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Comparative Impact of Mindfulness Yoga Vs Traditional Counseling on Smoking Cessation in Two WHO Index Age Groups Across Three Occupational Sectors in Guntur City: A Double-Blind RCT

Venkata Srinivasan Konda[1], Dr. Karthika P[2], Dr .P. Sudhan[3], Dr. V. SubbuLakshmi[4], Rajeswari Vaddiparthi[5], Gowri K[6], Dr. Zakir Hussain[7], Dr. Avinash Velamala[8]

[1,5,6] Ph.D. Scholar, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education & Research(MAHER), Chennai, Tamilnadu.

[2]Asst. Professor, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education & Research(MAHER), Chennai, Tamilnadu.

[3]Asst. Professor, Directorate of Learning and Development, SRM Institute of Science and Technology, Chennai, Tamilnadu.

[4]Professor, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education & Research(MAHER), Chennai, Tamilnadu.

[7]Principal, HoD and Professor, Department of Prosthodontics, Care Dental College, Guntur.

[8]Associate Professor, HoD Department of Public Health Dentistry, Care Dental College, Guntur.

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ABSTRACT

Tobacco use is a leading cause of premature deaths worldwide and a significant risk factor for non-communicable diseases. The main forms of tobacco products, whether they are smoked, inhaled, or sucked, cause severe damage to health. Every year, around 8 million people are affected by severe illnesses, resulting in deaths. Treatments for tobacco dependency frequently include a variety of tobacco programs, such as Nicotine Replacement Therapy (NRT) and other general wellness initiatives. Yoga, especially pranayama breathing exercises, and related psychotherapy ideas rooted in yoga philosophy have demonstrated potential in treating addiction-related issues. Research has demonstrated that smokers' addictive behavior is significantly impacted by Mindfulness Yogic Practices (MYP). Traditional counseling approaches (TCM) and MYP improve cessation outcomes, increase mood and well-being, and reduce stress.

METHODS/DESIGN: This study analyzes the effects of MYP intervention mixed with TCM intervention vs TCM intervention and No Treatment (NT) control group on craving effect, withdrawal, and smoking habit. Baseline evaluations, treatment completion (week 8), and follow-up at 3 and 6 months are examples of outcome measurements. Dependency rate-anxiety, depression, stress (a psychological metric), hypertension, gingivitis, periodontitis (dental issues), CO levels, and cotinine levels are among the baseline measurements that need to be examined and reported.

DISCUSSION: Innovative treatments are aimed at quitting smoking among working people. The chosen study design, Randomized Control Trail (RCT), will allow for the exploration of vulnerable mediators of intervention efficacy, examining how mindfulness-based yogic practices may serve as an alternative treatment for smoking cessation.

RESULT: If yoga proves to be a successful intervention, it could provide a substitute for standard counseling methods in lowering stress and negative symptoms associated with smoking cessation, as well as lowering the likelihood that recent quitters would relapse.

Corresponding Author:

Venkata Srinivasan Konda,
Faculty of Yoga Sciences and Therapy,
Meenakshi Academy of Higher Education & Research(MAHER), Chennai, Tamilnadu

1. INTRODUCTION

As a primary or contributing factor in over 8 million deaths annually, including approximately 1.35 million in India, tobacco usage is one of the world's top causes of preventable illness and mortality. Even the best available treatments have a significant relapse rate, despite the fact that most smokers wish to stop and many make an effort.

Better smoking cessation methods are required, such as those that emphasize raising acceptance and knowledge of the unpleasant consequences of abstinence and are practical for daily use. There is mounting evidence that mindfulness-based smoking cessation techniques are successful (1).

The WHO's guidelines for the working-aged primarily focus on physical activity and mental health at work. Every year, around 8 million people are affected with severe ill effects, which include COPD, chronic bronchitis, lung cancer, Asthma, atherosclerosis, peripheral artery disease PAD, lack of appetite, infertility, DM Type 2, erectile dysfunction in men, weak immune system. When attempting to stop smoking, smokers encounter a number of obstacles, such as nicotine addiction, strong cravings for cigarettes, elevated negative emotions, elevated stress levels, and worries about gaining weight after quitting (2).

