"*Everyone is Allowed One Sin in Life*": A Qualitative Study on the Perceptions towards Smoking and Smoking Cessation in University Students

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Abstract In the UK, cigarette use is most prevalent among individuals aged 18-34 years, and it is a time when young people, particularly university students move from smoking occasionally to smoking regularly. This study aimed to explore students' perceptions of smoking and its cessation. This study employed a descriptive qualitative method that used in-depth interviews to collect data from study participants, and 20 students from Anglia Ruskin University were recruited using purposive sampling. Interviews were conducted with a semi-structured, openended questionnaire. Thematic analysis of data revealed four main themes, including: influences and triggers for initiating smoking behaviour, perceived benefits and justification for smoking, university intervention for smoking cessation support, and participants' views on programs for quitting smoking. The result shows that family expectations, stress, social acceptability, and peer influence were the key triggers for initiating smoking behaviour among students. There were various myths held by smoking students to minimise the health risks of smoking, such as the belief that physical activity counters the harmful effects of smoking. In line with existing research on prevention and treatment initiatives for smoking among college students, participants supported the enforcement of smoking bans in school environment, provision of free or affordable replacement therapies and implementation of smoke-free educational campaigns. This

study emphasizes the complexity of smoking behaviour and the need for comprehensive strategies to deal with the difficulties young adults face when starting, maintaining, and quitting smoking. Policymakers and health educators should develop targeted strategies to lower smoking rates and encourage healthier lifestyles among university students.

Keywords University Students, Smoking Cessation, Perceptions, Determinants, Qualitative Study, UK

1. Introduction

Smoking has a detrimental impact on people's health and wellbeing and is still a serious public health concern worldwide [1]. Smoking prevalence is on the decline but there are still more than 1 billion smokers in the world [2,3]. The World Health Organisation (WHO) reports that over 8 million people die from the tobacco epidemic each year; 1.3 million non-smokers are affected by second-hand smoke exposure, making it one of the greatest public health hazards the world has ever faced [4]. In England, smoking was the largest preventable cause of diseases including respiratory disease, cardiovascular disease, dementia, and early death in 2019, claiming 74,600 lives [5]. The consequences of smoking are diverse with negative impacts on the quality of life and socio-economic determinants of health [6-8]. The US Surgeon General and Centre for Disease Control (CDC) have concluded that there is no safe threshold for exposure to cigarette smoke [9,10].

In the UK, smoking is more prevalent among individuals aged 25-34 years (15.8%) and 18-24 years (13.2%) than among all other age groups [15]. University students mainly fall within this group [11] and it is a period in which young people transition from deliberate to habitual smoking [12]. Early studies suggested that youth smoking initiation is due to a wide range of social, environmental, and individual factors, such as an increase in independence, leaving the family home, and going to college where they are exposed to new experiences, peer influences, and a range of stressors [13-15]. Research also found that having a stable girlfriend or boyfriend who smokes, having a toxic relationship with parents, having a parental history of tobacco use, and drinking alcohol all had a role in the initiation of smoking behaviour [16]. Some authors have stressed that youth are the target market for the sale of tobacco products, as they are more exposed to tobacco advertising and promotions [17-19]. In addition, reports by the Office for National Statistics (ONS) from the 2021 census suggest that those with no formal education have a higher probability of being smokers than people with a degree. That said, it seems sensible to determine why students appear to be well informed about the dangers of cigarette smoking and yet underestimate the risk [15]. Understanding the psychological underpinnings of smoking behaviours among university students proves essential for developing effective interventions. Previous research has flagged challenges to stop smoking faced by youths including nicotine dependence and possible disengagement belief theory held by humans [20]. As defined by Li et al. [21], the disengagement belief theory is a process where individuals psychologically detach themselves from self-sanctions when considering or doing something wrong, in this instance, minimising the harmful effects of smoking and justifying the deed.

It is widely believed that heavy cigarette smoking among youth increases the probability of lifelong addiction [12,22,23]. Although this cohort has been identified as the group with the highest tobacco use, there is evidence that it is knowledgeable about the associated risks [24,25]. As published, cigarette users were more likely than non-users to reside away from campus, seemingly because of the strict smoke-free regulations at universities as opposed to the off-campus setting, where there may be more exposure to tobacco products [26,27]. While this may not be a compelling reason for students to give up smoking, it is a good attempt at reducing the frequency of smoking and possibly supporting quitting attempts. In addition to implementing a campus-wide smoking ban, there are several anti-smoking initiatives available to students. These include the provision of therapy and support through the 3A's and 5A's brief advice model, educational campaigns, face-to-face sessions, technology-based services, and mixed strategies, which effectively motivate behaviour change among students [28,29]. Although the prevalence of weekly smoking among young people in the United Kingdom (UK) has dropped to about 3% [30], records still show that more than 25% of Europeans use several tobacco products [31]. Hence, the prevention of youth smoking is still a top priority for public health policy. It is also crucial to assess student support for smoking and cessation programs. Universities can design targeted interventions that address specific barriers and motivations to quit.

This study aimed to explore the perceptions of Anglia Ruskin University (ARU) student smokers towards smoking and smoking cessation programs. This study will update and expand existing knowledge on the subject, providing insights that will guide further research. The findings from this study are expected to support evidencebased health policy development and contribute to the design of effective smoking prevention strategies.

2. Methods

2.1. Study Design and Setting

This descriptive qualitative study was conducted among student smokers on the ARU Chelmsford campus of Essex. Virtual Interviews were conducted in July and August of 2023.

This study setting was chosen because of the high prevalence of cigarette smoking among those aged 25 to 34 (15.8%) and 18 to 24 (13.2%) years, which is representative of the age cohort for most university students, compared to other age groups [5]. As of February 2023, ARU had 35,195 students across its five campuses [32]. Participants were selected from the faculties of Science & Engineering and Health, Education, Medicine & Social Care. As compared to medicine students, engineering students may have a more limited awareness of the detailed health consequences of smoking, thereby offering a unique perspective on smoking perceptions. The study population also had a robust representation of diverse ethnic groups, making it a good sampling frame.

2.2. Study Sample

Eligible study participants included current students at ARU who were above 18 years and identified as current smokers for at least one year or had smoked up to 100 cigarettes consistently since the inception of smoking, while those who were not currently studying at the university, non-cigarette smokers, and unwilling to participate were excluded from the study [33].

