The Impact of the Tobacco-Free Policy on the AUC New Cairo Campus

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The Impact of the Tobacco-Free Policy on the AUC New Cairo Campus

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Abstract

In 2019, the American University in Cairo (AUC) conducted a research study on campus attitudes towards tobacco use and smoking behaviors within their community, in light of the then newly enforced tobacco-free policy. They found most campus members in support of the policy, with higher rates of disapproval from the smoking community. In 2021, this research aimed to follow-up on changes in attitudes towards the policy as well was smoking behaviors. It hypothesized that over time, levels of support to the policy would increase, smoking habits would be positively impacted and that positive health behaviors would correlate with policy support.

Student participants (n=101) were given a three-part survey consisting of: The Positive Health Behavior Scale (PHBS) which aimed to assess positive health behaviors, select items from the “Tobacco Use within the AUC Community ‘19” survey which measured levels of agreement with the policy, and an assessment of knowledge on policy stipulations. Two Tobacco Free Committee members and four student participants who attended the implementation were also interviewed to add richness to the data.

The results showed a significant increase in agreement with the policy. However, there was a significant drop in agreement on an item asking if people follow the policy, and on an item asking if the size of the smoking areas was adequate. No correlation was found between positive health behaviors and levels of agreement with the policy. Over half of smoking participants also reported smoking less after the policy’s implementation. The interviews reflected themes revolving around the agreement to the policy’s intent and stipulations along with complaints about administration’s methods of communication of the policy. This research concluded that the tobacco-free policy had an overall successful and positive impact on AUC campus.
The Impact of the Tobacco Free Policy on the Attitudes and Smoking Behaviors on the AUC New Cairo Campus

**Introduction**

According to WHO reports (2018), tobacco smoking is the cause of over eight million deaths every year, 1.2 of which occur due to impact of second-hand smoke worldwide. In 2015 alone, there were six million tobacco-related deaths with over 600,000 of them caused by second-hand smoke (World Health Organization, 2015). Between 2015 and 2018, the fatalities due to second-hand smoke almost doubled, which stresses the necessity for intervention. With rapidly rising statistics on tobacco-related mortality, preventative initiatives in various settings, such as academic institutions and workforce environments, may be essential in potentially saving millions of lives.

Egypt shares in the rising statistics on tobacco-related deaths. The Tobacco Atlas (2018) reports over 90,000 deaths every year with about 20% the population being smokers and about 95% of those current users smoking daily (Fouda et. al, 2018). Harbour (2011) discussed some of the social risk factors involved with higher smoking behaviors in the Egyptian culture. These included social settings that involve smoking peers, older age groups and being male and participating in work environments that promote smoking behaviors. Targeting these risk factors may help reduce smoking rates in Egypt. A ban on smoking in academic institutions reduces exposure to smoking peers and work environments that promote smoking behavior. It also reduces exposure to secondhand smoke.

In 2018, the American University in Cairo launched a smoking ban, known as the Tobacco Free Campus Initiative, to be put into effect the following year as part of the university’s centennial celebration. AUC published their Tobacco-Free Community Policy stating
that it was banning tobacco and any of its products starting the 25th of August 2018 (The American University in Cairo, 2018). Smoking would only be permitted in designated areas at the campus’s parking lots. The Tobacco Free Campus Committee, consisting of smoking and non-smoking students, faculty and staff, was created to help prepare campus members for the new change.

In order to gauge campus’s perception of the policy and to develop effective implementation strategies, the committee designed a survey under the management of the Office of Strategy Management and Institutional Effectiveness (SMIE). From that data, they were able to work with administration to initiate phases of the policy, so as to gradually introduce a smoke-free campus. For example, designated smoking areas were accommodated according to results they received from that survey. The policy was advertised as a green initiative to prevent second-hand smoking harms rather than as a means of stopping users from smoking, but nonetheless, the Tobacco Free Committee also promoted a cessation clinic as a tool for those who wanted to quit smoking completely. The policy was also said to aim to “respect the rights of non-smokers and protect the wellbeing” of its campus community (The American University in Cairo, 2018, p.1).

In 2019, after the Tobacco Free Campus Initiative was put into effect as a policy, the SMIE office conducted a follow-up study on the attitudes and behaviors of AUC’s smoking and non-smoking populations. While there was initial backlash from the smoking population, they found that most of the respondents were pleased with the smoke-free environment, but there was a difference in opinion between smokers and nonsmokers regarding the maintenance of the policy. Many smokers felt the penalties for violations were too strict and that the designated smoking areas did not accommodate them well enough. The ban has since been in effect for about two years.
The current research is a follow-up study on the SMIE’s research from 2019 regarding attitudes towards tobacco use and smoking behaviors within the AUC community after the implementation of the policy. Similar to that study, this research aims to investigate how the campus community perceives the tobacco-free policy by gathering data on student opinions and recommendations. Because the policy’s implementation received initial backlash, this study aims to follow up on any potential changes of attitude towards the policy after two years and assess its indicated effectiveness by observing whether campus members have become more satisfied with the policy’s enforcement. In addition, this research aims to identify potential factors impacting the community’s level of support for the policy, and to suggest improved strategies for inclusive communication and policy implementation at AUC.

**Literature Review**

**Smoking in Egypt**

According to the Tobacco Atlas (2018), in Egypt, over 90,000 people are killed by tobacco-related diseases every year. Over a million adults (15+) and 40,000 children (10-14) continue to use tobacco despite its adverse effects. According to their report from 2016, over 23% of male users (including child users) die from tobacco use – that is over 900 deaths in a week. Over 200 female users are also killed per week by tobacco use which make up about five percent of their respective population (The Tobacco Atlas, 2018). Despite these statistics being lower than other countries with similar social economic structures, Egypt continues to face serious problems related to tobacco smoking.

Anwar and Senosy (2021) discussed the prevalence of smoking among university students in different parts of Egypt. Outside of Cairo, the researchers reported that Beni-Suef university students had a 17.4% smoking prevalence, similar to the Suez Canal University
prevalence of 17.7%. Kafr El-Sheikh reported an 11% smoking prevalence while Banha University reported 9.9%. Cairo universities showed much a higher prevalence of over 31% and interestingly, Fayoum universities showed similar data with a 26% smoking prevalence.

Risk factors for smoking in Egypt include smoking peers, older age groups, being male and participating in work environments that promote smoking behaviors, low education levels in the family, no weekly allowances, low levels of self-esteem, and peer pressure. Students observing teachers normalizing and promoting smoking behaviors was also considered a risk factor (Atwa et.al, 2019; Ba-Break et al., 2021; Harbour, 2011). In addition, a higher level of awareness of the harms of smoking predicted a lower likelihood to engage in smoking behaviors (Atwa et al., 2019), and a study of university students in Egypt found that academic stress was one of the main factors motivating student smoking (Forden & Carrillo, 2016).

It is important for academic institutions to implement tobacco-related health interventions at the university level for a number of reasons. Primarily, the adolescent period in the western world has been highlighted as the start for most people to experiment with substances, like alcohol and tobacco (Johnston et al., 2010; Klein et al., 2013). Colder et al. (2008) also commented on college as being a period with usually escalated levels student smoking behaviors. Klein et al. (2013) emphasized the necessity for early interventions, with things like tobacco-free policies, to help avoid the early onsets of harmful smoking behaviors. Berg et al. (2010) also highlighted the importance of these tobacco-policy interventions at college level because of the higher levels of motivation to quit smoking amongst college students.

The Effectiveness of Smoking Policies for Universities

There is literature that supports the claim that the enforcement of smoke-free policies plays an important role in reducing smoking initiation (Lupton & Townsend, 2015; Sendall et al.,
2020), and the number of universities in the U.S that have implemented tobacco policies has more than doubled in the past five years (Wang et al., 2018). That increase may suggest an increase in awareness on the importance of tobacco-free campuses and the need for protection from secondhand smoke. However, Trad et al. (2018) examined this rise in policy implementation across multiple institutions in the United States and found a very low percentage of universities actually enforcing existing tobacco-free policies. That is important to note when assessing the effectiveness of implemented tobacco policies, because less effective policies may mostly be due to a lack of policy enforcement and low levels of compliance (Mamudu et al., 2012). Nonetheless, Fallin-Bennet et al. (2017) found that campuses with comprehensive tobacco policies had less cigarette butt litter, and overall community support and compliance with maintaining smoke-free campuses.

Factors Impacting Compliance with Tobacco Policy

In general, campus community members appear to be open to a smoke-free campus. Pacheco et. al (2018) found in their study on American Indian tribal students that most students wanted a smoke-free campus, and smokers who planned on quitting were also more likely to want a smoke free campus. In Bartington et al.’s (2020) study on a university in Birmingham, over 86 percent of students and staff were also in support of a smoke-free campus. Atiba et al. (2020) observed a campus in Nigeria (a country with lower smoking prevalence) and compared their findings with data from the other universities in New Zealand and Australia (countries with higher smoking prevalence). Interestingly, they found overarching attitudinal support for tobacco-free policies from both universities in Nigeria and New Zealand and Australia. Sendall et al.’s research (2020) also found that tobacco-free policies on Australian campuses are
generally well-supported by both users and nonusers, despite the country’s higher prevalence of tobacco use.

Despite research that finds overall support for college smoking bans, there are individual and community factors that have been found to impact acceptance and compliance. Some of the individual factors that correlate with greater support for and compliance with tobacco bans include being female, older in age, and having higher levels of education. Individuals that displayed greater levels of agreement were also more likely to be interested or engaging in positive health behaviors like concern with nutrition, exercise and mental health (Burns et al., 2016; Doucet et al., 2007; Glasgow et al., 2021; Stock et al., 2001.) Stock et al. (2001) specifically mentioned that these positive health behaviors were usually seen amongst the same female populations that showed greater agreement with health intervention policies. Dependence on nicotine makes students less likely to comply (Braverman et al., 2018,) and at the community-level, a lack of community concern about tobacco harms can make policies less effective (Chow et al., 2017.) Furthermore, staff and faculty may not comply because they don’t see observance of the policy as part of their roles on campus (Sendall et al., 2020.) In addition, tobacco industry marketing, social economic status, and cultural backgrounds can also impact compliance (Burns et al., 2016; Lund et al., 2016.)

Lund (2016) argues that smokers’ opposition to tobacco policies is related to social marginalization of smoking populations. Braverman et al. (2014) investigated attitudes of campus community groups, including smokers, former smokers and nonsmokers on a tobacco-free policy. They found that former smokers were just as opposed to tobacco-free policies as current smokers. The authors speculated that being a part of the smoking community, even without being a current user, may impact the community’s attitudes towards a smoke-free
campus. A lack of compliance can also result from social hesitancy on the part of nonsmoking populations due to cultural norms that constrain people from being more vocal (Burns et al., 2016.)

Campus communities usually display greater support for tobacco policies after implementation (Glasgow et al., 2021; Lupton and Townsend, 2015). Smoking bans may reinforce a “norm shift” regarding community support for a tobacco-free campus (Proctor-Scherdtel & Collins, 2012). Berg and Lin (2020) examined this attitude shift towards campus wide smoking bans and found that these policies were able to change people’s attitudes towards smoking instead of only lessen smoking behavior. This attitude shift phenomenon is interesting to note when it comes to assessing the effect of a ban on a campus population. Braverman et al.’s (2014) study may link with the notions of the cognitive dissonance theory to explain why some communities eventually end up complying and agreeing with the policy they were initially opposed to (Berg & Lin, 2020; Fointait & Pelt, 2015; Glasgow et al., 2021; Procter-Scherdtel & Collins, 2012).

It seems that by preventing a previously supported behavior through policy enforcement, that members begin to shift their attitudes towards that policy to match their new behavior. This change can be explained by the cognitive dissonance theory. According to cognitive dissonance theory, engaging in behaviors that violate a person’s moral codes causes an internal conflict which an individual always tries to reduce, either by changing their behavior or modifying the moral code that clashes with said behavior (Fointait & Pelt, 2015). According to Fointait and Pelt (2015), this dissonance reduction process is called ‘rationalization’ and is often expressed through action. This concept is crucial in understanding policy compliance, even with an initial attitudinal disapproval. The literature suggests that as behavior is forced to change so too would
the attitudes in order to reduce the aroused dissonance (Vallacher, 1992). For example, a newly instated policy removing a popular alcoholic beverage from the market could involve either one of the following reactions: regular customers of the beverage could revolt against the policy to have it removed (and have their behavior match their attitude about the drink), or by time old customers may report feeling indifferent or even against their forbidden beverage (and have their attitudes follow their behavior of not buying the drink enforced by the policy).

