



Enforcement experiences on tobacco-free universities in California

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ABSTRACT

Smoke- and tobacco-free university policies have been expanding throughout the United States. In spite of the benefits of such policies, policy compliance remains a challenge. A better understanding of campus community enforcement approaches is needed to inform future policy implementation to bring about greater adherence to university smoke- and tobacco-free policies. To this end, thirteen focus groups with 76 participants from two universities in Southern California with tobacco-free policies were held from October 2019 through October 2020 to discuss attitudes toward and experiences with the campus smoking policy, campus tobacco use behavior, and policy enforcement. Focus groups discussions were recorded, transcribed, and analyzed using a general inductive analysis approach. A wide array of campus stakeholders were involved in enforcement actions, including formal entities such as police and parking enforcement, as well as the general campus community such as students and employees. However, the majority of participants in the study had never had an enforcement experience and those who did only did so on rare occasion. Enforcement experiences were often perceived as aggressive, which elicited a desire for a similarly aggressive response on the part of the person smoking or vaping. The enforcement of e-cigarettes is particularly challenging because of the speed and discretion with which they can be used compared to combustible tobacco and perceived favorable norms toward e-cigarettes. Universities should consider using proactive, consistent, and tailored actions to reinforce changing social norms for greater policy compliance.

1. Introduction

The number of colleges and universities with smoke- or tobacco-free campus policies in the United States has been increasing (Bayly et al., 2020; Blake et al., 2020; Trad et al., 2018; Wang et al., 2018). As of July 2020, the Americans for Nonsmokers' Rights Foundation reported that there were at least 2542 completely smokefree campus sites (including 2104 that were completely tobacco-free), 2176 of which prohibit electronic cigarette (e-cigarette) use everywhere and 1183 which prohibit hookah use everywhere (American Nonsmokers' Rights Foundation, 2021). Previous studies suggest that smoke- and tobacco-free campus policies are well received by the general campus community (Ickes, Rayens, Wiggins, & Hahn, 2017; Lupton & Townsend, 2015; Seitz, Kabir, Greiner, & Davoren, 2018; Wray, Hansen, Ding, & Masters, 2020), and norms shift to greater disapproval of tobacco use on campus after their adoption (Wray et al., 2020). In addition, smoking rates appear to decline after the implementation of smoke- and tobacco-free campus policies (Leavens et al., 2020; Rogers, Barrington-Trimis, Unger, & Forster, 2020), though the impact on other nicotine products such as e-cigarettes

may follow different patterns (Leavens et al., 2020; Llanes, Cabriaes, Hernandez, & Cooper, 2019). Other benefits of smoke- and tobacco-free campus policies include reductions in the amount of cigarette litter on campus (Fujita & Marteache, 2020; Lee, Ranney, & Goldstein, 2013), secondhand smoke exposure (Roditis, Wang, Glantz, & Fallin, 2015), smoking behavior (Roditis et al., 2015; Seo, Macy, Torabi, & Middlestadt, 2011), and reporting seeing others smoking (Seo et al., 2011).

Though smoke- and tobacco-free university policies appear to be supported by campus community members and are associated with declines in smoking, policy compliance remains a challenge (Baillie, Callaghan, & Smith, 2011; Burns, Bowser, Smith, Jancey, & Crawford, 2014; Fennell, 2012). High rates of exposure to secondhand smoke remain even after smoke- and tobacco-free policies are enacted (Gatto et al., 2019; Mamudu, Veeranki, He, Dadkar, & Boone, 2012; Ramachandran, Bentley, Casey, & Bentley, 2020), with lack of enforcement frequently cited as potential reason for non-compliance (Baillie et al., 2011; Grossberg, Loukas, Fernandez, Latimer, & Karn, 2020; Russette, Harris, Schuldberg, & Green, 2014). University smoke- and tobacco-free policies vary widely in their enforcement approaches, with differences in who is supposed to

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enforce campus smoking policies, to whom reports of policy violation should be made, and sanctions for policy violators (Seitz, Greiner, Davoren, & McIntyre, 2018). One study found that three quarters of colleges and universities did not specify who was responsible for enforcement (26%) or instead relied on the entire campus community – including students, faculty, and staff – to enforce the policy (62%) (Seitz, Greiner, et al., 2018). Students, faculty, and staff, however, do not generally have the authority nor the tools to enact penalties and are thus limited in how much compliance they can engender from policy violators. Further, studies within the general population have found that the majority of adults do not or would not ask someone smoking near them in a public place to stop (Bigman, Mello, Sanders-Jackson, & Tan, 2019; Germain, Wakefield, & Durkin, 2007). Efforts to use student ambassador programs may be effective in reducing smoking on campus (Ickes, Hahn, McCann, & Kerckmar, 2013, 2015), however, using students for community enforcement of smoke- and tobacco-free policies has limitations due to their lack of authority (Ickes et al., 2013; Kuntz, Seitz, & Nelson, 2015; Seitz & Ragsdale, 2019).