Prior research has demonstrated that when physical fitness activities, like brisk walking or cycling, are combined with Cognitive Behavioral Therapy (CBT), women are more likely to stop at the end of treatment and at the six-month follow-up than when CBT is used alone (3-7).

Recent emerging evidence suggests that yoga may provide effects similar to exercise along with additional benefits of improved psychological health in individuals with smoking habits. Yoga, which has its roots in ancient Indian philosophy, is a comprehensive method that combines breathing exercises (pranayama), physical postures (asanas), and meditation (dhyana) to enhance mental, emotional, and physical health.

Preliminary studies on yoga suggest that it helps alleviate nicotine withdrawal symptoms, reduce cravings, and boost cognitive processes essential for maintaining abstinence and overall well-being. Most previous studies have primarily focused on smoking populations (8).

Physical activity aids tobacco cessation by stimulating dopamine release, providing a reward similar to nicotine. Exercise reduces stress hormones, enhances the production of endorphins, and improves oxygen flow to the brain (9-12). Yoga, along with these benefits, also elevates gamma-aminobutyric acid (GABA) levels, which is associated with better mood and decreased anxiety.

Yoga not only targets physical fitness but also incorporates mindfulness and relaxation techniques, making it effective in reducing symptoms of stress, depression, and anxiety, thereby improving the overall quality of life.

The goal of mindfulness exercises is to cultivate an attitude of nonjudgment and a nonreactive reaction to thoughts, feelings, and sensations as they occur. By educating people to be present and conscious of and accepting of the discomforts involved with quitting smoking (such as cravings and negative affect), mindfulness training is thought to help people quit smoking. These behaviors disrupt the cycle of smoking as a response to negative internal feelings and raise tolerance for them (10).

MYP serve as an alternative approach to traditional fitness programs for smoking cessation and likely as a complementary therapy to help individuals quit smoking. Various Asanas (yoga postures) for reducing stress and anxiety, different Pranayamas (breathing regulation) for controlling anxiety and depression, focused attention (meditation) for calming thoughts, and Yoga Nidra (Deep Relaxation Techniques) for mind relaxation are some of the components that make up MYP.

Mindfulness practices like SMET (Self-Management of Excessive Tension), Self-Awareness Programs and Emotional Regulation, Spiritual awareness, Time Management, Positive Thinking, Benefits of a Good lifestyle and well-being (11-12).

Various Traditional counseling methods (TCM) are deployed for smoking cessation, like Health education programs on smoking habits of working-aged people, the ill effects of smoking,

Individual counseling, Diet habits, various psycho therapeutically, motivational interviews from famous personalities (12-16).

The study, which is based on a synthesis of this evidence-based research, aims to investigate how an 8-week yoga program combined with TCM affects working-aged individuals' perceived stress levels, anxiety levels, hypertension, CO levels, and smoking cessation process.

The study aims to compare the impact of MYP combined with TCM on smoking cessation in a working-age population (municipal workers, auto drivers, and textile workers) in comparison to TCM and a control group that does not receive any treatment. It seeks to compare the long-term impact of the interventions on smoking cessation at follow-up intervals.

Hypotheses of the Study: Main Hypothesis (H1) H1: Individuals in the Mindfulness Yoga Practices (MYP) + TCM condition will have significantly greater rates of smoking cessation after treatment (week 8) and at follow-up at 3 and 6 months compared to individuals in the TCM and NT conditions. Secondary Hypotheses(H2) H2: After treatment (week 8), participants in the Traditional TCM group will have greater rates of smoking cessation than the NT group, but still exhibit lower rates than the MYP+TCM group at follow-up. Null Hypotheses (H0): H0: At the end of therapy (week 8), the 3-month and 6-month follow-ups, there won't be any discernible differences in the smoking cessation rates between the MYP+TCM group, the TCM group, and the NT group.

2. LITERATURE REVIEW

[17] Created and validated the yoga-breath-linked intervention to stop smoking (Y-BLISS), an innovative, scalable, and affordable yoga-based smoking cessation module as an add-on to standard care. Using the Content Validity Ratio (CVR) with a cut-off of 0.4, thirty experts with expertise in yoga, psychiatry, and clinical psychology assessed a variety of yoga techniques and short yoga philosophy-based psychotherapy (BYPP) concepts for their potential effectiveness in smoking cessation.