The tobacco-free policy at AUC was not intended for individual smoking cessation, but the theory of cognitive dissonance may help us understand how a ban might influence the patterns of belief that exist with smokers. According to Fotuhi et al. (2013), smokers’ cognitive rationalizations regarding their desire to smoke not only downplay the harms of smoking but help them persist in the behavior. More interestingly, they suggested interventions similar to policy enforcement, whereby smokers are not given smoking as an ‘escape route’ to minimize the dissonance but are rather challenged to minimize it through other methods. Tobacco-free policies may therefore work to not only protect the nonsmoking community, but also to encourage smokers to stop smoking.

**Impact of University Campus Attitudes on Tobacco Policy Implementation**

Appropriate policy enforcement strategies can be developed through identifying the attitudes of campus communities towards tobacco policies, and then understanding how these attitudes affect compliance (Sendall et al., 2020). For example, Niemeier et al. (2014) found that university students in the US who were in support of tobacco-free policies were more likely to view them from a more personal perspective and be concerned with environmental factors like the impact of secondhand smoke and importance of breathing smoke-free air. On the other hand, students who opposed the policies were more likely to recommend solutions that didn’t involve
them quitting smoking on campus, but that also included less community exposure to
secondhand smoke. For example, some of their ideas included on campus designated smoking
areas. These two different sets of views are likely to require different implementation and
enforcement strategies. In another example, Bower and Enzler (2005) investigated university
student perceptions in the US on the importance of tobacco-free campuses and found overall low
levels of concern regarding having a smoke-free environment. The authors commented that this
lack of concern could be influenced by increased levels of stress, which acts as a primary
motivating factor for students to continue smoking. In this case, implementation and enforcement
strategies that emphasize the benefits of a smoke-free environment are not likely to be
successful, while strategies that aim to reduce student stress as an alternative to smoking, might
be more effective.

Lund (2016) found that on campuses in the United States that smoking populations are,
more often than not, supportive of partial smoking bans when the bans are explicit about
smoking harms; for example, she found the highest level of support when the ban was around
children. In another study (Castañeda et al., 2010), researchers found community members’
primary concern regarding a tobacco-free policy was that it was seen as “socially risky.”
Members of smoking populations were worried about losing the social life they had built around
engaging in smoking behaviors. Even nonsmoking members who were close with smokers
expressed concern that the dynamic would shift if they were forced to stop smoking on campus.
The researchers were able to counter this by providing on campus health training programs
which they claimed not only helped members feel more comfortable in a new social atmosphere
(that didn’t include smoking) but also helped them engage in more health-related conversations.
Smokers tend to argue for personal freedoms to smoke wherever they, while nonsmokers may highlight their right to breathing clean air need (Niemeier et al., 2014; Sendall et al., 2020). It is important to address this conversation before policy implementation to increase levels of compliance (Niemeier et al., 2014; Sendall et al., 2020). Braverman et al. (2014) found that campuses that promoted widespread support of a tobacco-free policy helped increase individual acceptance and compliance with it. This means that new staff members, or newly enrolled students were more likely to automatically comply and agree with a tobacco-free campus policy if they perceived the campus community as already compliant.

Culture can also influence attitudes toward tobacco-free policies. In Egypt and other areas of the Middle East, the pervasive use of water pipe (shisha) which is seen as less harmful than cigarette smoking, may prevent people from quitting tobacco (Atwas et al., 2019; Fouda et al., 2018; Haddad et al., 2011; Mostafa, 2020.) This dismissal of the harms of the water pipe on balance with tobacco smoking may contribute greatly to the cultural mindset that views tobacco policies as futile (Mostafa, 2020). When it comes to implementing tobacco policies on Egyptian campuses, such cultural phenomena should be considered, especially regarding defining what it means to be smoke-free. Researchers investigating tobacco policies in universities the Middle East found that students who smoked had significantly less knowledge of the harms of smoking than nonsmokers. They suggested that smoking cessation programs as well as educational campaigns on smoking policies, would help motivate students to reduce smoking (Abu Shomar et al., 2014.)

**Enforcement Strategies**

While various factors, like lack of concern and cultural mindsets, influence the effectiveness of tobacco-free policies on campuses, there are enforcement strategies that
institutions could consider to mitigate some of the backlash. For example, Lupton and Townsend (2015) reviewed the effectiveness of certain strategies to help maintain tobacco-free policies after enforcement. They mentioned that different strategies would be effective in different contexts but that it was important to consider that significant effectiveness was usually observed after years of policy implementation. For example, they discussed the effectiveness of designated smoking areas which not only cater to smokers, but provide boundaries between them and nonsmokers. They mentioned 25-foot smoking ban buffers near building entrances as another strategy which proves effective after years of policy implementation. The reason for this is because members of each community is given enough time to adapt to the changes and form clearer understandings of the policy’s stipulations.

Researchers Sendall et al. (2020) suggest amassing signatures of campus members who agreed with the policy. They propose that this strategy promotes greater compliance because the signatures become a form of campus commitment to actively pursue a smoke-free environment. Glassman et al. (2011) also emphasized the importance of forming a committee to increase tobacco-free advocacy resources. Committees consisting of campus representatives are effective as a platform for voicing campus concerns and having a real ability in being able to act upon such concerns, if any. The authors also mentioned it was unrealistic to have students or faculty representation uphold a campus wide policy. They emphasized the effectiveness of administrative sustainability with things like penalties for violations as a more realistic method for overall policy compliance and maintenance.

Bottom-up approaches may increase the likelihood of success for the implementation of and compliance with tobacco policies because of the higher level of community involvement (Brinkhurst et al., 2011; Castañeda et al., 2010.) Strategies for bottom-up approaches include
identifying and involving community change makers, including faculty and staff in implementation (Brinkhurst et al., 2011,) and promoting the notion of a social community which cares about individual wellbeing and desires to better its environment for the collective group. Campus activities such as student debates allow for student involvement while also promote the purpose of the policy (Glassman et al., 2011). Fallin-Bennett et al. (2017) argue for the importance of conceptualizing enforcement as a social approach, where community members are not only involved in the policy implementation process, but also in how to sustain it over time. They specify techniques such as tracking smoking hotspots, using what they call the "AIR" method or approach, inform, and refer to campus community members.

**Communication Strategies to Introducing Change**

When institutions implement policies, it is important to consider how they approach communication and transparency. Appropriate communication can affect policy compliance because the way it is framed may impact overall support. For example, Williams et al. (2016) found that communication strategies didn’t matter much with nonsmokers because they were always more likely to support tobacco-free policies for health reasons. However, with smoking members, framing policies as part of a green movement for campus, rather than an effort to stop users from smoking, increased their level of support. Communicating to campus members that anything associated with smoking is bad and therefore should be removed is different from advocating an overall concern for campus physical health and well-being. The latter is usually easier to digest.

Neimeier et al. (2014) discussed framing strategies, whereby the method of communicating a policy is carefully considered, as an effective route to managing community reactions to policy changes. They investigated this by communicating policies through different
frames and observing campus members’ reactions. For example, they framed the tobacco policy in terms of health and wellbeing of campus members, and as aiming for community cleanliness. They found that with this type of framing, opponents of the policy tended to provide solutions to achieve smoke-free campuses without infringing upon their right to smoke, rather than demonstrate unmoving resistance. They also suggested using “I” to publicize policies, to make them more personal to the students and motivate change. Similarly, Harbison and Whitman (2008) suggested communicating policies by via campus members rather than administration. They mentioned that this strategy may render more positive first impressions on the policy. These methods of inclusive communication may play a helpful role in reducing the initial backlash that results from the smoking communities on campus.

**AUC’s Strategy and Approach to a Tobacco-Free Campus**

AUC began its policy implementation journey in 2018. They formed the Tobacco-Free Committee, which helped mediate between administration and campus members to enhance the two phases of the policy’s implementation. The policy was publicized with more festivity than most policies since it was launched hand in hand with the university’s centennial celebration. Then gradually, designated smoking areas were built on campus but away from department buildings. After a few more months, the university entered phase two, and the areas were moved further away until they reached the parking lots on all gates around campus. After receiving some backlash, the Tobacco Free Committee was able to accommodate some survey responses to make the designated smoking areas more comfortable by adding chairs, cushions and shades. They promoted their cessation clinic once or twice and received little to no attention.

The policy has been maintained by publicizing fines for any smoking violations which were reported by security guards around campus. In 2019, the SMIE’s follow-up survey showed
that 70% of participants reported the main reason for users violating the policy was due to the inappropriate location of the designated smoking areas. The report also indicated an average response for agreement with the policy of 4.3 (agree) from the nonsmoking participants and an average of 2.6 (disagree) from the smoking participants.

AUC administration implemented the tobacco-free policy with a lot of recommended strategies from the literature. For example, they formed a tobacco-free committee as suggested by Glassman et al. (2011), conducted an initial survey to build upon their process and promoted the policy via emails along with optional educational programs, which didn’t end up going into effect (Abu Shomar et al., 2014; Burns et al., 2016; Castañeda et al., 2010; Niles & Barbour, 2011). Despite these strategies, they continued to receive backlash, specifically from the smoking community. This leads to question whether administration could have better implemented the suggestions from their community to receive less initial backlash with the policy and the designated smoking areas. In addition to that, the current study asks whether the passing of time (two years) impacted the AUC community’s level of agreement with the policy.

Research Hypotheses

By taking into consideration the literature concerning tobacco-free policies on campus grounds, research hypotheses have been developed to guide the investigation.

1. The level of an individual’s positive health behaviors will correlate with their agreement with the tobacco-free policy
2. Over time, campus members’ level of agreement with the policy will increase.
3. After two years of enforcement, smokers will report smoking less than they used to.
Methods

This study aimed to measure the impact of the tobacco-free policy at AUC on attitudes and smoking behaviors by measuring campus community levels of agreement and changes in smoking behaviors as well as attempting to identify factors that may have influenced such levels, such as positive health behaviors and knowledge of the policy’s stipulations.

Participants

This study included 101 survey participants, all of whom were students. Participants were collected via self-selected sampling. Of the 101 participants, 82 participants were female and 19 were males. Eighty-one percent (n = 82) were undergraduates (13% freshmen, 21% sophomores, 33% juniors and 15% seniors) and 18% (n=19) were graduate students. There was a skew in the demographics regarding student majors because 40% (n=41) of the participants majored in humanities related studies with the remaining 60% divided across other fields of study (12% arts, 11% sciences, 20% business related, 14% engineering, 3% language). Only 16% of survey participants were smokers. The sample by Forden and Carrillo (2016) included 17% smoker participants who were students. From the SMIE’s 2019 report, 33% of student participants were smokers.

In addition to the survey participants, there was a self-selected sampling of six interviewees; two were faculty members of the Tobacco Free Committee and the remaining four were students who were on campus during the implementation of the policy. Two of the students were part of the smoking community (one smoker and one nonsmoker that had close smoker friends) and the remaining two were nonsmokers. The nonsmoker interviewee whom self-identified as a smoker sympathizer emphasized their grouping as part of the smoking community from how closely attached they were to people of that social hub.
Materials

Survey

At the beginning of the survey, participants were asked to respond to six demographic items identifying their class standing, gender, major, frequency on campus, smoking frequency if they smoke and if they responded to the SMIE report of 2019. For the quantitative portion, a three-part survey measuring health behaviors, agreement with the policy and knowledge of the policy was administered. In addition, participants responded to a 26-item positive health behavior scale (PHBS) developed by Woynarowska-Soldan et al. (2018). The scale included four subsections measuring health behaviors: nutrition, physical activity, relaxation and behaviors related to mental health and preventative behaviors. Each item on the scale had a score from zero to three: zero being “never or almost never” and three being “always or almost always” engaging in said positive health behavior. The scale’s total score (which is a three across the board) of 78 would indicate overall positive health behavior.

Participants also responded to 13 selected and modified Likert scale items from the “Tobacco Use within the AUC Community ’19” report. Of the 13 items, five were follow-up items further assessing participant agreement and impact of the ban on smokers’ behaviors. The section ended with a 14th open-ended item “In your opinion, how do you think AUC could have better communicated the stipulations of tobacco-free policy?” The final portion of the survey was a four-item true or false assessment on knowledge of the tobacco policy. Each item also had a “not sure” option (see Appendix 4 for full survey).

