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Cyber-Vetted Behind the Smokescreen: The Evaluations of Cigarette and Cannabis Smokers in Hiring

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ABSTRACT

A history of cannabis prohibition and tobacco/drug-control campaigns has created negative stereotypes around cigarette and cannabis users. Cyber-vetting, where organizations scan prospective employees' online footprints, has also risen. This research integrates stereotyping and personnel selection literatures to examine whether cyber-vetted knowledge of job applicants' private smoking behaviors influences assessor evaluations regardless of interview performance. It also examines the implications of when cyber-vetting takes place. Three experiments with student and professional samples paired social media cyber-vetting with realistic video-based interview simulations in North American jurisdictions where recreational cannabis is legal. In Study 1, 224 Canadian business students, role-playing as hiring managers, gave lower ratings to cigarette and cannabis smokers. A high-quality interview, while helpful, did not overcome the lowered evaluations. In Study 2 (with 318 Canadian business students), we used the Stereotype Content Model to show the indirect impact of smoking status on expected counterproductive workplace behaviors and final evaluations via diminished competence and warmth perceptions. In Study 3, 185 HR professionals in California also rated smokers unfavorably. While overall evaluations were higher when cyber-vetting occurred pre- versus post-interview for cannabis smokers, no significant differences were found for cigarette smokers. Overall, we highlight implications for smokers' employability as cyber-vetting and legal access to cannabis both gain traction.

1 | Introduction

Immutable attributes like applicant age or ethnicity can trigger adverse judgments in hiring (e.g., Derous et al. 2016; Finkelstein and Burke 1998), as can more controllable ones like visible tattoos (e.g., French et al. 2019), piercings (e.g., McElroy et al. 2014), or cigarette smoking (e.g., Roulin and Bhatnagar 2021). Negative judgments are capable of traveling far. Those against cigarette smokers, for instance, manifest in the form of lower quality healthcare, and lowered access to housing and other professional and personal opportunities (e.g., Stuber et al. 2009). Past research, specifically within hiring, uncovered negative reactions to cigarette smokers via both vignette studies and video-based job interview simulations (Roulin and Bhatnagar 2018, 2021). The research revealed adverse judgments of counterproductive work behaviors (CWBs) and first impressions associated with the smokers; the initial impressions also persisted and hurt final interview evaluations. The overall effects were robust even after accounting for interviewers' own smoking behaviors and attitudes. The negative implications of these findings are immense for the 1.18 billion adults worldwide who are regular cigarette smokers (Dai et al. 2022). This earlier work, however, is preliminary and limited in several ways.

First, Roulin and Bhatnagar (2018, 2021) restricted their explorations to (e-)cigarettes. While important, other widely used

Summary

- **What is currently known?**
  - Past research shows that employers view applicants with obvious cues of cigarette smoking less favorably in job interviews, but it is not fully known why.
  - It's unclear whether the rising number of legal cannabis smokers are similarly impacted.
  - People often post about their smoking habits online, and many employers now supplement interviews with personal information "cyber-vetted" from social media.
  - Existing research on cyber-vetting and interviews is compartmentalized, and how information obtained via both methods is integrated is not well understood.
- **What does this paper add?**
  - It uses a hiring simulation that pairs a video-based interview with cyber-vetting that uncovers naturalistic cigarette or cannabis smoking cues.
  - It thus contrasts the employability of cigarette and cannabis smokers versus non-smokers.
  - It explores new mediating mechanisms (perceived warmth/competence) and outcomes (counterproductive workplace behavior likelihood).
  - It examines whether cyber-vetting timing (pre- vs. post-interview) impacts assessments.
- **The implications for practitioners**
  - While a strong interview helps, it cannot overcome lowered evaluations due to cyber-vetting.
  - Cyber-vetting timing matters: Pre-interview cyber-vetting aids overall objectivity by reducing negative effects for cannabis (but not cigarette) smokers; this may, however, also filter worthy candidates out before the interview.
  - Employers should take care while inspecting potentially sensitive personal social media.
  - Employers should consider structured usage guidelines and training to benefit from greater applicant knowledge while also safeguarding objectivity.

substances deserve attention too. Around 219 million adults used cannabis in 2021, making it the world's most consumed illicit drug (United Nations Office on Drugs and Crime 2023). Twenty-seven percent of Canadians over the age of 16 (Health Canada 2022), 16% of people in the U.S. aged 18+ (McCarthy 2022), and 8% of adults in the E.U. aged 18–64 (European Monitoring Centre for Drugs and Drug Addiction 2023) reported past-year cannabis use. There is also easier legal access to cannabis in many parts of the world. Canada, for instance, instituted full legalization in 2018 (Health Canada 2022), Germany became the largest European country to legalize recreational use in 2024 (Manthey et al. 2024), and the U.S. grants cannabis legitimacy through assorted state-specific statutes despite its federal status as a Schedule 1 drug (Schaeffer 2024). Yet, the implications of cannabis use in hiring are unclear. On the one hand, widespread legal access and use may have facilitated general acceptance (Van Green 2022). Moreover, nonwork behaviors unrelated to job performance should not affect hiring decisions. Bernerth and Walker (2020) found that individuals who used cannabis shortly *before* and *during* work were associated with negative workplace outcomes; this, however, was not the case for those who used cannabis *after* work — a time when cannabis is used most often (e.g., Health Canada 2022). On the other hand, reviews link cannabis with cognitive and mental health harms and socialization issues, and caution against use by adolescents, young adults, or those at risk for mental health issues (Solmi et al. 2023; Scheier and Griffin 2021). Perceptually, historical prohibition and longstanding media depictions have linked cannabis users with negative stereotypes like slothfulness, amotivation, and criminality (Hirst 2017; Reid 2020). A preliminary study by Tews et al. (2023) found inferior hiring outcomes for applicants with social media content about recreational (but not medical) cannabis use. The study, however, used simple vignettes with limited external validity; each vignette briefly mentioned a Zoom interview and presented a single social media post. More nuanced simulations of interviews and social media content, as well as explorations of mediating mechanisms, are needed.