A purposeful sampling technique was employed to choose study participants because it enables the identification of information-rich cases by choosing participants who have in-depth knowledge and experiences related to the research topic [34]. This sampling method allows for maximum sample variation and considers deviant cases, resources, and time maximization [35]. A total of 20 in-depth interviews were conducted between June and August 2023. The sample size was determined based on the point at which no new insights addressing the research questions emerged from the data, indicating that saturation had been achieved [36].

2.3. Data Collection Tool

A preliminary interview guide was produced based on a literature review of the study's aim. This informed the creation of a semi-structured, open-ended questionnaire that was used to guide the interviews. The topic guide had two sections covering the general demographic information of the participants and questions focusing on the study's objectives and research questions; delve into the factors associated with the initiation of their smoking behaviour, and the overall challenges that students face to quit. It also delved into their knowledge and beliefs about the health consequences of smoking, their awareness, and the likelihood of using available smoking cessation programs. Interview questions were written and asked using English.

Before the data collection, the questionnaire used in this study was pilot tested to validate its effectiveness and appropriateness. This was aimed at ensuring that the interview guide captured the study objectives and generated relevant responses from participants. Pilot testing was conducted with three students who met the same criteria as the study sample. The participants expressed their opinions on the questions' clarity, interview flow, and whether any other topics needed to be added or changed. Feedback received during the pilot testing phase was implemented in the interview guide, and subsequent data collection with the real study participants employed the amended interview guide. Test participants were excluded from the final analysis.

2.4. Study Procedure

Current university students of ARU were invited to participate in the study through emails that were sent by the two faculty admins who acted as gatekeepers for liaison, intending participants to maintain the researcher's objectivity and contribute to the validity of the result. Those who expressed interest in participating were sent a copy of the Participant Information Sheet (PIS), which contained the aims, objectives, and rights of the participants. In addition, a written consent form was sent to be signed by the participants upon full understanding and acceptance of the terms in the PIS. Finally, the interview was scheduled based on the participants' location preferences, and the preferred mode of interview for all 20 participants was Microsoft Teams video call. The interviews were conducted by a researcher with training in conducting qualitative interviews. The individual interviews lasted for an average of 45 minutes.

2.5. Data Management and Analysis

The content of the interviews was transcribed verbatim, with the participant's consent. Detailed notes were taken during the interviews, including quotations used in the analyses. The notes were checked by listening to the recordings. After the interviews, the transcripts were analyzed by the researcher using manual thematic analysis, which involves discovering, analyzing, and presenting meaningful patterns and clusters within the data [37]. This was based on the six steps outlined by Braun and Clarke [38], including familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and writing the analysis. Interview responses were organized into themes and analyzed for connections between groups. Each theme was cross-checked to ensure that the data had been properly categorized. Finally, the specific themes were combined into one overarching subject.

2.6. Study Rigor and Trustworthiness

The term rigor refers to the quality of the research design and the method's suitability for addressing the research questions [39]. The study outlined the research design, objectives, research questions, and data collection procedures to ensure transparency. Purposeful sampling techniques were employed to ensure diversity in the participants' backgrounds, smoking behaviours, and attitudes. To reduce bias, the researcher had no direct relationship or links to the prospective participants before the interview. The invitation email was sent by gatekeepers in various faculties, and those who signified interest were signposted to the researcher. Participants who had not smoked cigarettes for up to one year were excluded from the study. Data collection took the form of one-to-one video interviews to gather rich and in-depth insights into the participants' perceptions. The interview questions were open-ended, and the interviewer used probing techniques to dig deeper into participants' responses. Participants had access to the recorded interviews and transcripts to validate the accuracy and credibility of the notes and to provide additional insights, if anything was missed. Rigorous and systematic coding thematic analysis was applied to analyze the data until thematic saturation was achieved. The study procedures have been sufficiently defined to allow other researchers to easily reproduce these results; hence, the study's findings may be trusted.

2.7. Ethical Considerations

This study was conducted in accordance with the tenets of the Declaration of Helsinki. Ethical approval for this study was provided by the Anglia Ruskin University School Research Ethics Panel (ETH2223-7151). Participants in the study were made aware that participation was completely optional and that any personal information learned from the interviews and conversations would be kept confidential. Prior to requesting a signed written consent form from the respondents, information outlining the purpose of the study was offered to them in a PIS and orally before individual interviews.

3. Results

Characteristics of Participants

The demographic characteristics of the students participating in this study are summarized in Table 1. Twenty current students, each identified by a unique serial number, participated in the interviews virtually via Microsoft teams. Participants were fairly distributed in terms of sex, with 13 males and 7 females ranging in age from 19 to 52 years. The ethnic backgrounds of the participants reflected a range of cultural perspectives with various ethnicities, including White British, Asian, Black British, Black African, and Indians.

65% of the study participants were identified as international students, 25% as home students, as well as students from the European Union (EU) (10%). Participants' degree statuses varied, with a mix of 7 undergraduate students and 13 postgraduate students.

Themes Identified

Four major themes emerged from the data analysis: influences and triggers for initiating smoking behaviour, perceived benefits, and rationalization of smoking despite health risks, a healthier campus environment, university interventions for smoking cessation support, and participant's views on programs for quitting smoking. Ten subthemes emerged from these four themes (Table 2). Further thematic analyses of the interviews are presented below: Each interview sample quoted was labelled with the age and gender of the respondent, including the unique participant serial numbers P1, P2, P3, and so on.