Cronbach’s alpha was used to measure the internal consistency of the PHBS scale; a score of .73 indicated that it had good reliability. The portion that asked about agreement with the policy consisted of eight items that matched the “Tobacco Use within the AUC Community
‘19” report. The remaining five were modified to measure the potential impact of the ban on smokers’ behaviors. The Cronbach’s alpha for the 13 items was .80 indicating good reliability as well.

*Semi-structured Interview*

To enrich the quantitative data, semi-structured interview with seven to nine open ended questions was administered on six participants. Student interviewees were asked seven open ended questions, and the committee members were asked nine on topics surrounding their view of the effectiveness of the tobacco-free policy. All interviewees were asked about reception of the policy, satisfaction with the designated smoking areas, perspectives on the enforcement and strategies, their view on the necessity of the policy, repercussions of the policy and AUC’s maintenance of it. Committee members were also asked about their perspectives on the Tobacco-Free mission, the funding for the policy and their view on maintaining it after COVID-19.

**Procedures**

Approval from the Institutional Review Board (IRB) at the American University in Cairo was obtained before collecting data as well as consent forms for both the survey and interviews (see Appendix 1 and 2). Due to the conditions of the COVID-19 pandemic, data was collected via online platforms. Interviews were conducted via zoom sessions and the surveys were collected via Google Forms.

**Survey**

The three-part survey was distributed via social media (Facebook and WhatsApp) groups with AUC student participants. Survey participants were given links to the three-part survey with the attached consent form and asked to fill in all sections. The sections were displayed in the following order: demographic information, then the PHBS scale, followed by the Likert scale.
items on agreement of the policy and finally the mini assessment on knowledge of the policy stipulations. The final open ended item requesting recommendations was mandatory, but close to 30% of participants did not respond.

*Interviews*

The interviews were conducted in colloquial Arabic and English, and their main ideas were noted for each question rather than transcribed (see Appendix 5). The interview was first introduced via email, which was sent out to Tobacco-Free Committee members and students who were enrolled on campus before and after the policy implementation. The email mentioned that the interview was to provide rich data into community perception on how the policy was communicated and perceived and whether they believed administration could have done a better job. After receiving confirmations from people who wished to participate, they were sent informed consents via email to sign and return. Following the signatures, they were sent a zoom link to interview. Before the interview began, participants were reassured that the interview was to remain anonymous and no identifying information would be published. They were also welcomed to end the zoom session if they felt uncomfortable at any stage. Participants were asked about emotional and social repercussions of the policy as well as how they perceived administration’s maintenance of it. Before ending the interview, they were given an opportunity to ask any questions, if any. They were also told that they were welcome to read how the interviews were analyzed in this research after its completion. The interviews were not audio or video taped as this was not a part of the consent forms.
Data Analysis

Survey

The survey included both descriptive and qualitative analyses. The quantitative data calculations were conducted using SPSS version 27. The variation in scores from the PHBS scale (which was between 11-55) was grouped by fives and the frequency of participants with similar responses was calculated. The scores from the PHBS scale were also analyzed descriptively. To see if there was a connection between health behaviors and agreement with the policy, a correlation was run between the sum of participant scores and item four from the Likert scale items measuring agreement with the policy (“I support a total tobacco ban to ensure a tobacco free environment”). A multiple response analysis was also run on this item and the participants who said they were smokers to determine the level of agreeability from the smoking community.

The Likert scale items measuring policy agreement both from 2019 and 2021 were also analyzed descriptively. A random sample of the same number of participants (n=101) was selected from the raw data of the 2019 survey and compared with scores from the 2021 survey through a paired t-test. Selected items from this part of the survey were also compared through t-tests to address research hypotheses.

Descriptive statistics from the knowledge of policy portion were calculated. The sum of those scores was also correlated with the sum of scores from items measuring agreement with the policy to determine whether there was a relationship between the two. Finally, the open-ended question requesting recommendations for policy implementation was interpreted similarly to the interviews: the frequency of similar responses was recorded and grouped as one recommendation and frequencies were stated as a whole. For example, one-third of responses did not give a recommendation.
Interviews

The interviews underwent content analysis from the main ideas noted from each participant. All interview responses were grouped through the seven to nine questions. The frequency of similar responses to each question was recorded and grouped accordingly. Responses could have been grouped by similarity in concept or if another participant simply phrased their response similarly to someone else. Eventually, a sheet was created displaying the set of seven to nine themes, with various bullet point responses under each theme. Tally marks next to each response indicated how many participants said the same thing (see Appendix 7 for content analysis sheet). These frequencies were then interpreted by observation of the responses. Those interpretations were written out in narrative form and not kept in bullet points (Simonton, 1988).

Results

Survey

Participant Demographics

When asked about their smoking status, 81% of participants said they were nonsmokers, 16% identified as smokers and the remaining 3% were smokers who had quit. Of the 16 participants that reported they were smokers, five of them had smoked only a few times, one smoked but quit, nine smoked occasionally, three smoked daily, five smoked half a pack a day and two smoked more than half a pack a day.

In order to understand how much exposure respondents had to the smoking situation on campus, they were asked about how often they visited campus in the past year. Fifteen percent of participants hadn’t been at all, while 28% came once a semester, 31% once every few weeks and
27% often, coming about every week. Regarding the earlier 2019 survey questions, only 6% remember taking it, 48% didn’t recall and 47% did not take it.

**Positive Health Behavior Scale**

The items on this scale were rated from zero to three, zero being “never or almost never” and three being “always or almost always” engaging in this health-related item. Scores closer to the total possible score (78) indicate a higher level of engagement with positive health behaviors. Participant scores ranged from a low of 11 to a high of 55. The mean was 49 ($SD = 9.1$). The table below displays the wide variation in responses. The majority scores tend to cluster in the middle between scores 31 and 45, accounting for about 55% of participants. Otherwise, the scores are scattered across both the high and low ends of positive health behavior. The table below displays the variation of responses:

Figure 1

*Frequency of participants with the same scores*
The sum of participant scores on the PHBS was correlated with the scores from item 4 measuring agreement with the policy (“I support a total tobacco ban to ensure a tobacco free environment”). The correlation was statistically insignificant with a p-value of 0.12 and a weak positive correlation of 0.15.

**Survey Items measuring Agreement with the Policy**

When asked if the current tobacco free policy provided adequate protection from secondhand smoke, 67% of participants agreed or totally agreed, 21% were neutral, and 12% disagreed or totally disagreed. When asked if participants believed the ban was successfully implemented, 61% of participants agreed or totally agreed, 27% were neutral, and 11% disagreed or totally disagreed. When smokers were asked if started smoking less after the enforcement of the tobacco ban, 16% of participants agreed or totally agreed, and 9% disagreed or totally disagreed. The remaining 75% neutral responses were nonsmoking participants. That means that of the smoking participants only: 64% of smokers agreed or totally agreed that they started smoking less, while the remaining 36% of smoking participants disagreed or totally disagreed that they smoked less after the policy’s enforcement. Building on the previous item, smoking participants were asked if the policy made a positive impact on their smoking habits. Of the smoking participants only, 55% agreed or totally agreed and the remaining 45% disagreed or totally disagreed.

**Comparison of 2019 Survey Data with 2021 Survey Data**

The first eight items on the 2021 survey matched the items of the 2019 survey. To see if responses had changed, a random sample of the same number of participants (n=101) from the raw data of the 2019 survey was compared through paired t-tests with the responses from the 2021 survey. It was found that participants more strongly agreed with the statement “I like the
smoke free air on campus” in 2021 ($M=4.2, SD=1.4$) than in 2019 ($M=3.5, SD=1.1$). This change in the level of agreement was statistically significant $t (100) = 4.4, p = 0.00$). They also more strongly agreed with the statement “I support a total tobacco ban to ensure a tobacco free environment” in 2021 ($M=3.7, SD=1.44$) than in 2019 ($M=2.3, SD=1.45$). This change in the level of agreement was also statistically significant $t (100) = 7.2, p = 0.00$). Participants more strongly agreed with the statement “In general, the designated smoking areas encourage people to smoke within the spaces” in 2021 ($M=3.6, SD=1.06$) than in 2019 ($M=2.9, SD=1.45$). This change in the level of agreement was statistically significant $t (100) = 3.4, p = 0.001$). Finally, they more strongly agreed with the statement “In general, smokers at AUC use the designated smoking areas” in 2021 ($M=3.6, SD=0.91$) than in 2019 ($M=2.8, SD=1.67$). This change in the level of agreement was statistically significant $t (100) = 3.7, p = 0.00$).

Participants showed lower agreement with the statement “The smoking designated areas are adequate in size” in 2021 ($M=3.2, SD=1.25$) than in 2019 ($M=3.9, SD=0.83$). This change in the level of agreement was statistically significant $t (100) = -5.0, p = 0.00$). They also showed lower agreement with the statement “In general, people follow the tobacco free policy” in 2021 ($M=3.2, SD=0.98$) than in 2019 ($M=3.7, SD=0.86$). This change in the level of agreement was statistically significant $t (100) = -3.6, p = 0.00$).

For the remaining two items, participants more strongly agreed with the statement “The smoking designated areas are adequate in appearance” in 2021 ($M=3.3, SD=1.23$) than in 2019 ($M=3.0, SD=1.38$). They also showed lower agreement with the statement “The behavior of people in the designated smoking areas is respectful” in 2021 ($M=3.4, SD=0.85$) than in 2019 ($M=3.6, SD=1.48$). Neither of these changes were statistically significant. See Table 2 for a summary of these results.
### Table 1

*Descriptive statistics and paired samples scores of datasets from 2019 and 2021*

<table>
<thead>
<tr>
<th>Items measuring agreement with the policy (2019 and 2021)</th>
<th>Survey</th>
<th>Mean Responses</th>
<th>Std. Deviation</th>
<th>Sig. values</th>
<th>Paired Means</th>
<th>t-scores (df 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like the smoke free air on campus</td>
<td>’21 survey</td>
<td>4.2</td>
<td>1.14</td>
<td>0.00</td>
<td>.74</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>3.5</td>
<td>1.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The smoking designated areas are adequate in size</td>
<td>’21 survey</td>
<td>3.2</td>
<td>1.25</td>
<td>0.00</td>
<td>-.76</td>
<td>-5.0</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>3.9</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The smoking designated areas are adequate in appearance</td>
<td>’21 survey</td>
<td>3.3</td>
<td>1.23</td>
<td>0.140</td>
<td>.27</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>3.0</td>
<td>1.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I support a total tobacco ban to ensure a tobacco free environment</td>
<td>’21 survey</td>
<td>3.7</td>
<td>1.44</td>
<td>0.00</td>
<td>1.3</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>2.3</td>
<td>1.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, the designated smoking areas encourage people to smoke within the spaces</td>
<td>’21 survey</td>
<td>3.6</td>
<td>1.06</td>
<td>0.001</td>
<td>.65</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>2.9</td>
<td>1.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, people follow the tobacco free policy</td>
<td>’21 survey</td>
<td>3.2</td>
<td>0.98</td>
<td>0.00</td>
<td>-.50</td>
<td>-3.6</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>3.7</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The behavior of people in the designated smoking areas is respectful</td>
<td>’21 survey</td>
<td>3.4</td>
<td>0.85</td>
<td>0.217</td>
<td>-.19</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>3.6</td>
<td>1.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, smokers at AUC use the designated smoking areas</td>
<td>’21 survey</td>
<td>3.6</td>
<td>0.91</td>
<td>0.00</td>
<td>.73</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>’19 survey</td>
<td>2.8</td>
<td>1.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is also important to note that the report from 2019 showed an average response of 2.7 (disagree) from the smoking community to agreement with the policy. The smoker participants responded with an average of 3.2 (neutral) to item four from the survey measuring agreement with the policy: “I support a total tobacco ban to ensure a tobacco free environment”. A multiple response analysis on smoking participants’ responses to indicated of the 16 smoking participants, 37% agreed or totally agreed in support of the tobacco ban, 12% were neutral and the remaining 50% disagreed or totally disagreed that they support the tobacco ban.
**Knowledge of Policy**

Overall, across the four questions related to knowledge of smoking policy, participants appeared for the most part, to have an accurate understanding. The item that was most often answered correctly (84% correct) was “students, staff, faculty and visitors are prohibited from smoking and using tobacco and nicotine products (other than approved cessation aids) outside of the designated smoking area. The remaining items were less often answered correctly, with “Electronic smoking devices or any tobacco products not involving spreading smoke in the air are permitted on regular campus grounds (meaning outside of the smoking areas)” answered correctly 58% of the time; “Student organizations are prohibited from accepting money or gifts from tobacco companies and tobacco advertisements are prohibited in university-run publications and on grounds or facilities,” answered correctly 56% of the time; and “Tobacco waste products such as cigarette butts do not have to be disposed in designated bins,” answered correctly 49% of the time. The table below displays the results:

Table 2

**Frequency of responses to knowledge of the tobacco-free policy**

<table>
<thead>
<tr>
<th>Item</th>
<th>Correct Answer</th>
<th>Participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students, staff, faculty and visitors are prohibited from smoking and using tobacco and nicotine products (other than approved cessation aids) outside of the designated smoking</td>
<td>True</td>
<td>84% correct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2% incorrect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15% not sure</td>
</tr>
<tr>
<td>Tobacco waste products such as cigarette butts do not have to be disposed in designated bins</td>
<td>False</td>
<td>49% correct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12% incorrect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40% not sure</td>
</tr>
<tr>
<td>Student organizations are prohibited from accepting money or gifts from tobacco companies and tobacco advertisements are prohibited in university-run publications and on grounds or facilities</td>
<td>True</td>
<td>56% correct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4% incorrect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41% not sure</td>
</tr>
</tbody>
</table>
Electronic smoking devices or any tobacco products not involving spreading smoke in the air are permitted on regular campus grounds (meaning outside of the smoking areas) | False | 58% correct
| | 10% incorrect
| | 33% not sure

The sum of the knowledge of policy scores was correlated with item 4 measuring agreement with the policy (“I support a total tobacco ban to ensure a tobacco free environment”). The correlation was statistically insignificant with a p-value of 0.8 and a very weak negative correlation of -0.026.