Second, earlier research on cigarette smokers (Roulin and Bhatnagar 2018, 2021) used heavy-handed depictions of smoking status (e.g., openly smoking outside before the interview, and/or placing a cigarette pack on the desk during the interview). Such openness is unlikely in actuality, given the tendency to hide what we are stigmatized for (Newheiser and Barreto 2014). "Cyber-vetting," where hiring professionals seek details about job applicants' online activities, is now routine (e.g., Berkelaar 2017; Roulin and Bangerter 2013) and offers a more realistic avenue for identifying smoking habits. This technique is used for unearthing information about applicants' lifestyles and values that may be at odds with those of the organization (Hartwell and Campion 2020; Roth et al. 2019, 2020). Indeed, content such as posts, comments, and follows on social media platforms like Facebook can be quite telling about who people truly are. Such information can be used to uncover "red flags" or "faux pas" (Hartwell and Campion 2020) and provide insights not readily available from formal interviews. Importantly, some employers report having rejected job applicants based on their social media activities (Smith 2017). Cyber-vetting is hence ripe for investigation as a means for smoking status discovery and associated evaluations.

Third, cyber-vetting often accompanies interviews. Yet, selection research examines cyber-vetting and interviews separately. Decisions when judgments arising from the former (e.g., negative reactions to cigarette or cannabis smoking) run counter to those from the latter (e.g., positive reactions to a strong interview) remain unexamined. Furthermore, there is no clear guidance on when cyber-vetting should ideally take place within the selection process (e.g., Berkelaar 2017; Roth et al. 2016). In practice, cyber-vetting at the start can help screen or know more about candidates before the interview; cyber-vetting at the end can help verify information and head off problems (akin to a cheap and quick alternative or supplement to a formal background check). However, pre-interview cyber-vetting of stigmatizing cues may trigger negative initial impressions; these can anchor final evaluations despite adjustments based on new information from the interview (e.g., Derous et al. 2016). Conversely, post-interview cyber-vetting may influence final assessments without adjustment or attenuation. Earlier work uncovered lower evaluations of cigarette smokers when smoking status was discovered pre-interview

(Roulin and Bhatnagar 2018, 2021), along with reminders during the interview (Roulin and Bhatnagar 2021). Understanding whether smoking status discovery pre- versus post-interview alters selection outcomes has implications for the sequencing of assessment methods.

Overall, we contribute to the employment interview, cyber-vetting, and stereotyping literatures by examining: (1) whether hiring professionals evaluate applicants that smoke cigarettes or recreational cannabis more negatively than those that do not; (2) how information gained via interviews and cyber-vetting jointly impact evaluations; (3) whether judgments of applicant warmth, competence, or CWB engagement act as mediators; and (4) whether cyber-vetting pre- versus post-interview evokes differing assessments. We explore all this via three complementary experiments.

1.1 | Cyber-Vetting as a Complement to Interviews in the Broader Selection Process

While organizations mainly use interviews to evaluate job applicants (Sackett et al. 2022), other methods can also be used. Cyber-vetting (i.e., scrutinizing social media and other online activities), for instance, has emerged as a complement or replacement for more established techniques (Berkelaar and Buzzanell 2014). There is a mismatch, however, in how cyber-vetting is studied (in isolation) and the way it is typically applied (alongside other more conventional selection methods). Selection research that integrates interviews, cyber-vetting, or more is thus better suited to practice. In the present research, we position information uncovered via cyber-vetting as an unstructured supplement to that obtained from a formal interview. Although there is limited evidence for its validity (e.g., Mönke et al. 2024), managers tend to believe that cyber-vetting yields more information than a resume and provides deeper insights into personal character (Zhang et al. 2020). These insights can help in "getting to know" applicants before an interview (Berkelaar 2017, 1129), or spotting "red flags" quickly and economically (e.g., Hartwell and Campion 2020; Tews et al. 2020). On the flip side, cyber-vetting may tap into sensitive information that triggers negative judgments (e.g., Pu et al. 2022; Wade et al. 2020).

1.2 | Cyber-Vetting Cigarette and Cannabis Smokers

There are two perspectives related to potential hesitations in hiring cigarette or recreational cannabis smokers. On the one hand, hiring managers may be justifiably concerned about the risks or costs associated with these behaviors. Shrestha et al. (2022), for instance, estimated substantial morbidity-related productivity losses arising from cigarette smokers' absenteeism, presenteeism (i.e., lowered productivity at work), and inability to work. Meta-analyses have also linked cigarette smoking with higher absenteeism risks (Weng et al. 2013), as well as lower earnings for younger people and fewer years of employment for older ones (Viinikainen et al. 2025). In the context of cannabis, researchers such as Solmi et al. (2023) and Scheier and Griffin (2021) have found associations between its use and challenges such as cognitive impairment, mental health issues, and socialization problems. On the other hand, hiring professionals may engage in unwarranted smoker stigmatization. Goffman (1963) depicted a stigma as a characteristic that triggers unrelated negative associations (i.e., stereotypes). This degrades social identity and makes people vulnerable to prejudice (Link and Phelan 2001). Applicants may thus try to hide what they are stigmatized for, as in the case of racial minorities that strategically "whiten" their resumes (Kang et al. 2016). Personal social media platforms like Facebook subvert this by creating a false sense of privacy. People, in fact, regularly create or share social media posts or comment on content related to cigarettes (Van Hoof et al. 2014; Yoo et al. 2016) and cannabis (Willoughby et al. 2020). For instance, 39% of Facebook profiles that Van Hoof et al. (2014) analyzed had references to tobacco. Similarly, Willoughby et al. (2020) reported that 31% of young Americans shared content about cannabis, with Facebook being their primary platform. Displays of stigmatized behaviors on social media (e.g., profanity, alcohol/drug use, sexual behavior, violence, and self-absorption; Hartwell and Campion 2020; Tews et al. 2020; Zhang et al. 2020) are associated with more negative selection outcomes. Revelations of mental health issues (Pu et al. 2022) and political views (Wade et al. 2020) are as well. Similar hesitations may arise from cigarette or cannabis use. For example, while Viinikainen et al. (2025) emphasize the serious health issues linked with cigarette smoking, they also caution about the potential role of smoking stigma. Smokers are indeed stigmatized both generally (e.g., Seiter et al. 2010; Stuber et al. 2009) and in interviews (Roulin and Bhatnagar 2018, 2021). For cannabis, a vignette-based study showed negative hiring manager reactions to the discovery of recreational use (Tews et al. 2023). More generally, people associate cannabis use with criminal behaviors (Steiner et al. 2019), lack of maturity (Reid 2020), cognitive impairment (Hirst et al. 2017), and amotivation and apathy (Skumlien et al. 2023). Overall, we expect cyber-vetted cigarette or cannabis content to be associated with lower final interviewer evaluations.