Ten items total—two psychotherapy concepts and eight practices—were included in the final intervention package. 26 individuals (25 men) with Fagerström Nicotine Dependence Scale (FTND) scores of 6 or above who were enrolled in a smoking cessation program and had a tobacco use disorder diagnosis according to the DSM-5 were tested on the module over the course of two months. After participating in 15–25 sessions, including one BYPP session, participants provided feedback on safety, viability, and clinical outcomes.

Sixteen people provided post-data at eight weeks. With no negative consequences, the module obtained high safety ratings. FTND scores decreased significantly from baseline to weeks 4 and 8, according to the study. Following eight weeks of Y-BLISS module practice, there was also a notable development in peak expiratory flow rate. These results support more RCT studies to evaluate its potential and efficacy as part of integrative strategies for managing tobacco use disorder. If this is expanded with extensive coverage, it may affect primary care in public health.

[18] Examined the effects of yoga breathing techniques based on mindfulness on smoking behavior, emotion, and cravings. The study looked at how craving, emotion, withdrawal, and smoking behavior were affected by a mindfulness-based yoga breathing (MB) intervention as opposed to a cognitive strategy (CS) and an NT control group. It was demonstrated that yogic breathing techniques based on mindfulness seem to be very useful in reducing smoking behavior and lessening the immediate side effects of quitting smoking. Techniques for mindfulness breathing are inexpensive, easy, and safe.

[19] Conducted a systematic review in the Cochrane Database on mindfulness for quitting smoking, offering a variety of mindfulness-based interventions such as yoga for quitting smoking, acceptance and commitment therapy (ACT), mindfulness training in meditation, and distress tolerance training. Participants in the RCT trials received mindfulness training interventions, while the control group did not receive any treatment. The final findings showed that the mindfulness training intervention by itself did not have a significant benefit, and additional research using different methods is needed.

[18] Examine how the smoking habit is affected by MAB both with and without a controlled yoga breathing component. A 20-minute intervention consisting of (1) MAB, (2 MYB, or (3) NT was randomly allocated to twelve-hour abstinent daily smokers. In a 50-minute smoking vs money choice exercise, MAB and MYB both decreased the risk of smoking in comparison to NT. Additionally, compared to MYB and NT, the MAB group reported much higher post-manipulation tranquility (i.e., relaxed, serene, and at ease).

Ratings of smoking craving, mood, and withdrawal symptoms did not differ between conditions. With participants giving consistently positive descriptors of MAB in terms of enjoyment (e.g., “relaxing”), utility (e.g., “very helpful”), and ease of use ("not at all difficult"), qualitative data showed that the MAB exercise was very acceptable. According to the findings, MAB is a cheap and easily spread method that could encourage quitting smoking and needs more research. The working strategy of the proposed model is given in Figure 1.

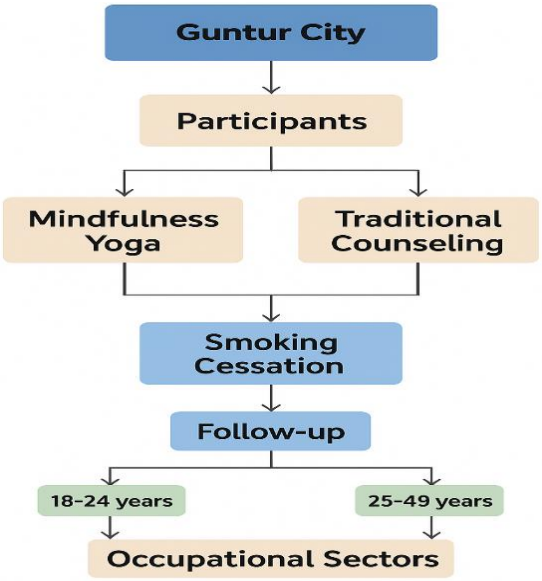

Figure 1. Working strategy of the proposed model

Table 1. Pico’s model

POPULATION (3)	INTERVENTIONS (2)	COMPARISON (2)	OUTCOME
Municipal workers Auto Drivers Textile workers	MYP + TMC TMC	MYP + TMC TMC	Tobacco Abstinence

2.1. 5 A’s and 5 R’s of tobacco cessation

The 5 A’s and 5 R’s are strategies used to aid individuals in quitting tobacco. Table 1 shows the Pico model. When discussing tobacco use with patients, healthcare professionals should follow these five A's:

- Ask: Find out and note each patient's tobacco use status at each visit.
- Advise: Encourage everyone who uses tobacco to quit in a straightforward, firm, and personalized manner.
- Assess: Determine whether the patient is prepared to attempt stopping at this time.

