



# Tobacco Harm Reduction Approach in Clinical Practice: A Qualitative Study among Multi-Specialty Healthcare Professionals in an Indian Metropolitan City

Sree T Sucharitha<sup>1</sup>, Aravind Manoharan<sup>2</sup>, Pradeep R<sup>3</sup>, Balaji SM<sup>4</sup>, Hari M Krishnan<sup>5</sup>, Jeevanandam Subramanian<sup>6</sup>

<sup>1</sup>Tagore Medical College Hospital, Chennai

<sup>2</sup>Chettinad Academy of Research & Education, Kelambakkam

<sup>3</sup>Madha Medical College, Chennai

<sup>4</sup>Thanjavur Medical College, Thanjavur

<sup>5</sup>Tagore Dental College, Chennai

<sup>6</sup>Tagore Medical College Hospital, Chennai

## ABSTRACT

**Background:** Tobacco harm reduction when advocated by care providers as continuum of care towards the goal of tobacco cessation might result in long-term abstinence than it is currently seen. This study aimed to qualitatively explore the healthcare professionals approach and self-reported practices related to tobacco harm reduction and smoking cessation.

**Methods:** A purposive sample (N=36) of multi-specialty healthcare professionals providing tobacco related cessation services at six private medical teaching institutes were engaged in semi-structured qualitative interviews between July 2020 and October 2020 in Chennai.

**Results:** The results indicated that majority of the healthcare professional's lack conceptual understanding about tobacco harm reduction. Harm reduction was practised and nicotine replacement therapy was prescribed by psychiatrists in this study. Majority of the healthcare professionals were found to have misconceptions that promoting harm reducing practices instead of cessation might result in continued addiction to nicotine products among the clientele.

**Conclusions:** The findings reveal that tobacco harm reduction remains an under-utilized clinical practice in Indian setting due to knowledge and awareness gaps among multi-specialty healthcare professionals. Improved sensitization through continuous medical education updates is needed to inform effective clinician-affirmative tobacco harm reduction practices.

**Keywords:** Healthcare professionals, tobacco, harm reduction, cessation, relapse

## INTRODUCTION

Globally tobacco consumption is considered to be one of the leading causes of preventable death. Tobacco causes about seven million avoidable deaths and it is responsible for over 12% of premature deaths across the globe.<sup>1</sup> Thus, tobacco use in multiple forms leads to decrease in life expectancy by 11 years among women and 12 years among men.<sup>2</sup> The World Health Organization predicts that the number

of tobacco related deaths will increase to one billion in the 21st century up from 100 million in the 20th century without rapid implementation of global tobacco control measures.<sup>3</sup> Smoking Cessation is not a standalone solution as it is not helping consumers as relapse rates within 6 months are high.<sup>4</sup> Hence by merely relying on cessation and accompanied relapses will lead to mortality rather harm reduction may extend the life span.<sup>5</sup>

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**Correspondence:** Aravind Manoharan (Email: m\_aravind86@yahoo.co.in)

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WHO Framework Convention on Tobacco Control has enlisted tobacco control policies such as including price and tax increases, pictorial warnings, prevention of smoking in public and work places, monitoring of tobacco use, offering help to quit, tobacco advertisement and promotion ban. These policies helped in achieving reductions in smoking prevalence of to about 1 per cent per year.<sup>6</sup> Although the execution of these policies appears to be successful, this international legislation focuses primarily on non-health related approaches to tobacco control but fails to directly address smoking cessation and harm reduction strategies.<sup>7</sup> It is the responsibility of international community to adopt health interventions such as harm reduction to ensure tobacco control.<sup>8</sup>

Harm reduction is minimizing the net damage to health for continuing tobacco users and the general population by substituting less harmful tobacco products for more harmful ones, particularly cigarettes.<sup>9</sup> One such modality is Nicotine Replacement Therapy (NRT) but the problem statement is that most of NRT users discontinue treatment prematurely because of misinformation about NRT which is a common cause of poor compliance.<sup>10</sup> The other causes of poor compliance with NRT includes concerns about safety, addictiveness, lack of confidence in efficacy, side effects, cost and relapse.<sup>11,12,13,14</sup> The lack of compliance can be tackled mainly by providing scientific information by health professionals to the patients undergoing NRT.<sup>12</sup>

Without a comprehensive program of scientific research, surveillance, and regulation, the potential benefit of harm reduction will go unrealized.<sup>15</sup> There should be a further focus of research on effective pharmacological and behavioural treatment modalities.<sup>16</sup> There is little understanding about healthcare professionals approaches to tobacco harm reduction as a potential path to guide and support the tobacco consuming client's needs towards tobacco cessation in India. Tobacco harm reduction when advocated by care providers as continuum of care towards the goal of tobacco cessation might result in long-term abstinence than is currently seen. With this background this study is aimed to qualitatively explore the healthcare professionals' approach and self-reported practices related to tobacco harm reduction and smoking cessation.

