When Job Opportunities Go Up in Smoke: The Role of Applicant Cigarette Smoking or Vaping and Gender in Cybervetting

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Abstract

Employment discrimination based on job-unrelated factors (e.g., gender, smoking status) can lead to unfair outcomes for applicants. In the present study, 400 Canadian and U.S. hiring professionals evaluated a candidate's resume and then cyber-vetted their social media page which disclosed their gender and smoking status (i.e., cigarette smoker, vaper, or non-smoker). Revised evaluations post-cybervetting were lower for applicants discovered as smokers and vapers than for non-smokers, but vapers were perceived as negatively as smokers. Negative evaluations for cigarette smokers depended on raters' attitudes towards smoking. Applicant gender moderated the effect of vaping but not smoking on evaluations. Managers' gender role beliefs did not play a moderating role. These findings indicate the need for improvements in cybervetting practices used in hiring.

Keywords: Smoking; Vaping; Gender; Cybervetting; Social media; Discrimination

Assessing applicants' social media profiles, also known as "cybervetting", has become common practice in personnel selection (e.g., Berkelaar, 2017; Roulin & Bangerter, 2013). In a survey of HR practitioners, 21% of Canadian and 19.5% of U.S. practitioners reported that their organizations used social media cybervetting as a selection tool, a technique used more often than personality or ability testing (Risavy et al., 2019). Moreover, a majority of U.S. hiring managers in a 2020 Harris Poll survey believed that it was effective for applicant screening (71%) and should be used (70%). Of those that indicated using this technique (67%), 55% reported deciding not to hire an applicant due to information that was discovered (Express Employment Professionals, 2020). Despite its prevalence in practice, cybervetting can also uncover stigma-inducing personal information that facilitates discriminatory hiring decisions (e.g., Zhang et al., 2020).

More generally, hiring practices often stifle inclusivity and equal opportunity due to stigmas and associated prejudices that arise from individual differences (Derous et al., 2016). Goffman (1963) referred to a stigma as an attribute that causes a "stranger" to be viewed as less desirable, bad, dangerous, or weak. Moreover, the dual-process model of interviewer judgments by Derous et al. (2016) proposed that hiring managers rely on either Type 1 (i.e., automatic, heuristic, and stereotype-based) or Type 2 (i.e., conscious, thoughtful, and rule-based) processes when forming initial impressions of applicants. They further argue that Type 1 processes are triggered especially when judging applicants with stigmatized attributes and in contexts where minimal applicant information is available (e.g., prior to an interview). If this takes place in the screening stage of selection and especially with unstructured processes like cybervetting, it can unduly affect or eliminate stigmatized applicants. It can also preclude deliberative Type 2 processes that could update initial impressions, for instance within the interview stage.

Personnel selection research has gone beyond demographic characteristics (e.g., age, gender, race) to examine other traits or choices that are also stigmatized in the workforce. For instance, researchers have examined personal choices like piercings (McElroy et al., 2009) or tattoos in hiring (Timming, 2017). Recently, Roulin and Bhatnagar (2018; 2021) showed that cigarette smokers or e-cigarette vapers are also discriminated against in hiring. Interestingly, a hallmark of this set of studies has been investigations into smoking solely by men. These investigations are limiting given past research indicative of negative attitudes and stigmatization of women that smoke (Elkind, 1985; Nichter, 2006). When two independently disadvantaged characteristics intersect, they can result in extended stigmatization or a "double jeopardy" for an individual (Mendelson et al., 2008). In fact, selection literature has examined the effects of gender combined with ethnicity (e.g., Derous et al., 2015) and age (e.g., Krings et al., 2023). In the present study, we expand on prior findings by investigating the combined effects of applicants' smoking status and gender (with applicants nomenclated as men or women for our purposes).

In addition, extant research has focused on smoking status that is disclosed either before or during a job interview (Roulin & Bhatnagar, 2018; 2021). Yet, hiring managers also make screening decisions prior to interviews. For example, cybervetting applicants' social media presence following more traditional resume screening can be used to identify "red flags" (Hartwell & Campion, 2020). Recent research shows that otherwise hidden characteristics of applicants, such as their political views (Wade et al., 2020) or mental health issues (Pu et al., 2022), that are uncovered during cybervetting bias hiring decisions. We, therefore, examine the effects of cybervetting that uncovers applicant smoking status and gender after an initial resume review that represents the applicant in a gender-neutral fashion (i.e., via their name). Lastly,

consistent with dual process theory (Derous et al., 2016), we also explore the potential effects of hiring managers' personal ideologies (i.e., their progressive versus traditional gender role beliefs, and attitudes towards smoking or vaping) to understand their contributions to impression formation.