Table 1. Demographic Characteristics of Interview Participants

SN	Age	Sex	Ethnicity	Self-Identification	Degree status
P1	43	Female	Greek Caucasian	International	Postgraduate
P2	27	Male	White British	Home	Undergraduate
P3	46	Female	White British	Home	Undergraduate
P4	32	Female	Asian/Chinese	EU	Undergraduate
P5	37	Male	Black British	Home	Undergraduate
P6	26	Male	India	International	Postgraduate
P7	23	Male	White Portuguese	EU	Postgraduate
P8	28	Female	African/ Ugandan	International	Postgraduate
P9	31	Male	Hindu/Indian	International	Postgraduate
P10	24	Male	Black African	International	Postgraduate
P11	32	Male	Black African	International	Postgraduate
P12	52	Female	White British	Home	Undergraduate
P13	26	Male	Hindu/ India	International	Postgraduate
P14	32	Female	Roman Jewish	Home	Undergraduate
P15	23	Male	Indian	International	Postgraduate
P16	19	Male	Indian Christian	International	Undergraduate
P17	37	Male	Black African	International	Postgraduate
P18	29	Male	India	International	Postgraduate
P19	23	Female	India	International	Postgraduate
P20	25	Male	India	International	Postgraduate

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SN	Themes	Sub-themes	Codes	
1	Influences and Triggers for Initiating Smoking Behaviour	Family Influence	High expectations from family to get good grades, revolution against family rules of not smoking, family members who smoke, being away from family.	
		Stress and coping	Stress from having kids, academic work, environment, exams, finance, and housing.	
		Social influence and Peer influence	Social setting surrounded by older children who smoke, friends who smoke, normalised in social circle, peer group influence, colleagues who smoke, to associate with the fun guys, to fit in.	
2	Perceived Benefits and Justifications for	Perceived Benefits of Smoking	Habitual, addiction to nicotine, fear of withdrawal symptoms, weight loss, reduced craving for food.	
	Smoking Despite Known Health Risks	Misconceptions and Denial	Risk is debatable, not smoking enough to cause harm, older people who smoke still being healthy, fear of eating more and gaining weight, health consequences that are not immediate, active lifestyle to counter consequences; short term harms are not very harmful.	
3	A healthier campus environment; University	Policy and Infrastructure Changes	Ban smoking areas within the university; provide vape rooms, smoke free university; and situate smoking areas far away from campus.	
	Interventions for Smoking Cessation Support	Educational and Awareness Initiatives	Health promotion activities, awareness posters on smoking shelters included in the curriculum, sharing success stories of former smokers, signposts for students to stop smoking resources.	
4	Participants' Views on Programs for Quitting	Affordability and Policy Changes	Programs should be subsidised or free; the government bans cigarettes in the UK, increasing cigarette cost/tax.	
	Smoking	Promotion and Awareness	Promote stopping smoking services on campus, include smoking education into curriculum for freshman year, and display smoking cessation comms in smoking shelters.	
		Perception of vapes and nicotine products offer	Vapes are as risky as cigarettes, and vapes are more addictive, cheaper, more accessible than cigarettes, and the addiction to the process and action of smoking more than the nicotine in vapes.	

Theme 1: Influences and Triggers for Initiating Smoking Behaviour

When participants were asked which factors influenced them to commence smoking, three sub-themes emerged: Family influence, stress and coping, social influence, and peer influence.

1. Family Influence

Four participants mentioned that their decision to start smoking was driven by a desire to rebel against their families' strict rules against smoking, viewing it as an act of defiance.

... I come from a family who are anti smokers, fanatic and hate smokers. It was a revolution against family rules. So, it was very important that I do something against family expectations... (P1 female 43)

Participants noted instances in which family members, particularly parents, siblings, or specifically their mothers, were smokers.

... smoking was just normalised in my social circles. And one of my older brother smoked and then it started off being only when I've drunk alcohol... (P5 male 37)

2. Stress and Coping

Participants' replies revealed that stress plays a role in their decision to begin smoking cigarettes. The stressors they observed covered both academic and personal areas, highlighting the complex relationship between stress and initiation of smoking among university students.

... the stress of Uni and I started Uni during COVID and I was just like locked at home and just kind of discovering new things, and once I got to 2nd year, the assignments were like heavier and that stressed me... (P4 female 32)

3. Social Influence and Peer Influence

These findings highlight the impact of participants' social circles on smoking initiation. These included the influence of friends, normalization of smoking within their social circles, and the desire to fit in.

... friends were doing it and didn't want to feel like the black sheep so I joined in and before I knew it, I was addicted... (P2 male 27)

... there are two categories of people. Either you're with the big boys or you are with the termed losers, right? So, I went for a party. I needed to actually blend in because I didn't want to be identified as a loser in school and avoid being bullied... (P17 male 37)

Theme 2: Perceived Benefits and Justifications for Smoking Despite Known Health Risks

When participants were asked if they knew about the health risks of smoking, they all agreed to have knowledge of the various risk factors for smoking. However, they still smoked for several reasons. The two sub-teams that emerged were the Perceived Benefits of Smoking and Misconceptions and Denial.

1. Perceived Benefits of Smoking

Habits, addiction, social norms, coping mechanisms, and fear of withdrawal have emerged as major factors influencing the opinion of smoking benefits.

... I started smoking because it was just like a coping mechanism, you know, I was under pressure of exams, life... (P3 female 46)

Participants expressed concern about experiencing withdrawal symptoms as a potential discomfort from quitting smoking, reinforcing their habitual behaviour.

... I actually hate smoking. But I just can't quit because if the nicotine goes down in my body, it starts to react differently. So it's hard to quit; it's called withdrawal. So if I can get through that, I'll probably be able to quit. But it's hard to get through withdrawal, so that's why I can't quit... (P15 male 23)

2. Misconceptions and Denial

The participants believed that the actual risk posed by smoking was debatable. Some felt that they did not smoke enough to cause considerable harm, while others downplayed short-term consequences and believed that their bodies could withstand the effects of smoking.

... my granddad always used to say to me "everyone's allowed one sin in life", he died of lung cancer, and he'd never smoked a cigarette in his life, you know, his sin in life was buying 3 newspapers everyday; my main sin in life is having a cigarette. I acknowledged that there is a risk there, but it's debatable... (P2 male 27)

There was also a fear of gaining weight and the belief that smoking aids weight management.

... I needed to lose quick weight because I'm prediabetic. And now the fear that I start eating excessively is greater than the fear that one day this smoking could cause me really bad harm... (P14 female 31)

Theme 3: A Healthier Campus Environment; University Interventions for Smoking Cessation Support

When participants were asked about their views on university disposition towards smoking, responses were grouped into two sub-themes: Policy and Infrastructure Changes and Educational and Awareness Initiatives. 1. Policy and Infrastructure Changes

The participants' comments provided insights into creating a smoke-free or smoke-reduced campus environment. Many participants proposed creating smoking areas located far from the university campus. Some participants also suggested implementing smokefree policies on campuses.

