

# **HOW DESIGN MIGHT HELP TO REDUCE SMOKING**

VED VISHNU BHAT KU2403U695  
PRANAV V NARAYAN KU2403U626  
HARSH NAIR KU2403U412  
SESHA SAI BHARADWAJ KU2403U690

FACULTY:  
PAVAN KUMAR  
SANDIPAN BHATTACHARJEE

# INTRODUCTION

We selected this topic to explore the reasons and rationale behind why people smoke, why they started smoking, what pushes them to smoke, if its stress or peer pressure and if they want to quit, what can help them quit and if not what's stopping them from quitting. We also wanted to understand if existing design elements are useful or effective in the means of helping someone quit smoking and if there are any changes of entirely new designs that we can come up with to help people with the same.

## Problem Statement

Despite knowing the risks, millions, including ordinary people struggle to quit smoking due to nicotine addiction, deep set habits, and lack of real support. Most solutions ignore the emotional, and psychological triggers behind smoking. There is a need for design that not just informs but actively supports and understands, the smoker's daily battle.

## Scope of study

The study pertains to students in college particularly surrounding or in Karnavati University

## Relevance and rationale

this topic is relevant in order to study the students mindset and pain points when it comes to smoking.

# RESEARCH OBJECTIVES

**There are a few objectives that we would like to achieve through this research or by the end of this research**

1. The main objective being to find an effective design alternate to a cigarette in order to get people to quit smoking.

2. We also aim towards understanding peoples mentality and pain points which pushes them towards a cigarette.

3. Something else that will help us come up with an effective design model is for us to understand why its hard for a smoker to quit.

4. Its also essential to understand peoples opinion on current and existing design models which are in favor of supporting quitting.

5. We need peoples opinions and their preferences on a design model which would put a conscious strain on their decision to quit smoking.

# LITERATURE REVIEW

## Theoretical Foundations

The prevalence of smoking amongst university students is common and widespread. Generally, the period of smoking gets triggered with the onset of adolescence. This period is also called student period in which the most behavioural traits are created.

The survey was conducted in one of the universities in Delhi/NCR during the academic year 2019 - 2020 by self-administering a questionnaire among the population of 200 students studying in various departments. The questionnaire included questions to analyse their knowledge, attitude and practice about smoking habits.



## Results

Of the total of 200 surveyed students (128 males and 72 females), the total number of smokers were 163 (106 males and 57 females).

# Global & Local Context

## Local Context

Health warning:

In 2006 the Indian Government first mandated that all tobacco products feature graphic warnings. These warnings became mandatory on 31<sup>st</sup> May 2009.

The health warnings on cigarette packaging in India have been changing. Although they are more intense than previous warnings, they have yet to be proven effective.

Despite tobacco control policies, the number of juvenile and young tobacco users is rising, as are diseases, disabilities, and deaths associated with tobacco use.

## Global Context

More than 150 countries have now implemented one or more tobacco control measures—three times the 44 countries that had done so in 2007—but the pace of progress has been decelerating since 2018, the World Health Organization has said.<sup>1</sup>

The global tobacco epidemic report, which was supported by Bloomberg Philanthropies, found that the number of countries with two or more control measures in place has increased almost 10-fold since 2007—from just 11 to over 100 countries. Additionally, 48 countries now have at least three policies in place.

# Benchmark Studies & Case Examples

5784 college students from 58 colleges (medical, nursing, engineering, arts, and law and fisheries) selected by cluster random sampling in the district of Ernakulum, Kerala, completed a self-administered questionnaire incorporating standardized instruments. R software was used for analyses. Lifetime prevalence and severity of tobacco use were determined. Furthermore, for each course, factors influencing tobacco use were identified.



To conclude, it appears that among college students, course-level characteristics may influence risk of tobacco use. This has public health importance as it suggests that interventions need to be tailored bearing this in mind. Future research needs to examine campus-level characteristics that may explain variance.