Applicant Smoking and Hiring Decisions

There has been a modern-day denunciation of cigarette smoking that was instigated by the 1964 U.S. Surgeon General's report on the health risks of smoking. Governmental regulations and stigma-based anti-tobacco health campaigns have intensified, and tobacco use has significantly declined since then (Cummings & Proctor, 2014). The stigma created around smoking has resulted in a variety of negative personal and interpersonal attributions about smokers, including in the workplace with respect to their employability. For example, cigarette smokers are viewed as less joyful, polite, considerate, truthful, and healthy (Dermer & Jacobsen, 1986) as compared to non-smokers. They are also perceived as less competent (Schneider, 1992) and clean (Seiter et al., 2010). For organizations, smokers are seen as costly in terms of increased healthcare costs and absenteeism, and lowered productivity (Schmidt et al., 2013). These characteristics can greatly influence impressions and decision-making around smokers that then impact hiring outcomes (Seiter et al., 2010). Along these lines, Roulin and Bhatnagar (2018) found that applicants identified as cigarette smokers created less favourable first impressions on hiring personnel; these impressions were partially driven by greater expectations of engagement in counterproductive workplace behaviors if hired.

Smoking can be construed as a type of addiction. Yet, smokers are largely left out from under the umbrella of legal protections (e.g., under the Americans with Disabilities Act or the Canadian Human Rights Act) unlike alcohol and other forms of addiction that are recognized as

protected grounds for discrimination (Chadwick, 2006; Roulin & Bhatnagar, 2018). Given the present-day stigma surrounding smoking, dual-process theorization within hiring (Derous et al., 2016) suggests that limited information in the early stages of hiring (e.g., the outcome of cybervetting that follows initial resume screening) activates heuristic and stereotype-reliant Type 1 processes. We thus expect that hiring managers that first evaluate an applicant based solely on a resume (without information about smoking status) would negatively adjust their evaluations upon subsequent cybervetting and discovery that the applicant is a smoker given the negative societal stereotypes associated with such behaviors.

Hypothesis 1: An applicant that is discovered to be a cigarette smoker within social media cybervetting will receive lower evaluations than one that is not.

Applicant Vaping and Hiring Decisions

An e-cigarette is a device that mimics a conventional cigarette and is often promoted as an aid to smoking cessation. E-cigarette use, often referred to as “vaping”, continues to rise in popularity, and has become a gateway to nicotine-use rather than its purported use as a cessation aid (e.g., Dawkins, 2013). Although e-cigarettes have been labeled as 95% less hazardous than cigarettes by Public Health England, there are currently no firm conclusions as to the health outcomes of vaping due to difficulties in research standardization (Laucks & Salzman, 2020).

The literature on social perceptions around vaping is still limited, and its findings remain inconsistent. Initial work indicated that vapers were perceived more positively as compared to traditional cigarette smokers (Coleman et al., 2016). Yet, newer research has started demonstrating a downward shift in vaper-related perceptions (Huang et al., 2019). Some studies depict a shift in perceptions of e-cigarettes as seemingly harmless smoking cessation tools to those that are equally or even more harmful than cigarettes based on worries about health

outcomes (e.g., Balfour et al., 2021). In fact, health concerns have become one of the main reasons for vapers to quit or revert to cigarettes (Malt et al., 2020). Previous research has shown that post-interview evaluations of applicants identified as vapers were more negative than those of non-smokers; at the same time, these evaluations were slightly more positive than those of traditional cigarette smokers, even when the quality of applicants' interview responses was controlled for (Roulin & Bhatnagar, 2021). Taken together, the literature on social perceptions towards smoking status describes consistently negative views toward conventional cigarette smoking and mixed attitudes towards e-cigarette usage. The current study aims to replicate the findings by Roulin and Bhatnagar (2021) and expand on them by investigating the effect of smoking status discovery made through post-resume social media cybervetting. We expect:

Hypothesis 2: An applicant that is discovered to be a vaper will be evaluated (a) more negatively than a non-smoker, but (b) more positively than one discovered to be a cigarette smoker.