... where I come from in India, you can't smoke around colleges. If you get a break and you wanna smoke, you'll have to walk a mile. The fact that you can just get out of your class and walk 2 minutes to a smoking area on campus is not good for smokers... (P16 male 19)

The idea of providing a vapor room demonstrates the willingness to consider harm reduction measures as an alternative to traditional smoking.

... The best thing that the university could do is to allow vaping in obviously selected areas so people could comfortably vape... (P12 Female 52)

2. Educational and Awareness Initiatives

Participants believed consistent health promotion activities such as campaigns, posters on smoking shelters that evoke relatability and hosting lectures featuring guest speakers who can share insights into the challenges and successes of quitting smoking.

... having some awareness messages on smoking shelters to say if you are thinking of quitting, we have this service every Wednesday 12 till 1 and also I think when you have conversations about the health implications it does put a light bulb, you think oh God yeah me lungs and... (P3 female 46)

Theme 4: Participants' Views on Programs for Quitting Smoking

When interviewees were asked about their views on existing smoking cessation services, the majority said they had never heard about the service and their responses towards their uptake of smoking services were grouped into two sub-themes: Affordability and Policy Changes, Promotion and Awareness and Perception of vapes and nicotine products offer.

1. Affordability and Policy Changes

Participants who have used smoking cessation services suggest that programs should be subsidized or provided for free, because costs may hinder individuals from accessing services.

... I registered for a stop smoking program but wasn't motivated to continue because I'd have to pay monthly for the service best to be highly subsidised or given for free. People who are addicted to cigarettes won't pay a penny to buy vapes or nicotine gums... (P17 male 37)

Participants believed that a complete prohibition would be a decisive step towards reducing smoking rates and urged the government to ban cigarettes in the UK. ... If it does cost the NHS such a huge thing, then as a government shouldn't, they just stop selling them, and ban them in the UK? If I don't have access to it, I'm gonna have to cope with those withdrawal symptoms... (B2 male 26)

2. Perception of Vapes and Nicotine Products Offer

Several interviewees raised concerns about vapes, implying that vapes are as dangerous as cigarettes.

... I'm afraid of vapes because I buy a pack of cigarettes for £15, 20 sticks, compared to a vape that is very cheap for £8, 10,000 puffs. The fact that I have something which is rechargeable makes me keep sucking on it like breathing air. Unlike cigarettes, I limit the number of sticks to three daily. But when it comes to vape, there's no limit because you don't realise how much you smoke until it finishes... (P16 male 19)

Some participants believed that it was more about the ritual and process involved in smoking cigarettes, which made it difficult to quit regardless of the cessation method used.

... Again, it's the whole mini ritual, going for a stroll, pulling out lighting, the movement, the breathing. I think it's not just the nicotine; it's all of that... (P7 male 23)

4. Discussion

The findings of this study are varied, and while concurring with previous studies on the factors that influence young people to take up smoking, it also provides new insights into the rationale behind smoking despite informed health risks.

The research highlighted factors that may influence students' smoking behaviour: social and peer influence to fit into a group and environment where smoking is a culture, coping mechanism for physical and mental stress and pressures from university coursework, work, friends and family members, and walking in the footsteps of family members who smoke. Some participants stated that they started smoking to rebel against their families' antismoking regulations. This finding is similar to that of previous research highlighting the intricate dynamics of family influence on smoking behaviour. One was conducted among African American adolescents, which showed a longitudinally negative connection between an overall measure of effective parenting and the future use of tobacco, alcohol, and marijuana [40]. Similar research documents smoking as a form of resistance to parental authority among adolescents and young adults [41]. In contrast to children who smoke to rebel against parental rules, there is evidence that smoking-specific parenting is effective in reducing smoking rates and uptaking among adolescents [42-44]. The Self-Determination Theory (SDT) as researched by Soenens and Vansteenkiste may be useful in explaining why some smoking-specific parenting techniques are protective, while others are not in stopping

young people from smoking [45]. SDT states that all humans have innate psychological needs for competence and autonomy in order to develop and function well. In other words, children raised by parents who adhere to this principle fully support the morals and guidelines set out by their parents and regard them as their own [46]. However, the best communication style is when parents maintain an autonomy supportive position and try to understand their children's viewpoints in contrast with the known "lecturing" or "preaching" method that actively questions and criticizes children while parents merely express their opinions [47]. Hence, parents should be encouraged to have respectful and constructive conversations with their children about the issues of anti-smoking-related education.

The analysis of the discussions on risk perception towards smoking indicates that, most participants were aware of the dangers associated with smoking, but still smoked for various reasons. Some participants mentioned their addiction to nicotine, coping with stress and social influence, and withdrawal anxiety. This finding aligns with the larger body of research on smoking behaviour, which frequently points to addiction and the use of cigarettes as a stress reduction technique. This is also in tandem with studies that highlight physiological and psychological dependence on nicotine as a major barrier to quitting [48]. Many students concurred with several myths undermining the harms of smoking, such as the idea that regular physical activity lessens most of the damaging effects of smoking or that smoking is a lesser evil than other common unhealthy behaviours. Some phrases that reflect the fatalistic attitude among interviewees include "something must kill a man", and "Everyone is allowed one sin in life" amongst others. This depicts a mix of optimism bias and disengagement belief theory which makes people think they are less susceptible to adverse outcomes than others [49]. Numerous studies have demonstrated that adherence to disengagement beliefs is linked to lower intentions to quit smoking [50]. However, research shows that educationbased interventions using the Health Belief Model (HBM) are effective in altering risk perceptions. For instance, Giti et al., in their interventional study, found that students who received the HBM educational intervention developed new attitudes and beliefs about smoking [51].

Another interesting finding was the fear of gaining weight as a barrier to quitting smoking. This concern is in line with the belief that smoking can be used to control appetite to lose weight [52,53]. Contrary to this belief, there are insufficient data to support a link between smoking and significant weight reduction in young adults [54], possibly because nicotine usage has a cumulative weight-reducing impact that only becomes noticeable in adulthood [55].

When asked about quit support, many students supported the need for infrastructural and policy reforms to promote a smoke-free campus environment. This is consistent with a systematic review on students' attitudes and behaviours towards a smoke-free campus policy, which found that it had an impact on reducing smoking activities in the university and, ultimately, helping the policy's goal of preventing second-hand smoke exposure [56]. Other studies, including a recent study conducted at the University of Birmingham, have shown to favour a no-smoking campus policy, both internationally [57] and locally [11]. Implementing smoke-free policies on campus and the relocation of smoking areas to distant locations aligns with the "denormalization" concept, which seeks to make smoking less visible and socially acceptable [58]. Such approaches have been shown to decrease smoking levels in university campuses [59].

