



## International Journal of Current Trends in Pharmaceutical Research

Journal Home Page: [www.pharmaresearchlibrary.com/ijctpr](http://www.pharmaresearchlibrary.com/ijctpr)

CODEN (USA): IJCTGM | ISSN: 2321-3760 | Publisher: Pharma Research Library

Int. J. Curnt. Tren. Pharm, Res., 2024, 12(1): 24-28

DOI: <https://doi.org/10.30904/j.ijctpr.2024.4646>



# Clinical pharmacist role in smoking cessation: current and future perspective -A prospective study

D. Meghavarna<sup>1</sup>, M. Bhargavi<sup>1</sup>, B. Sanjay<sup>1</sup>, Hina kousar<sup>1</sup>, M.Vinay<sup>1</sup>, K. Sai mahesh<sup>1</sup>, K. Prem Raj\*<sup>2</sup>

<sup>1</sup>B. Pharmacy 4<sup>th</sup> year student, Saastra College of Pharmaceutical Educational and Research, Nellore, A.P, India

<sup>2</sup>Assistant Professor, Department of Pharmacy Practice, Saastra College of Pharmaceutical Education and Research, Nellore, A.P, India

## ABSTRACT

**Background:** Smoking remains a major public health concern worldwide, leading to a variety of the chronic diseases such as cardiovascular disease, respiratory problems, and cancer. Despite broad public awareness efforts and treatments, many people still struggle to quit smoking. Clinical pharmacists, with their specific training in drug management and patient counseling, are well-equipped to assist with the smoking cessation attempts. **Aim and objective:** To motivate and educate the patients about health risks through smoking cessation counseling by clinical pharmacist. To reduce the dependence of nicotine and to improve the health status for enhances the quality of life. At the end of the session participant will be able to quit the smoking. **Materials and methods:** It was a prospective observational study conducted in kim`s hospital nellore. The participants were followed up to 3 consecutive months to motivate and educate. The sample size was estimated using a descriptive statistical analysis. Participants (n=66) were recruited based on inclusion and exclusion criteria. Participants were counseled according to their nicotine dependence level determined by using FAGERSTROM TEST. **Results:** A total 66 nicotine addicted participants were enrolled for the study out of 66, 6 were dropout so, 60 participants assessed. The higher number of nicotine dependence observed in age group of 21-30 yrs followed by 31-40 yrs in both male & female among them male are more effected. Regarding the outcome, we saw improvements between the pre and post-smoking cessations. The study shown a significant improvement in their ability to quit smoking at the conclusion of motivational enhancement counseling. **Conclusion:** Research has demonstrated the enormous impact that motivational enhancement counseling has on male smokers. Gaining a deeper comprehension of each smoker`s motivations is crucial to encouraging them and achieving desired outcomes.

**Keywords:** Clinical pharmacist, smoking cessation, Nicotine dependence, pharmacotherapy, healthcare issues intervention, comforting.

## ARTICLE INFO

### \*Corresponding Author

K. Prem Raj  
Assistant Professor,  
Department of Pharmacy Practice,  
Saastra College of Pharmaceutical Education and Research  
Nellore, A.P, India

### Article History:

Received : 07 Dec 2023  
Revised : 23 Feb 2024  
Accepted : 24 Mar 2024  
Published : 12 April 2024

**Copyright© 2024** The Contribution will be made Open Access under the terms of the Creative Commons Attribution-NonCommercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0>) which permits use, distribution and reproduction in any medium, provided that the Contribution is properly cited and is not used for commercial purposes.

**Citation:** K. Prem Raj, et al. *Clinical pharmacist role in smoking cessation: current and future perspective -A prospective study.* Int. J. Curnt. Tren. Pharm, Res., 2024, 12(1): 24-28.

## CONTENTS

1. Introduction. . . . .	24
2. Materials and methods. . . . .	25
3. Results and Discussion. . . . .	26
4. Conclusion . . . . .	27
5. References. . . . .	27

### 1. Introduction

The process of counseling is non-directive, non-judgmental, theory-based, and has a brief name. Throughout this procedure, an individual (client) who is essentially mentally Healthy and dealing with issues related to adjustment,

development, and/or situational worries or challenges is capable of being aware of himself or herself and their circumstances and is able to make decisions with the help and support of another individual (a counselor) through

their relationship. Peer counseling is the process by which trained peers offer this kind of support and help. It is not given by licensed counselors and is much shorter and less formal than professional counseling. When two people have a shared identity or experience, they are considered peers in this context. Age, gender, occupation, education, social orientation, or any other self-defined shared experience can be the commonality. Through peer counselling, a client can feel comfortable talking openly and in a non-defensive environment.