Without formal enforcement entities or procedures and emphasis on education and community enforcement of smoke- and tobacco-free policies, universities may unintentionally create ambiguous environments around policy compliance with unpredictable interpersonal interactions. The absence of institutional enforcement actors (e.g., university police) or policies (e.g., fines) does not preclude any enforcement, only formal enforcement. What enforcement interactions occur under the guise of “education” or “community enforcement” is not well understood. Thus, the present study examined the experiences and attitudes of students and employees at two tobacco-free public universities in California who reported non-compliance with the university smoking policy to address the question, “What types of enforcement interactions, if any, are experienced by individuals who are non-compliant with university tobacco-free policies?” A better understanding of enforcement experiences on smoke- and tobacco-free universities can provide insight into more and less effective interactions to guide future policy implementation and evaluation efforts.

2. Materials and methods

2.1. Data collection

In Fall 2019, college students and university employees who self-reported use of tobacco products (including e-cigarettes and other nicotine products) on-campus were recruited from two four-year public universities in Southern California to participate in focus group discussions on compliance with university tobacco-free policies. University 1 had a student enrollment of approximately 34,812 undergraduate students in Fall 2019 (for whom 1980 on-campus housing units are available) and has been smoke-free since Fall 2013 and tobacco-free since Fall 2017. It is a part of the California State University (CSU) system. While University Police have the ultimate enforcement authority, the policy suggests that individual members of the CSU community are “responsible to comply” with the policy, and that “educational campaigns, outreach, communication and the promotion of tobacco cessation treatment options will be the primary means to promote compliance” (California State University, 2017). The policy explicitly prohibits “hostile and/or violent interpersonal conduct directed against members of the CSU community requesting that an individual(s) comply.” University 2 had a student enrollment of approximately 30,794 undergraduate students in Fall 2019 (of whom 11,790 lived in on-campus housing) and has been tobacco-free since Fall 2013. It is part of the University of California (UC) system, and non-compliance is dealt with through human resources personnel policies for staff, academic personnel policies for faculty, and campus-specific policies for students through Student Conduct offices (University of California, 2018). Though the policy grants each campus the authority to issue citations not to exceed \$100, University 2 has elected to emphasize an educational approach to its policy

implementation.

Both universities have also created programs utilizing student ambassadors to educate the campus community about the tobacco-free policy to complement signage and other educational efforts. The student ambassador program at University 1 was housed in the Environmental Health and Safety office and sent trained students onto campus to educate observed policy violators about the policy and ask them to stop smoking, conduct campus cigarette clean ups, and collect data from students on attitudes toward the policy. It was a sustained program with paid part-time student employees as well as volunteers. At University 2, the student ambassador program was initiated through Student Health Services but carried out more sporadically than University 1, utilizing student volunteers to educate observed policy violators about the policy, asking them to stop smoking, and conducting campus cigarette clean ups.

Two marketing firms managed recruitment of participants and project logistics for focus groups. One marketing firm was assigned to each university and utilized panels of potential participants, social media outreach, on-campus recruiting, and participant referral to recruit participants. In addition, research staff passed out study flyers to individuals observed smoking or vaping on campus. Eleven in-person focus groups were conducted at off-campus facilities (7 with students, 4 with employees) from October 2019 through February 2020.

COVID-19 restrictions on in-person gatherings at both universities in March 2020 required a modification to study recruitment and data collection. Online only recruitment of study participants from University 1 was conducted by a university-based research center for online focus groups. For employees, publicly available email addresses on university webpages were collected and an email invitation was sent to a subset of employees to participate in an online survey of tobacco health behaviors. Those who reported ever smoking or vaping on campus and agreed to be contacted for participation in a focus group were recruited into the study. For students, a snowball sampling procedure utilizing employed student researchers was used to recruit students who self-reported tobacco use on campus. Two online focus groups were held in October 2021.

Inclusion criteria for both student and staff for the study were: (1) age 18 or older; (2) student or employee at one of the two universities; and (3) self-reported use of a tobacco product on university property. Inclusion criteria were verified by the market research companies and research center and potential participants were assigned to focus groups held from October 2019 to October 2020. A total of 13 in-person and online focus groups were conducted.

For in-person focus groups, upon arrival at the focus group facility, a study alias, informed consent materials, and a demographic and tobacco use questionnaire were given to each participant. Informed consent forms and demographic questionnaires could be completed prior to focus groups in the facility lobby, or after entering the focus group room if participants had questions. Informed consent was obtained from all participants. For online focus groups, informed consent and the study questionnaire were completed online prior to focus group participation. Participants were not allowed into the online meeting room unless informed consent was obtained. In total, six focus groups (4 with students, 2 with employees) were held with participants from University 1 and 7 focus groups (4 with students, 3 with employees) with participants from University 2.