H1. *An applicant identified as a (a) cigarette smoker or (b) cannabis smoker receives lower evaluations than an applicant who is not.*

In addition to applicant characteristics, most theoretical models of judgment in selection consider hiring manager (or interviewer) characteristics as key moderating variables. For instance, Huffcutt et al.'s (2011) model of interviewee performance suggests that non-job-relevant factors influence evaluations when hiring managers possess limited information processing capacity and rely on heuristics. Similarly, Derous, Buijsrogge, et al.'s (2016) dual-process model of interviewer bias emphasizes the role of prejudicial attitudes toward stigmatized applicants. Empirical work also shows that hiring managers are more likely to judge applicants favorably when they share the same healthy lifestyle (Yu et al. 2023). As such, it is important to examine the influence of evaluator attitudes toward cigarette smoking and recreational cannabis use, especially given the rise in public acceptance of the latter. Fifty nine percent of U.S. adults, for instance, support the legalization of cannabis for medical and recreational use, and an additional 30% do so for purely medical reasons (Van Green 2022). Most Canadians 16+ also consider the occasional nonmedical vaping, smoking, or eating of cannabis as acceptable (Health Canada 2022).

We suggest that interviewers with strong negative views of cigarette smoking or recreational cannabis use are particularly likely to assess applicants who engage in these behaviors poorly. Past research has

only found partial support for such effects and has focused solely on cigarette smokers. Roulin and Bhatnagar (2018) found a significant moderating effect of attitudes toward cigarette smoking amongst experienced U.S.-based evaluators, but less so for Canadian student evaluators. And while Roulin and Bhatnagar (2021) did not find a moderating effect of attitudes in the relationship between smoking status and initial interview impressions, evaluators with more negative attitudes were found to be more likely to focus on smoking-related cues (such as a visible cigarette pack). Such moderating effects, however, have not been examined for cannabis users. Overall, building on the theoretical foundations described above (e.g., Derous et al. 2016), we predict that:

H2. *The effects of applicant smoking status discovered during cyber-vetting on final evaluations are moderated by interviewers' personal attitudes toward: (a) cigarettes, and (b) cannabis smoking, such that the negative effects are stronger when evaluators hold more negative attitudes.*

1.3 | Stereotype Mechanisms and Perceptions of CWBs

It is important to understand the mechanisms underlying evaluator judgments of applicants who smoke cigarettes or cannabis to develop appropriate interventions and ensure objectivity. Models of decision-making in selection often integrate the effects of stereotypes and biases (e.g., Derous et al. 2016). The Stereotype Content Model proposes that we judge others on the core dimensions of warmth (i.e., communion) and competence (i.e., agency), and these in turn shape our cognitive, affective, and behavioral responses (Fiske 2018; Fiske et al. 2007). Prior selection research has drawn on warmth and competence in examining job applicant evaluations (e.g., Krings et al. 2011), and this framework is well-suited for studying judgments influenced by potentially stigmatizing information contained within social media. Cigarette smokers are generally viewed as social outcasts and misfits (Kim and Shanahan 2003), interpersonally less likable (Seiter et al. 2010), and less professional in the workplace (Gilbert et al. 1998). A "stoner" stereotype associates cannabis users with qualities such as immaturity, irresponsibility, and incompetence (Reid 2020). These perceptions are congruent with lowered attributions of warmth and competence at work, leading us to the following prediction:

H3. *An applicant identified as a cigarette/cannabis smoker is perceived as lower on (a/b) warmth and (c/d) competence than one who is not.*

A key function of applicant cyber-vetting is to spot issues that could cause problems for the organization or the job. CWBs (Robinson and Bennett 1995) encompass problematic conduct that is potentially detrimental to organizational processes or objectives. They range from relatively minor transgressions (e.g., deliberately slowing down) to more egregious ones (e.g., stealing, abusing coworkers). CWBs also bear conceptual similarity to many of the negative stereotypes associated with cigarette and cannabis users. Supervisors, for example, rate cigarette smokers as weaker on dependability and interpersonal relationships (Gilbert et al. 1998). People often attribute the inability to quit smoking to a lack of self-control (Muraven and Baumeister 2000), which is also a characteristic associated with CWBs (Spector 2011). Similarly, cannabis users are often associated with amotivation, apathy, and criminality (Skumlien et al. 2023; Steiner et al. 2019). In fact, Roulin and Bhatnagar (2018) showed that interviewers link cigarette smokers with CWBs, and Bernerth and Walker (2020) linked cannabis use before or during work with heightened CWBs. Taken together, we predict that hiring managers evaluate cigarette or cannabis smokers poorly, partly because they view the smokers as lower on competence and warmth, and due to concerns about CWBs.