Intersectionality

While the symbolism underlying smoking has undergone distinct shifts throughout history, modern social attitudes in relation to smoking and gender are not well understood. For instance, one study found no significant relationship between gender roles and smoking in populations born in the 1970s (Hunt et al., 2004), whereas another study found that self-perceived masculine traits were associated with smoking (Emslie et al., 2002). In addition, while literature on social attitudes based on the interaction between gender and smoking status is currently meager, some research has depicted negative attitudes towards women who smoke. For example, qualitative research showed that women experienced smoking-related stigma and were labeled as "trashy", "slutty", "ugly", "out of control", and so forth while men that did the same

were viewed as “manly”, relaxed” or “in control” (Nichter, 2006). Similarly, while smoking was viewed as consistent with men’s masculine identity (e.g., signalling toughness or dominance), it was seen as a source of shame and incongruent with feminine identity for women (Alexander et al., 2010). These negative associations coincide with more dated literature that described young women who smoked as promiscuous and of low social status (Elkind, 1985). These views have deemed smoking as a masculine activity and thus inappropriate for engagement in by women (i.e., a violation of gender norms and expectations).

Experiencing the intersectionality between two individually disadvantaged characteristics can cause extended stigmatization known as a “double jeopardy” (Mendelson et al., 2008). Such effects have already been examined in selection literature; for instance, through the examination of applicant gender and ethnicity (e.g., Derous et al., 2015), and gender and age (e.g., Krings et al., 2023). Given the presence of some literature suggestive of a disdain towards women who smoke, as well as a lack of current research on the interaction between gender and vaping, we examine the following:

Hypothesis 3: Applicant gender will moderate the effect of applicant smoking status on evaluations, such that a woman who is discovered to be a cigarette smoker will receive particularly low evaluations.

Research Question 1: Will an applicant who is a woman as well as discovered to be a vaper receive particularly negative evaluations?

The Role of Ideologies: Smoking Attitudes and Gender Role Beliefs

Despite the possible transition in widespread beliefs linked to (e-)cigarette usage, those that do not smoke or vape tend to have more negative perceptions towards usage than those that

partake in cigarette and e-cigarette use (Romberg et al., 2021). Roulin and Bhatnagar (2018) also found that attitudes towards smoking moderated the effect of applicant smoking status on initial impressions amongst older evaluators (that reported higher rates of smoking) but not students (that reported lower levels of smoking). Based on these findings, it is possible that the discovery of applicant smoking or vaping behaviors would amplify the downward revision of assessments amongst evaluators with less favorable attitudes towards smoking.

Hypothesis 4: Attitudes towards (a) smoking and (b) vaping will moderate the effect of applicant smoking status on evaluations, such that an applicant discovered to be a smoker or vaper within cybervetting will receive especially low evaluations from raters that possess negative attitudes.

Moreover, revised evaluations for women that are discovered to be smokers or vapers may depend on hiring managers' progressive versus traditional gender-role views. Gender role beliefs capture ideologies or prescriptive views about appropriate behaviors for men and women (Kerr & Holden, 1996). Historically, smoking has been perceived as a masculine behavior, congruent with a masculine but not feminine identity (Alexander et al., 2010), and traditional gender roles can prevent women from smoking (Hunt et al., 2004). If we expect women who smoke to be less favorably evaluated compared to men because such behaviors are viewed as gender-incongruent (and associated with negative attributes such as being "trashy" or "out of control"; Nichter, 2006), this should especially hold true for evaluators with more traditional gender role views. Yet, this relationship has not been empirically examined. Further, research on vaping, gender, and gender roles is also lacking. We thus propose to explore whether traditional views exacerbate negative evaluations of women who are discovered to be smokers or vapers:

Research Question 2: Do raters' gender role beliefs moderate the negative impact of smoking status on the evaluation of female applicants?

Methods

Participants and Procedure

A total of 402 American and Canadian residents that were pre-screened for prior hiring experience were recruited using Prolific. The final sample consisted of 400 participants (201 women; mean age = 42.14; *SD* = 25.19; 75.3% White); two participants were excluded for failing attention check items (e.g., please respond with "strongly agree"). Participants had 7.6 years of hiring experience on average (*SD* = 7.72). About 15% of participants self-identified as vapers while 16% self-identified as smokers.[1]

Participants were compensated GB£2 (about 2.7 USD or 3.4 CAD) for an online study that took approximately 10-15 minutes to complete. They were tasked with hiring a candidate for a translator job. As part of this task, participants read a fictional job scenario and job posting, and reviewed the resume of an applicant with a gender-neutral name (i.e., "Alex Smith"; see Online Supplements A, B, and C).[2] After providing their first impressions of the candidate based on the resume, participants screened the applicant's personal social media (i.e., Instagram) page which contained the smoking and gender manipulations (see Online Supplement D for samples) and completed the final evaluation measures. Finally, they completed individual difference, demographic, and manipulation check measures.