Groups had an average of 5.85 participants (range 1–9), with an average of 7 participants for student groups (range 2–9) and 4 for employees (range 1–9). Focus groups averaged 69.3 min (range 33–85 min), with an average of 76.8 min for students (range 64–85 min) and 57.4 min for employees (range 33–77 min). Focus groups were facilitated by the first author and followed a semi-structured protocol. Discussion topics included tobacco use initiation and transitions, knowledge of and attitudes toward campus smoking policy, campus tobacco use behavior, policy enforcement, and engagement with tobacco content on social media. Students who completed the focus group were given a \$125 incentive for participation; employees received \$200 for their participation. In-person focus groups were audio recorded and verbatim

transcripts were provided by the market research firms. Online focus groups were video recorded and sent to a professional transcription company for processing. The study protocol was approved by the Institutional Review Board at California State University, Fullerton (HSR-18-19-532).

2.2. Data analysis

Focus group transcripts were reviewed for accuracy by research assistants then imported into and analyzed using ATLAS.ti 8 qualitative data analysis software (ATLAS.ti Scientific Software Development GmbH, 2019). The codebook for analysis was developed using a team-based approach (MacQueen, McLellan, Kay, & Milstein, 1998). The first author developed an initial coding scheme based on the focus group discussion protocol and emergent themes from a close reading of a subset of two transcripts. Two research assistants coded a subset of focus group transcripts using the initial coding scheme and added new codes as needed. The analysis team met to review and finalize the coding scheme. An iterative process of coding, assessing intercoder agreement, and resolving differences in coding was repeated until a Krippendorff's $\alpha = 0.862$ was reached, exceeding the level of accepted data reliability of $\alpha = 0.800$ (Friese, 2019). Research assistants then coded all focus group data. The first author created a subcode for each coded data fragment, which was reviewed by research assistants for appropriateness. The analysis team met and resolved conflicts to achieve a consensus subcoding of data fragments. Research assistants then recoded the data with subcodes within ATLAS.ti.

A general inductive analysis approach was utilized to analyze the data (Thomas, 2006). Immersion in the data began during data collection with the focus group facilitator and 2–5 members of the research team observing focus groups behind two-way glass debriefed after each focus group, into preliminary reading of focus group transcripts, coding data, and formal analysis (Borkan, 2021). The codes used to analyze the data provided a preliminary set of themes in the data. The first author extracted data for codes with a larger number of data quotations which were read iteratively and common themes summarized in data memos. Thematic summaries for each focus group were also created for key codes providing context for individual quotations. The Co-Occurrence table in ATLAS.ti facilitated crystallization by displaying data by subcodes for comparison and synthesis. Through iterative analysis of data memos, comparison of subcodes, and focus group thematic summaries, data were synthesized into patterns within themes and relationships between themes were identified and organized into a broad framework to describe the nature of enforcement interactions experienced by individuals who are non-compliant with university tobacco-free policies (Borkan, 2021). The narrowly delineated sample population resulted in data saturation after approximately 3 student and 2 staff focus groups at University 1 and 4 student and 2 staff focus groups at University 2 (Morse, 1995).

3. Results

3.1. Participant description

A total of 76 individuals participated in the study, 20 of whom were employees and 56 of whom were students (Table 1). Fifty percent of employees were female compared to 37.5% of students. Employees were predominantly White (75.0%) whereas 35.7% of students reported being Asian, 23.2% White, 16.1% Middle Eastern/North African, 8.9% Hispanic, 3.6% Black. The percent of participants correctly identifying the smoking policy on their campus was 11.8%, with employees more successfully doing so (30.0%) compared to students (5.3%). Most employees ever used either cigarettes only on campus (30.0%) or were dual users (40.0%), and students were predominantly e-cigarette only users (39.3%) or dual product users (32.1%)

Table 1
Sample characteristics.

	University 1 (n = 30)		University 2 (n = 46)	
	Students	Employees	Students	Employees
Male	11	3	23	7
Female	12	3	9	7
Other	1	0	0	0
Average age (years)	22.3	44.4	21.5	45.2
White	4	6	9	9
Black	1	0	1	0
Asian	4	0	15	3
Hispanic	2	0	3	2
Middle Eastern/ North African	9	0	0	0
Two or more	4	0	4	0
Correctly identify smoking policy	1	3	2	3
Product ever used on campus				
Cigarette only	2	3	2	3
E-cigarette only	7	2	15	1
ATP only	1	1	0	1
Dual product	9	0	9	8
Poly product	5	0	5	1

3.2. Pursuing compliance without consequences

Though enforcement was initiated by a wide array of stakeholders, only one specific subgroup – students at University 2 living in university housing – reported a consequence as a result of policy violation. Enforcement experiences on both campuses, which rely on an education-focused approach to compliance, were dependent on the willingness of the individual smoking or vaping to comply, leaving members of the campus community, and even security guards and police, with little recourse to achieve policy goals of a tobacco-free campus.