## MATERIALS AND METHODS

In this qualitative study principal investigator (STS) trained in qualitative research methodology conducted one-on-one, personal interviews for 23 participants and phone interviews for 13 participants among 36 purposively approached, consenting healthcare professionals. These included a diverse group such as psychiatrists, dentists, ear-nose-throat surgeons, physicians from general medicine and respiratory medicine specialties, obstetricians at six leading private teaching medical institutes between July 2020 and October 2020, in Chennai. Non-

probabilistic, convenient sampling was utilized and participants were recruited through snowballing technique and informed consent was obtained for audio recording of the interviews. Patient identifiers were omitted during recording of the interview. Institutional Ethics Committee approved this study. An interview guide was developed based on existing global, peer-reviewed literature on tobacco harm reduction and adapted to the meet the objectives of the study along with socio-demographic characteristics. It included a combination of pre-determined set of closed and open-ended questions which allowed for free flow style of conversation with care providers and natural enquiry and engagement in open discussion during interview. This allowed to explore the conceptual understanding of tobacco harm reduction, attitudes and practices and their willingness to promote harm reduction in their clinical practice was implemented. Piloting of the interview guide among three diverse professionals allowed for modification as per the regional context compared to global setting.

## Data Analysis

The audio content from the interviews was transcribed verbatim by Principal Investigator manually and read independently by two authors to identify recurring themes. The authors read and reread to familiarize with the transcripts and identified the emerging themes and sub-themes and attempted coding independently. The emerging codes were identified independently based on the set of questions included in the interview guide by the above authors and presented to the team and final set of the themes and sub-themes were arrived collectively after three rounds of discussion sessions (each for duration of 60-90 minutes) over a period of two weeks. At the end of this period, inductive approach was employed and consensus was arrived upon the final set of themes.

## RESULTS

The mean age of the study participants was 31.5± 10.6 years and was from different disciplines of medical and dental fields. 36.1% participants had experience for 5-10 years. (Table 1)

**Table 1: Socio-demographic characteristics of the study participants (N=36)**

Characteristics	Participants (%)
<b>Gender</b>	
Male	18 (50)
Female	18 (50)
<b>Age (years) (Mean ± SD)</b>	31.5 ± 10.6 years
<b>Work Experience</b>	
<5 years	2 (5.5)
5-10 years	13 (36.1)
10-15 years	9 (25)
15-20years	6 (16.7)
>20 years	6 (16.7)

**Table 2: Tobacco Harm Reduction approach themes and subthemes**

Themes	Sub themes
Poor Awareness about tobacco harm deduction (THR)	1. Reasons for lack of awareness about THR 2. Lack of training sessions on THR 3. Lack of knowledge updates related to tobacco
Favorable attitudes related to tobacco harm reduction	1. Self-support to THR 2. Peer support to THR 3. THR-better than tobacco cessation

Salient themes and sub-themes from the qualitative data are enlisted in Table 2 and described as below.

### **Theme: Poor Awareness about tobacco harm deduction (THR)**

Majority of healthcare professionals interviewed during this study revealed significant knowledge-awareness gap, thus are poorly informed about tobacco harm reduction approach in clinical practice.

#### **Sub theme: Reasons for lack of awareness about THR**

Most respondents identified the reasons contributing to lack of awareness about tobacco harm reduction (THR) and the absence of focus on tobacco harm reduction similar to tobacco prevention, control and cessation in National Tobacco Control Policy in the country emerged as a recurring theme.

*"We are not aware of such things; we have no such national program. I heard of NTCP."* (ENT Surgeon, Male, age 38)

*That's what even I don't know. Because even in the anti-tobacco campaign, whatever we do, I have not heard of such word. Because I saw yesterday for your interview request, till then am not aware of it.* (Periodontologist, Male, age 46)

One interviewee, (male, age 41) mentioned lack of proactive initiatives by government in promoting tobacco harm reduction.

*"Because of lack of what....stimulus programs by various each of these organizations... each of the institutions and even the government as such."*(ENT Surgeon, Male, age 43)

Another participant, (Psychiatrist, Male, age 35) noted that medical curriculum has not included syllabus on harm reduction as the reason for poor knowledge on THR.