The participants stressed the importance of campaigns to raise awareness and educate people about the dangers of smoking. There is substantial evidence on the effectiveness of anti-smoking campaigns and health promotion through the mass media. A group of researchers discovered a positive association between the amount of advertising and likelihood of quitting [60]. This is strengthened by other studies which uncovered that health campaigns can encourage behaviour change among students and are more effective when campaigns are longer and better funded [61]. The recommendations offered by the study participants, such as health campaigns, anti-smoking ads that are extremely emotional, and inclusion of smoking health education into the curriculum of new university entrants, align with other evidence-based smoking prevention approaches [62].

The majority of interviewees stated that they were unaware of the existence of a smoking cessation service in the locality. Those who have used this service raised concerns regarding the cost of maintaining the service, which was unexpected given that the National Health Service's (NHS) smoking cessation service is purportedly free of charge. They argued that the price of these services makes them difficult to obtain, especially as they require regular payments. It is reasonable to think that offering free or reduced cost smoking cessation medication may increase the use of cessation services and stimulate quit attempts among smokers, as backed by different studies [63]. In addition, consideration to providing equitable access to the service for individuals not in employment or from low socio-economic backgrounds, as it is evidenced that, people in this category are more disposed to smoking behaviours. Consequently, lowering costs or offering free smoking cessation programs may result in greater adoption and effectiveness of the service.

Some students recommended an outright ban on tobacco products to reduce smoking rates. Although this is a drastic step, it is consistent with existing literature regarding the possible advantages of more stringent tobacco control measures [64]. The discussions on risks of traditional cigarettes have led to an increased usage of e-cigarettes and vapes among young people. This poses a public health concern, as most e-cigarette liquids contain nicotine, which is known to be addictive [65]. Some participants voiced concerns about nicotine products and vapes, which are used as cessation aids, believing that they are just as deadly as cigarettes. This viewpoint has gained prominence among young people in the UK, as shown in the August 2023 ASH survey that four out of ten smokers in Britain wrongly believe that vaping is just as harmful as smoking [66]. Contrary to this belief, using e-cigarettes is a safer alternative than smoking cigarettes [67]. Students also mentioned that their addiction to cigarettes is a combination of their physical dependence on nicotine and their behavioural rituals associated with going out for a stroll, pulling out lighting, movement, breathing, and not just nicotine. These results highlight the necessity for thorough, evidence-informed smoking cessation programs that address not only the physical addiction, but also the psychological and environmental aspects that influence smoking behaviour.

4.1. Study Limitations

This study had some limitations. First, due to concerns about confidentiality, many students who had initially registered their interest in being interviewed declined after reading the PIS and noting that interviews would be recorded. However, we discontinued the interviews as soon as we obtained multiple reoccurring themes with no new insights. Second, the study was conducted in the third trimester of the academic session, and most undergraduate students were on break or interning, with limited access to their emails and varying levels of engagement in academicrelated activities. However, there was an option for virtual interviews: students' willingness to participate might have dropped as a result of other non-academic-related commitments.

5. Conclusions

In conclusion, this study showed that the factors, such as peer pressure, stress, and family influence, affecting students' decision to start smoking, have not changed significantly. Students continued to smoke despite being aware of the negative effects of smoking on their health for a variety of reasons, including nicotine addiction and denial of the actual risks of smoking. This shows how crucial it is for smoking cessation programs to address psychological and social aspects of addiction.

In terms of perceptions towards smoking cessation, it was recommended that policy changes be implemented, such as curtailing the use of cigarettes within the campus, making cessation programmes more affordable and accessible, and conducting consistent awareness and health education activities. These findings have significant implications for educational institutions and public health programmes aimed at promoting healthier campus environments and for smoking prevention and cessation among young people.

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Conflict of Interest

None.

REFERENCES

- [1] D. Mantaleon, and H.K. McLaughline, "Smoking and health: A looming menace to public well-being," Health Science Journal, vol. 17, no. 7, pp. 1-3, 2023. https://doi.org/10.36648/1791-809X.17.7.1045
- [2] A.R. Kaufman, J.E. Twesten, J. Suls, K.D. McCaul, J.S. Ostroff, R.A. Ferrer, N.T. Brewer, L.D. Cameron, B. Halpern-Felsher, and J.L. Hay, "Measuring Cigarette Smoking Risk Perceptions," Nicotine & Tobacco Research, vol. 22, no. 11, pp. 1937-1945, 2020. https://doi.org/10.10 93/ntr/ntz213
- [3] M.B. Reitsma, M. Ng, S.F. Abera, G.Y. Abyu, A.O. Adebiyi, A. Al Alkerwi, P. Allebeck, "Smoking prevalence and attributable disease burden in 195 countries and territories, 1990–2015: a systematic analysis from the Global Burden of Disease Study 2015," The Lancet, vol. 389, no. 10082, pp. 1885-1906, 2017.https://doi.org10.101 6/S0140-6736(17)30819-X
- [4] World Health Organisation. "Tobacco fact sheets," 2023. https://www.who.int/news-room/fact-sheets/detail/tobacco
- [5] Office for National Statistics. "Adult smoking habits in the UK:2021," 2022. https://www.ons.gov.uk/peoplepopulatio nandcommunity/healthandsocialcare/healthandlifeexpectan cies/bulletins/adultsmokinghabitsingreatbritain/2021
- [6] S. Rezaei, S. A. Akbari, M. Arab, R. Majdzadeh, and P.A. Mohammad, "Economic burden of smoking: a systematic review of direct and indirect costs," Med J Islam Repub Iran, vol. 13, no. 30, pp. 397, 2016. https://www.ncbi.nlm.nih.g ov/pmc/articles/PMC5004566/
- [7] P. Böckerman, A. Hyytinen, and J. Kaprio, "Smoking and long-term labour market outcomes," Tobacco control, vol. 24, no. 4, pp. 348-353, 2015. https://doi.org/10.1136/tobac cocontrol-2013-051303
- [8] V.U. Ekpu, and A.K. Brown, "The Economic Impact of Smoking and of Reducing Smoking Prevalence: Review of Evidence," Tobacco Use Insights, vol. 8, pp. 1-35, 2015. https://doi.org/10.4137/TUI.S15628
- [9] Center for Disease Control and Prevention. "Health effects of cigarette smoking," 2015. cdc.gov/tobacco/data_statistic s/fact_sheets/health_effects/effects_cig_smoking/
- [10] U.S. Department of Health and Human Services. "The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General," 2014. www.surgeongener al.gov/library/reports/50-years-of-progress/full-report.pdf