At University 1, students, faculty, staff, community services officers (student assistants hired by the police department to report suspicious activities or incidents to the University Police Department, or CSOs), the police department, and student ambassadors were all reported as having initiated an enforcement experience though the general campus community (e.g., students and staff) and were most often noted as taking on the enforcement role. Enforcement at University 1 was limited to requests to stop smoking or vaping, sometimes relying on peer pressure to achieve compliance. For example, one student reported that sometimes when students approached them about stopping smoking, they “wait there until I’m done” to pressure them to stop. “I was like, ‘You can sit here and watch me smoke until the end if you want,’ and they do every time which is funny.” With no mechanism or other authority by which to enforce a request to stop smoking or vaping, intervening students were limited in their efforts to elicit compliance, a fact that held true for student ambassadors as well. Another student at University 1 described student ambassadors as “particularly aggressive and condemning, they just won’t move” as the individual continues to smoke to apply peer pressure in the absence of enforcement authority.

This was not only limited to intervening students. A faculty member who was caught smoking on a Saturday by a police officer recalled their experience this way:

“They noticed that I was smoking in some area. And they said, ‘Well, you know, we have [a] smoking policy.’ And I tried to explain to her that this is [the] weekend, you know, that it’s like, uh, no one is around and so on. And she said, ‘No, no. You know that it’s a policy.’ I said fine ... [I didn’t put it out] ... And I just bumped into the police officer and that was the conversation.”

Or, as another employee stated: “I work with every university police officer in the course of my job. And they have no way to enforce the policy whatsoever.”

Enforcement experiences reported by students at University 2

centered around the student housing environment with residential security officers (housing department employees who complete a civilian field training program through the police department to uphold campus policies, or SROs), or resident assistants, other students in dormitories, and CSOs (whose roles are similar to those at University 1). Some students who were caught violating the university smoking policy by SROs or CSOs reported having to attend a disciplinary session for their violations, with students concerned that smoking violations might threaten their housing contracts. For example, a student said, "A cancellation of your housing contract ... would be on my mind every time I smoke." Enforcement interactions with other students or staff on campus were reported less often, with no consequences resulting from those experiences.

Among employee participants, enforcement was reportedly implemented by security guards or parking enforcement, but often halfheartedly. For example, one participant recalled of her experiences smoking in the parking lot:

"I have been confronted in the parking lot ... in my car ... a few times. Sometimes by the parking guys who are checking for passes. And one time by ... some kind of security guy. And, and another time by, uh, someone who parked near me ... Well [the] parking guys were kind of going, they'll kind of go, "Well you're not supposed to do it." But you know they, understood because those particular ones smoked ... And then the time with the one security guy, he was sent over by some campus kind of construction guys ... and they asked him to come over and talk to me in my car. And he made a big show of like, uh, 'I want to see your ID.'"

In each case above, the participant reported putting out their cigarette out of a sense of guilt because they knew they were violating the policy and not any ability by security or parking attendants to enforce their request. Other employees reported similar experiences interacting with security guards at off-campus properties, but with varying outcomes related to whether they stopped smoking. One employee said security will "either come over and smoke with me or [say] 'I don't care, dude, just do what you do.'" Employees were also approached by their peers, but were far more inclined to ignore peer enforcement. For example, one employee recalled that:

"I was smoking in a car once, me and a couple of my friends, and this guy that I have no idea who he was or where he was from, he like walked up and knocked on the door or the window of the car and he like told us that we couldn't do that here. So, we just rolled up the window and kept doing it. And he started looking really angry, and we just started making faces at him and drove away."

3.3. Inconsistent enforcement, variable responses

Enforcement was inconsistent with 17 study participants reporting any enforcement interactions. As one student remarked:

"I've been smoking at [University 1] for the last four years and no one has ever said anything. Campus PD [police] will walk right by or I'll go hang out with the Kuwaiti exchange students and no big deal ... no one ever says anything."

Inconsistent enforcement was practiced not only by official university entities such as police and security, whom one employee at University 2 said "doesn't give a shit," but of the broader campus community as well. Even among those who reported enforcement interactions, they suggested they were approached only "every now and then" or that "they don't enforce this policy as much as they do parking." This lack of consistent enforcement not only raises the possibility of secondhand smoke exposure risk, but also signals to those who smoke and vape on campus that the policy is not taken seriously by the university. As one student at University 2 suggested:

"The fact that [the university] knows that there are people smoking here [and] is not doing anything about it on a smoke-free campus, just shows that they also don't really care."

The reliance on signage to communicate the policy with few formal university entities engaging with policy violators created a perception of compliance as a matter of "interpersonal courtesy." That is, individual smokers took it upon themselves to smoke or vape away from others, around other users, or asking for consent from those around them. For example, participants described smoking or vaping to the "side and standing where there's no one," "fac[ing] the wall," and staying "away from people as much as we can and not like get it in people's face." Some who vaped in dorm room first asked their roommates if it was okay to do so in their room, and others described only smoking or vaping with their friends who were also using tobacco. Participants used terms and phrases such as being "polite," "courteous," or "considerate," "keeping [smoking] out of other people's business," wanting to "be a decent human being" in respecting people's aversion to smoking, not be "an asshole," and knowing that "the smell bothers people" as the basis for showing "interpersonal courtesy" in their on-campus smoking and vaping.