- Assist: Offer the patient medication and counseling to help them stop, if necessary.
- Arrange: Arrange for a follow-up call to assist the patient in their attempt to quit.

Patients who are not yet prepared to attempt quitting can benefit from the motivational intervention known as the "5 R's":

- Relevance: Assist the patient in determining the personal significance of quitting.
- Risks: Have the patient list any possible drawbacks to using tobacco.
- Rewards: Inquire about the possible advantages of quitting smoking with the patient.
- Roadblocks: Inquire about the possible advantages of quitting smoking with the patient (20).

Repetition: Even if the patient isn't ready to stop, keep talking to them about it at every appointment.

3. METHODOLOGY

Study Design

A double-blind RCT (DBRCT) is the study's design.

Study Population

WHO index age groups, such as those aged 35–44 and 65–74.

Study Groups

It is further divided into three working age groups of Municipal workers, Auto drivers, and Textile workers.

Sample Size

G. Power Software determined the sample size by taking the study's power to be 0.80.

The sample size is of the Total population, n = 360, out of which 90 n are assumed as dropouts, and the remaining sample for the experiment is 270 n. Each group consists of 90 participants, working age group of 3 different sectors. Table 2 shows the samples of the dataset.

Table 2. Sample of the Dataset

Experimental Group	**No. of Sample**
Municipal Workers	90 n
Auto Drivers	90 n
Textile workers	90 n
Total No. of Samples	270 n

Block Randomization

Each comprises 90 participants. Each working group is further divided into 3 groups of 30 participants by the Block Randomization method to eliminate selection bias (21).

Blinding

Double-blinding effect will be done for all the participants. Three distinct interventions are administered to each group; neither the subject nor the researcher is aware of the experiment to which the subject has been assigned.

Interventions

Three interventions are given.

Group 1: Combining TCM with MYP to help people quit smoking.
Group 2: TCM for smoking cessation and
Group 3: NT control groups with sports.

Study Setting

Recruitment methods include ---Reaching Dental set up camps at various working organizations like Municipal Corporation, Auto drivers' union stand, and Textile factory, and taking the required consent from the superior authorities.

Internal Validity

The Internal Validity of the study is ensured through Pre-Tested Questionnaires, Properly Trained Examiners, Pre-Calibrated Instruments, Block-Randomization, and DB methods.

Data Collecting Instruments

- The smoking situations temptation scale (SST), smoking history and nicotine dependency (FTND), stage of change of smoking symptoms checklist, and survey of demographic data are among the assessment tools. Additionally, participants fill out the Frieberg mindfulness inventory (FMI), spirituality measure (STI), anxiety measure (STAIT), and depression symptoms (CESD).
- Additionally, participants fill out the Short-Form Health Survey (SF), the Physical Self-Perception Profile, and the Post-Cessation Weight Gain Assessment (SSQ).
- The WHO Oral Health Assessment form 2013 was utilized to document precancerous white lesions such as leukoplakia, gingivitis, and periodontitis.
- Pre-tested Data was gathered using validated questionnaires (23).

Training

- Three times a week for eight weeks in a row, the research investigator led yoga classes taught by certified yoga instructors with over fifteen years of experience who were trained in Hatayoga and MYP.
- The study co-investigator(CI) is trained to provide 5A,5R tobacco cessation counselling to working-age people who call the program in response to the recruitment and to screen the interested people for eligibility.
- Properly Trained Examiners participated in the study to eliminate Observer bias.

Calibration

- All the instruments like CO-Monitor, Sphygmanometer, and CPITN Probe are pre-calibrated and tested to eliminate Instrument errors.