**Open-Ended Survey Item on Recommendations**

The final item on the survey asked participants if they had recommendations for administration regarding implementing the tobacco-free policy more successfully. Over one third of participants either had no idea of a tobacco-policy in the first place or left the item blank. Over 25% of responses recommended flyers, campaigns and clearer emails. About four percent of responses from smoking participants elaborated their discomfort with the designated smoking areas and how they need to be more accommodating to smokers. Then there were individual responses that weren’t repeated frequently, for example: one student suggested “They could have prohibited smoking inside the dorms, as some people smoke in their rooms, but the smoke reaches adjacent rooms”. Another student said “[admin] should have included both smoking and non-smoking students [in the implementation process]”. Three other responses discussed the importance of including the community perspective in implementation. The remaining 20% of responses were participants who felt the policy was well communicated.

**Interviews**

A total of six interviewees were asked between seven to nine open ended questions on the effectiveness of the tobacco-free policy. Two of the interviewees were members of the tobacco
free committee and the remaining four were students who attended the implementation of the policy. Two of the students were part of the smoking community (one smoker and one nonsmoker with close smoker friends) and the remaining two were nonsmokers.

**Reception of the Policy**

When asked about how the policy was presented, there were notable differences between the smoker group and nonsmokers. The nonsmoker interviewee whom self-identified as a smoker sympathizer emphasized their grouping as part of the smoking community from how closely attached they were to people of that social hub. As the smoker stated, “the policy came off as very disrespectful to [the smokers], because we all knew they only cared about how they looked rather than being actually concerned about our health.” Both the smoker and nonsmoker with smoker peers also felt the policy was not presented as a community led project and was presented abruptly. On the other hand, the three non-smoking interviewees regarded the policy’s introduction very positively. As one stated, “the [administration] went about it right. They introduced the policy before implementing it and encouraged suggestions from the start.” The two groups did agree that they would have preferred that the policy be directed by the entire community. They also unanimously felt that administration policies were not to be trusted, and that the policy could have been a lot more successful if things were more transparent.

Both of the committee members conceded that they should have gauged community perspective a little more before the policy’s implementation. They also both commented that after the initial enforcement, they gained community perspective through a public survey and mended the policy’s implementation accordingly.
Satisfaction with the Designated Smoking Areas

Because the initial backlash involved dissatisfaction with the designated smoking areas, interviewees were asked about it again two years later. The nonsmokers felt the areas were suitable (one even mentioned they were too close to campus gates) while smoker and nonsmoker interviewee part of the smoking community felt the exact opposite. They commented that they were too crowded and far away from classes. Three interviewees (smoker and two nonsmokers) agreed the areas were not able to contain all smokers, since they still smoked in prohibited areas after policy enforcement. The smoker interviewee explained, “It was awful, if the areas had been more accommodating, like if they gave us an air-conditioned room on campus, smokers wouldn’t have broken so many of the rules.” Two nonsmoker interviewees said despite the initial aversion to the areas, smokers eventually turned it into a social hub. They also mentioned that they were very bothered by the secondhand smoke and glad to know it was gone somewhere else.

Perspectives on the Enforcement

When asked about their viewpoints on the enforcement of the policy, student and committee member interviewees unanimously commented on Egyptian culture as a culprit in perpetuating smoking behaviors. One student interviewee stated, “The community in Egypt views smoking as a common thing. There isn’t much awareness or any laws preventing it and society doesn’t care”. The committee member interviewees explained that the enforcement never aimed at making smokers quit, but at lessening the secondhand smoke for others to have cleaner air. Despite this consensus, student responses continued to be sharply contrasting on the policy’s enforcement. One nonsmoker said the policy was enforced well, but not too strictly while the smoker interviewee commented that there was too much surveillance which led to overzealous enforcement of the policy. He explained, “sometimes the areas would be so crazy crowded, and I
would need to smoke before a class so I go off to the side but would have a guard direct me to the areas even though there’s clearly no room for me to stand. This made no sense to me, how am I supposed to smoke there?” In response to the unsatisfactory enforcement, one smoker interviewee claimed they would have preferred mandatory workshops or incentives over the penalties, but nonsmoker interviewees argued such campaigns would have been ineffective on AUC campus because as one stated “No one would care enough to follow through.” Notably, one committee member revealed in his interview that the committee did in fact implement educational programs for smoking violators to attend, but he stated, “Students found it a waste of time, and no one would show up, so it was shut down.”

Necessity of the Policy

When asked if they felt the policy was needed on campus the three nonsmoking interviewees as well as both committee member interviewees agreed that everyone has a right to clean air. The two interviewees who were part of the smoking community argued instead that AUC should focus on bigger problems than green initiatives. One student commented, “I’m already spending so much money in this place, and it’s to get a good education, which I’m not getting. Instead, I see my money being spent to disrespect the smoking community and kick them out while the level of education doesn’t seem as important.” Two of the nonsmokers argued there wasn’t enough promotion of the cessation clinic, which they said could have helped a lot of people.

Repercussions of Policy Implementation

When asked how they viewed the repercussions of the policy, one nonsmoker said, “Implementing this policy created many stigmas for smokers, and it was so unnecessary because admin could have just focused their efforts on banning indoor smoking.” Another nonsmoker
argued smokers were only unsatisfied with the policy because they were nicotine addicts. The third nonsmoker felt they were finally given a right back to clean air on campus. The smoker argued that habits worsened dramatically as people would “chain smoke” right before class to get their much-needed nicotine, since the areas were too far for them to reach class on time from. The nonsmoker interviewee involved in the smoking community commented that the policy caused a great divide within the community that left nonsmokers feeling entitled and smokers feeling inferior.

Another important repercussion from the smoker’s perspective was about the change in dynamic between smokers and their security guard friends, whom now had to enforce a penalty for smoking outside of the areas. He stated, “these rules ruined our relationships with them [security guards], they were our friends and sometimes I felt like they felt so bad catching us and reporting us.” Interestingly, one committee member had a similar answer, that the policy impacted the dynamic between students and guards. She stated, “We’re trying to work on this point, to make sure students still have positive relationships with these guys without needing to disregard the new rules.” Committee member interviewees agreed that the repercussions of the policy left the community liking the policy itself but hating how it was implemented. However, one member stated, “I am hopeful. Because Egyptian culture respects tobacco free laws. We see people adhering to it in the metros for example.”

**Perspectives on Institution’s Maintenance of the Policy**

When asked about their perspectives on AUC’s sustainability of the policy, all three nonsmokers agreed that it will be able to maintain it through surveillance very well. The only outlier was the smoker who said, “AUC is not equipped to maintain this policy at all.” Both
committee members responded that the resources for maintenance are there, but the will to properly maintain the policy could be concerning.

**Perspectives on Counter-Framing Arguments**

When asked about their perspectives on the potential effectiveness of using counter-framing as a strategy to persuade AUC of the benefits of the tobacco policy, all student interviewees felt that they would be ineffective. One student commented, “AUC simply doesn’t care enough, we’re not like universities abroad.” The committee members both agreed that counter-framing is a successful strategy.

**Committee Perspectives on the Tobacco-Free Implementation**

In addition to the questions asked of committee members that were also asked of students, three questions were asked only of the committee members. These included their perspectives on the mission, the issue of funding, and the impact of COVID-19 on the policy.

When asked about the mission of the tobacco ban, the committee members agreed that their mission was never to help people quit smoking but to stop the spread of secondhand smoke and promote a greener environment. One member added, “AUC is responsible for protecting the community. This was something we had to do.” In response to the question about funding, both members explained that AUC’s administration had supplied any financial resources that were required. They also felt that maintaining the policy was an accommodation issue and not a financial one. One member mentioned that they needed funds for things like stress-relief devices in the designated smoking areas as a way for smokers to relax through tools other than smoking. They also had initial funds to run competitions for students to help the policy implementation be more community led, but it never ran due to a lack in student representation. Finally, both members regarded the maintenance of the policy after COVID as an adjustment they will deal
with when they get there. One member suggested that they would move the chairs in the designated areas for further protection. But as a general response, they both agreed that since COVID, violations of the policy thus far were incredibly minimal.

**Discussion**

This research examined the impact of the tobacco-free policy at AUC by assessing changes in the community’s levels of agreement with it after two years, while also examining factors that might influence agreement, including health behaviors and knowledge of the policy. The results showed that there was a significant increase in agreement with the policy across questions addressing support for a tobacco-free environment, and that the use of the smoking areas was good. However, there was a significant drop in agreement on an item asking if people follow the policy, and on an item asking if the size of the smoking areas was adequate. Overall, no correlation was found between positive health behaviors or knowledge of the policy and levels of agreement with the policy. Smoking participants reported a positive difference in smoking behaviors after the policy’s implementation. The qualitative data analysis reflected overall themes revolving around the agreement to the policy’s intent and stipulations. However, participants also highlighted implications behind the policy that included Egyptian culture as a smoking culprit and risk factors perpetuating unhealthy behaviors.

Overall, perhaps because AUC followed many best practices in implementing their tobacco-free policy, such forming a tobacco-free committee (Glassman et al., 2011), and conducting initial surveys to gather data on community attitudes and online policy promotion (Abu Shomar et al., 2014; Burns et al., 2016; Castañeda et al., 2010; Niles & Barbour, 2011) it appears that the policy positively impacted both smoking and nonsmoking community members.
These best practices predicted high levels of compliance, which was confirmed by this research’s findings.

**Positive Health Behaviors and Agreement**

The PHBS was administered to measure whether the student community’s level of engagement in positive health behaviors was related to their support for a health-related intervention, the tobacco-free policy. There was no significant correlation between health behaviors and support for the policy. However, this could have been due to the research’s small sample size, because it seems likely that they would correlate as was observed from some of the research (Stock et al., 2001).

The wide variation in responses ($SD=9.1$) also made it difficult to draw conclusions about the community’s pattern of health behaviors. Participant scores would cluster around certain score points (see Table 1) to possibly indicate the most frequent level of positive health behavior engagement. For example, the highest frequency of similar responses had over 25 participants scoring between a 36-40 (the scale was out of 78). The remainder of participant scores scattered across the scoreboard, from lower to higher scores. It is also important to note that literature concerning the factor of positive health behavior is limited. It may be important to investigate whether it plays a role in impacting community levels of support for tobacco-policies, or health interventions in general.

**Agreement Levels over Time**

It should be noted that the university’s administration did not react to the disapproval of the policy by alleviate their surveillance or penalty system. The only accommodation that occurred was from Tobacco-Free Committee efforts on the designated smoking areas, which had also received most of the disapproval. Surprisingly, participants responded to the items on
whether the areas encourage smoke within the spaces and if smokers use the areas with higher averages in 2021. But the items on the satisfaction of the areas themselves had lower averages and two of the items had insignificant responses anyway. The significant response was item two on the areas’ size, which had lower responses of agreement. It is interesting how the one accommodation from administration seemed to receive less satisfaction. These scores seem to go hand in hand with the complaints collected from the interviews. Interviewees discussed their concern that the smaller sizes of the areas caused crowding and discomfort, which is what also factored into the initial disapproval of the policy from the smoking population.