Participants reported variable responses to enforcement interactions. Students at University 2 approached by a CSO or RSO when smoking or vaping consistently reported stopping when asked to do so, whereas students and staff approached by CSOs and police officers at University 1 did not consistently cease their use. Similarly, while some respondents on both campuses reported ceasing their use when approached by the general campus community, others did not. Amongst those who did not report having enforcement interactions, they not only suggested that they would be more likely to comply with those who approached them politely, but also expanded the meaning of compliance to include moving away but continuing to smoke or vape. When students at University 1 who exclusively vaped on campus were asked if they would stop if another student asked them to, they replied that they would "do it somewhere else" or "would just go somewhere else." Students at University 2 suggested that they would move away if asked to stop smoking a cigarette because "if you just started smoking a cigarette you're going to be not so thrilled to put it out."

3.4. Aggressive enforcement

Participants at both universities consistently reported that those initiating enforcement interactions did so in ways they considered "aggressive," "mean," or "rude." For example, a student at University 2 smoking near graduate student housing recalled someone "came up like Nazi Germany and was very upset with me." A student at University 1 recalls being given "the look" of disdain, with others reported feeling stigmatized for their smoking. Even though participants knew they were in violation of the policy, the effect of aggressive enforcement approaches was to escalate the interaction, sometimes to confrontation. As one student said, "I feel like 9 out of 10 times they come at you angry. And they're like you need to stop right now ... if you're going to charge at me like a rhino, I'm going to react like a rhino." Another added that "If I was approached in an aggressive way, I would be aggressive about it. Like, if you're sassing me, I'm going to sass you back." Alternatively, respondents suggested that if they were approached politely, they were more likely to stop or move away. Respondents said, "if someone asked me like a decent person, I would react like a decent person" and "if they approached ... like we're equal, then I would have no problem with it whatsoever." A polite response from a non-compliant individual, however, is not guaranteed. As one employee remarked, "If you ask me, I may oblige" whereas a student described a past experience in which "some people will come up to me and maybe if it's a stressful day or something, I will be like, 'No, bro, honestly, I'm just going to smoke a cigarette. You can eff off.'" Another student remarked that once they put out their cigarette, they sometimes start again when the enforcement interaction is over.

3.5. The challenge of enforcing e-cigarettes

Among those who reported enforcement interactions, only one was using an e-cigarette at the time. The greater enforcement of combustible cigarette smoking compared to e-cigarettes is due in part to product differences. Participants discussed how fast and discreet using a vape is, making it difficult to enforce the campus smoking policy. Smoking cigarettes takes more time and emits smoke that is more recognizable and disliked by others. It is so easy to vape on campus without being caught that one employee said that “one of the major advantages of e-cigarettes is you can get away with murder. Anywhere.” Not only is it harder to enforce compliance with e-cigarettes, participants perceive that attitudes among the campus community toward e-cigarettes are more open compared to cigarette use. Participants suggested that “vaping is actually kind of accepted,” that the campus community is “relatively indifferent” toward vaping, and that “people never really say anything when it comes to vapes.” As one student summed up, “Juil, you just hit it and it’s gone in just like a couple of seconds ... it’s less bothersome to individuals than with how cigs are.”

4. Discussion

Though the specific dynamics of university smoking policy enforcement varied between the two sites in this study, patterns emerged between both campuses. First, a wide array of campus stakeholders, such as police, CSOs, parking enforcement, security, student ambassadors, and the general campus community including individual students and employees, had policy compliance or enforcement-related interactions, but those actions were limited in effectiveness due to lack of enforcement authority or penalty. Second, enforcement was infrequent and inconsistent. The majority of participants in the study had never had an enforcement experience and those who did only did so on rare occasion. The infrequent and inconsistent enforcement by both official university entities and the general campus community conveyed to policy violators that the university did not take the policy seriously. As a result, individuals who smoke and vape believed smoking away from or with the consent of others was a form of compliance. Third, enforcement experiences were often perceived as aggressive, which elicits a desire for a similarly aggressive response on the part of the smoker or vaper, and may be equally counterproductive for encouraging tobacco cessation or quit behavior. Lastly, the enforcement of e-cigarettes is particularly challenging because of the speed and discretion with which they can be used compared to combustible tobacco. Participants perceive a greater acceptance of e-cigarettes compared to conventional cigarettes due to a more pleasant smell, less perceived risk, and fast rate of dissipation of e-cigarette aerosol.

The proliferation of smoke- and tobacco-free spaces in the United States has expanded to colleges and universities, but the absence of institutional enforcement mechanisms results in compliance through self-government and social sanctions (Poland, 2000). Poland’s work on smoking restrictions in public places suggests that individuals who smoke in public shape their behavior on definitions of being considerate or showing common courtesy that includes smoking away from others and minimizing exposure to secondhand smoke, findings that are also reflected in the results of this study (Poland, 2000). Study participants describe compliance in terms of self-government, suggesting they smoke and vape in ways that are considerate or respectful of others including away from others, slowing their secondhand smoke away from others, or moving if asked to. Study participants also suggest that they deserve to be treated with respect by non-smokers when asked to stop smoking or vaping. They assert that if they are treated respectfully, they will be considerate of others, though not necessarily stop smoking or vaping.