H4. *An applicant identified as a cigarette/cannabis smoker is perceived as (a/b) more likely to engage in counterproductive workplace behaviors.*

H5. *Interviewers' perceptions of applicant warmth/competence act as mediators in the relationship between applicant smoking status and (a/b) final evaluations, and (c/d) applicant likelihood to engage in counterproductive workplace behaviors.*

As in the case of final evaluations (see H2), and building on theoretical models that emphasize the effects of interviewers' personal characteristics (e.g., Derous et al. 2016; Huffcutt et al. 2011), we expect that evaluators who possess more negative attitudes toward cigarette smoking or cannabis use will be especially prone to viewing the smokers as being lower on warmth and competence. We thus predict:

H6. *The effects of applicant smoking status on perceptions of applicant warmth/competence are moderated by interviewers' personal attitudes toward (a/b) cigarette and (c/d) cannabis smoking, such that the negative effects are stronger when evaluators hold more negative attitudes.*

1.4 | The Role of Cyber-Vetting Timing

As briefly noted earlier, cyber-vetting at different stages of the selection process can serve different functions. Cyber-vetting early on (e.g., alongside application and resume screening, but before interviewing) can help determine whether applicants possess core qualifications for the job. Alternatively, cyber-vetting later (e.g., upon interview completion) can serve as a fast and inexpensive supplement or replacement for a formalized background check. Although selection research has (directly or indirectly) investigated the two approaches, there is no work that empirically compares the implications for hiring outcomes. Chang and Madera (2012) examined hiring managers' practices and found that 56% reported cyber-vetting use during the pre-interview screening phase and 12% after hiring, thereby demonstrating its implementation at varying points of the selection process. Similarly, Berkelaar (2017) reported that hiring managers thought of cyber-vetting as useful for "getting to know" applicants before an interview or as background checks after the interview. For the former, Roulin and Bangerter (2013) considered cyber-vetting as a relevant preliminary assessment of applicants' knowledge, skills, abilities, and other characteristics (KSAOs) for screening purposes. Much of empirical research in the area also relates to the psychometric properties of KSAO assessments (e.g., Roulin and Levashina 2019; Van Iddekinge et al. 2016; Zhang et al. 2020). In contrast, Hartwell and Campion (2020) described cyber-vetting as useful for finding "red flags," and

"not unlike background checks, credit checks, or drug screens, all of which tend to occur later in the hiring process" (p. 12).

Does it matter whether stigmatizing information is acquired before or after interviewing? To our knowledge, this question has not been examined. On the one hand, recently acquired information can have an outsized impact due to its salience at the time of assessment. In fact, potentially stigmatizing features (like smoking cues) can facilitate hiring bias when made salient due to recency (Derous et al. 2016; Finkelstein and Burke 1998). On the other hand, theoretical models of interviewer judgment emphasize the importance of *pre*-interview information in final evaluations (e.g., Derous et al. 2016; Huffcutt et al. 2011). Although evaluators can update initial impressions based on knowledge from the interview (e.g., based on applicant performance), pre-interview judgments may create stable first impressions that anchor final evaluations. Due to the two competing rationales, we set up the following Research Question.

> **RQ1:** *Does the effect of applicant smoking status on final evaluations depend on when cyber-vetting takes place within the selection process?*

2 | Overview of Studies

We conducted three experimental studies simulating a selection process that consisted of an interview supplemented with social media cyber-vetting that identified the job applicant as a cigarette smoker, cannabis smoker, or control candidate. In Studies 1 and 2, Canadian business student samples enacted the role of interviewers, whereas Study 3 relied on hiring professionals from California (with cannabis being legal in both these geographic locations). Study 1, where participants evaluated the suitability of a job applicant who: (a) was identified as a cigarette or cannabis smoker versus not during post-interview cyber-vetting, and (b) demonstrated high versus average job qualifications based on the quality of their interview responses, tested H1 and H2. Studies 2 and 3 focused solely on applicants who performed well and provided high-quality interview responses. Study 2, which sought evidence of the stereotypes and mechanisms at play in applicant assessments, also tested H3–H6. Lastly, Study 3, where selection simulations varied based on whether cyber-vetting took place before versus after the interview, explored RQ1.

3 | Study 1

3.1 | Methods

3.1.1 | Participants

We initially recruited 236 Canadian undergraduate business students to complete the study in a lab (in small groups). Twelve of them were excluded due to incomplete data or technical issues. The final sample consisted of 224 responses. The mean age was 20.14 (SD = 2.57). The sample composition was 54% female and 46% male, 45% White, 33% Asian, 10% Black, 11% mixed or other races, and 60% employed (with 26% in managerial roles). Moreover, 9.6% of participants identified as cigarette smokers and 21.5% as cannabis users.

3.1.2 | Procedure

We developed a personnel selection simulation resembling the one used by Roulin and Bhatnagar (2021) for assessing first impressions, post-interview evaluations, and final post-cyber-vetting evaluations of a job applicant. Participants played the role of an assistant human resource (HR) manager at a local bank charged with hiring for a social media manager position. As part of the simulation, participants read a job description, viewed a series of short interview videos in response to several question choices, reviewed cyber-vetted social media information, and provided applicant assessments (see the simulation flow in Figure 1). Such asynchronous video interview (AVI) simulations are often used within personnel selection research (e.g., Arseneault and Roulin 2024). The simulation began by asking participants to review the job description for the position they were being hired for. Participants then watched a brief video clip shot in first-person depicting the point-of-view of the interviewer (i.e., the participant) greeting the applicant (played by a White, male professional actor in his 30s) who knocks, enters an office, shakes hands, and takes a seat. Participants reported their initial impressions (i.e., their pre-interview evaluations) after viewing the video clip. An interview, which consisted of four rounds of questioning, then commenced. Each round began with the participant (i.e., the interviewer) selecting either an easy or a hard question. This decision, not associated with specific hypotheses per se, was included to increase the realism of the interview and immerse participants in their roles as interviewers. The selection activated an approximately 2-min-long video clip of the applicant's response that was portrayed as being of either high or average quality consistently across all four questions. The response also slightly differed depending on whether the participant chose an easy versus a difficult question, although they relied on the same core scripts and demonstrated the same competencies (see our Online Supplement for all questions and scripted responses). This material was taken from Roulin and Bhatnagar (2021), who pilot-tested question difficulty and response quality. After watching all four interview responses, participants evaluated the applicant. In the last stage, participants scrutinized screenshots of the applicant's social media presence (i.e., his Facebook posts) presented as part of cyber-vetting. It was used for manipulating the applicant's smoking status, and was followed by final evaluations. Finally, demographic and attitudinal data were collected.[1] We collected attitudes toward cigarette smoking and cannabis use after all outcome variables so that we would not prime participants by making the issue of smoking artificially salient.