*"Maybe the books haven't told much about it. Also, maybe the community providers who are involved in this particular thing, the awareness programs are not as great as the other programs?"* (Public Health Dentist, Female, age 35)

#### **Sub theme: Lack of training sessions on THR**

Most participants in this study (N=34) had not attended any training or continuous medical education (CME) event in the previous two years. One female participant explained that, it is more a customary or standard practice to include a single line about to-

bacco towards the end of presentation in any respiratory topic.

*"Tobacco usually we get to learn from Journals. I have not attended any CME on tobacco cessation or harm reduction."* (Respiratory Physician, Female, age 29)

Among the two participants who described training exposure on THR, a surgeon (male, age 29) organized the training for the commemoration of World No Tobacco Day (WNTD) and a respiratory physician (Female, age 34) attended an online session on Electronic Nicotine Delivery Systems (ENDS) popularly known as E-cigarettes.

#### **Sub theme: Lack of knowledge updates related to tobacco**

Eight participants shared that Medical Journals remain the major source for updates on tobacco, followed by online sources including social media sources.

*"It's a YouTube channels I just watch some clippings, some cases related to tobacco or implant failures.... one of the reasons for implant failures ....is tobacco smoking. Not very much particular about tobacco."* (Prosthodontics and Implantology, Male, age 37)

Also, a respiratory physician (Female, age 35) shared that they constantly follow the national and international guidelines for clinical management for tobacco clients.

*"We have COPD guidelines, which get updated; smoking cessation is actually a part of our COPD guidelines. It gets annual updates. It is from Indian authorities. We have these GOLD guidelines, which we follow"* (Respiratory Physician, Female, age 36)

*"Journal articles, personal or professional body, official, if we attend any conference."*(Orthodontist, female, age 45)

*"Drug related things I get from pharma people other than that I never thought specifically about tobacco."*(Psychiatrist, Female, age 40)

#### **Theme: Favourable attitudes related to tobacco harm reduction**

Majority of the practicing clinicians though unaware of concept and term of tobacco harm reduction were practicing as revealed during interviews. A female dental practitioner shared an experience of opportunistic counselling for reducing tobacco harms when clients came for dental aesthetic consultation with history of chronic tobacco smoking.

*"He was so much addictive to tobacco, just wanted to clean his teeth, I said 'I can do a scaling for his teeth and give you aesthetic look for your teeth. But what about your lung health? Why don't you start using reduced risk alternatives?' and just like in a month time he came back to the follow-up consultation and said he did use the product"* (Orthodontist, female, age 45)

Majority of participants were counselling and supporting their clients towards reducing the frequency of consumption of tobacco products whether clients are seeking services directly related to tobacco or not as their primary care for consultation.

*"After discussing with me because prosthetic part is not supporting his oral health due to smoking. He has to take some... some call on that, he has to reduce it, otherwise he has to keep on spending lakhs and lakhs for replacement, after discussing with me he used to have around 10 cigarettes per day. Now he has reduced it to one like that he has got into"* (Prosthodontics and Implantology, Male, age 37)

For example, another care provider shared the multiple approaches including abrupt cessation or gradual process of transitioning to reduced risk alternatives from combustibles tobacco products to nicotine replacement therapies and other licensed products available in the markets.

*"But given that they feel that they will not be able to cope if we do get a replacement. We do give them gum we do suggest gradual reduction also."* (Psychiatrist, Female, age 46)

Another interviewee shared her experiences with female tobacco users and narrated the variations of tobacco use between both the genders and health seeking behaviours as well as services provided to them.

*"I never got an opportunity to prescribe products with females, mostly with counselling they come out(of addiction) not like very.... strongly...dependent on the product like males, and mostly it lies within comorbidity so we never get a chance to recommend this appropriate medication."* (Psychiatrist, Female, age 40)

### **Sub theme: Self-support to THR**

Interviewees reported positive attitudes towards adopting harm reduction approaches in clinical practice in future additionally to cessation services whenever the client needs are explicit as is the case below:

*"Very hard to give up and If you push it more, they will not turn back and it goes back. So, you're to slightly go in that space and reduce it."* (Periodontologist, Male, age 46)

*"Yeahhhh.... Because most of the time, it's very difficult for the patients to discontinue the tobacco smoking."* (Psychiatrist, Male, age 34)

*"Actually, tobacco harm reduction has an effect and has very good effect, I believe. Like, they can have some alternative, they have access to, they have chewing gum, which give the same effect as tobacco chewing, (smokeless tobacco) which will be helpful for the patients to overcome this issue."* (Surgeon, Male, age 29)

Many of the interviewees were reflective of their tobacco related services during the interviews and few had been candid and honest in their admission to reveal their knowledge gaps and the difficult conversation they encounter in routine clinical practice with their clients.