Design and Material

[1] A sensitivity analysis performed in GPower showed that a sample of N=400 would be enough to detect effect sizes as small as $f = .155$ within our planned analyses (e.g., ANCOVAs with 6 groups and one covariate).
[2] All online supplements, as well as a simplified and anonymous version of the dataset, are available in the OSF folder for this project: https://osf.io/nkvwe/?view_only=bd4460f97a4e4195961ceacb36832535

The study consisted of a 2 (applicant gender: man vs. woman) x 3 (applicant smoking status: non-smoker vs. vaper vs. smoker) between-subject design. Each social media page included 8 similar photos (i.e., similar clothing, background, poses, facial expressions, etc.) that contained manipulations which revealed the gender and smoking status of the applicant. Instagram was chosen over other social media platforms because of (a) its extensive and growing popularity[3]; (b) a lack of coverage in selection research (e.g., past studies on stigma or bias in cybervetting have systematically used Facebook or LinkedIn); (c) its popularity amongst younger users (consistent with our mock applicants); and (d) it represented an ideal platform to integrate pictures of individuals displaying their smoking habits in a subtle yet realistic manner. Participants were forced to spend at least 30 seconds on the social media page to ensure that they did not skip or rush through relevant information (mean time spent on the page was 57.08 seconds, *SD* = 34.63).

Pilot Study

A pilot study was conducted in order to select one man and one woman to portray the applicants within social media content, and to select a job type perceived as gender-neutral for use in the main study. Six individuals (3 men and 3 women) provided 2 headshots each: one smiling and one with a neutral facial expression (see Online Supplement E for samples). Twenty-one student participants rated each candidate on warmth, the Big Five personality traits, and the characteristics included in the trait inferences scale (i.e., trustworthy, competent, aggressive, likeable, and attractive; Willis & Todorov, 2006; see Online Supplement F). Subsequently, using a slider (0 = male; 50 = gender-neutral; 100 = female), participants indicated their perceptions of the gender specificity of five jobs: museum director, nurse, translator, travel agent, and

[3] See for instance: https://www.demandsage.com/instagram-statistics

firefighter (see Online Supplement G). Selecting a gender-neutral job was important in order to avoid potential biases arising from the gendering of job types rather than perceived competence of male and female applicants. Repeated-measures ANOVAs were used to identify one man and one woman that were not perceived as significantly different on the 11 characteristics assessed. Means and standard deviations were used for identifying the job that was perceived as most gender neutral (i.e., the translator; see Online Supplements H and I).

Measures[4]

Applicant evaluations. Participants gave their overall impressions of the candidate (e.g., "I believe this applicant can achieve a high level of performance in the job they applied for") after viewing the resume ($\alpha = .96$) and again after viewing their social media page ($\alpha = .95$) using a 5-item scale similar to Roulin and Bhatnagar (2021). Ratings were made on a scale from 1 = strongly disagree to 7 = strongly agree.

Smoking and vaping attitudes. Participants completed two 4-item measures from Roulin and Bhatnagar (2021) to indicate their attitudes towards vaping ($\alpha = .98$) and smoking ($\alpha = .96$) using 7-point scales anchored from "favorable" to "unfavorable", "negative" to "positive", "dislike" to "like", and "good" to "bad".

Gender role beliefs. A shortened 10-item version of the Gender Role Beliefs (GRB) scale (Brown & Gladstone, 2012) was used. This scale measures perceptions related to gender stereotypes (e.g., "Women with children should not work outside the home if they don't have to financially."; $\alpha = .85$) using a Likert scale that ranged from 1 = strongly disagree to 7 = strongly agree. Lower (vs. higher) scores indicated more feministic/progressive (vs. traditional) beliefs.

[4] For the complete list of items, see Online Supplement J. We also collected open-ended comments about raters' evaluations of the applicant. We will use these in our discussion section to illustrate particular findings.