3.1.3 | Design

Participants were randomly assigned to one of six conditions in a 2 (applicant qualifications: strong or average) x 3 (smoking status: cigarette smoker, cannabis smoker, or control) between-subjects experimental design. The same actor played the applicant across all experimental conditions but varied his video-recorded responses based on the specific interview questions chosen and provided high versus average quality answers that manipulated applicant qualifications. All responses followed the pilot-tested scripts as in Roulin and Bhatnagar (2021). Subsequent cyber-vetted screenshots of the applicant's fictitious Facebook profile and posts were used to manipulate smoking status. These included the same general content, varied by the actor's photographs that were either neutral or

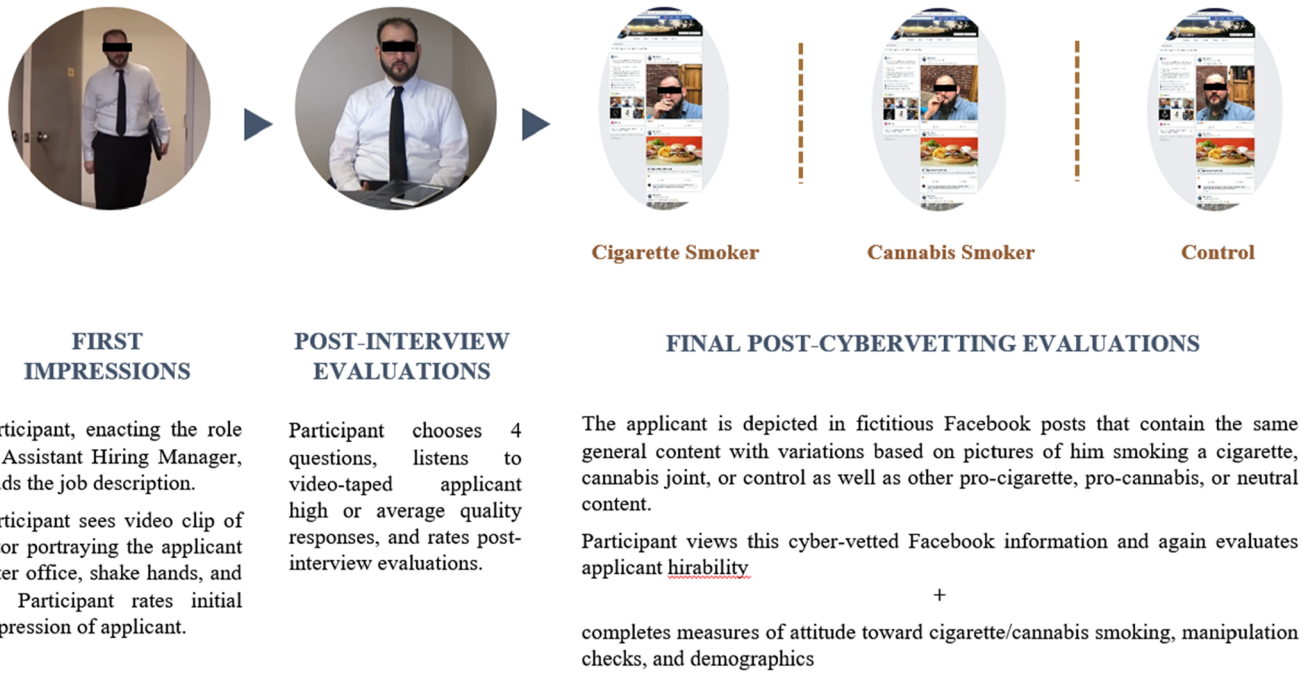

FIGURE 1 | Interview and cyber-vetting simulation for Study 1.

showed him smoking a cigarette or cannabis joint, and posts and shared content that were either neutral or pro-cigarette or cannabis smoking in nature (see illustrative examples in Figure 2). At the end of the study, participants were presented with five manipulation check statements about the applicant's social media posts or pictures and were asked to report on what they saw. Overall, 95% of participants in the cigarette smoker condition correctly checked the "smoking a cigarette" statement, and 89% of those in the cannabis smoker condition correctly checked the "smoking a cannabis joint" statement, with differences being significant between experimental conditions (see detailed results in Table S5).

3.1.4 | Measures

3.1.4.1 | Initial Impressions. We measured initial pre-interview evaluations using four items ($\alpha = 0.83$; Roulin and Bhatnagar 2021). A sample item is "based on a first impression, it was a good idea to invite this candidate for an interview" (see the Online Supplement for all the items used). Responses were provided on a 1–5 (*strongly disagree* to *strongly agree*) Likert scale.

3.1.4.2 | Post-Interview Evaluations. Post-interview evaluations were measured via four similar Likert scale items ($\alpha = 0.94$, e.g., "based on the interview, I would offer the job to this candidate").

3.1.4.3 | Final Evaluations. Post cyber-vetting evaluations were also measured via four similar Likert scale items ($\alpha = 0.93$, e.g., "based on all the information I gathered, I would offer the job to this candidate").

3.1.4.4 | Question Difficulty. We captured the number of hard (e.g., "tell me about a work project for which you did not respect the deadline that was set") versus easy (e.g., "tell me about a project that you managed from start to finish") interview questions participants chose (from 0 to 4).