Smoking is a worldwide health issue and a widely recognized health risk. There are currently 1.1 billion smokers worldwide, and this number is expected to rise. By 2025, more than 1.6 billion. Many people continue to smoke despite the risks because they are careless. Most smokers remain really addicted to nicotine, despite the fact that some smokers are unaware of the dangers of smoking. Obstructive pulmonary disease, which is a form of lung cancer, arterial stenosis, and lung cancer are all brought on by smoking. Smoking poses a risk. Alzheimer's disease-related factor.[4] Health professionals have carried out a number of research that have demonstrated the fatal consequences of smoking. It's thought that only a very small percentage of smokers are able to successfully break the habit on their first try. The response to the query seems as nonsensical as developing an addiction. Perhaps addiction is the cause of why smokers Have difficulty giving up smoking. Nicotine's psychological effects can undermine the resolve to give up smoking. However, an individual's willpower can overcome this psychological dependence.[5] A person's willingness can have a significant impact on the outcomes of their attempts to stop smoking.

The primary application that provides inspirational therapy has been in the behavioral management of disorders.[6] Interventions in motivational therapy are those that are offered. By the medical staff in an effort to help patients adopt and modify behaviors that result in favorable results. It refers to a collaborative effort where patients and healthcare providers are expected to actively participate in order to support the patient's autonomous initiative toward adopting healthy practices.[7] Few attempts have been made to ascertain the evidence of motivational interviewing applied specifically to smoking cessation, despite systematic reviews demonstrating the effectiveness of the technique for alcohol, normal weight, nutrition, and exercise.[8–10] The basic concepts include rolling with resistance, encouraging self-efficacy, communicating empathy, and creating disparity. Been prepared with motivational interviewing in mind.[11] Different primary care providers can provide effective interventions. Studies indicate that when pharmacists receive specific training in tobacco cessation counseling, the number of counseling sessions increases. Less than 10% of Northern California pharmacists surveyed. Recently by Dr. Karen Hudmon had received formal training in smoke cessation counseling. The poll included over 1,100 pharmacists. But 87% of respondents said they would be interested in formal training, 70% said it would increase the number of patients

they counsel, and 94% said it would improve the caliber of the help they give patients.[12]

## 2. Materials and methods

Sample size calculation: Various parameters are taken into account and descriptive statistics used like mean, simple percentages to analyze the sample size for studies evaluating the role of clinical pharmacists in smoking cessation. Finding a statistically significant difference in the rates of pre and post smoking cessation.

**Participants:** We spoke with the patients who had arrived at Kims Hospital, Nellore general and respiratory departments for consultations. Asked if they were smokers, and gave a brief explanation of who we were (i.e., details about the department, institution, researchers, and study goals). We followed the research protocol if they disclosed that they were smokers. By employing fagerstrom test & the PFT digital apparatus to recruit participants with FEV1 values between fifty and eighty% (Mild according to the COPD categorization based on PFT basis). Following completion of the trial, 66 of the 60 participants who met the recruitment requirements were assigned to receive smoking cessations or either normal treatment. Study design and duration: the study was a prospective observational study conducted general and respiratory department of territray hospital conducted for a period of 3 months.

### Inclusion /Exclusion criteria:

Adult smokers who are willing to engage in smoking cessation programs and who satisfy the eligibility requirements established by the study protocol are usually included in the inclusion criteria. People who are taking particular medications to quit smoking, have serious mental health issues, or are undergoing concurrent smoking cessation therapy are examples of exclusion criteria. These standards protect the study's safety and integrity while focusing on those who stand to gain the most from pharmacist-led interventions. The Fragerstom Smoking Check Form [13, 14] is another tool used to assess nicotine dependency. Following the cessations every participant in the study underwent an interview. Motivational interviewing enabled us to comprehend the varying perspectives of each person regarding smoking. Every month, the counseling was offered three times. With smoking-related materials, important pictures, and pamphlets about smoking dangers, we gave participants advice on the advantages of quitting and the negative effects of smoking.

### Procedure :

Participants for this study included from all patients to have nicotine dependence by fragerstorm test and provided smoking cessation in kim's hospital, Nellore.

### Current Role of clinical pharmacist :

Direct patient care: clinical pharmacist play a vital role part in furnishing direct case care. They conduct the patient assessment and offer pharmacotherapy options similar as nicotine relief remedy (NRT) and other drugs rules as demand to promote successful smoking cessation which include 3 types of counseling (intra and extra treatment, social support, skill building) conducted with 3 types of modalities (individual, group and telephone).

**Inter professional collaboration:**

Clinical pharmacist unite nearly with other health care providers to deliver comprehensive somking cessations. Future perspective and emerging trends likes integration techonology, precision medicine approaches ,expanded compass of practice and cooperative care model which may involve mobile health operations, telemedicine platform, advance in pharmacogenomics and perfection drug to provide primary health care, cover patient progress and give real time support .