Inclusion Criteria

- The WHO index age groups, viz., 35-44 years, 65-74 years, who do not have severe systemic diseases, were included in the study.
- Those who are willing to give consent are included in the study.

Exclusion Criteria

The participants are excluded if they have very mild smoking habits, i.e., if they smoke less than 3 cigarettes per day, are already doing physical fitness, and are intensive physical active, yoga practitioners, have current heart disease, lung diseases, or orthopedic conditions that prevent them from doing yogic practices, or have mental problems or are using any drugs.

Consent from Participants

The PAF-Q (24) Participant Agree Form Questionnaire is used to screen eligible participants and verify their willingness and safety when engaging in physical activity. Each participant must sign this form.

After screening, those who are found eligible are invited to an orientation where the co-investigator (CI) will explain the study's specifics and go over the requirements for participant and administrator informed consent.

Ethical Clearance

The protocol of the study, Data collection Instruments, Consent form, and Interventions before giving to participants were pre-validated by the IEC (Institutional Ethical Committee).

Scheduling Interventions to Three Groups

Group 1 participants:

All screened participants of Municipality workers are randomly allocated to either the MYP or TCM separately on a weekly basis for 3 days on the same timings and NT control group are allowed to play sports which they are interested in.

Group 2 Participants

All screened participants of Auto drivers are randomly assigned to either MYP plus TCM or only TCM, and NT groups control group is allowed to play sports that they are interested in separately on a weekly basis for 3 days at the same timing.

Group 3 Participants:

All screened participants of Textile workers are randomly assigned to either the MYP plus TCM or only TCM, and NT group control group is allowed to play sports that they are interested in separately on a weekly basis of 3 days at the same time.

Procedure for the Delivery of Interventions

For eight weeks in a row, yoga courses are taught three times a week by certified yoga instructors with over 15 years of experience who have received training in Hatayoga and mindfulness yogic techniques.

The yoga experts design yoga modules for each class of participants, that is, for municipality workers, Auto drivers, and Textile workers, which include specified Asanas with breathing movements for releasing stress and anxiety levels.

In coordination with the yoga trainers, a pattern of Asanas is selected for beginners that is most appropriate in execution. For every asana in between, there will be a one-minute relaxation time given for the participants.

Various pranayamas are taught, which relieve stress and depression for the participants. For relaxation and concentration of mind, Meditation and Yoga nidra are given to the participants to calm down thoughts and frequency levels of the mind, and thus lowering the hormonal imbalances in the body. MYP like SMET, spiritual awareness, and self-awareness programs are given to the participant in an alternative day schedule, and a total of 40 minutes is allotted to all the screened participants on a three-day per week schedule.

Participants attending TCM like 5A,5R for smoking cessation are given extensive health educational programs on cigarette smoking habits, explaining the epidemiology of tobacco-related deaths, chemical contents of various forms of tobacco, ill effects of smoking, benefits of quitting smoking, and identifying the quit date. Participants are circulated with pamphlets, consist of various agents in cigarettes. Videos consisting of the harmful effects of smoking and its ill effects on the health of smokers and its impact on family members and their future living style are explained by our co-investigators.

There is a psycho therapeutic treatment which relies on thoughts, feelings, behavior, and positive thinking. Motivational interviews from famous personalities like top doctors, actors, and educationalists. The TCM will be for 40 minutes and 3 days per week schedule (25).

The control group is not given any treatment, but different sports are organized among the participants for the release of stress and anxiety.

Throughout the program, all three groups' members are urged to choose wholesome, low-calorie snacks that will allow them to refuel while training. No NRT or other smoking medicine is given to the subjects.

Measures

Participants are completed with baseline assessments, end of treatment at 8 weeks, and both 3 and 6-month follow-up.

Participants' current smoking status is evaluated every week of the program based on their salivary cotinine levels, pulse rates, respiratory or lung capacity rates, blood pressure, BMI, and CO levels.

Smoking outcomes are biochemically validated by CO levels, cut off<10 PPM, and saliva Cotinine cut off = 15 mg/ml.