Regarding levels of agreement, items one and four from the survey asked about their levels of support to the policy which received higher averages in support in 2021 than in 2019. This can be explained by the research on cognitive dissonance theory (Fointait & Pelt, 2015), where people’s attitudes needed to eventually shift and accept their surroundings to reduce any inner conflict.

There was also a significantly lower level of agreement that smokers were following the policy in 2021 compared to 2019. These contradictory findings warrant further investigation into people's understanding of what it means to be “following a policy”. Could this difference indicate that despite smokers using the areas, that violations continue to occur under the radar? That aspect may be important to consider for further follow-up research on the tobacco-free policy at AUC.

It is also important to note that the report from 2019 showed an average response of 2.7 (disagree) from the smoking community to agreement with the policy. The smoker participants responded with an average of 3.2 (neutral) to item four from the survey measuring agreement with the policy: “I support a total tobacco ban to ensure a tobacco free environment”. Even
though about 50% of the smoking respondents disagreed that they supported the policy, their average response was still higher in 2021 than in 2019. That difference may also be explained by the cognitive dissonancy theory which helps indicate the success of the policy.

**The Impact on Smoking Habits**

Items 12 and 13 from the surveys asked smokers whether their smoking habits decreased and if they were impacted positively. Of the smoking participants, 64% reported lower levels of smoking and 55% of them agreed that the policy impacted their habits positively. Fotuhi et al. (2013), explained this interesting phenomenon by commenting on people’s individual cognitive rationalizations. They predicted that policies which prevent users from using smoking as an ‘escape route’ would challenge smokers to minimize the dissonance through shifting behaviors. Eventually positive attitudes towards lower levels of smoking could then follow their new nonsmoking behavior. The results of this study seem to corroborate Fotuhi et al.’s. (2013) conceptualization of the cognitive dissonance theory in this context which indicates the overarching success of tobacco-free policies. Because the ban reduces the time that people can smoke, it makes it more difficult to smoke and eventually leads to a reduction in smoking.

When looking at changes in responses across the two surveys, there was a significant increase in agreement that smokers were using the smoking areas in 2021 compared to 2019.

Another important aspect regarding the impact of the policy on smokers involves the frequencies of smoker participants at AUC, which have been collected starting 2016. Since this research sampled students, student smoker samples were compared. The sample by Forden and Carrillo (2016), and before the implementation of the policy, included 17% student smoker participants. In 2019 after the enforcement of the policy, the SMIE report had 33% student participants smokers. Finally in 2021, this research included 16% of survey participants were
smokers. The larger variation in the SMIE demographics could be because they had the largest sample size (over 1000 participants). However, the lower percentages of smoking participants may also indicate that student smokers have become less years after the policy’s enforcement, which could point at the policy’s overall success.

**Interview Themes supported by Literature**

One of the themes that emerged from the qualitative analysis was concern about the marginalization of smokers. This issue was also reflected in the literature which found that such marginalization could work against successful policy implementation (Braverman et al., 2016; Burns et al., 2016; Lund, 2016.) Stigma against smokers can lead them to oppose the policy (Lund, 2016,) and this opposition can lead to low levels of compliance (Burns et al., 2016.) Enforcement of the policy also has the potential to harm social dynamics, as was observed by smokers in the present study who felt that their relationship with security had been harmed by enforcement of the ban. It is important therefore, to consider how smoking bans may affect community social dynamics, and to provide training to community members so that these negative effects do not occur (Castañeda et al.,2010.)

Several interviewees felt that the way the AUC policy was framed greatly influenced the initial level of disapproval the policy received. Research has found that framing tobacco-free policies as a movement to “green” the campus (Williams et al., 2016), or as a public health initiative (Neimeier et al., 2014), tend to be received more positively by community members. Even though AUC published their goals to protect the wellbeing of the community in their policy, it may be that much of those intentions did not reach campus members. However, over the course of two years, even though AUC didn’t change its messaging, in the long term it didn’t matter. With the currently high level of policy compliance, it seems that factor may not be
paramount. If it wasn’t a matter of changing communication methods, why did approval for the policy significantly increase? It may be due to cognitive dissonance, which argues changes in behaviors can be followed by shifts in attitudes (Fointait & Pelt, 2015; Vallacher, 1992). As people followed the smoking policy, their attitudes towards it shifted.

The issue of transparency was also made clear from the interviews. It is recommended that administration become transparent using inclusive approaches and strategies. Brinkhurst et al. (2011) suggested using bottom-up approach strategies which include identifying and involving community members in implementation. Not only would that address the problem of transparency but also keep administrative power in maintaining the policy intact. This means that they would continue to apply surveillance and penalties for violations as seen necessary.

Interviewees also discussed their preference for mandatory workshops on the importance of healthy habits and living in healthy environments rather than experiencing “disrespectful” fines for violations. Previous research has found that educational programs help improve the success of tobacco policies on campus (Abu Shomar et al., 2014; Burns et al., 2016; Niles and Barbour, 2011). But it is important to note that committee member interviewees mentioned that these programs were never initiated due to the lack of community interest in them. There is an interesting question here: was the community’s lack of interest in these programs an indicator of dislike to the policy’s interventions, or was there something more culturally ingrained which kept campus members dismissive of these programs’ benefits, like the smoke perpetuating culture? Future research should investigate these notions so as to understand why campus communities are sometimes receptive or unreceptive to policies and/or health-related interventions.
Recommendations

The Egyptian culture may play a role in the success or failure of tobacco-free policies on campuses. Researchers found that in Egypt, a lack of governmental intervention, and lack of enforcement of tobacco bans played a role in the lack of concern for the harms of smoking (Atwa et al., 2019; Ba-Break et al., 2021; Harbour, 2011), something which several interviewees in the present study discussed. However, despite this the policy still worked. It seems that policy administrators don’t have to wait for communities to be convinced that secondhand smoke is harmful, they can simply ban smoking.

Literature on western universities also demonstrated how social concerns could play a part in initial tobacco-policy disapproval (Burns et al., 2016; Castañeda et al., 2010; Fallin-Bennet et al., 2017; Glassman et al., 2011). Despite that, people from both cultures were able to comply and maintain smoke-free environments and eventually display positive attitudes towards the policies. It seems that cultural differences (like tightly knit relationships) may not play as relevant a role in eventual policy compliance. Egyptian universities should accordingly begin administration of tobacco-free policies to not only decrease levels of secondhand smoke and protect their communities, but possibly help users improve their smoking habits.

Another recommendation extracted from this research is to allow for time to pass. Many of the participants were newly enrolled students who not only came back to campus after a year of quarantine due to COVID-19, but who began their college experience on an already smoke-free campus. Quarantine also created distance from the campus which may have lessened the tension that used to be there regarding aspects of the policy like the designated smoking areas or the penalties for violations. This reason alone may have eased the sustainability of the policy greatly.
Limitations and Recommendations for Future Research

This research is not without limitations. The study measured a non-representative sample (n=101), particularly in the qualitative interviews (n=6) and only one smoker interviewee, which makes it difficult to generalize. In addition to the small sample size, the small number of smoking participants (n=16), male participants (n=19) and the non-representative student backgrounds (40% humanities related majors), makes the results difficult to generalize. It is also important to note that because literature discussed females as more likely to agree with tobacco policies (Burns et al., 2016; Doucet et al., 2007; Glasgow et al., 2021; Stock et al., 2001) that may have impacted the higher levels of agreement from this research.

Regarding the PHBS scale, since it was originally administered on a population in Poland, the items measuring overall positive health may have excluded more culturally healthy behaviors that Egyptians could be practicing. For example, by observing individual scores, it was apparent that most participants took time out of their day to “relax”. They may be engaging in other positive health behaviors to relax that weren’t options on the survey like social support groups, prayer and familial gatherings. These factors are easily missed by the scale because it was not intentionally catering to Egyptian culture. Including these factors might have indicated that people were engaging in higher levels of positive health behavior, which may have decreased the variability in responses.

This research’s finding which supported Fotuhi et al.’s (2013) prediction on individual users benefiting from a tobacco policy should be explored further. Research could even expand to grander scales, not just communities but perhaps national scales in an effort to help reduce the statistics on tobacco-related morbidities. Positive health behavior as a potential factor influencing support for health interventions, like tobacco-policies, should also be explored in much more
depth. With little literature on the construct, it is possible that a potential link between both positive health behavior and support for health interventions may be useful in instating health-related policies.

**Conclusion**

It seems the tobacco-free policy at AUC produced an overall positive impact and sustained good levels of compliance. Campus members not only agreed with its stipulations but were also positively impacted by its enforcement. Suggestions for enhanced policy approach on campus would be used to help circumvent the initial disapproval that occurs after implementation. Tobacco-free policies at institutions are vital in preventing harms of secondhand smoke as well as potentially helping individual campus members lessen their engagement in smoking behaviors.
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doi:10.1371/journal.pone.0236989


Appendices

Appendix 1

Please note that IRB approval does not automatically ensure approval by CAPMAS, an Egyptian government agency responsible for approving some types of off-campus research. CAPMAS issues are handled at AUC by the office of the University Counsellor, Dr. Ashraf Hatem. The IRB is not in a position to offer any opinion on CAPMAS issues, and takes no responsibility for obtaining CAPMAS approval.

This approval is valid for only one year. In case you have not finished data collection within a year, you need to apply for an extension.
Appendix 2

Documentation of Informed Consent for Participation in Research Study (survey)

**Project Title:** The Effectiveness of the Tobacco Free Community Policy at AUC

**Principal Investigator:** Fatimah Badawy

*You are being asked to participate in a research study. The purpose of this research is to gather data that could help improve the effectiveness and sustainability of the Tobacco Free Community Policy (initiated in 2018). This research aims to collect AUCian attitudes and perspectives on how well the policy was communicated, how it may be maintained and suggestions regarding its implementation. By collecting these responses, the study will also understand campus health behaviors and how they may have been impacted by the tobacco policy. The findings may be published or presented.

The expected duration of your participation is about 10-15 minutes.

The procedures of the research will be as follows: You will be asked to respond to questions split into 3 portions via an online survey. The first set of questions is a scale related to health behaviors, the second will be concerned with your general opinions about the current campus tobacco policy and the final assesses your knowledge of the policy. Some of the questions are very similar to the “Tobacco Use within the AUC Community 2019” conducted by the Office of Strategy Management and Institutional Effectiveness (SMIE). If you participated to that survey before, please indicate that in this survey.
* There are no anticipated discomforts associated with these surveys. However, you may experience slight discomfort responding to some questions about your health habits.

* Your responses will benefit this research greatly. It will shed light on how AUC campus members’ health behaviors may or may not have been affected by the current tobacco policy, and how the sustainability of the policy can be improved.

* The information you provide for purposes of this research confidential. No personal information will be linked directly to the data obtained from you so it will not be identifiable. Information may be shared among other research staff or supervisors for purposes of review and consultation to ensure the best analysis of the data. When that happens, all efforts will be taken to not directly identify you.

If disclosure of any information is uncomfortable for you, please inform the researchers immediately so that they may discard your data.

* You have the right to withdraw from this research study at any point in time during the research. You have the right to ask and be debriefed about how the researchers will use the data you have provided. The results of this study will be used as part of a graduate student’s thesis research. The study may potentially be published later on. Your demographic information (gender, class standing, smoking status, etc.) will be recorded for research analysis purposes only.
You are responsible for being honest about your performance throughout the process of this research. You are responsible to voice any discomforts that arise before, during or after the research procedure. You are responsible for any biases (such as stances/positions with or against AUC tobacco policy) affecting your performance and making sure researchers are aware of how that may affect their research.

If at any point during your participation you feel uncomfortable with data sharing, you are expected to voice this concern to the researcher so they can discard your results. You should expect from the researchers respect towards your decisions and opinions about the research.

*Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.*

*If you have further inquiries about this research please feel free to contact the primary investigator at fatimabhadawy@aucegypt.edu*

Signature

________________________________________

Printed Name

________________________________________

Date

________________________________________
Documentation of Informed Consent for Participation in Research Study (interview)

**Project Title:** The Effectiveness of the Tobacco Free Community Policy at AUC

**Principal Investigator:** Fatimah Badawy

*You are being asked to participate in a research study. The purpose of this research is to gather data that could help improve the effectiveness and sustainability of the Tobacco Free Community Policy (initiated in 2018). This research aims to collect AUCian attitudes and perspectives on how well the policy was communicated, how it may be maintained and suggestions regarding its implementation. By collecting these responses, the study will also understand campus health behaviors and how they may have been impacted by the tobacco policy. The findings may be published or presented.