*"Because I have not had a very great knowledge about this harm reduction, I normally say that it is better to quit rather than as now what we call as harm reduction. But still, these patients say that they cannot quit. That is what the problem."* (Oral Pathologist, Male, age 37)

Two psychiatrists interviewed in this study promote tobacco cessation as the first step to support their clients and only consider tobacco harm reduction as secondary to it whereas one interviewee was not in favour of harm reduction.

*"Usually, my advice is to go for cessation. So, I ask them to stop it immediately"* (Psychiatrist, Female, age 46)

*"See you must understand that harm reduction is just a part of, one option of tobacco cessation or tobacco management, we advise harm reduction only for more serious substances, people who use injection, then you give harm reduction by switching them to oral opioids, ok, in all other cases, we try to promote, abstinence, complete abstinence, many a time only that works"* (Psychiatrist, Male, age 42)

*"I'm not favour of it... Because then these people like to get addicted to the other products, like Nicorette gums... And also, electronic cigarettes. That's my understanding."* (Psychiatrist, Female, age 34)

### **Sub-theme: Peer support to THR**

Interviewees discussed their personal experiences in promoting tobacco harm reduction practices among their tobacco consuming clients and their attitudes in supporting the philosophy of tobacco harm reduction along with tobacco cessation in clinical practice.

*"Yes, yes, yes, we use similar methods for other psychoactive substances"* (Psychiatrist, Male, age 38)

*"Yes, THR is pretty much the only thing which is working even in the past and well aware by most psychiatrists, so they are doing this as I do."* (Psychiatrist, Male, age 42)

### **Sub-theme: THR-better than tobacco cessation**

Respondents in this study mostly favored promoting complete cessation among clients in their clinical practice however they also indicated that harm reduction yielded better results in the statements as below:

*"Yes, first we try for cessation, if cessation not possible surely harm reduction is possible."* (Psychiatrist, Male, age 42)

*"Well, the statement talks for itself actually."* (Psychiatrist, Male, age 38)

*"Abrupt cessation or setting a quit date doesn't always work Or I should say that THR has better success rate than instant quitting."* (Psychiatrist, Male, age 42)

## DISCUSSION

To our knowledge, this is the first qualitative study to explore the multi-specialists' perceptions and current clinical practices related to tobacco harm reduction. World Health Organization (WHO) promotes provider-initiated strategy widely known as 5A's and 5R's for brief opportunistic assessment and counseling for smoking cessation at the level of primary care.<sup>17</sup> Majority of our interviewees are promoting tobacco cessation among consumers intending to quit tobacco who are using predominantly smoking forms by improving their motivation to quit through personal counselling, by setting quit dates coinciding with personal milestones such as birthdays or anniversaries. Analysis of quit-line services data showed that among consumers who made a commitment by setting a quit date had increased rates of quitting.<sup>18</sup> Another study found that high-quality goal setting when delivered consistently motivates a higher proportion of callers to initiate quit attempts.<sup>19</sup>

In an Indian randomized control trial, cognitive behavioural therapy (CBT) along with health education delivered in dental hospital setting is more effective in abstinence increase and relapse prevention.<sup>20</sup> In a recent study assessing the effectiveness of tobacco cessation interventions offered by dental professionals, moderate-certainty evidence was found if pharmacotherapy was combined with behavioural support.<sup>21</sup> Healthcare professionals in this study were either prescribing either nicotine replacement therapy (NRT) products such as gums, lozenges, or transdermal patches or professionals such as Psychiatrists prescribed drugs such as bupropion or varenicline.<sup>22</sup> Multiple-studies including meta-analyses show that NRT increases the quitting rates including reducing the habit formation among chronic users.<sup>22, 23</sup>

Most of the interviewees revealed significant lack of conceptual awareness about "tobacco harm reduction" however most of them were actively practicing it by counselling the clients in reducing the frequency of use of tobacco products and initiating NRT products to support the preparation towards cessation. Though clinically none of them are providing follow-up services for any of these clients, these findings are in concurrence with a cross-sectional survey carried in 14 European countries which revealed limited awareness among health care providers about risk reduction concept. This could be due to lack of training and updates on tobacco cessation and

tobacco harm reduction and is important to highlight this knowledge gap.<sup>24</sup>