- [11] S.E. Bartington, R. Wootton, P. Hawkins, A. Farley, L.L. Jones, and S. Haroon, "Smoking behaviours and attitudes towards campus-wide tobacco control policies among staff and students: a cross-sectional survey at the University of Birmingham," BMC public health; BMC Public Health, vol. 20, no. 1, pp. 252, 2020. https://doi.org/10.1186/s12889-020-8321-9
- [12] E.K. Do, S. Tulsiani, D.M. Vallone, and E.C. Hair, "Transitions in Frequent to Daily Tobacco and Nicotine Use among Youth and Young Adults," Substance use & misuse, vol. 57, no. 11, pp. 1681-1687, 2022. https://doi.org/10.10 80/10826084.2022.2107674
- [13] J. O'Loughlin, I. Karp, T. Koulis, G. Paradis, and J. DiFranza, "Determinants of First Puff and Daily Cigarette Smoking in Adolescents," American Journal of Epidemiology, vol. 170, no. 5, pp. 585-597, 2009. https://doi.org/10.1093/aje/kwp179
- [14] W. Lenney, and B. Enderby, ""Blowing in the wind": a review of teenage smoking," Archives of Disease in Childhood, vol. 93, no. 1, pp. 72, 2008.https://doi.org/10.1 136/adc.2006.109702
- [15] S. Tewolde, B.S. Ferguson, and J. Benson, "Risky Behavior in Youth: An Analysis of the Factors Influencing Youth Smoking Decisions in Canada," Substance use & misuse, vol. 41, no. 4, pp. 467-487, 2006. https://doi.org/10.1080/1 0826080500521730
- [16] L.D.P.C. Afanador, D.S.S. Radi, L.E.V. Pinto, C.E.P. Pinz ón, and M.F.C. Carre ño, "Sociocultural Determinants of Tobacco Smoking Initiation among University Students in Bucaramanga, Colombia, 2012," International Journal of Preventive Medicine, vol. 5, no. 9, pp. 1106-1112, 2014.
- [17] A.B. Barker, K. Whittamore, J. Britton, and J. Cranwell, "Content analysis of tobacco content in UK television," Tobacco control, vol. 28, no. 4, 2019. https://doi.org/10.11 36/tobaccocontrol-2018-054427
- [18] C. Lovato, A. Watts, and L.F. Stead, "Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours," Cochrane Database of Systematic Reviews, vol. 10, 2011. https://doi.org/10.1002/14651858. CD003439.pub2
- [19] R.J. Wellman, D.B. Sugarman, J.R. DiFranza, and J.P. Winickoff, "The Extent to Which Tobacco Marketing and Tobacco Use in Films Contribute to Children's Use of Tobacco: A Meta-analysis," Arch Pediatr Adolesc Med, vol. 160, no. 12, pp. 1285–1296, 2006. https://doi.org/10.1001/ archpedi.160.12.1285
- [20] M. Kleinjan, R.J.J.M. van den Eijnden, and R.C.M.E. Engels, "Adolescents' rationalizations to continue smoking: The role of disengagement beliefs and nicotine dependence in smoking cessation," Addictive Behaviors, vol. 34, no. 5, pp. 440-445, 2009.https://doi.org/10.1016/j.addbeh.2008.1 2.010
- [21] J. Li, B. Yuan, and G. Zeng, "The attitude towards Ecigarettes, disengagement belief, E-cigarette health literacy and susceptibility among youths and adolescents," International Journal of Adolescence and Youth, vol. 25, no. 1, pp. 849–860, 2020.https://doi.org/10.1080/02673843.20 20.1758174
- [22] S. Moran, H. Wechsler, and N.A. Rigotti, "Social Smoking Among US College Students," Pediatrics, vol. 114, no. 4,

pp. 1028-1034, 2004. https://doi.org/10.1542/peds.2003-0558-L

- [23] P.M. Ling, and S.A. Glantz, "Why and How the Tobacco Industry Sells Cigarettes to Young Adults: Evidence From Industry Documents," American journal of public health, vol. 92, no. 6, pp. 908-916, 2002. https://doi.org/10.2105/ AJPH.92.6.908
- [24] L. Campo, S. Lumia, and S. Fustinoni, "Assessing Smoking Habits, Attitudes, Knowledge, and Needs among University Students at the University of Milan, Italy," International journal of environmental research and public health, vol. 19, no. 19, pp. 12527, 2022. https://doi.org/10.3390/ijerph191 912527
- [25] O. Al Omari, L. Abu Sharour, K. Heslop, D. Wynaden, A. Alkhawaldeh, M. Al Qadire, and A. Khalaf, "Knowledge, Attitudes, Prevalence and Associated Factors of Cigarette Smoking Among University Students: A Cross Sectional Study," Journal of community health, vol. 46, no. 3, pp. 450-456, 2021.https://doi.org/10.1007/s10900-020-00874-0
- [26] M. Noland, M.J. Ickes, M.K. Rayens, K. Butler, A.T. Wiggins, and Hahn, E.J. "Social influences on use of cigarettes, e-cigarettes, and hookah by college students," Journal of American college health, vol. 64, no. 4, pp. 319-328, 2016. https://doi.org/10.1080/07448481.2016.11 38478
- [27] M.J. Ickes, E.J. Hahn, M. McCann, and S. Kercmar, "Tobacco-free Take Action!: Increasing Policy Adherence on a College Campus," World medical and health policy, vol. 5, no. 1, pp. 47-56, 2013. https://doi.org/10.1002/wmh 3.20
- [28] Muhammad Siddiq, Md Mizanur Rahman, Sabrina Binti Lukas, Kamarudin Bin Kana, Merikan Bin Aren, Rudy Ngau Ajeng, Mohd Faiz Gahamat, "5A's and 3A's Adolescent Smoking Interventions as Nicotine Dependence Endgame Initiatives in Sarawak, Malaysia," Universal Journal of Public Health, vol. 11, no. 5, pp. 698-707, 2023. https://doi.org/10.13189/ujph.2023.110519.
- [29] K. Setchoduk, P. Pichayapinyo, P. Lapvongwatana, N. Chansatitporn, "The effectiveness of tobacco cessation programs for university students: A systematic review and meta-analysis," Tobacco induced diseases, vol. 21, pp. 73, 2023. https://doi.org/10.18332/tid/162001
- [30] NHS Digital. "Smoking, Drinking and Drug Use Among Young People in England – 2016," 2017. https://digital.nhs.uk/data-andinformation/publications/statistical/smoking-drinking-anddrug-use-among-young-people-in-england/2016
- [31] European Union. "Attitudes of Europeans towards tobacco and electronic cigarettes," 2021. https://europa.eu/eurobaro meter/surveys/detail/2240
- [32] Higher Education Statistics Agency. "Where do HE students study," 2023. https://www.hesa.ac.uk/data-andanalysis/students/where-study
- [33] M. Mohammadnezhad, G. Tsourtos, C. Wilson, J. Ratcliffe, and P. Ward, "I have never experienced any problem with my health. So far, it hasn't been harmful": older Greek-Australian smokers' views on smoking: a qualitative study," BMC Public Health, vol. 15, no. 304, 2015. https://doi.org/10.1186/s12889-015-1677-6