Studies have shown, however, that the “common courtesy” approach adopted by study participants is an ineffective way to protect people from secondhand smoke exposure (Davis, Boyd, & Schoenborn-Charlotte, 1990; Germain et al., 2007), and that non-smokers not accustomed to

secondhand smoke are more assertive when asked about being exposed to secondhand smoke (Germain et al., 2007). Study findings that individuals initiating an enforcement interaction were insistent that individuals who smoke or vape stop altogether suggest that the university tobacco-free policies created an expectation of a total absence of smoking or vaping on campus among some members of the campus community, thus emboldening individuals to ask policy violators to stop (Poland et al., 1999) and engaged in behavior perceived as aggressive by study participants. A mismatch between compliance expectations between individuals who smoke and vape on campus (and focus on minimizing harm) and other campus community members (who expect total abstinence) may therefore lead to hostile enforcement interactions and the potential for escalation, a dynamic unexpectedly fostered by tobacco-free policies reliant on an educational compliance approach.

In the present study, enforcement interactions were experienced almost exclusively to individuals smoking cigarettes. The lack of enforcement of e-cigarette use may result from the ease and discretion with which vaping can be done, perception of less harm, and perceived social acceptability reported by study participants. These results as well as other similar findings on stealth vaping (Russell, Yang, Barry, Merianos, & Lin, 2021; Yingst et al., 2019) suggest that norms and patterns of use may require enhanced and tailored approaches to educational and enforcement efforts specific to campus vaping (Russell et al., 2021).

The results of the study are not generalizable to other students and staff at other universities because of the qualitative nature of the study and the convenience sampling utilized for the study. In addition, the study was limited to two urban universities in California, thus may not be generalizable to other universities. Additional research on policy enforcement should be conducted at colleges and universities in other settings and student populations to identify campus-specific knowledge, attitudes, and behaviors from which implementation efforts are based.

5. Conclusion

This study adds to a growing but limited area of tobacco control literature examining the implementation of university tobacco-free policies, and specifically policy enforcement. While enforcement dynamics varied between the two campuses in this study, findings suggest that policies are inconsistently enforced and without penalty. When institutional enforcement and penalty are lacking, responsibility for enforcement is redirected to the general campus community where enforcement interactions are perceived to be initiated in an aggressive manner which increases the likelihood of a hostile, and potentially less compliant, interaction. Institutional entities should reassume leadership in policy enforcement to elicit greater compliance and reduce the risk of hostile interactions on campus using proactive, consistent, and tailored actions to reinforce the changing social norms represented by policy adoption and redefine meanings of consideration and self-governing in the context of tobacco and emerging nicotine product use.

Ethics approval

Ethics approval for this study was granted by the Institutional Review Board of California State University, Fullerton (HSR 18-19-532).