**Outcome measures:** Biochemically confirmed cessation from smoking is frequently the main outcome measure in clinical pharmacist-led smoking cessation trials. This is usually measured at predetermined follow-up intervals, such as three, six, and twelve months after the intervention. Changes in smoking behavior (e.g., number of cigarettes smoked daily), quality of life, medication adherence, and adverse events associated with quitting drugs are examples of secondary outcome variables. To determine acceptability and feasibility, patient-reported outcomes, such as satisfaction with the pharmacist-led intervention, may also be evaluated.

**3. Results and Discussion**

The demographic distribution reveals several noteworthy trends. The maturity of actors fall within the 21- 30 age group, comprising 36 of the total sample. This suggests that youngish individualitiez are more laboriously seeking conclusion support, conceivably due to increased mindfulness of the health pitfalls associated with smoking and societal pressures to quit. also, the gender distribution

indicates a advanced proportion of manly actors across all age groups, reflecting a well- proved trend of advanced smoking frequence among males.

There were 46 participants in total in the post-test data. After quitting, the number of smokers dramatically dropped. Male smokers fell from 82.6 % to 69% of the participants , which is a significant decline. In a similar vein, women’s smoking rates dropped from 16% to 8.7%.The age group of 21–30 had the largest percentage of smokers, followed by 31–40.All age categories showed a discernible decline in the number of smokers, with the 41–50 age group experiencing the largest decline. The efficacy of smoking cessation programs is demonstrated by the comparison of pre- and post-cessation data. The decline in the number of smokers in all age categories is evidence of the effectiveness of cessation programs. It is possible that males may benefit more from cessation programs given the significant decline in the percentage of smokers in the male population. Though the general number of smokers has decreased, it is important to remember that some people are still smoking, underscoring the necessity of ongoing support and interventions for quitting. The data further highlights the significance of focusing on younger age groups in order to prevent the initiation of smoking habits, as seen by the decline in the proportion of smokers under the age of 20 after cessation. As a Overall, the comparison shows the decline in smoking rates, but it also emphasizes the difficulties that still exist and the necessity of continual efforts to support smoking cessation programs.

Table :1 Demographic details of participants

Age	Gender		%
	MALE	FEMALE	
>20	10	0	15%
21-30	16	8	36%
31-40	14	4	28%
41-50	10	4	21%
Total	50	16	100%

Table: 2 Depender level / Frequency of smoking based upon fragrance nicotine check.

Age	More Frequent smoking		Less Frequent smoking	
	MALE	FEMALE	MALE	FEMALE
>20	6	0	4	0
21-30	10	3	4	1
31-40	9	2	5	2
41-50	4	2	6	2
Total	29	7	19	5

Table: 3 Comparison between pre and post smoking cessation (PRE TEST)

Age	MALE	FEMALE
>20	10	0
21-30	16	8
31-40	14	4
41-50	10	4

There were fifty people in total in the pre-test data. Men made up the bulk of participants in all age categories. The age group of 21–30 had the largest percentage of smokers, followed by 31–40. Under the age of 20, there were no female smokers, and as women aged, there were fewer and fewer of them.

Table: 4 Comparison between pre and post smoking cessation (POST TEST)

Age	MALE	FEMALE
>20	2	0
21-30	14	2
31-40	14	4
41-50	8	2

There were 46 participants in total in the post-test data. After quitting, the number of smokers dramatically dropped. Male smokers fell from 82.6 % to 69% of the participants, which is a significant decline. In a similar vein, women's smoking rates dropped from 16% to 8.7%. The age group of 21–30 had the largest percentage of smokers, followed by 31–40. All age categories showed a discernible decline in the number of smokers, with the 41–50 age group experiencing the largest decline.

#### 4. Conclusion

All of the smokers received smoking cessation as part of the treatment was administered. The response, though, was on the same pace. The current investigation demonstrated the many Viewpoints of smokers regarding their habit. The most information was reached and responded to well through pictures. When consumers interacted with pictures that explained the repercussions of cigarette smoking, they showed the most interest. Clinical pharmacist now become important component of conseling cessations .Drug therapy & clinical pharmacist goes hand in hand. The majority of smokers were unwilling to follow up and wasn't responding well at first. Research has demonstrated the enormous impact that motivational enhancement counseling has on male smokers .

#### Acknowledgement

We would like to thank each and every clinical pharmacist whose knowledge and commitment to the subject of smoking cessation are invaluable. Furthermore, we are grateful for the priceless assistance and direction our mentors and colleagues offered us during this study.