- [34] M. Q. Patton, "Designing qualitative studies," Qualitative research and evaluation methods, vol. 3, 2002.
- [35] H. Suri, "Purposeful Sampling in Qualitative Research Synthesis," Association for Qualitative Research, 2011. https://go.gale.com/ps/retrieve.do?tabID=T002&resultList Type=RESULT_LIST&searchResultsType=SingleTab&re trievalId=c4a7212d-fd0a-41ff-b376-9c09457c9d1c&hitCount=1&searchType=AdvancedSearc hForm¤tPosition=1&docId=GALE%7CA27513072 7&docType=Report&sort=RELEVANCE&contentSegme nt=ZONE-MOD1&prodId=AONE&pageNum=1&contentSet=GALE %7CA275130727&searchId=R1&userGroupName=anglia _itw&inPS=true
- [36] G. Guest, E. Namey, and M. Chen, 'A simple method to assess and report thematic saturation in qualitative research," PLoS One, vol. 15, no. 5, pp. e0232076, 2020. https://doi.org/10.1371/journal.pone.0232076
- [37] J. Ritchie, R. Ormston, N.C. McNaughton and J. Lewis, "Qualitative research practice: a guide for social science students and researchers," SAGE Publications, 2013.
- [38] V. Braun, and V. Clarke, "Using thematic analysis in psychology," Qualitative research in psychology, vol. 3, no. 2, pp. 77-101, 2006. https://doi.org/10.1191/1478088706q p063oa
- [39] B.S. Cypress, "Rigor or Reliability and Validity in Qualitative Research: Perspectives, Strategies, Reconceptualization, and Recommendations," Dimensions of Critical Care Nursing, vol. 36, no. 4, pp. 253-263, 2017, https://doi.org/10.1097/DCC.0000000000025
- [40] M.J. Cleveland, F.X. Gibbons, M. Gerrard, E.A. Pomery, and G.H. Brody, "The Impact of Parenting on Risk Cognitions and Risk Behavior: A Study of Mediation and Moderation in a Panel of African American Adolescents," Child development, vol. 76, no. 4, pp. 900-916, 2005. https://doi.org/10.1111/j.1467-8624.2005.00885.x
- [41] Z. Harakeh, R.H.J. Scholte, H. de Vries, and R.C.M.E. Engels, "Parental rules and communication: their association with adolescent smoking," Addiction, vol. 100, no. 6, pp. 862-870, 2005. https://doi.org/10.1111/j.1360-0443.2005.01067.x
- [42] A. Broun, D. Haynie, and K. Choi, "Parental Anti-Smoking Encouragement as a Longitudinal Predictor of Young Adult Cigarette and E-cigarette Use in a US National Study," Nicotine & Tobacco Research, vol. 23, no. 9, pp. 1468-1474, 2021. https://doi.org/10.1093/ntr/ntab026
- [43] M. Hiemstra, R.N.H. de Leeuw, R.C.M.E. Engels, and R. Otten, "What parents can do to keep their children from smoking: A systematic review on smoking-specific parenting strategies and smoking onset," Addictive Behaviors, vol. 70, pp. 107-128, 2017. https://doi.org/10.1 016/j.addbeh.2017.02.003
- [44] T. Thorlindsson, T. Bjarnason, and I.D. Sigfusdottir, "Individual and Community Processes of Social Closure: A Study of Adolescent Academic Achievement and Alcohol Use," Acta sociologica, vol. 50, no. 2, pp. 161-178, 2007. https://doi.org/10.1177/0001699307077657
- [45] B. Soenens, and M. Vansteenkiste, "A theoretical upgrade of the concept of parental psychological control: Proposing

new insights on the basis of self-determination theory," Developmental review, vol. 30, no. 1, pp. 74-99, 2010. https://doi.org/10.1016/j.dr.2009.11.001