Manipulation check. Participants were asked to select all activities the applicant had showcased engaging in on their social media page ("Standing by a plant wall", "Smoking", "Vaping", "Using a computer", "Waiting for the bus", and "Reading"). Participants were classified as having passed the manipulation check if they correctly indicated the smoking status of the applicant they evaluated. In total, 381 of 400 participants (95%) passed this check.

Results

Descriptive Analyses

Table 1 contains the means, standard deviations, and correlations for the main variables.

Hypothesis Testing

To examine Hypotheses 1-3 and RQ1, we initially conducted an ANCOVA, with post-cybervetting evaluations as our dependent variable, and applicant smoking status and gender as the independent variables. Initial resume-based evaluations were included as a covariate since we are interested in understanding how being discovered as a smoker/vaper impacts evaluations, and because initial impressions can anchor final evaluations (see Derous et al., 2016). In other words, this analysis examined how evaluations evolved once participants became aware of the applicant's smoking status and gender upon reviewing their social media page. We found a significant main effect of smoking status, $F(2, 393) = 6.52$, $p < .01$, partial $\eta^2 = .03$, but no main effect of gender, $F(1, 393) = 0.40$, $p = .53$, partial $\eta^2 = .00$. In addition, the interaction between gender and smoking status was just not statistically significant, $F(2, 393) = 2.87$, $p = .06$, partial $\eta^2 = .01$.[5]

[5] See Online Supplement K for a summary table, as well as additional analyses without the covariate and excluding participants that failed the manipulation checks.

H1 and H2 predicted that an applicant discovered to be a smoker would receive the lowest evaluations, followed by a vaper, and finally a non-smoker. Pairwise comparisons with Bonferroni adjustments, controlling for resume-based evaluations, showed that the smoker (M = 4.87) received significantly lower evaluations compared to the non-smoker (M = 5.18, $p < .01$). Similarly, the vaper (M = 4.87) received significantly lower evaluations compared to the non-smoker ($p < .01$). However, the smoker and vaper did not differ significantly from each other (p = 1.00). Therefore, H1 and H2a were supported, but H2b was not.

H3 predicted that gender would moderate the effect of smoking status on updated evaluations such that a female applicant discovered as a cigarette smoker would receive lower evaluations as compared to any other type of applicant. And RQ1 examined the same relationship for vaping. Overall, the non-smoking female applicant was perceived most favourably (M = 5.22), followed by the male non-smoker (M = 5.14), the male vaper (M = 5.03), the female smoker (M = 4.91), the male smoker (M = 4.83), and lastly the female vaper (M = 4.72). Pairwise comparisons with Bonferroni adjustments showed that the female smoker was not evaluated differently from the female vaper (p = .45), the female non-smoker (p = .08), or the male smoker (p = .54). Therefore, H3 was rejected. However, with regards to RQ1, the female vaper received significantly lower evaluations compared to the male vaper (p = .02) and the female non-smoker ($p < .01$).

We then re-tested H1-3 and RQ1, and examined H4 and RQ2, using linear regressions (see Table 2).[6] Initial resume-based evaluations were entered as a control in all models. Smoking status was examined using two dummy-coded variables (smoker and vaper). Finally, relevant main effect variables and two- or three-way interactions were entered. Model 1, that was

[6] See also Online Supplement L for the same analyses excluding participants who failed the manipulation checks.

designed to test H1-2, confirmed that both the applicants discovered as being smokers (ß = -.11, $p < .01$) and vapers (ß = -.10, $p < .01$) received lower evaluations. Model 2 was designed to test H3 and RQ1, and it confirmed our ANCOVA results: applicant gender significantly interacted with vaping (ß = -.11, $p = .04$), but not smoking (ß = .00, $p = .99$). Model 3 was built to test H4, which predicted that attitudes toward smoking/vaping would moderate the effect of being discovered as a smoker/vaper on final evaluations. Results showed a significant smoker x smoking attitudes interaction (ß = .22, $p < .01$). Follow-up analyses using the Johnson-Neyman technique in PROCESS showed that an applicant discovered to be a smoker received significantly lower updated evaluations when the rater had negative attitudes toward smoking (i.e., under 2.27 on a 1-7 scale – note that the sample mean was 1.97); this effect was non-significant for raters with neutral attitudes (2.27 to 6.68), and then significantly positive for very positive attitudes (above 6.68). However, the interaction between vaper and vaping attitudes failed to reach significance (ß = .12, $p = .06$). As such, only H4a (but not H4b) received support.