3.1.4.5 | Attitudes Toward Cigarette Smoking and Cannabis Use. At the end of the study, we measured attitudes toward cigarette smoking (four bipolar scale items, $\alpha = 0.96$, e.g., "unfavorable-favorable") and recreational cannabis use (four similar bipolar scale items, $\alpha = 0.99$). These items were similar to those used by Roulin and Bhatnagar (2021) to capture smoking/vaping attitudes.[2]

3.2 | Results

Descriptive statistics and correlations are included in Table 1 of the online supplement. We first examined evaluations of cigarette or cannabis smokers (H1) and the effect of applicant qualifications via a 3 × 2 ANOVA. There was a significant main effect of applicant smoking status, $F(2, 217) = 19.74$, $p < 0.001$, and a significant main effect of applicant qualifications, $F(1, 217) = 34.19$, $p < 0.001$, but no interaction, $F(2, 217) = 0.31$, $p = 0.73$ (see Figure 3). Pairwise comparisons confirmed that cigarette ($M = 2.99$, SD = 0.99) and cannabis smokers ($M = 2.80$, SD = 1.17) received lower final evaluations than the control ($M = 3.75$, SD = 0.93), with large effect sizes for the cigarette smoker versus control ($d = 0.79$, $p < 0.001$) and cannabis smoker versus control ($d = 0.90$, $p < 0.001$) conditions. Highly qualified applicants (i.e., those providing strong answers) were evaluated more positively ($M = 3.56$, SD = 1.07) than moderately qualified ones ($M = 2.81$, SD = 1.02, $d = 0.72$, $p < 0.001$). These findings provide initial support for H1.

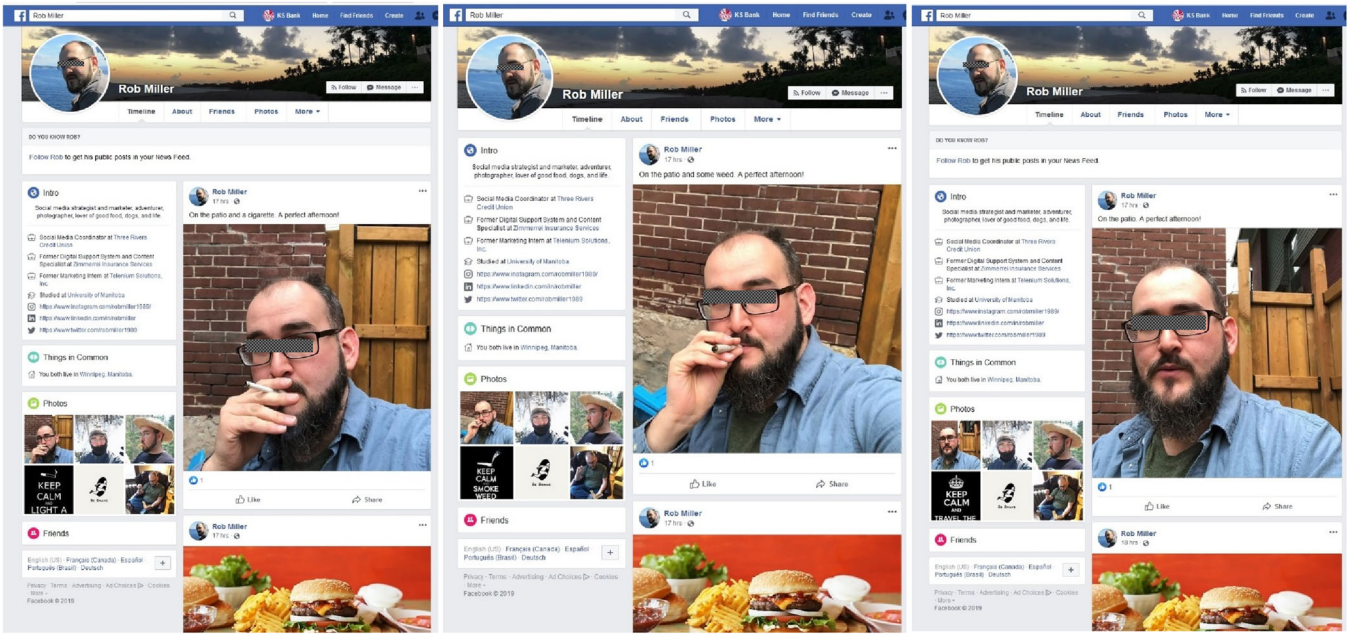

FIGURE 2 | Examples of Facebook content for the cigarette smoker (left), cannabis smoker (center), and control (right) conditions for Studies 1–3.

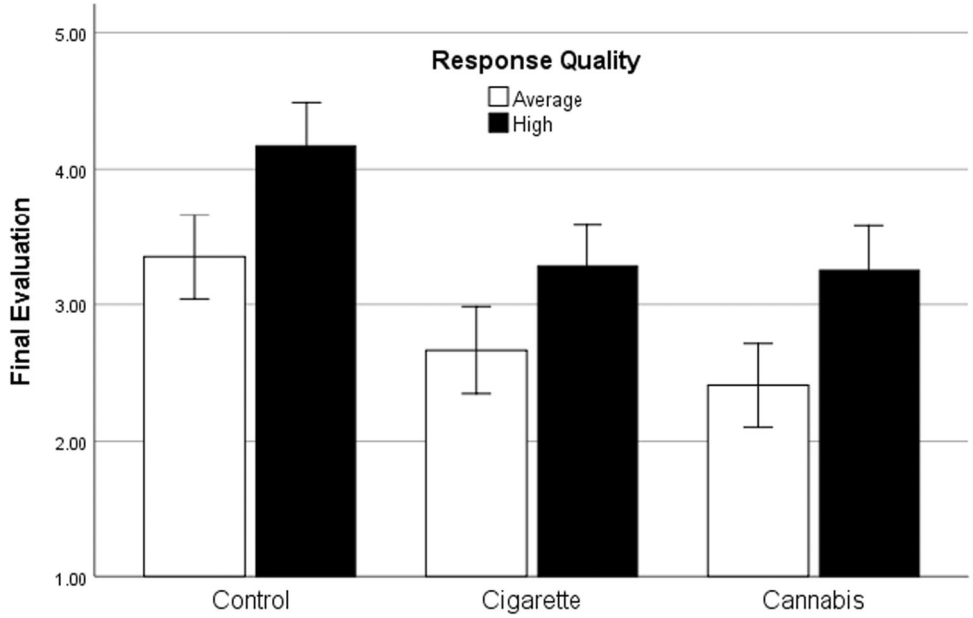

FIGURE 3 | Final evaluation by condition for Study 1. Error bars represent 95% CI.