4. PROPOSED STUDY

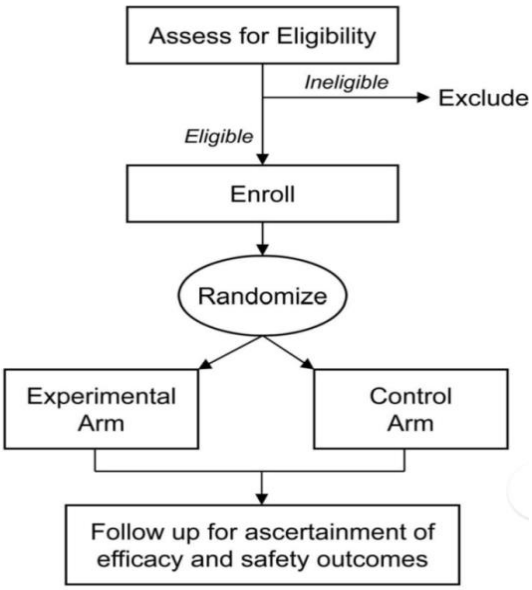

Figure 2. Basic structure of a classic RCT

RCTs can have more than one experimental arm; however, for simplicity's sake, just one is displayed. Active therapy (active-controlled) or a placebo (an inactive drug; placebo-controlled) could make up the control arm. A double blind design is ideal, where neither the subject nor the researcher is aware of the arm to which the subject has been assigned. Figure 2 shows the basic structure of classic RCT.

5. OUTCOMES

The primary objectives of the study are acceptability, study feasibility, and post-treatment cessation rates. Information for impact size estimations that can be utilized to produce validated

estimates for a large clinical study will be obtained from variations in the conditions' post-treatment (12-week) discontinuation rates.

The following outcome measures will be used to evaluate the program's acceptance and feasibility on both a qualitative and quantitative level at the individual participant level.

1. Rates of smoking cessation
2. The rate of retention and accrual
3. Acceptance of Randomization

The above-mentioned acceptability and feasibility outcome measures will be evaluated at baseline, eight weeks into the course of therapy, and at three and six-month intervals.

6. SYSTEMATIC ANALYSIS

Quit status is the main outcome variable, which is confirmed by CO (cut off 8 ppm) every week, cotinine (cut off 15 mg/ml) at the conclusion of treatment, and follow-up evaluations at three and six months.

If the subjects are in quit status, their cotinine levels should be fewer than 15 mg/ml and their CO levels should be less than 8 ppm. A logistic regression will be used to evaluate the study's main hypothesis and generate an odds ratio that quantifies the impact of TCM (counseling) + MYP (yoga) on the chance of quitting smoking at the post-treatment and follow-up evaluations.

Additionally, we use Zeger and Liang's generalized estimated equations (GEE) approach to perform a second longitudinal study across time (end of therapy, three, and six months after treatment). Covariates and missing data can be accommodated by this process, maximizing the use of available data to identify treatment effects.

Through secondary analyses, the effects of TCM (counseling) on other behavioral and psychological dimensions, including anxiety, quality of life, spirituality, mindfulness, and self-esteem, will be examined. Three repeated measurements (at the conclusion of therapy, three months later, and six months later) and the baseline measures of each variable are used as covariates in a series of repeated-measure analyses of covariance.

Additional studies will look at how MYP (yoga) and TCM (counseling) affect the physiological variables of gingivitis, periodontitis, and white lesions (dental problems). These variables are evaluated using a scoring system that takes into account the severity of gingivitis and the gingival index (GI), which measures the depth of gum problems.

The benefits of MYP (yoga) and TCM (counseling) on participants' quitting smoking are also examined using other physiological variables, such as blood pressure, pulse rates, respiration rates, and BMI. The aforementioned analysis will be conducted longitudinally over the course of the 8-week, 3-week, and 6-month follow-up periods following therapy.

Analysis of Baseline data

For statistical analysis, SPSS Version 22 software will be utilized. Using mean and standard deviation, descriptive statistics will be utilized to characterize the study participants' baseline demographic, psychological, and smoking rate features.

The effectiveness of therapies will be assessed using ANOVA from baseline to follow-up at 8 weeks, 3 weeks, and 6 months. Post-hoc comparisons between and within groups will be conducted. Two methods are used to evaluate the range values and proportion of state of change for quitting smoking: first, with the intention of quitting, and second, if participants have made at least one quit attempt (> 24 hours) in the past year and plan to quit within the next 30 days, they will be placed in the preparation stage.