Model 4 was designed to explore RQ2 related to the potential moderating role played by raters' gender role beliefs (GRBs) in updated evaluations of a female applicant discovered to be a smoker or vaper. However, neither the gender x smoker x GRBs (ß = -.05, $p = .73$) nor the gender x vaper x GRBs interactions (ß = -.14, $p = .35$) were significant. This suggests that GRBs did not influence the manner in which the female smoker or vaper was evaluated. We also found no significant two-way interactions between GRBs and applicant gender or smoking status.

Lastly, Model 5 was an exploratory attempt to analyze whether attitudes towards smoking or vaping interacted with applicant smoking status and gender to affect post-cybervetting evaluations. However, no significant interactions were found for smoker x gender x smoking attitudes (ß = .09, $p = .35$) or vaper x gender x vaping attitudes (ß = -.06, $p = .56$).

Discussion

Main Findings and Theoretical Implications

The purpose of this research was to examine the effects of applicant smoking status and gender discovered as part of cybervetting on hiring evaluations. This research replicates and expands on preliminary work that shows that smoking status can bias pre- or post-interview evaluations (Roulin & Bhatnagar, 2018; 2021) by integrating a gender-based intersectionality element. It also builds on research that demonstrates the use of cybervetting as a tool for hiring managers for identifying "red flags" about applicants during personnel selection (e.g., Hartwell & Campion, 2020), and contributes to the growing literature on the manner in which social media content makes otherwise hidden personal information about applicants easily available to hiring managers (e.g., Pu et al., 2020; Wade et al., 2020).

Roulin and Bhatnagar (2021) found that applicants identified as smoker or vapers in interviews received lower evaluations. Similarly, our results showed that applicants discovered as either cigarette smokers or e-cigarette vapers during cybervetting performed after an initial resume screening were (re-)evaluated less favourably as compared to the non-smoker candidates. The finding that smokers received worse hiring evaluations aligns with negative social stigma that is associated with this behavior (e.g., Seiter et al., 2010).[7] A variety of reasons may also be linked to the increasingly negative perceptions of vaping that are likely rooted in increasing perceived harm. First, despite its original purpose related to combating smoking addiction,

[7] Interestingly, some of the open-ended comments provided by participants (after evaluating the applicant) were consistent with past findings that cigarette smokers are more likely to be seen as burdensome and costly in terms of health insurance (Schmidt et al., 2013) or to engage in deviant work behaviors (Roulin & Bhatnagar, 2018). For instance, the comments included: "I didn't like that he was posting pics of him openly smoking. I don't want to be responsible for his health insurance. He could be a liability to the company." Or "the candidate smokes and I do not think that reflects well on them. They may do other drugs as well."

vaping has ironically become a form of initiation for further nicotine use (Laucks & Salzman, 2020; Pokhrel et al., 2015). This is especially problematic when its use amongst younger populations is taken into consideration (Chadi et al., 2019). Although long-term effects are unclear, recent studies suggest that vaping is potentially as or more harmful than smoking (e.g., Becker & Rice, 2022). And perceptions of vapers in society are becoming more negative too (e.g., Balfour et al., 2021). In addition, the individuals playing the role of the applicants and portrayed within the cyber-vetted social media content in our study were generally young (i.e., in their twenties). This may well be associated with the increase in negative perceptions linked to vapers as compared to Roulin and Bhatnagar (2021) which included applicants that appeared to be somewhat older (in their thirties).

Like past research that has examined the intersectionality of applicant demographic characteristics (e.g., gender and ethnicity; Derous et al., 2015), we examined the interactive effects of smoking status and gender on evaluations. Our findings did not support a double jeopardy for women who smoke as we had hypothesized. Indeed, the female smoker received similar updated evaluations, for instance, as the male smoker. This might reflect changes in societal views of smoking as a gendered behavior. While earlier work has shown particularly negative stigmatization of women that smoke (e.g., Elkind, 1985; Nichter, 2006), our findings suggest that such views have evolved. In contrast, the negative evaluations received by vapers were especially salient when the applicant was a woman.[8] Overall, our findings suggest that especially harsh judgments may be reserved for men that smoke cigarettes and women that vape e-cigarettes. However, it is important to note that differences in evaluations remained somewhat

[8] The interaction effect between applicant gender and vaping was mostly visible in the regression analyses. Interestingly, the female vaper also received twice as many open-ended comments denouncing their behavior compared to the male vaper. Examples of such comments included: “the vaping image stood out to me as being unprofessional” or “I didn't think she exercised good judgment by including a photo of her vaping.”

small, and that these findings warrant further investigation to clarify the possibility of a double jeopardy in greater detail (e.g., for women who vape).