The expected duration of your participation is about 30-45 minutes.

The procedures of the research will be as follows: This is a semi-structured interview where you will be asked a few questions (about 7-8) about your perspective on the Tobacco-Free Community Policy. The questions aim at understanding how you think the policy could have been approached better, whether you think the implementation of the policy had a positive or negative impact and your suggestions for the future.

* There are no anticipated discomforts associated with these surveys. However, you may experience slight discomfort responding to some questions concerning your thoughts on the tobacco policy.
* Your responses will benefit this research greatly. It will shed light on how AUC members view the current tobacco policy, offering suggestions for sustaining the policy along with insight into how the policy should be better implemented in the future.

*The information you provide for purposes of this research confidential. No personal information will be linked directly to the data obtained from you so it will not be identifiable. Information may be shared among other research staff or supervisors for purposes of review and consultation to ensure the best analysis of the data. When that happens, all efforts will be taken to not directly identify you.

If disclosure of any information is uncomfortable for you, please inform the researchers immediately so that they may discard your data.

* You have the right to withdraw from this research study at any point in time during the research. You have the right to ask and be debriefed about how the researchers will use the data you have provided. The results of this study will be used as part of a graduate student’s thesis research. The study may potentially be published later on. Your demographic information (gender, constituency, smoking status etc.) will be recorded for research analysis purposes only.

You are responsible for being honest about your performance throughout the process of this research. You are responsible to voice any discomforts that arise before, during or after the research procedure. You are responsible for any biases (such as stances/positions with or against AUC tobacco policy) affecting your performance and making sure researchers are aware of how that may affect their research.
If at any point during your participation you feel uncomfortable with data sharing, you are expected to voice this concern to the researcher so they can discard your results. You should expect from the researchers respect towards your decisions and opinions about the research.

*Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

*If you have further inquiries about this research please feel free to contact the primary investigator at fatimahbadawy@aucegypt.edu

Signature

________________________________________

Printed Name

________________________________________

Date

________________________________________
Appendix 3

Interview Questions

Committee Members:

• How was the policy change presented to you?

• How do you understand the Tobacco Free mission?

• What is your perspective on the enforcement? Explain.

• Was there enough funding to implement the policies?

• What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)

• Do you think AUC is equipped to meet the needs of the tobacco policy?

• What do you think about the numbers and sizes of the designated smoking areas?

• The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?

• From your perspective, how can AUC maintain the policy after COVID-19?

Smoking/Non-Smoking Population:

• How was the policy change presented to you?

• How satisfied are you with the designated smoking areas? Rate and explain.

• What is your perspective on the enforcement of the tobacco free campus policy? Explain.
• Do you think it is necessary to implement such a policy? (for health or environmental reasons?) Explain.

• What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)

• Do you think AUC is equipped to sustain this partial tobacco ban?

• The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?
Appendix 4

Health scale (Woynarowska-Sołdan et al., 2018) and modified follow-up survey questions from the “Tobacco Use within the AUC Community ‘19” survey

*Positive Health Behavior Scale (PHBS) PART I*

<table>
<thead>
<tr>
<th>Positive Health Behavior Scale (PHBS) PART I</th>
<th>0 never or almost never</th>
<th>1 sometimes</th>
<th>2 often</th>
<th>3 always or almost always</th>
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<tbody>
<tr>
<td>I. Nutrition (N)</td>
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<tr>
<td>1. I have at least 3 meals a day with a regular meal pattern</td>
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<td>2. I have breakfast at home every morning (more than a glass of milk, tea or other beverage)</td>
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<td>3. I eat fruit at least once a day</td>
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<td>4. I eat vegetables at least once a day</td>
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<tr>
<td>5. I drink at least 2 glasses of milk, kefir or yogurt daily</td>
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<tr>
<td>6. I limit the intake of animal fats</td>
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<td>7. I limit the intake of salt</td>
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<td>8. I limit the amount of consumed sweets</td>
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<tr>
<td>9. I avoid snacking between meals (e.g. between lunch and a light afternoon meal)</td>
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<td>II. Physical activity (PA)</td>
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<td>1. I exercise daily at least 30 minutes with moderate or vigorous intensity (e.g. jogging, brisk walking, practicing sport, gardening, working on a farm)</td>
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<td>2. I do strength-building exercise for main muscle groups at least twice a week (e.g. raking leaves, carrying shopping bags (a heavy backpack), climbing stairs, exercise for abdominal muscles)</td>
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<tr>
<td>3. I increase physical activity and physical effort in everyday life (e.g. walking instead of driving, taking a bus, climbing stairs instead of using elevators)</td>
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<td>4. I limit the time spent watching television</td>
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<td>III. Relaxation and behaviours related to mental health (R)</td>
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<td>1. I get at least 6-7 hours of sleep every night</td>
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<td>2. I go to bed at regular hours</td>
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Demographic Info PART II

1. Class Standing
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior

2. Gender
   a. Male
   b. Female

3. What’s your major type?
   a. Arts related
   b. Science and math related
   c. Business and finance related
   d. Engineering and technology related
   e. Language related
   f. Humanities related

4. How often have you been on campus in the past year (2020-2021)?
   a. Often, at least twice every week
   b. Not often, maybe once every few weeks
   c. Almost not at all, maybe once in a semester
   d. I haven’t been on campus at all

5. How often do you smoke?
   a. I have never smoked, or have only smoked a few times
   b. I used to smoke but I have quit smoking
   c. I smoke occasionally (not on a daily basis)
d. I smoke daily, but less than half a pack a day
e. I smoke a half a pack a day
f. I smoke more than a pack a day

6. Did you complete the “Tobacco Use…’19” survey?
   a. Yes
   b. No
   c. Do not recall

**Opinions and Observations (Likert Scale 1-5) PART III**

<table>
<thead>
<tr>
<th></th>
<th>1 Totally Disagree</th>
<th>2 Disagree</th>
<th>3 Neutral</th>
<th>4 Agree</th>
<th>5 Totally Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I like the smoke free air on campus.</td>
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<td>2. The smoking designated areas are adequate in size.</td>
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<td>3. The smoking designated areas are acceptable in appearance.</td>
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<td>4. I support a total Tobacco ban to ensure a tobacco free environment.</td>
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<td>5. In general, the designated smoking areas encourage people to smoke within the spaces.</td>
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<td>6. In general, people follow the tobacco free policy.</td>
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<td>7. The behavior of people in the designated smoking areas is respectful.</td>
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<td>8. In general, smokers at AUC use the designated smoking areas.</td>
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<td>9. The current implementation of the tobacco free policy provides adequate protection from secondhand smoke.</td>
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<td>10. I believe the Tobacco ban were successfully implemented</td>
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</table>
Knowledge of the Tobacco-Free Community Policy PART IV

1. Are you aware of Tobacco-Free Community Policy?
   a. Yes
   b. No

Below are a few questions aiming at assessing your knowledge of the policy. Please answer them to the best of your ability. (The bolded responses are the correct ones)

2. Students, staff, faculty and visitors are prohibited from smoking and using tobacco and nicotine products (other than approved cessation aids) outside of the designated smoking
   a. True
   b. False
   c. Not sure

3. Tobacco waste products such as cigarette butts do not have to be disposed in designated bins.
   a. True
   b. False
   c. Not sure

4. Student organizations are prohibited from accepting money or gifts from tobacco companies and tobacco advertisements are prohibited in university-run publications and on grounds or facilities
   a. True
   b. False
   c. Not sure

5. Electronic smoking devices or any tobacco products not involving spreading smoke in the air are permitted on regular campus grounds (meaning outside of the smoking areas).
   a. True
   b. False
   c. Not sure

6. In your opinion, how do you think AUC could have better communicated the stipulations of tobacco-free policy?
Appendix 5

Below are the raw interviews of all six interview members: four student interviews (one smoker, three non-smokers) and two committee member interviews.

Interview 1 (student non-smoker)

- How was the policy change presented to you?
  Email sent to describe phases. They went about it right, they introduced the policy before implementing it, and took people’s opinions and encouraged suggestions and students to participate

- How satisfied are you with the designated smoking areas? Rate and explain.
  I hated going to classes with people smoking and I loved the implementation and the policy and I liked the way they did it. Yes except for gate 4 because you have to go through it when you’re going inside so I was still exposed to second hand smoking bus gate, but the rest are fine. Bus gate is a busy one

- What is your perspective on the enforcement of the tobacco free campus policy?
  Explain.
  I like the green environment and that it’s not just about a secondhand smoking. We want to be environmentally friendly. I felt that the principle was communicated well for those of us who read our emails. They were doing their best, by email. They would send updates and sent a map for the designated areas. There’s no other way to communicate else, but I remember that they had a banner up as well. I don’t think campaigns would have been effective because about 20% of students participate in campus activities anyways.

- Do you think it is necessary to implement such a policy? (for health or environmental reasons?) Explain.
For both. The freedom to access clean air because it was impeding other people’s rights.

- **What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)**

Positive repercussions and I felt that I was given a right as a student. It did not change the mentality of people just changed the behavior. I wouldn’t say people stopped smoking because of the policy. It was pretty popular and everyone knew about it. There were campaigns but they did what they can do. Even with the existence with the cessation clinic. The macho guys aren’t going to stop smoking because campus told them. It might be a cultural barrier. They’ll stop smoking when they want to. Community work doesn’t on our campus because of ignorance. Smoking within our communities is a bonding experience. It’s social and it’s fun for them and if someone doesn’t smoke they’ll feel left out so they smoke out of peer pressure. Coping mechanisms shared socially.

- **Do you think AUC is equipped to sustain this tobacco policy?**

  New students will not have to transition to smoke on campus to off campus they’ll come on new. With vaccinations, we’ll be able to go on campus without masks and they will remain enforcing with the same enforcing techniques.

- **The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?**
Everything they asked for they got. They got bigger spaces it was never too crowded, they had enough space to smoke. We need to move you somewhere. I am very pro the policy.

Interview 2 (student non-smoker)

- **How was the policy change presented to you?**
  
  Presented that we’re going to become a green campus to help cessation but the security will be strongly surveilling and people will be fined if they broke the rules. A lot of people thought that it was unfair because it was a way for AUC to make money off of them but I liked it anyways. I would see people smoking near the areas that were prohibited but there were designated areas.

- **How satisfied are you with the designated smoking areas? Rate and explain.**
  
  The designated areas, I’m not sure why they’re there. It was confusing. The space was too small and what happened was people were just smoking anywhere; For the smokers, it was so bad for them to have to go there and alienating and forced into a small space, but it ended up being a social place. People would gather and have fun. Not dignified because people would feel stigmatized to smoke there for example. But I love them because finally I wasn’t exposed to second hand smoke.

- **What is your perspective on the enforcement of the tobacco free campus policy? Explain.**
  
  then in 2019 people were smoking again normally, it wasn’t enforced as strictly as it was at first, especially at night. I didn’t like the surveillance around it because security guards were everywhere. Even though I didn’t smoke but my friends were annoyed if they were smokers. AUC tried to do it all at once. The way it was phrased made students skeptical and made people resist a lot more. Moreover, our culture tobacco is already something so
ingrained and normalized. I think AUC didn’t really pay attention to this idea that smoking is everywhere here. That’s one of the factors that made it harder.

- **Do you think it is necessary to implement such a policy? (for health or environmental reasons?) Explain.**

If we were to choose what to concentrate our efforts on I would choose something else. Smokers know it’s wrong and harmful. It’s not about awareness. A big part of our culture, because we have a big distrust with admin, so anything coming from them wouldn’t be accepted like the cessation clinic. If it was student led it wouldn’t have been strictly enforced.

- **What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)**

Communally, it might have caused a bit of a divide because smokers are forced to go smoke somewhere. It made nonsmokers more entitled and become too much. Social circles might be broken up because nonsmokers wouldn’t go out to with smoker friends to areas because it’s too concentrated. It might also cause stigma around smoking. *I think it was a nice idea, but it would have made more sense to implement the indoor policy because it was already there but no one cared about it. Indoor smoking was the bigger nuisance.* Focusing on little by little before doing such a huge thing. People were extra skeptical.