There has been a seismic shift in the understanding of tobacco addiction with International Classification of Diseases-10 categorizing of tobacco addiction as a mental and behavioural disorder.<sup>25</sup> The latest global adult tobacco survey-2 in India identified 55.4% of current smokers and 49.6 % of smokeless users thinking of quitting (GATS-1:46.1%).<sup>26</sup> The same survey places India had the 2<sup>nd</sup> lowest quit rates among the GATS-2 countries despite high awareness about deleterious health consequences associated with tobacco consumption.<sup>27</sup> Only 2% - 5% smoking consumers spontaneously quit smoking in India.<sup>28</sup>

According to WHO, hard-hitting anti-tobacco adverts and picture warnings prevented initiation among children and increased quitting among adult smokers.<sup>29</sup> It is long recognized that a combination of treatment approaches addressing biological, behavioural and social determinants leading to tobacco addiction are most effective. Despite this, evidence points to the reality that nicotine dependent consumers demonstrated low uptake and inferior efficacy in real world compared to experimental settings.<sup>30</sup>

In a novel study attempted in Bihar, community-centred approach with sustained interventions delivered through trained community volunteers were more effective compared to clinic-centred, intensive, individual approach in providing tobacco cessation activities.<sup>31</sup> In an Indian study among migrant construction workers, 66.56% have not attempted to quit and among low-income population groups the quit attempts are likely to be unsuccessful.<sup>32, 33</sup> It is estimated that by 2030, the proportion of tobacco-related deaths will have risen to 70% in low-income countries, and National Health Policy for India set a target of 30% reduction of tobacco users by 2025.<sup>34</sup> Thus it is increasingly becoming an urgent public health imperative to reduce the harms for tobacco consumers who are unable to quit the habit.

Harm reduction approach enables the tobacco consumers in any form to lessen the effects without total abstinence and is historically utilized more among smoking consumers.<sup>35</sup> This approach when practiced consistently might facilitate the patient towards complete cessation when complemented with adequate behavioral support in the long term while providing immediate short-term benefits to the individual and the family in the interim period. However, in a study from South Indian state of Kerala only one-third of surveyed doctors asked about tobacco history in their clinical practice, and only one-tenth offered useful information on quitting.<sup>36</sup> This can be promoted by clinicians in number of ways by substituting combustible smoking products to licensed nicotine replacement therapy (NRT) products such as gums, lozenges, patches, inhalers. Major barrier foreseen for prescription of NRT is the poor knowledge among care providers about prescribing nicotine replacement therapies and lack of on-job

training for tobacco cessation.<sup>37, 38</sup> In a study among primary health care physicians, only half of the participants had favorable attitudes and suboptimal preparedness (only 15% prepared) towards tobacco cessation and only marginal fraction self-reported adequate knowledge about prescribing pharmacological therapy.<sup>38</sup> These products also termed as pharmaceutical nicotine are classified as drugs and made available as smoking cessation therapies for only a recommended duration.<sup>16</sup> Studies have shown that clients supported with NRT products after smoking cessation have better relapse prevention rates.<sup>39</sup>

Currently, these products are not widely available in public health system at subsidized prices which contribute to low accessibility and poor affordability among the low-income groups who can benefit most from these reduced risk products. Authors recommend that pharmacotherapy and counselling for tobacco addiction to be covered in national health insurance schemes and can be offered at free of cost after physician recommendation.<sup>40</sup> A combination of measures targeting specific barriers for poor promotion of tobacco harm reduction and cessation services by healthcare providers including periodic on-the-job trainings, expansion of portfolio of tobacco clinical services in public sector clinics including provision of NRT products, community women volunteer training to address taboo and misconceptions among women tobacco consumers about smokeless tobacco use are urgently needed to reverse tobacco epidemic.

## CONCLUSION

This study presents novel qualitative data from private healthcare providers from various specialties about tobacco harm reduction practices from Chennai, South India. The findings highlight significant gaps in knowledge and practice towards tobacco harm reduction among all specialists as most of them strongly are in favor of complete cessation. The existing gaps in conceptual understanding of philosophy and principles of harm reduction partly explains the negative attitudes in promotion and adoption of tobacco harm reduction approach in clinical practice by participants in this study. There is scope to expand the understanding of health care professionals about tobacco harm reduction by undertaking sensitization sessions to reduce tobacco harms among consumers in Chennai.

## LIMITATIONS

This is the first qualitative study undertaken to explore the awareness about tobacco harm reduction practices among private healthcare providers from various clinical specialties from Chennai, South India. Thus, it captured qualitative inputs from only 36 specialists and study findings may be applicable to this setting alone.

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