# **PRIMARY RESEARCH**

## **Methodology:**

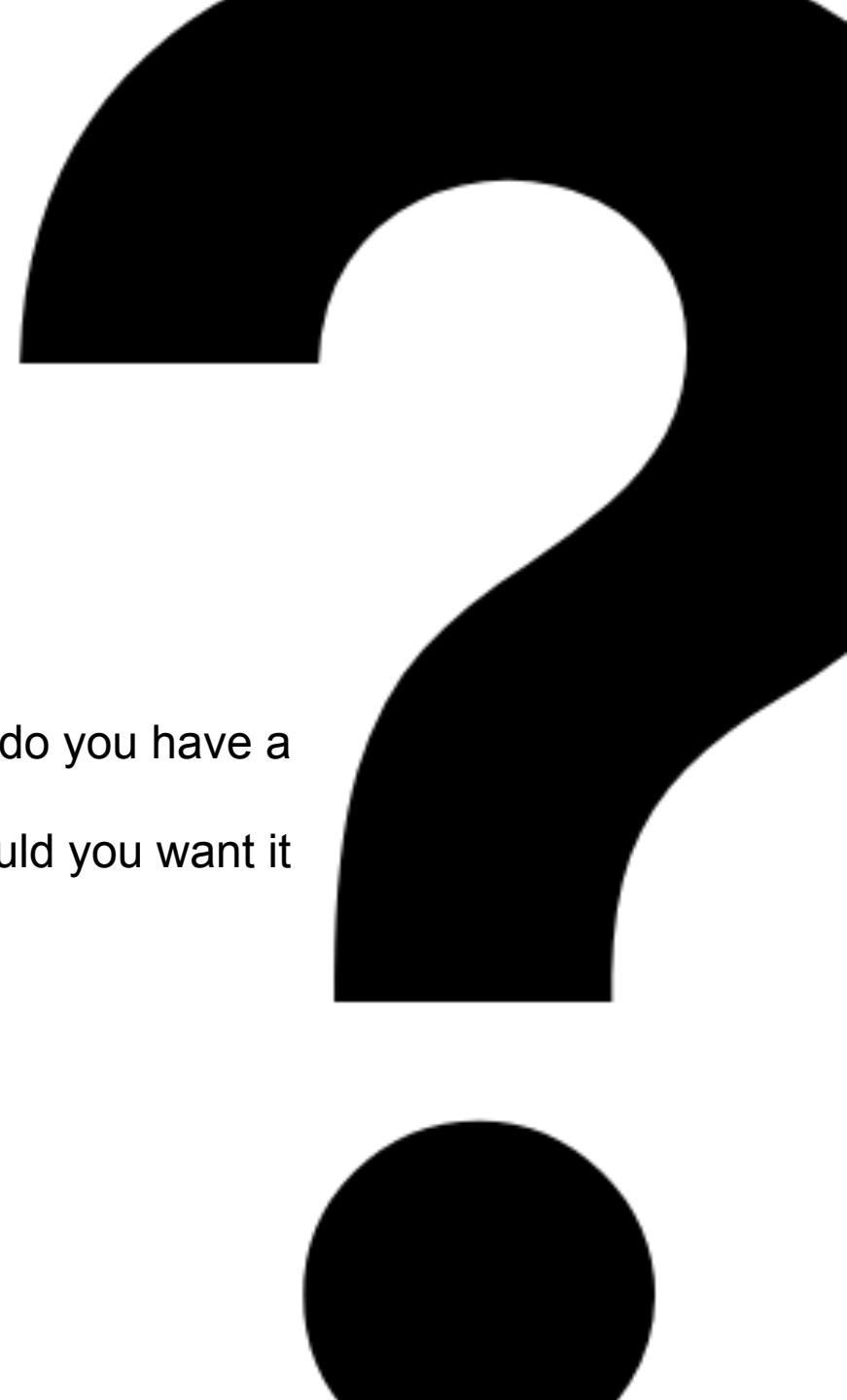
Our group decided to research the targeted group using interviews containing relevant questions and surveys.

The reason why we used interviews primarily to collect information is because access to people for interviewing was readily available, and we could do it at higher volumes.

## **Execution Details:**

The duration of this study is 2 weeks long

# THE QUESTIONS

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1. Do you smoke?
  2. Which year / semester are you and which department (UID, UIT, BBA, etc.)
  3. How many times in a day do you have the urge to smoke.
  4. What was the first time you started smoking and how was the experience?
  5. What was the reason you started smoking?
  6. What makes you want to smoke?
  7. Do you plan on quitting smoking? If yes, what makes you want to quit and do you have a plan to achieve it? If no, what makes you want to continue smoking?
  8. If we were to design a solution that reduces or prevents smoking, what would you want it to be?

**Sampling Strategy:** Interviewing college students who were smoking next to the University as they were the targeted demographic in this research analysis.

**Methods used:** Brainstorming, Finding out a problem statement, Secondary Research, Primary Research- Open Surveys, and Interviews, Affinity Mapping, and Semiotics.