- **Do you think AUC is equipped to sustain this tobacco policy?**

I think it’s better to concentrate their efforts on some more important things. They should focus on social distancing. Usually we have other policies in effect and they don’t usually prioritize correctly. We already don’t trust them because of other policies. You want to be
a green campus but you don’t want to fix other more important things, like education like professors. This makes us distrust them more and feel scared that their decision would ultimately just benefit to them to look good and not on student concerns. A big part of making us trust them more would be transparency, but one of the main problems but we always have meetings and at the end of the day they decide what they’re going to do. If they give the students genuine voice. They say why they’re doing something genuinely and not passively act like they hear our voices (sending passive emails about anyone who wants to join campaign).

- **The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?**

I don’t think this would have worked. People won’t care, their argument would be you live in Egypt, we don’t have to be like abroad.

Interview 3 (student non-smoker)

- **How was the policy change presented to you?**

  I’m not a smoker. I liked the policy, they didn’t totally ban it all at once. They made it so that the smoker is satisfied and the nonsmoker is satisfied.

- **How satisfied are you with the designated smoking areas? Rate and explain.**
The areas were fine they weren’t too crowded, and people got used to it eventually. People would smoke in the bathrooms since they got too lazy to go outside to the areas instead of not smoking. The smoke itself would bother me.

- **What is your perspective on the enforcement of the tobacco free campus policy?**
  
  Explain.

  I wouldn’t see smokers at all honestly. Whoever wanted to really go smoke would go smoke. I have no idea about the fines if they were implemented. The green environment idea and principle of the tobacco-free is great.

- **Do you think it is necessary to implement such a policy? (for health or environmental reasons?)** Explain.

  If someone wants to stop smoking they’ll find a way. Everyone knows that smoking is bad. The community in Egypt accepts smoking as a common thing. There isn’t as much awareness that smoking is that bad or no laws, society doesn’t care. The community in AUC is different from the rest of Egypt, or other Egyptian universities.

  - **What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)**

  There were mixed opinions when it was first implemented. Smokers were pretty upset, and they needed to smoke I guess it was addiction since they weren’t able to do it as easily. There wasn’t enough promotion about the clinic. The best thing that would have happened would have students to convince other students.

  - **Do you think AUC is equipped to sustain this tobacco policy?**
With the new freshmen, it’s better that they don’t have to transition. The difficulty was with those who transitioned. But with covid, obviously some people won’t wear their masks and some people might smoke. But I think auc will do well but not 100%.

- **The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?**

Anything coming from the administration the students would hate. I would hear a lot of arguments about it when it was first implemented. One argument was the normal is that you don’t smoke, and uni doesn’t have to accommodate smoking but it does. It’s not like you’re born with it, no you can choose to not do it on campus. I liked the policy in general. People don’t have a right to complain about it – they say we should have a uni like abroad but abroad is tobacco free.

Interview 4 (student smoker)

- **How was the policy change presented to you?**

It was all of a sudden. The emails weren’t taken seriously, and it didn’t feel like a community action. Suddenly the president says he wants a green campus but I didn’t care. I was okay with it being not inside of campus. I would be late for class so I can smoke a cigarette. The implementation wasn’t respecting the smokers but the nonsmokers only. I was able to find less monitored areas on campus to smoke.

- **How satisfied are you with the designated smoking areas? Rate and explain.**
The areas were crowded, they were in the sun, and I couldn’t tell my professor I’m late because I was smoking so you looked bad. The smoking areas were very ostracized and it was a longer distance I liked the first step of the areas when they were on campus because it was allowing for healthier environment. When they moved it out it became a huge problem and lots of crowding, and inferiority on the smokers. And the fines were very lame, and when you take money from me I won’t stop smoking. And the fees that are taken if they were used to make a smoking room ACed I would feel respected. And I would just pay the money because it was offensive and I couldn’t respect the policy because it wasn’t respecting me. And the poor security had to follow us around, because we had great relationships with them so there were problems with them. What about drug and sexual activities? What about those penalties? It wasn’t considerate. I didn’t care about being a green campus I was already paying so much to be here and not even getting a proper education. And this policy came after education and inflation problems.

- **What is your perspective on the enforcement of the tobacco free campus policy?**

  **Explain.**

  When the area would be too crowded, they would still enforce to stand inside which was really tough.

  I could have an incentive, do some pushups and get a price to motivate exercise and help them quit smoking through active campaigns. Speech health and second-hand smoking campaigns. They get desensitized to the photos on the cigar boxes. Another successful campaign is to switch to lighter cigarettes. They could have provided nicotine patches. (the nicotine chair could have been invested in) it wasn’t about me as a student.
• Do you think it is necessary to implement such a policy? (for health or environmental reasons?) Explain.

I don’t think anyone reduced their smoking habits. They hated the securities more, which they didn’t want to

• What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)

The packet of cigarettes has awareness and it doesn’t work. People would smoke in their cars, they would chain smoke before entering campus. And run to class which is worse for their health anyways. Especially before exams they need it before the exam and now they couldn’t. as long as I don’t feel transparency I won’t be transparent and won’t like or receive anything from policies. The security arresting us like that was very demeaning and rude. No one felt that AUC was worrying about our health. It had nothing to do with my health. I was a bad smoker and give us money. I would have liked a mandatory workshop or fine if someone was caught smoking and they can promote the cessation clinic way better. But the clinic was really good if it was promoted well because the physiatrist there was amazing but what seemed to be more important was their reputation.

• Do you think AUC is equipped to sustain this tobacco policy?

They will deal with it really badly. I don’t trust their capacity at all anyways. Because of COVID they might remove the smoking area instead of increasing its space because they don’t think of the students and their needs. And they would justify that with we’re helping the students to be better health. SSE students don’t usually have time between classes anyways so it’s tough for them.
• The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus. Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?

They could have campaigns about second hand smoking to raise awareness. They could have had closer smoking areas, they wanted to just do it the way they wanted.

Interview 5 (committee member)

• How was the policy change presented to you?

This was true since year 2000. There was no enforcement to this; the tobacco policy in short was no smoking under any ceiling and you have to smoke 20 meters away from people. The implementation was lax, and this was due to the architecture and people still building and students didn’t care to enforce it as well. Francis really wanted to enforce it and he did. They implemented the policy that already existed. Problem was with moving to new campus I was with auc since 2000.

• How do you understand the Tobacco Free mission?

The policy was never changed. AUC was always responsible for protecting the whole community.

• What is your perspective on the enforcement? Explain.

The president held the meeting to ask if anyone wanted to oversee if they wanted to hold a committee for implementing the policy. We had regular meetings to decide how to enforce it. We got input from students, staff, etc. we revised the plan in light of the
survey. Maybe we should have started this gaining input before the plan. We wanted to have the phases that we ban the smoking altogether but stopped in light of events.

- **Was there enough funding to implement the policies?**

Committee didn’t require funds it was done by admin. We needed facilities to build designated areas and security for surveillance. It was part of the operation, the resources we needed we got it from admin. Jaime Mendoza recommended brochures and stress relief devices in designated areas, and facilities provided them. We secured some funds for competitions for students to design the designated areas and we put students in charge of it but it never ran. But we didn’t have continuity representation from students. We’re willing to revise this area as we come back to campus.

- **What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)**

Psychologically, students resented it, because of the penalties if caught violating. We instituted an educational program, which they could have instead of penalties but they found it as waste of time and wouldn’t attend. The most difficult stakeholders to deal with faculty because they are hiding in their offices and smoking. But students are the majority which is why they are more resistance. Faculty is reported to provost. Students’ main violations came from exam time because of stress, etc. the Minister said he will implement 2018 following AUC model for the rest of national universities. With regards to smoking culture, there is enforced law in the metro and people respect it so this is what we always respond with. It’s just a matter of enforcement and getting used to it. People don’t violate it.
• Do you think AUC is equipped to meet the needs of the tobacco policy?

It has never been a question of resources it is a question of will. The change of the
president is my biggest concern. Many staff are under management and operations and
they feel and it’s too much. Without the leadership of a president enforcing this, the
efforts will die in my opinion.

• What do you think about the numbers and sizes of the designated smoking
areas?

We had too types of areas. One that is very close to the ID gates to stand there to
accommodate more people to smoke fast and return. The other farther away are furnished
with chairs and chargers and evolved to accommodate. But our mission isn’t to force
them to stop smoking but to protect from secondhand smoke (not green environment
mission). We have cessation clinic for individuals.

We had walk through with students to help student representatives select the areas with us
so that it is. They had evolved to accommodate.

• The smoking population may claim they can harm or benefit their bodies at their
own will, reserving the personal right to perpetuate smoking on campus.

Counter framing that claim would highlight the campus’s public rights that
anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you
think counter arguments such as this against the possible benefits of smoking
would make for a more effective ban? Why or why not?

We would use this exactly and say their freedom stops when it impedes other peoples’
freedoms. We would site research on effects on second hand smoke in open air which
showed greater damages than in enclosed room because of wind promoting smoke in
more areas. Yes, this technique is very successful. We had committee members who are smokers. We are not trying to prevent smoking. We are trying to prevent violations to protect smokers and nonsmokers who are also exposed to secondhand smoking.

- **From your perspective, how can AUC maintain the policy after COVID-19?**

  I expect we resume as was. We started with this enforcement before in March 2020, the doctors suggested banning smoking altogether but by the time we had to take a decision and we quarantine. I come to campus a lot and haven’t seen violation. Practically now there isn’t a need to discuss this, but we will talk about it over summer. If we get 70% vaccination we will resume face to face on campus next year.

  Interview 6 (committee member)

- **How was the policy change presented to you?**

  I’m not an anti-smoker I used to do shisha, but my behavior changed after COVID. I do believe that people have the right to not have second hand smoking exposure. It was no surprise to apply because even in airports, etc. it made sense that our university shouldn’t have people smoking left and right. I joined the committee by personal choice. The beginning of the policy – could have been rolled out a bit smoother, but in the end when the policy was implemented, that was that. Students resisted they said they don’t have enough time to go smoke and come back.

- **How do you understand the Tobacco Free mission?**

  The mission was instilled even before the policy. We had a very clear mandate (not the healthy mandate NOT to raise awareness to the effects of smoking) but we communicate the tools and facilities for those who want to quit smoking – that was another committee that was working on raising awareness.
• What is your perspective on the enforcement? Explain.

For us, we just wanted to apply the policy not to encourage people to quit. The new Cairo campus has always had a green initiative. The campus is designed so that the shadows provide cooling, we have recycling systems, so this wasn’t new.

• Was there enough funding to implement the policies?

We haven’t faced financial issues. To maintain the policy isn’t hard, it’s a matter of accommodating the smoking areas, not a budget issue, but even if there is; admin supports it.

Part of the committee is the security head, Mr. Obeid to not face resistance. This area is one we want to work on, but at the same time we’re a community. How do I tell someone that I will report you? They help enforcing to maintain it.

• What were some repercussions of implementing the policy? (emotional, psychological, reputation, etc.)

There was a bit of a backlash. But it wasn’t about the policy per se, I felt it was about the community felt that admin just didn’t ask their opinions. It wasn’t a matter of that the policy was wrong in their eyes. It was a matter of not taking the voice of them. But as SU became understanding and promoted to work with the community for the transition. It became how can we make it more accommodating to help the community.

• Do you think AUC is equipped to meet the needs of the tobacco policy?

Yes of course. There’s no reason why it wouldn’t. we have the space, support of SU, intelligence, well informed community. We’ve communicated more than once. Everyone knows it’s a smoke free campus.
What do you think about the numbers and sizes of the designated smoking areas?

We started off with less spots and increased them with surveys. Some the areas were too close on a walking path so we moved them farther because it defeated the purpose of having a smoking free campus. The areas were in the middle were too close. The compromise of location was always a problem. First the place was without furniture, we put umbrellas, we put chairs, to accommodate so that people use it. It’s a problem. The initial problem is a cultural problem, it’s not just AUC. Egypt smokes. Abroad, a cigarette is not allowed unless 6 feet away from anyone. People follow the rules abroad but here it’s not the same. AUC has been known to be one of the pioneers to do things not done in Egypt. It’s one of the first universities to have co-ed classes before Harvard, Eva Habib. Our culture of sustainability, disabilities, sexual harassment, etc. is all pioneer efforts of AUC regardless of what happens outside of AUC. It’s an adjustment curve rather than learning. The roof tops weren’t considered; they were considered hazardous and the smoke would spread. We would still

The smoking population may claim they can harm or benefit their bodies at their own will, reserving the personal right to perpetuate smoking on campus.

Counter framing that claim would highlight the campus’s public rights that anyone on campus shouldn’t have to be exposed to secondhand smoking. Do you think counter arguments such as this against the possible benefits of smoking would make for a more effective ban? Why or why not?