Moreover, attitudes towards smoking (but not vaping) were found to moderate the effect of applicant smoking status on evaluations, largely replicating past findings (Roulin & Bhatnagar, 2018; 2021). More precisely, we found that the negative impact of smoking was only significant when raters themselves had negative attitudes towards smoking (i.e., less than 2.27 on a 1-7 scale). However, consistent with past research about the largely negative societal perceptions of cigarette smoking (e.g., Seiter et al., 2010), our participants also reported very negative attitudes (i.e., $M = 1.97$, median = 1; 70% of participants with scores lower than 2.27). As such, in the hiring context, and even when a candidate is qualified for a position, most hiring managers are still likely to penalize a smoker. In contrast, attitudes towards vaping played a smaller role (i.e., only the main effect of vaping was significant). Although we found slightly more positive attitudes towards vaping (i.e., $M = 2.48$, median = 2), this suggests that vaping can hinder applicants' chances of being invited for an interview (or hired) independently of the hiring managers' general views on such behaviors.

Finally, we examined the role played by GRBs but found that they did not moderate the effect of applicant gender and smoking status on evaluations. This may have resulted from more progressive gender role views amongst our participants (i.e., $M = 2.64$, on a 1-7 scale, with 7 being more traditional views) that limited the variability needed for detecting an interaction effect. Alternatively, participant scores may have been impacted by response bias (that manifested via an avoidance of traditional belief expressions given the social push for gender equality) or unconscious bias (manifested through overt expressions of progressive views while implicitly holding more traditional ones).

Practical Implications

The findings of this study highlight the significant problems that can arise from scrutinizing applicants' personal social media during the selection process. They emphasize the importance for organizations to carefully consider if cybervetting is justified (and if so, how to cybervet) in order to reduce potentially harmful hiring outcomes (e.g., by instituting manager training, process standardization, or even elimination; see Hartwell et al., 2022). Organizations may also find themselves on shaky legal ground arising from claims of discrimination by those that are cybervetted. Legislation is also evolving. For instance, the recent E.U. General Data Protection Regulation (Article 29 – 5.1) stipulates that reviewing applicants' social media should be limited to job-relevant information, and that applicants should be informed of such procedures beforehand. Explicit requests for informed consent may further help organizations protect themselves from claims of discrimination, avoid negative applicant reactions (Cook et al., 2020), and address questions raised by advocates of ethical hiring practices (Gruzd et al., 2020).

For applicants, our findings highlight the need for managing one's online presence, especially as it relates to smoking and vaping related content, as a means of self-protection during the job search process. This might involve changing privacy settings to manage who is able to view personal content or considering the aspects of ones' lifestyle to share. Generation of stigma awareness as a precursor to self-protective efforts may be key given that people often post smoking related content on social media (e.g., Van Hoof et al., 2014; Yoo et al., 2016).

Limitations and Future Research

The current study contained some limitations that could be addressed in future research. First, a large portion of the social media utilized framed the candidate as well-read and hardworking, and all pictures used depicted them on their own. Had the content been related to

more engaging life events or activities (e.g., trips, birthdays, parties with friends), it is possible that the effects of smoking status would have been stronger. Future studies could examine the effects of the applicant posting pictures where they are smoking or vaping in social situations where societal norms around smoking and vaping become more salient. Second, we attempted to keep the smoking or vaping element subtle (i.e., it was only visible in three of the eight pictures, and within one of the captions). Yet, it is possible that this was still too pronounced and may have made the purpose of the study obvious to some participants, thereby making them more conscious of their responses. Future studies could use even more subtle ways to depict smoking status (e.g., by including more neutral posts/pictures) to increase external validity and the legitimacy of responses.

Third, we used Instagram as our social media platform, given its popularity (especially among younger users) and the ease of integrating pictures of the applicant smoking or vaping in a subtle and realistic way. Yet, studies could examine if effects differ based on the platform chosen. We would expect largely similar results on platforms like Facebook, but displaying smoking habits could lead to more negative effects on more professional ones like LinkedIn. Fourth, as the health risks associated with vaping are not as well established as with smoking (e.g., Becker & Rice, 2022), social perceptions related to vaping are likely in flux. Future studies could continually assess the impact on hiring outcomes. Future research could also investigate stigmas and stereotypes associated with women who vape more closely to better understand the negative evaluations they received within the current study.