**Location:** Vicinity surrounding the Karnavati University campus, particularly at local shops like 'Varahi', 'Lala' and 'Brahmani'

**Number of participants:** 70



# INTERPRETATION AND ANALYSIS

## Problem Reframing

the initial problem we came up with was that despite knowing the risks, millions, including ordinary people struggle to quit smoking due to nicotine addiction, deep set habits, and lack of real support. Most solutions ignore the emotional, and psychological triggers behind smoking. And the revised problem we concluded to after the research is that people have conceived smoking as an emotional support system and a coping mechanism to a point where they resort to a cigarette when their emotions are off check.

## Insights

[https://www.figma.com/board/  
V85VBaVB7bbTbT4iS0rXWf/classification?node-  
id=0-1&p=f](https://www.figma.com/board/V85VBaVB7bbTbT4iS0rXWf/classification?node-id=0-1&p=f)

## Patterns and anomalies

Majority of people who were interviewed started smoking when they came to college  
Surprising outliers:

A small sect of the people who were interviewed started smoking at an extremely young age (ages 11-13)

The number of people who want to quit and don't want to quit smoking is almost equal.

While there were students who moderately smoked during the day, there were outliers where students who smoked heavily on a daily basis.

# PROPOSED DESIGN INTERVENTION

## Final Concept

A portable, app-connected smoking alternative device designed to replicate the sensory and ritual aspects of smoking while gradually reducing nicotine intake. It combines a tactile, lighter-style ignition experience with customizable flavor pods (including nicotine-free options), supported by behavioral tracking and motivational cues.

## Core Features & Functionalities

The device works with replaceable pods containing measured doses of nicotine, allowing gradual reduction over time. Users can select flavours that mimic the smoking experience, while an accompanying mobile app tracks usage patterns, offers real-time reminders, and provides gamified rewards for progress. The lighter-inspired ignition creates a familiar ritual, maintaining the emotional and tactile satisfaction associated with smoking. Social features allow users to connect with others on the same quitting journey.

## Value Proposition

The intervention addresses both the physical addiction and psychological habits tied to smoking. By retaining the sensory rituals smokers enjoy—flavour, feel, and ignition—it eases the transition away from cigarettes without abruptly breaking familiar routines. The gradual nicotine reduction, combined with real-time tracking and community support, empowers users to quit in a sustainable and personalised way.

# Differentiation

Unlike traditional nicotine patches, gums, or basic vaping devices, this solution integrates ritual preservation with data-driven behavioral change. It doesn't simply replace nicotine intake; it blends emotional satisfaction, progress tracking, and community-driven motivation. This dual focus on habit and addiction makes it stand apart from purely medicinal or purely recreational alternatives.

## Implementation Roadmap

# Phases

Prototype – Build an initial working model of the device with core flavor pods and app interface.

Test – Conduct user trials with target audience to evaluate functionality, habit satisfaction, and nicotine reduction effectiveness.

Refine – Incorporate feedback to improve design, flavor profiles, app usability, and nicotine tapering system.

Deploy – Launch final product with targeted marketing, partnerships, and support programs.

# Resources Required

Skills: Product design, electronics engineering, app development, behavioral psychology.

Tools: 3D printing, circuit prototyping kits, app development platforms, usability testing software.

Partnerships: Health professionals, flavor manufacturers, quit-smoking organizations, hardware suppliers.

# Potential Challenges

User Resistance: Smokers may be hesitant to adopt new habits → Mitigation: Emphasise ritual familiarity and community success stories.

Regulatory Barriers: Tobacco/nicotine device compliance → Mitigation: Early legal consultation and adherence to safety standards.

Technical Reliability: Device/app malfunction risks → Mitigation: Rigorous prototyping and quality testing before launch.

# CONCLUSION

## Key Learnings

The research revealed that smoking is as much about ritual, habit, and emotional satisfaction as it is about nicotine addiction. Addressing both aspects is essential for sustainable quitting. Interviews showed that gradual transition, community support, and retaining familiar sensory cues significantly improve willingness to quit.

## Reflections

This project deepened our understanding of human-centred design, requiring empathy and creativity to bridge physical addiction with behavioural change. The process challenged us to think beyond a “quick fix” and create a solution that respects user psychology. Moving forward, the next steps involve detailed prototyping, extended field trials, and scaling production to reach a wider audience.

# ACKNOWLEDGEMENT

- We would like to sincerely thank our faculty mentors, Sandeepan sir and Pawan sir, for their constant guidance, constructive feedbacks, and encouragement throughout the two weeks of the Design Research module. Their insights not only helped us refine our approach but also deepened our understanding of how research forms the backbone of any design process. This journey has taught us the value of asking the right questions, observing with intent, and translating findings into meaningful, human-centred solutions.
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