Yes, you have a right to smoke but yes you have the right to follow the rules. It’s not a public place, it’s a private area with rules and strategies: like green, healthy, tolerance, etc. we can accept people want to smoke but tolerate that others don’t want second hand
smoke. We were supposed to have zero smoking, but after a major shift in our phases of implementation because we still have smoking on the gates. The message we were sending if we had removed smoking completely would be rude and bad. We accommodated to the point where it makes sense.

We are doing it for the community then throwing them in the streets. It’s not right.

- **From your perspective, how can AUC maintain the policy after COVID-19?**

We had to adjust the areas to allow for COVID, but we couldn’t apply it because we quarantine. We had said to move the chairs farther and limit their staying inside to accommodate someone waiting in line to smoke.

Students will have to be vaccinated so hopefully, the responsibility will be on the person who acts irresponsibly. We will realize behavior and act accordingly.
## Appendix 6

[STUDENTS] smokers/nonsmokers (4)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
</table>
| Q1 How was the policy change presented to you? | ⇒ AUC only cares about its reputation I  
⇒ Liked the policy II  
⇒ It wasn’t led by the community I  
⇒ Implementation satisfied both smokers and nonsmokers I  
⇒ It was all of a sudden I  
⇒ It was disrespectful  
⇒ Presented as green initiative  
⇒ It only satisfied nonsmokers  
⇒ Communication encouraged community participation |
| Q2 How satisfied are you with the designated smoking areas? | ⇒ People still smoked in prohibited areas after implementation II  
⇒ Despite initial aversion, the areas became a social hub I  
⇒ Smokers were treated as inferior I  
⇒ Nonsmokers were bothered by secondhand smoke II  
⇒ The areas were not accommodating (not shaded, crowded, far, etc.) II  
⇒ Ruined relationships of smokers with security  
⇒ The areas were too close to the gates  
⇒ Areas were not crowded  
⇒ Would have preferred indoor on campus area with AC |
| Q3 What is your perspective on the enforcement? | ⇒ Egypt’s culture is not concerned with health issues when it comes to smoking II  
⇒ Enforced well  
⇒ Enforcement wasn’t strict  
⇒ There was too much surveillance (nonsensical enforcement) I  
⇒ Campaigns would have been effective  
⇒ Campaigns would not have been effective  
⇒ Not all enforcement strategies were communicated |
### Q4 Do you think it is necessary to implement such a policy?

- Yes, everyone has a right to clean air **II**
- No, AUC should focus on problems bigger than green initiatives (like education, inflation) **I**
- No smokers quit smoking **III**
- It wasn’t successful because community doesn’t trust admin because they aren’t transparent **III**
- Not enough promotion of services **I**
- AUC is different from the rest of Egyptian culture

### Q5 What were some repercussions of implementing the policy?

- Should have implemented mandatory workshops instead of fines
- Caused a divide within the community (nonsmokers felt entitled)
- Formed a stigma around smoking
- Should have focused on banning indoor smoking
- Smokers were unsatisfied due to their nicotine addiction
- Students were given a right
- Smoking habits worsened dramatically
- The penalties felt more exploitative than incentivizing

### Q6 Do you think AUC is equipped to sustain this partial tobacco ban?

- Admin won’t prioritize enforcement **I**
- New students won’t have to transition to a tobacco free campus **I**
- Yes, but they won’t enforce it all the way **I**
- AUC is not equipped to maintain the policy at all

### Q7 Do you think counter arguments would make for a more effective ban?

- Counter-framing would be ineffective because our community doesn’t care
- Not effective because AUC doesn’t want to be like universities abroad
- Effective because AUC wants to be like universities abroad
<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 How was the policy change presented to you?</td>
<td>- Smokers didn’t have enough time to smoke and go to class (areas not accommodating)</td>
</tr>
<tr>
<td></td>
<td>- Policy already existed since before moving campuses</td>
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<tr>
<td></td>
<td>- Policy makes sense</td>
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<tr>
<td></td>
<td>- We should have gauged the community’s perspective before implementation</td>
</tr>
<tr>
<td>Q2 How do you understand the Tobacco Free mission?</td>
<td>- Our mission is not to help people quit smoking but to stop the spread of secondhand smoke (green)</td>
</tr>
<tr>
<td></td>
<td>- AUC is responsible to protect the community</td>
</tr>
<tr>
<td>Q3 What is your perspective on the enforcement?</td>
<td>- Initial policy’s full ban was mended after gaining community perspective</td>
</tr>
<tr>
<td></td>
<td>- Enforcement didn’t listen to resistance</td>
</tr>
<tr>
<td>Q4 Was there enough funding to implement the policies?</td>
<td>- Admin supports all finances</td>
</tr>
<tr>
<td></td>
<td>- Members recommended stress relief devices, which was provided</td>
</tr>
<tr>
<td></td>
<td>- Had funds for competitions but never ran due to lack of student representation</td>
</tr>
<tr>
<td></td>
<td>- Maintaining the policy is an accommodation issue not a financial one</td>
</tr>
<tr>
<td>Q5 What were some repercussions of implementing the policy?</td>
<td>- Student relationships with security were ruined</td>
</tr>
<tr>
<td></td>
<td>- The community felt disrespected</td>
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<tr>
<td></td>
<td>- We had implemented educational programs instead of fines but students found it a waste of time</td>
</tr>
<tr>
<td></td>
<td>- Egyptian culture respects laws (metro is tobacco free)</td>
</tr>
<tr>
<td></td>
<td>- Egyptian culture is not concerned with health when it comes to smoking</td>
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<tr>
<td></td>
<td>- Students mostly resented the policy</td>
</tr>
<tr>
<td></td>
<td>- Faculty hid in offices to smoke (harder to stop)</td>
</tr>
<tr>
<td></td>
<td>- People liked the policy but hated implementation</td>
</tr>
<tr>
<td>Q6 Do you think AUC is equipped to meet the needs of the tobacco policy?</td>
<td>- The resources for maintenance are there</td>
</tr>
</tbody>
</table>

| Q7 What do you think about the numbers and sizes of the designated smoking areas? | The change of president/will is concerning |
| Q7 | Cessation clinic was available as a service  |
| Q7 | People follow rules abroad, not in Egypt |
| Q7 | New policies are adjustment curves |
| Q7 | Compromise on the areas is always a problem |
| Q8 Do you think counter arguments would make for a more effective ban? | People have the right to clean air |
| Q8 | Yes, counter-framing is very effective |
| Q8 | Private institutions have rules to be respected |
| Q9 From your perspective, how can AUC maintain the policy after COVID-19? | The policy will be maintained as was before and adjust accordingly |
| Q9 | Move chairs farther for COVID protection |
| Q9 | There were no violations |
Appendix 7

Below is the raw data to the questionnaire. These are the participant responses to the final optional question: *In your opinion, how do you think AUC could have better communicated the stipulations of tobacco-free policy?*

Skipped responses OR “not sure” “I don’t know” were removed from this list (33 participant responses were removed for convenience)

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not immediately, having them being well shadowed and nearer to gates, allowing a break between classes to smoke</td>
</tr>
<tr>
<td>Online campaign and on ground campaign and activities. Signs showing designated areas</td>
</tr>
<tr>
<td>The could’ve had student representatives communicating to the student body in their language</td>
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<tr>
<td>By spreading visual material around on campus</td>
</tr>
<tr>
<td>I have been smoking for 8 years. I think the tobacco-free policy hasn’t really affected the behavior of smokers. Although it did protect non-smokers from second hand smoking, it’s implementation did not provide convenience for smokers at all, it exposed smokers to an excessive amount of second hand smoking (especially during assembly when the designated areas were too crowded) as well as started a behavior of chain smoking that I observed in a lot of people that I personally know (including myself). Thus, I think there should be more designated areas for each building, and there should be a maximum no of smokers at a time. And all in all, I don’t support the policy.</td>
</tr>
<tr>
<td>flyers, permanent posters, etc.</td>
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<tr>
<td>Information sessions/emails including implications of smoking</td>
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<tr>
<td>Pinning posters in places that smokers may use instead of the designated areas…launching regular campaigns about smoking because a law prevents/restricts the result but not the cause.</td>
</tr>
<tr>
<td>I’m new, I honestly don’t know much about it. All I know is that when I had my FYP orientation the leader told us that he could tell us the spots where you can smoke and the cameras won’t pick it up</td>
</tr>
<tr>
<td>Perhaps they could provide this information in early student orientations and emails.</td>
</tr>
<tr>
<td>Worst policy and implementation ever made.</td>
</tr>
<tr>
<td>I think they did a good job</td>
</tr>
<tr>
<td>Use social media</td>
</tr>
<tr>
<td>Through online quizzes like the anti-sexual harassment quiz for example</td>
</tr>
<tr>
<td>i think it was communicated well.</td>
</tr>
<tr>
<td>Put less smoking areas, in less crowded places</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Put less smoking areas, in less crowded places</td>
</tr>
<tr>
<td>Hang up signs. People tend to hide and smoke on campus.</td>
</tr>
<tr>
<td>I’m not sure how they communicated it initially</td>
</tr>
<tr>
<td>Email and flyers</td>
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<tr>
<td>increase the designated area</td>
</tr>
</tbody>
</table>

I mainly have an issue with the locations of the smoking areas. They are at the entrances of the university which is a problem to me because it's the first thing I smell right after I park my car and go through the gates. So definitely a relocation of these areas is really needed in my opinion.

I have not been in the university long enough to know how they implement these things. However, I would say social media campaigns and mandatory seminars are a necessity.

| I think they did a good job |
| maybe made more designated smoking areas |
| Put posters everywhere |
| More awareness as to why and helping make it easier for those who smoke, AUC is mostly outdoor so there could be more accommodating |
| more brochures and talks about the benefits of such move |
| I think they did a good job |
| Campaigns |
| By expanding the smoking areas |
| Banners |
| Put less smoking areas, in less crowded places |
| Banners |
| Campaigns |
| Put less smoking areas, in less crowded places |
| Not by force. Also by having some smoking areas inside campus. |
| Brochures |
| No one knows anything about it, if they’re going to impose a policy this draconian in its extent given that a vast majority of AUC students are smokers, might as well let them know what they’re dealing with. None of these measures are helping them stop smoking in the first place. |
| Having it explained and presented during orientation. |
| Take real actions |
| More awareness maybe on smoking negative impact |
| With signs and ensuring security guards watching out for hiding smokers |
| same as the harassment |
| Provide the link in more places or just make some lesser known aspects of it better advertised |
| International students did not know. Communicate it to them. |
surveys and taken everyone's opinion

They should have included both smoking and non-smoking students from the start in the design + implementation phase. It seemed like a top-down as opposed to a collaborative approach was used. If that was done, there would have been no need to market the policy per way as students would’ve been involved from the start

<table>
<thead>
<tr>
<th>There needs to be more signs.</th>
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</thead>
<tbody>
<tr>
<td>Through obligatory information sessions</td>
</tr>
<tr>
<td>Maybe monitoring students and faculty members better</td>
</tr>
<tr>
<td>I have never heard or seen them so maybe through an email</td>
</tr>
<tr>
<td>I believe many students especially freshmen and sophomores are not aware of the policy especially those who don't smoke. Therefore, more awareness about this policy is needed.</td>
</tr>
<tr>
<td>Remove smoking areas and ban smoking on campus completely</td>
</tr>
<tr>
<td>They could have prohibited smoking inside the dorms, as some people smoke in their rooms, but the smoke reaches adjacent rooms.</td>
</tr>
<tr>
<td>better spread them especially for the online classes</td>
</tr>
<tr>
<td>Maybe have more eye-catching signs up on campus</td>
</tr>
<tr>
<td>I think the smoking rules on campus are already well followed by the students</td>
</tr>
<tr>
<td>Banners</td>
</tr>
<tr>
<td>Flyers or Emails</td>
</tr>
</tbody>
</table>

I joined AUC two months ago and only heard of the tobacco-free policy when I was asking a friend if I could light a cigarette on campus or not.

I don't remember seeing any email from the university regarding this policy, and I don't remember seeing any banners inside the university encouraging smoking cessation and supporting this policy.

I believe there must be more efforts to reach every person, specially new students, to enlighten about this policy and provide him assistance if he is willing to quit smoking.

| Emails and workshops and through professors in lectures |
| Through social media regular reminders of signs |
| I was not aware of the tobacco-free policy before this survey. |
| I think it’s already fine |