Fifth, future work could explore the impact of other categories of smoking behaviors (e.g., cannabis, hookahs) in hiring (see Tews et al., 2023 for some initial evidence). Sixth, we recruited participants with prior hiring experience to bolster the external validity of our findings.

Yet, our sample only included participants from Canada and the United States. Investigations in other regions where smoking is more prevalent or accepted, or where men and women have historically been treated differently (e.g., in more traditionally gendered ways), could result in different outcomes. For instance, hiring managers from more conservative U.S. states might possess more traditional gender role views, which may lead to different results compared to the more progressive-leaning sample in this study. Thus, future research could investigate regional differences in perceptions of job applicants based on their gender and smoking status. Lastly, the applicants within the present study were evaluated quite positively (i.e., post resume screening evaluation $M = 5.07$, $SD = 1.43$, post cybervetting evaluations $M = 4.97$, $SD = 1.39$ on 1-7 scales). Highly qualified applicants can afford to act more authentically and can even be rewarded for engaging in self-verification (e.g., Moore et al., 2017), whereas less qualified applicants do not have that luxury. Future research should thus examine whether applicant smoking and vaping (and the intersectionality with gender) impact evaluations or hiring decisions differently depending on applicant qualifications.

Conclusion

Our findings replicated and extended past work (e.g., Roulin and Bhatnagar, 2018; 2021) and demonstrated that hiring evaluations undergo degradation upon cybervetting for applicants that are discovered to be smokers or vapers despite being as qualified as non-smokers. While we showed that gender only played a small role in these evaluations, we also recommend further investigations for understanding how perceptions about smoking status, and particularly about female vapers, continue to change. Overlooking candidates based on characteristics unrelated to job requirements can hurt both applicants and organizations seeking qualified employees. Our

findings thus highlight the need for training hiring managers or developing more standardized cybervetting procedures to mitigate discriminatory outcomes.

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Table 1. *Means, Standard Deviations, and Correlations between the Main Variables*

	M	*SD*	1	2	3	4	5
1. Resume-based evaluation	5.07	1.43					
2. Post social media evaluation	4.97	1.39	.81**				
3. Gender role beliefs	2.64	1.02	.02	.06			
4. Smoking attitudes	1.97	1.34	.15**	.19**	.08		
5. Vaping attitudes	2.48	1.59	.17**	.19**	.02	.69**	
6. Participant gender	0.52	0.51	.04	.03	-.18**	.01	-.04

Notes. N = 400 for the entire sample. * $p < .05$; ** $p < .01$. All scores were measured on 7-point Likert scales.

Table 2. *Regression Analyses Predicting Post Social Media Evaluations*

	Model 1 (H1-2)	**Model 2 (H3-RQ1)**	**Model 3 (H4)**	**Model 4 (RQ2)**	**Model 5 (explor.)**
Resume-based evaluation	.82**	.82**	.81**	.82**	.81**
Smoker	-.11**	-.11*	-.27**	-.00	-.29**
Vaper	-.10**	-.04	-.20**	-.01	-.09
Gender (female)	-	.03	-	.08	.05
Smoking attitudes	-	-	-.02	-	-.06
Vaping attitudes	-	-	-.03	-	.01
Gender role beliefs (GRBs)	-	-	-	.12	-
Smoker x gender	-	.00	-	.04	.03
Vaper x gender	-	-.11*	-	.02	-.18*
Smoker x smoking attitudes	-	-	.22**	-	.27**
Vaper x vaping attitudes	-	-	.12	-	.07
Gender x GRBs	-	-	-	-.04	-
Smoker x GRBs	-	-	-	-.11	-
Vaper x GRBs	-	-	-	-.04	-
Gender x smoking attitudes	-	-	-	-	.08
Gender x vaping attitudes	-	-	-	-	-.09
Smoker x gender x GRBs	-	-	-	-.05	-
Vaper x gender x GRBs	-	-	-	-.14	-
Smoker x gender x attitudes					-.06
Vaper x gender x attitudes					.09
F	270.09**	137.15**	123.00**	69.50**	62.40**
R^2	.67	.68	.68	.68	.69

Note: $N = 400$. Values are standardized beta coefficients. *$p < .05$ **$p < .01$.