#### 5. Reference

- [1] Prochaska Cataldo JK, Prochaska JJ, Glantz SA. Cigarette smoking Is a risk factor for Alzheimer's disease: An analysisUsual ling for tobacco industry affiliation. *J Alzheimers Dis* 2010, 19: 465-80.
- [2] Spangler JG, George G, Foley KL, Crandall SJ. TobaccoIntervention training: Current efforts and gaps in US Medical schools. *JAMA* 2002; 288: 1102-9.
- [3] Burke BL, Arkowitz H, Menchola M. The efficacy of Motivational interviewing: A meta analysis of usual led Clinical trials. *J Consult Clin Psychol* 2003;71: 843-61.
- [4] Knight KM, McGowan L, Dickens C, Bundy C.A systematic review of motivational interviewing In physical health care settings. *Br J Health Psychol* 2006,11: 319-32.

- [5] Dent LA, Harris KJ, Noonan CW. Randomized trial assessing the effectiveness of a pharmacist-delivered program for smoking cessation. *Ann Pharmacother.* 2009, 43(2): 194-201.
- [6] El Hajj MS, Kheir N, Al Mulla AM, Al-Badriyeh D, Mahfoud ZR. An evaluation of pharmacists' readiness to prescribe smoking cessation aids in Lebanon: a cross- sectional study. *Pharm Pract (Granada).* 2015,13(1): 507.
- [7] Hudmon KS, Corelli RL, ASHP Council on Professional Affairs. ASHP therapeutic position statement on the cessation of tobacco use. *Am J Health Syst Pharm.* 2009, 66(4): 356-365.
- [8] Weingarten TN, Podduturu VR, Hooten WM, Thompson JM, Luedtke CA, Oh TH. Impact of tobacco Use in patients presenting to a multidisciplinary Outpatient treatment program for fibromyalgia. *Clin J Pain,* 2009, 25: 39-43.
- [9] Perkins KA, Epstein LH, Stiller RL, Fernstrom MH,Sexton JE, Jacob RG, et al. Acute effects of nicotine on Hunger and caloric intake in smokers and nonsmokers. *Psychopharmacology* 1991; 103: 103-9.
- [10] Huot I, Paradis G, Ledoux M. Quebec Heart Health Demonstration Project Research Group: Factors Associated with overweight and obesity in Quebec Adults. *Int J Obes Relat Metab Disord* 2004; 28:766 74.
- [11] Pomerleau CS, Pomerleau OF, Namenek RJ, Mehringer AM. Short term weight gain in abstaining Women smokers. *J Subst Abuse Treat* 2000, 18: 339-42.
- [12] Blaha V, Yang ZJ, Meguid M, Chai JK, Zadak Z. Systemic Nicotine administration suppresses food intake via Reduced meal sizes in both male and female rats. *Acta Med,* 1998, 41: 167-73.
- [13] Hughes J. An algorithm for choosing among Smoking cessation treatments. *J Subst Abuse Treat* 2008, 34: 426-32.
- [14] Falba T, Jofre Bonet M, Busch S, Duchovny N, Sindelar J.Reduction of quantity smoked predicts future cessation Among older smokers. *Addiction* 2004, 99: 93-102.
- [15] Hatsukami DK, Henningfield JE, Kotlyar M. Harm Reduction approaches to reducing tobacco related Mortality. *Annu Rev Public Health* 2004; 25: 377-95.
- [16] Hatsukami DK, Stead LF, Gupta PC. Tobacco addiction. *Lancet* 2008, 371: 2027-38.
- [17] Welsch SK, Smith SS, Wetter DW, Jorenby DE, Fiore MC. Development and validation of the Wisconsin Smoking Withdrawal Scale. *Exp Clin Psychopharmacol* 1999; 7: 354-61.
- [18] Hughes JR. Effects of abstinence from tobacco: Valid symptoms and time course. *Nicotine Tob Res,* 2007, 9: 315-27.
- [19] Gajalakshmi V, Peto R, Kanak TS, Jha P. Smoking and Mortality from tuberculosis and other diseases in India. *Lancet* 2003, 362: 507-15.
- [20] Aronson MD, Weiss ST, Ben RL, Komaroff AL. Association Between cigarette smoking and acute

respiratory tract illness in young adults. *JAMA* 1982; 248: 181-3.

[21] Lee A, Chui PT, Chiu CH, Tan PE, Tam TP, Samy W, Tong PW, Critchley LA, Gin T, Risk of perioperative respiratory complications and postoperative morbidity in a cohort of adults exposed to passive smoking. *Ann Surg*, 2015, 261(2): 297-303.

[22] Schenker MB, Samet JM, Speizer FE, Effect of cigarette tar content and smoking habits on respiratory symptoms in women. *Am Rev Respir Dis*, 1982, 125(6): 684-690.