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Data statement

Data are available from the first author upon reasonable request.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- American Nonsmokers' Rights Foundation. (2021). Smokefree and tobacco-free U.S. and Tribal colleges and universities. <https://no-smoke.org/at-risk-places/colleges/>. (Accessed 14 January 2022).
- Baillie, L., Callaghan, D., & Smith, M. L. (2011). Canadian campus smoking policies: Investigating the gap between intent and outcome from a student perspective. *Journal of American College Health*, 59(4), 260–265. <https://doi.org/10.1080/07448481.2010.502204>
- Bayly, J., Trad, C., Saint-Fort, L., Andrews, M., Patel, M., Haynie, D., et al. (2020). Adoption of electronic-cigarette-free, hookah-free and American College Health Association recommended tobacco-free policies among a national sample of postsecondary educational institutions. *Journal of American College Health*, 68(1), 26–31. <https://doi.org/10.1080/07448481.2018.1527772>
- Bigman, C. A., Mello, S., Sanders-Jackson, A., & Tan, A. S. L. (2019). Speaking up about lighting up in public: Examining psychosocial correlates of smoking and vaping assertive communication intentions among U.S. adults. *Health Communication*, 34(4), 500–510. <https://doi.org/10.1080/10410236.2018.1428849>
- Blake, K. D., Klein, A. L., Walpert, L., Casey, L., Hallett, C., Douglas, C., et al. (2020). Smoke-free and tobacco-free colleges and universities in the United States. *Tobacco Control*, 29(3), 289–294. <https://doi.org/10.1136/tobaccocontrol-2018-054829>
- Borkan, J. M. (2021). Immersion–crystallization: A valuable analytic tool for healthcare research. *Family Practice*, 1–5. <https://doi.org/10.1093/fampra/cmab158>. November.
- Burns, S., Bowser, N., Smith, J., Jancey, J., & Crawford, G. (2014). An exploratory study of smokers' and stakeholders' expectations of the implementation of a smoke-free policy in a university setting. *Health Promotion Journal of Australia*, 25(2), 129–135. <https://doi.org/10.1071/HE13044>
- California State University. (2017). Policy on systemwide smoke and tobacco free environment. *Executive Order*, 1108. https://www.csusm.edu/smokefree/pdfs/policy_eo_1108.pdf. (Accessed 14 January 2022).
- Davis, R. M., Boyd, G. M., & Schoenborn Charlotte, A. (1990). "Common courtesy" and the elimination of passive smoking. Results of the 1987 national health interview survey. *JAMA*, 263(16), 2208–2210. <https://doi.org/10.1001/jama.1990.03440160070040>
- Fennell, R. (2012). Should college campuses become tobacco free without an enforcement plan? *Journal of American College Health*, 60(7), 491–494. <https://doi.org/10.1080/07448481.2012.716981>
- Friese, S. (2019). *Qualitative data analysis with Atlas.ti*. Sage Publications Ltd.
- Fujita, S., & Martache, N. (2020). Evaluation of a smoke- and tobacco-free campus policy: The issue of displacement. *Journal of American College Health*, May 20, 1–9. <https://doi.org/10.1080/07448481.2020.1758705>
- Gatto, A., Powell, S. E., Walters, E. F., Zamani, S., Sales, L. B., & DeBate, R. (2019). A mixed-methods assessment of a peer-enforced tobacco- and smoke-free policy at a large urban university. *Journal of Community Health*, 44(2), 365–376. <https://doi.org/10.1007/s10900-018-0593-y>
- Germain, D., Wakefield, M., & Durkin, S. (2007). Non-smokers' responses when smokers light up: A population-based study. *Preventive Medicine*, 45(1), 21–25. <https://doi.org/10.1016/j.ypmed.2007.03.012>
- Grossberg, L. A., Loukas, A., Fernandez, A., Latimer, L. A., & Karn, S. (2020). Examining student perceptions of tobacco policy enforcement on college campuses in Texas. *Health Education & Behavior*, 47(5), 692–695. <https://doi.org/10.1177/1090198120939488>
- Ickes, M. J., Hahn, E. J., McCann, M., & Kerckmar, S. (2013). Tobacco-free Take Action!: Increasing policy adherence on a college campus. *World Medical & Health Policy*, 5(1), 47–56. <https://doi.org/10.1002/wmh3.20>
- Ickes, M. J., Rayens, M. K., Wiggins, A. T., & Hahn, E. J. (2015). A tobacco-free campus ambassador program and policy compliance. *Journal of American College Health*, 63(2), 126–133. <https://doi.org/10.1080/07448481.2014.990972>
- Ickes, M. J., Rayens, M. K., Wiggins, A., & Hahn, E. J. (2017). Students' beliefs about and perceived effectiveness of a tobacco-free campus policy. *Policy, Politics & Nursing Practice*, 18(1), 17–25. <https://doi.org/10.1177/1527154417700633>
- Kuntz, M., Seitz, C. M., & Nelson, M. (2015). Enforcing a tobacco-free campus through an ambassador-based program: A phenomenology. *Journal of American College Health*, 63(3), 195–202. <https://doi.org/10.1080/07448481.2014.1003380>
- Leavens, E. L. S., Lechner, W. V., Stevens, E. M., Miller, M. B., Meier, E., Brett, E. I., et al. (2020). Electronic cigarette and combustible cigarette use following a campus-wide ban: Prevalence of use and harm perceptions. *Journal of American College Health*, 68(4), 332–335. <https://doi.org/10.1080/07448481.2018.1551803>
- Lee, J. G. L., Ranney, L. M., & Goldstein, A. O. (2013). Cigarette butts near building entrances: What is the impact of smoke-free college campus policies? *Tobacco Control*, 22(2), 107–112. <https://doi.org/10.1136/tobaccocontrol-2011-050152>
- Llanes, K., Cabriaes, J. A., Hernandez, N., & Cooper, T. V. (2019). Electronic cigarette use after the adoption of a tobacco-free campus policy. *Addictive Behaviors*, 90, 324–328. <https://doi.org/10.1016/j.addbeh.2018.11.037>