- [46] E. Gritz, A. Prokhorov, K. Suchanek Hudmon, M. Mullin Jones, C. Rosenblum, C. Chang, R. Chamberlain, W. Taylor, D. Johnston, and C. de Moor, "Predictors of susceptibility to smoking and ever smoking: A longitudinal study in a triethnic sample of adolescents," Nicotine & Tobacco Research vol. 5, no. 4, pp. 493-506, 2003. https://doi.org/10.1080/1462220031000118568
- [47] M. Joussemet, R. Landry, and R. Koestner, "A Self-Determination Theory Perspective on Parenting," Canadian psychology, vol. 49, no. 3, pp. 194-200, 2008. https://doi.org/10.1037/a0012754
- [48] P. Fagan, E. Augustson, C.L. Backinger, M, E. O'Connell, R. E. Vollinger, A. Kaufman, and J.T. Gibson, "Quit Attempts and Intention to Quit Cigarette Smoking Among Young Adults in the United States," American Journal of Public Health, vol. 97, no. 8, pp. 1412-1420, 2007. https://doi.org/10.2105/AJPH.2006.103697
- [49] P. Slovic, "What does it mean to know a cumulative risk? Adolescents' perceptions of short-term and long-term consequences of smoking," Journal of Behavioral Decision Making, vol. 13, no. 2, pp. 259–266, 2000. https://doi.org/10.1002/(SICI)1099-0771(200004/06)13:2<259::AID-BDM336>3.0.CO;2-6
- [50] Z. Triandafilidis, J. M. Ussher, J. Perz, and K. Huppatz, "It's one of those "It'll never happen to me" things': young women's constructions of smoking and risk," Health, Risk & Society, vol. 19, no. 5–6, pp. 260–283. 2017. https://doi.org/10.1080/13698575.2017.1384801
- [51] A. Giti, D. Shojaeizade, G. Heidari, S. Khodakarim Ardakani, A. Ramezankhan, "The effect of educational intervention based on health belief model on smoking preventive behaviors among female students," J Educ Community Health, vol. 9, no. 3, pp. 162-169. 2022. https://doi.org/10.34172/jech.2022.24
- [52] M. Fang, "Association Between Adolescent Body Mass Index and Adulthood Smoking," Nicotine & Tobacco Research, vol. 21, no. 12, pp. 1629-1635, 2019. https://doi.org/10.1093/ntr/nty183
- [53] J. Cawley, S. Markowitz, and J. Tauras, "Lighting up and slimming down: the effects of body weight and cigarette prices on adolescent smoking initiation," Journal of health economics, vol. 23, no. 2, pp. 293-311, 2004. https://doi.org/10.1016/j.jhealeco.2003.12.003
- [54] Centers for Disease Control and Prevention Office on Smoking and Health. "Preventing tobacco use among youth and young adults: A report of the Surgeon General," 2012. https://www.cdc.gov/tobacco/data_statistics/sgr/2012/cons umer_booklet/pdfs/consumer.pdf
- [55] S. Dare, D.F. Mackay, and J.P. Pell, "Relationship between Smoking and Obesity: A Cross-Sectional Study of 499,504 Middle-Aged Adults in the UK General Population," PLoS ONE, vol. 10, no. 4, 2015. https://doi.org/10.1371/journal. pone.0123579

- [56] S. Mohmad, and A. Ismail, "Smoking behaviors and attitudes towards the smoke-free campus policy: a systematic review," Malaysian Journal of Public Health Medicine, vol. 21, no. 3, pp. 124-135, 2021. https://doi.org/10.37268/mjphm/vol.21/no.3/art.1095
- [57] G. Al-Jayyousi, R. Kurdi, S. Alsaei, H. AL-Kaabi, A.J. Alrushdi, and H.F. Abdul Rahim, "Students' perceptions of a university 'No Smoking' policy and barriers to implementation: a cross- sectional study," BMJ open, vol. 11, no. 6, pp. e04369, 2021. https://doi.org/10.1136/bmjop en-2020-043691
- [58] D. Hammond, G.T. Fong, M.P. Zanna, J.F. Thrasher, and R. Borland, "Tobacco Denormalization and Industry Beliefs Among Smokers from Four Countries," American Journal of Preventive Medicine, vol. 31, no. 3, pp. 225-232, 2006. https://doi.org/10.1016/j.amepre.2006.04.004
- [59] D. Seo, J.T. Macy, M.R. Torabi, and S.E. Middlestadt, "The effect of a smoke-free campus policy on college students' smoking behaviors and attitudes," Preventive medicine, vol. 53, no. 4, pp. 347-352, 2011. https://doi.org/10.1016/j.ypm ed.2011.07.015
- [60] A. Hyland, M. Wakefield, Cheryl Higbee, G. Szczypka, and K.M. Cummings, "Anti-tobacco television advertising and indicators of smoking cessation in adults: a cohort study," Health Education Research, vol. 21, no. 2, pp. 296–302, 2006. https://doi.org/10.1093/her/cyh068
- [61] M.A. Wakefield, B. Loken, and R.C. Hornik, "Use of mass media campaigns to change health behaviour," The Lancet, vol. 376, no. 9748, pp. 1261-1271, 2010. https://doi.org/10 .1016/S0140-6736(10)60809-4
- [62] M.C. Farrelly, J.C. Duke, K.C. Davis, J.M. Nonnemaker, K. Kamyab, J.G. Willett, and H.R. Juster, "Promotion of Smoking Cessation with Emotional and/or Graphic Antismoking Advertising," American Journal of Preventive Medicine, vol. 43, no. 5, pp. 475-482, 2012. https://doi.org/10.1016/j.amepre.2012.07.023
- [63] D.B. Floor A van, G.E. Nagelhout, K. Hummel, M.C. Willemsen, A. McNeill, and C.P.V.S. Onno, "Does free or lower cost smoking cessation medication stimulate quitting? Findings from the International Tobacco Control (ITC) Netherlands and UK Surveys," Tobacco control, vol. 28, no. 1, 2019. https://doi.org/10.1136/tobaccocontrol-2017-054023
- [64] L.S. Flor, M.B. Reitsma, V. Gupta, M. Ng, and E. Gakidou, "The effects of tobacco control policies on global smoking prevalence," Nature Medicine, vol. 27, no. 2, pp. 239-243, 2021. https://doi.org/10.1038/s41591-020-01210-8
- [65] E.L.S. Leavens, T.T. Smith, N. Natale, and M.J. Carpenter, "Electronic Cigarette Dependence and Demand Among Pod Mod Users as a Function of Smoking Status," Psychology of Addictive Behaviors, vol. 34, no. 7, pp. 804–810, 2020. https://doi.org/10.1037/adb0000583
- [66] Action on Smoking and Health (ASH). "Four in ten smokers wrongly believe that vaping is as or more harmful as smoking," 2023. https://ash.org.uk/mediacentre/news/press-releases/four-in-ten-smokers-wronglybelieve-that-vaping-is-as-or-more-harmful-as-smoking

[67] R. Daynard, "Public health consequences of e-cigarettes: a consensus study report of the National Academies of Sciences, Engineering, and Medicine: Committee on the review of the health effects of electronic cigarettes of

electronic nicotine delivery systems," Journal of Public Health Policy, vol. 39, no. 3, pp. 379–381, 2018. https://doi.org/10.1057/s41271-018-0132-1