We used path analyses to test H1 and H2 more comprehensively. Information about model fit and results is presented in Figure 4. Both initial pre-interview evaluations ($\beta = 0.30$, $p < 0.001$) and applicant qualifications ($\beta = 0.52$, $p < 0.001$) were positively associated with post-interview evaluations. Post-interview evaluations ($\beta = 0.59$, $p < 0.001$), as well as being a cigarette ($\beta = -0.29$, $p = 0.002$) or cannabis smoker ($\beta = -0.50$, $p < 0.001$), were associated with final (i.e., post-cyber-vetting) evaluations, further supporting H1. However, contrary to H2, we found no significant interaction between participants' attitudes toward cigarette ($\beta = -0.03$, $p = 0.77$) or cannabis ($\beta = 0.18$, $p = 0.09$) smoking and applicant smoking status, nor any main effects of such attitudes. Interestingly, the path analyses showed that pre-interview evaluations were negatively associated with the number of hard questions asked by participants during the interview ($\beta = -0.18$, $p < 0.01$), and the number of hard questions was also negatively associated with post-interview ratings ($\beta = -0.14$, $p < 0.01$). This is consistent with the important role that first impressions have within interviews.

3.3 | Discussion

In Study 1, we demonstrated the empirical robustness of key anchoring and adjustment mechanisms theorized within past models of judgment in interviews (e.g., Derous et al. 2016). Initial

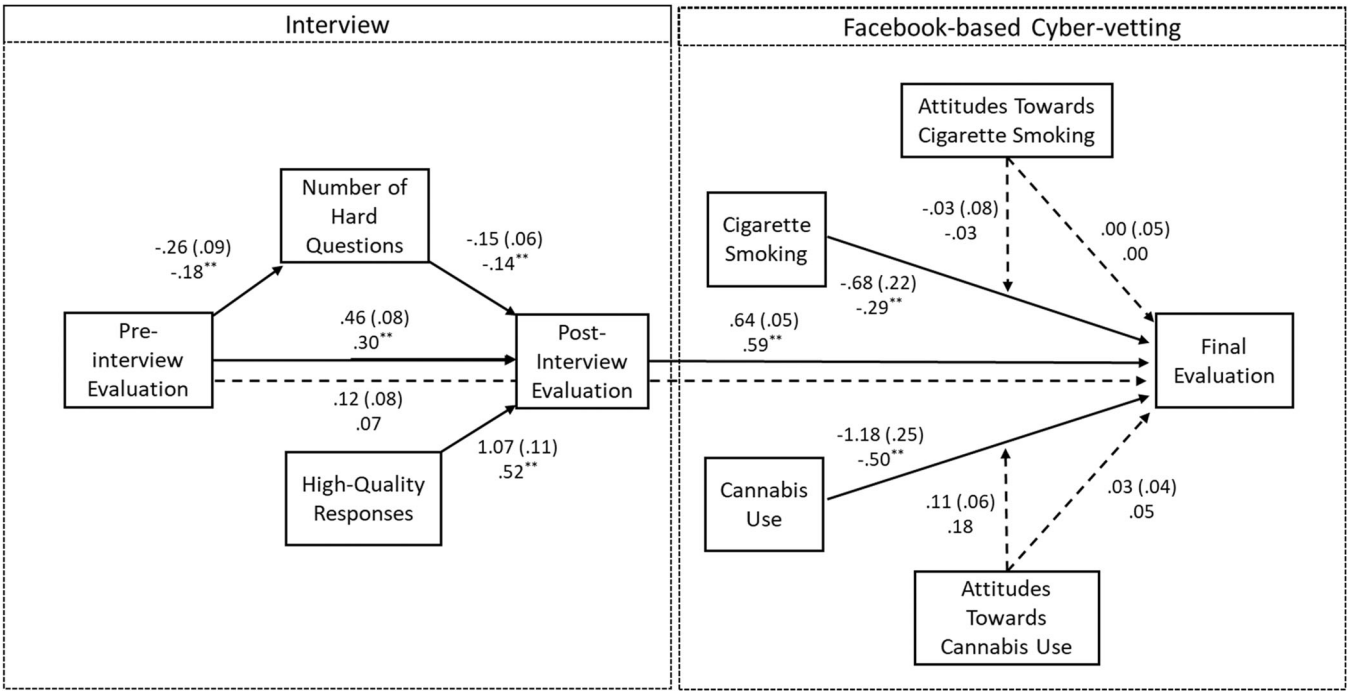

FIGURE 4 | Path model for Study 1. $N = 224$ Canadian business students. Unstandardized b values and standard errors are above the standardized beta values. Full lines show significant paths, dotted lines show nonsignificant paths. Model fit: $X^2 = 14.86$, $p = 0.46$; RMSEA 90% CI = 0.00–0.06; CFI = 1.00; TLI = 1.00, SRMR = 0.03. $^*p < 0.05$; $^{**}p < 0.01$.

impressions formed upon meeting the applicant anchored subsequent post-interview evaluations, along with adjustments based upon interview quality. Although the effect of post-interview assessments endured even after the completion of social media cyber-vetting, final evaluations dropped as predicted upon the discovery of cigarette and cannabis smoking status. In other words, even objective evidence in the form of strong interview skills and job qualifications was unable to overcome interviewers' negative perceptions of the smoker. In the absence of additional sources of influence (e.g., references, managerial intervention), this outcome can undoubtedly impact final rulings on applicant files and associated job offers. Moreover, interviewers' own favorable or unfavorable attitudes toward smoking did not influence final evaluations in this study. Much has been made of limiting subjectivity in the selection process (e.g., Bilimoria and Piderit 1994; Finkelstein et al. 2007; Roulin and Bhatnagar 2021). Now that we empirically demonstrated negative evaluations of cigarette or cannabis smokers introduced through cyber-vetting, we turned next to the reasons underlying such judgments to help inform mitigation strategies. To do so, we used the Stereotype Content Model, which asserts that we think of and judge others in terms of their warmth (i.e., whether they are trustworthy and likable) and competence (i.e., whether they are capable and self-assured; Fiske 2018; Fiske et al. 2007).