We determined the percentage of the sample that endorsed 3 or higher on the withdrawal symptoms checklist (which rates the intensity of nicotine withdrawal symptoms from 1 = not at all to 5 = severely) to characterize the participants' withdrawal symptoms from prior quit efforts.

7. DISCUSSIONS

If successful, MYP (yoga) can serve as a substitute for conventional counseling techniques in lowering stress and the bad side effects that frequently accompany quitting smoking, as well as predicting recurrence in recent quitters. The benefits of TCM (counseling) for managing stress and cigarette cravings may be amplified by MYP (yoga), which also helps to improve quality of life. MYP (yoga) is a lifelong practice that helps smokers improve their health even after therapy and, for the first time, acts as a non-pharmacological medicine. The person's chance of relapsing into smoking will be increased by the different symptoms, such as negative symptoms and perceived stress.

The present study is an investigation of the impact of MYP (yoga) as an alternate therapy for smoking cessation among working-age people of different sectors of the urban population. The investigation is mainly on the three different sectors of working-age people, aged between 18-44 years, who are exposed to more stress and depression. The participants are to be exposed to 3 interventions and mainly focused on the MYP complemented with TCM.

For making the trial more effective, numerous parameters, including different psychological, physiological, and other factors of demographic factors, are taken for study. The intervention modules MYP (yoga) and TMC (counseling) mentioned in this study have been proven to be scientific and reliable and impose a considerable impact on the post-intervention results.

The intervention modules prescribed in this study are a full-time package to the participants for enhancing QOL and well-being, and by and large will make a great impact on the health standards of the whole society.

Novelty of the Proposed Study

The present study is novel.

1. A sample size is chosen from 3 different working-class sectors of people in an urban area who are randomly exposed to more stress and anxiety in their working environment.
2. Three interventions are taken for exposure – two experimental & one control group.
3. In one experiment arm, MYP (yoga) is given, which is unique, combining with TMC (counseling), and the other experiment arm is exclusively of TMC (counseling), which is different from regular counseling methods in view of the outcome of the result. In the present study, the control group is also given sports activities for the participants, and the impact of all the interventions is considerable in terms of outcome.
4. The present study is unique as Double blinding design is attempted, which is difficult as neither the investigator nor the subject knows the arm to which the subject has been allocated. And thus it is described as DBRCT which was not done by previous investigators.
5. The present study is unique as number of different measurable variables are taken for
6. Study in which physiological variables like Gingivitis, periodontitis, White lesions (Dental problems) are manipulated and measured.
7. All these co-variables will make a considerable impact on the results and thus cause & effect is established in the proposed study.

8. CONCLUSION

The present study gives thrust on MYP which is a combination of the benefits of Mindfulness and benefits of yoga offering even deeper insights into mind and help the practitioner to lead a high QOL. The mindfulness practices are focused mainly on 5R’S – Recognize Relax, Recover, Respond & Return in relation to Body & Mind.

The proposed study will be beneficial to other working age group of population like Software employees, Govt. employees, Industry workers and working class who are exposed to perceived Stress, Anxiety and Depression who indulge in consuming nicotine products and addicted to smoking and feel difficulty from withdrawal or quitting smoking.

List of Abbreviations

Abbreviations	Definition
MYP	Mindfulness Yogic Practices
TCM	Traditional counseling methods
NRT	Nicotine Replacement Therapy
NT	No treatment
RCT	Randomized Control Trail
CBT	Cognitive Behavioral Therapy
SMET	Self-Management of Excessive Tension
FTND	Fagerström Test for Nicotine Dependence
SST	Smoking Situations Temptation Scale
SOC-SC	Stage of Change – Smoking Symptoms Checklist
FMI	Freiburg Mindfulness Inventory
STI	Spiritual Transcendence Index
STAI-T	State-Trait Anxiety Inventory – Trait version
CES-D	Center for Epidemiological Studies Depression Scale
PSPP	Physical Self-Perception Profile
SF	Short Form Health Survey
SSQ	Smoking-Specific Questionnaire on Weight Gain Concern
GEE	Generalized Estimated Equations
ANOVA	Analysis of Variance
PAF	Participant agreement form

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