- Lupton, J. R., & Townsend, J. L. (2015). A systematic review and meta-analysis of the acceptability and effectiveness of university smoke-free policies. *Journal of American College Health*, 63(4), 238–247. <https://doi.org/10.1080/07448481.2015.1015029>
- MacQueen, K. M., McLellan, E., Kay, K., & Milstein, B. (1998). Codebook development for team-based qualitative analysis. *Cultural Anthropology Methods*, 10(2), 31–36. <https://doi.org/10.1177/1525822X980100020301>
- Mamudu, H. M., Veeranki, S. P., He, Y., Dadkar, S., & Boone, E. (2012). University personnel's attitudes and behaviors toward the first tobacco-free campus policy in Tennessee. *Journal of Community Health*, 37(4), 855–864. <https://doi.org/10.1007/s10900-011-9520-1>
- Morse, J. M. (1995). The significance of saturation. *Qualitative Health Research*, 5(2), 147–149.
- Poland, B. D. (2000). The "considerate" smoker in public space: The micro-politics and political economy of "doing the right thing. *Health and Place*, 6(1), 1–14. [https://doi.org/10.1016/S1353-8292\(99\)00025-8](https://doi.org/10.1016/S1353-8292(99)00025-8)
- Poland, B. D., Stockton, L., Ashley, M. J., Pederson, L., Ferrence, R., Bull, S., et al. (1999). Interactions between smokers and non-smokers in public places: A qualitative study. *Canadian Journal of Public Health*, 90(5), 330–333.
- Ramachandran, S., Bentley, S., Casey, E., & Bentley, J. P. (2020). Prevalence of and factors associated with violations of a campus smoke-free policy: A cross-sectional survey of undergraduate students on a university campus in the USA. *BMJ Open*, 10(3), Article e030504. <https://doi.org/10.1136/bmjopen-2019-030504>
- Roditis, M. L., Wang, D., Glantz, S. A., & Fallin, A. (2015). Evaluating California campus tobacco policies using the American college health association guidelines and the institutional grammar tool. *Journal of American College Health*, 63(1), 57–67. <https://doi.org/10.1080/07448481.2014.963108>
- Rogers, C. J., Barrington-Trimis, J. L., Unger, J. B., & Forster, M. (2020 Jul 23). *Journal of American College Health*, 1–5. <https://doi.org/10.1080/07448481.2020.1786097>
- Russell, A. M., Yang, M., Barry, A. E., Merianos, A. L., & Lin, H.-C. (2021 Jul 23). *Stealth vaping among college students on four geographically distinct tobacco-free college campuses: Prevalence and practices*. Nicotine & Tobacco Research. <https://doi.org/10.1093/ntr/ntab153>. ntab153.
- Russette, H. C., Harris, K. J., Schulderberg, D., & Green, L. (2014). Policy compliance of smokers on a tobacco-free university campus. *Journal of American College Health*, 62(2), 110–116. <https://doi.org/10.1080/07448481.2013.854247>
- ti Scientific Software Development GmbH, A. T. L. A. S. (2019). ATLAS.ti. <https://impli.sense.com/en/companies/atlas-ti-scientific-software-development-gmbh-berlin-DEWMMDZT3A64>, 8.
- Seitz, C. M., Greiner, B. A., Davoren, M. P., & McIntyre, S. C. (2018). Enforcement of smoke/tobacco-free policies at public universities in the U.S. *Tobacco Regulatory Sciences*, 4(4), 22–31.
- Seitz, C. M., Kabir, Z., Greiner, B. A., & Davoren, M. P. (2018). Student, faculty, and staff approval of university smoke/tobacco-free policies: An analysis of campus newspaper articles. *Tobacco Use Insights*, 11. <https://doi.org/10.1177/1179173X18765127>, 1179173X18765127.
- Seitz, C. M., & Ragsdale, T. L. (2019). Student experiences with community-based enforcement of a smoke-free university. *Health Promotion Practice*, 20(2), 188–195. <https://doi.org/10.1177/1524839918782700>
- Seo, D.-C., Macy, J. T., Torabi, M. R., & Middlestadt, S. E. (2011). The effect of a smoke-free campus policy on college students' smoking behaviors and attitudes. *Preventive Medicine*, 53(4–5), 347–352. <https://doi.org/10.1016/j.ypmed.2011.07.015>
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246. <https://doi.org/10.1177/1098214005283748>
- Trad, C., Bayly, J., Saint-Fort, L., Andrews, M., Patel, M., Sabado-Liwag, M., et al. (2018). Adoption of tobacco- and smoke-free policies in a U.S. national sample of postsecondary educational institutions. *American Journal of Public Health*, 108(10), 1366–1369. <https://doi.org/10.2105/AJPH.2018.304568>
- University of California. (2018). Smoke and tobacco free environment. <https://policy.ucop.edu/doc/4000371/SmokingPolicy#:~:text=The%20University%20of%20California%20prohibits,free%20effective%20January%202%2C%202014>. (Accessed 14 January 2022).
- Wang, T. W., Tynan, M. A., Hallett, C., Walpert, L., Hopkins, M., Konter, D., et al. (2018). Smoke-free and tobacco-free policies in colleges and universities - United States and Territories, 2017. *MMWR. Morbidity and Mortality Weekly Report*, 67(24), 686–689. <https://doi.org/10.15585/mmwr.mm6724a4>
- Wray, R. J., Hansen, N., Ding, D., & Masters, J. (2020). Effects of a campus-wide tobacco-free policy on tobacco attitudes, norms and behaviors among students, staff and faculty. *Journal of American College Health*, 69(8), 860–871. <https://doi.org/10.1080/07448481.2020.1711763>
- Yingst, J. M., Lester, C., Veldheer, S., Allen, S. I., Du, P., & Foulds, J. (2019). E-cigarette users commonly stealth vape in places where e-cigarette use is prohibited. *Tobacco Control*, 28(5), 493–497. <https://doi.org/10.1136/tobaccocontrol-2018-054432>