4 | Study 2

4.1 | Methods

4.1.1 | Participants

We recruited 385 Canadian undergraduate business students (different from those in Study 1) to complete the study online. Given the unsupervised format and tendency of students to be inattentive, we included two attention check items (e.g., a "please select somewhat agree" item). As students accessed the study remotely on their personal devices, we also included a question to check whether the video-based experimental stimuli were viewed and heard correctly. The final sample included 318 participants who passed the attention checks and were able to adequately access the video clips. The mean age was 20.55 (SD = 3.00), with 41.6% being female and 57.8% male, 36.9% White, 44.3% Asian, 8.3% Black, 10.5% other races or mixed-race, and 59.1% employed (20.1% in a managerial role). In addition, 9.1% of participants were cigarette smokers and 18.6% were cannabis users.

4.1.2 | Procedure and Design

The selection simulation and materials were similar to those in Study 1, with four key differences: (1) the simulation used a customer relationship manager position instead of the social media manager position in Study 1 to forestall questions regarding the judgment of a social media professional that casually references smoking on their own social media,[3] (2) only strong applicant responses were used (i.e., there was no applicant qualification manipulation), (3) perceived warmth and competence were assessed post-cyber vetting to better understand the mechanisms leading to negative evaluations, and (4) likelihood of engaging in CWBs was assessed post-cyber-vetting as an additional outcome. Participants were randomly assigned to one of three conditions (smoking status: cigarette vs. cannabis vs. control) using a between-subjects design. We used the same manipulation check procedure as in Study 1 and found that most participants correctly identified the applicant behavior (i.e., 93% for cigarette smoking, 88% for cannabis use).

We used a social media manager job in a bank for Study 1. Hiring managers may consider social media posts about smoking habits or cannabis use as a "faux pas" (e.g., Hartwell and Campion 2020). We were therefore concerned that participants' expectations that social media managers should be aware of the risks of posting sensitive information had amplified the negative effects found within Study 1. Thus, in Study 2, we switched to a customer relationship manager role.

4.1.3 | Measures

4.1.3.1 | Evaluations. We measured initial pre-interview ($\alpha = 0.85$), post-interview ($\alpha = 0.90$), and final post-cyber-vetting evaluations ($\alpha = 0.91$) with the same four-item measures as in Study 1.

4.1.3.2 | Warmth/Competence. We captured perceived warmth (four items, $\alpha = 0.85$, e.g., "how good-natured do you believe this applicant is?") and competence (five items, $\alpha = 0.85$, e.g., "how intelligent do you believe this applicant is?") after cyber-vetting with measures adapted from Krings et al. (2011). Responses were made on 1–5 Likert scales (1 = not at all, 5 = a great deal).

4.1.3.3 | Likelihood of CWBs. At the end of the simulation, we also assessed perceived likelihood of engaging in CWBs via 13 items ($\alpha = 0.94$, e.g., "to what extent do you think that he would be likely to... come in late to work without permission") adapted from Roulin and Bhatnagar (2018). Responses were made on a five-point Likert scale (1 = very unlikely, 5 = very likely; see the online supplement for all items used).

4.2 | Results

Descriptive statistics and correlations are presented in Table 2 of the online supplement. A MANOVA was first conducted to examine differences in the post-cyber-vetting measures (i.e., perceived warmth and competence, perceived likelihood of CWBs, and final evaluations) across the three smoking conditions (related to H1, H3, and H4). The overall MANOVA results were significant, $F(8, 622) = 4.60$, $p < 0.001$. Results of subsequent ANOVAs showed significant differences on all four outcome variables (all ps < 0.01, see Figure 5). As compared to the control ($M = 3.50$, SD = 0.68), the cigarette smoker ($M = 2.95$, SD = 0.77, $d = 0.76$, $p < 0.001$) and cannabis smoker ($M = 3.05$, SD = 0.89, $d = 0.57$, $p < 0.001$) were perceived as being less warm. As compared to the control ($M = 3.61$, SD = 0.65), the cigarette smoker ($M = 3.32$, SD = 0.72, $d = 0.42$, $p = 0.005$) and cannabis smoker ($M = 3.26$, SD = 0.85, $d = 0.46$, $p = 0.001$) were also perceived as less competent. As compared to the control ($M = 2.39$, SD = 0.87), the cigarette smoker ($M = 2.82$, SD = 0.74, $d = 0.54$, $p < 0.001$) and cannabis smoker ($M = 2.81$, SD = 0.80, $d = 0.50$, $p < 0.001$) were perceived as more likely to engage in CWBs. Finally, as compared to the control ($M = 3.79$, SD = 0.94), the cigarette smoker ($M = 3.45$, SD = 0.89, $d = 0.37$, $p = 0.009$) and cannabis smoker ($M = 3.41$, SD = 0.94, $d = 0.40$, $p = 0.002$) received lower final evaluations. These results provide more support for H1 and initial support for H3 and H4.

As in Study 1, we tested all other relationships and hypotheses more directly using path analyses (see Figure 6). Initial pre-interview evaluations ($\beta = 0.31$, $p < 0.001$) were positively associated with post-interview evaluations, which were positively related to final (i.e., post-cyber-vetting) evaluations ($\beta = 0.30$, $p < 0.001$).

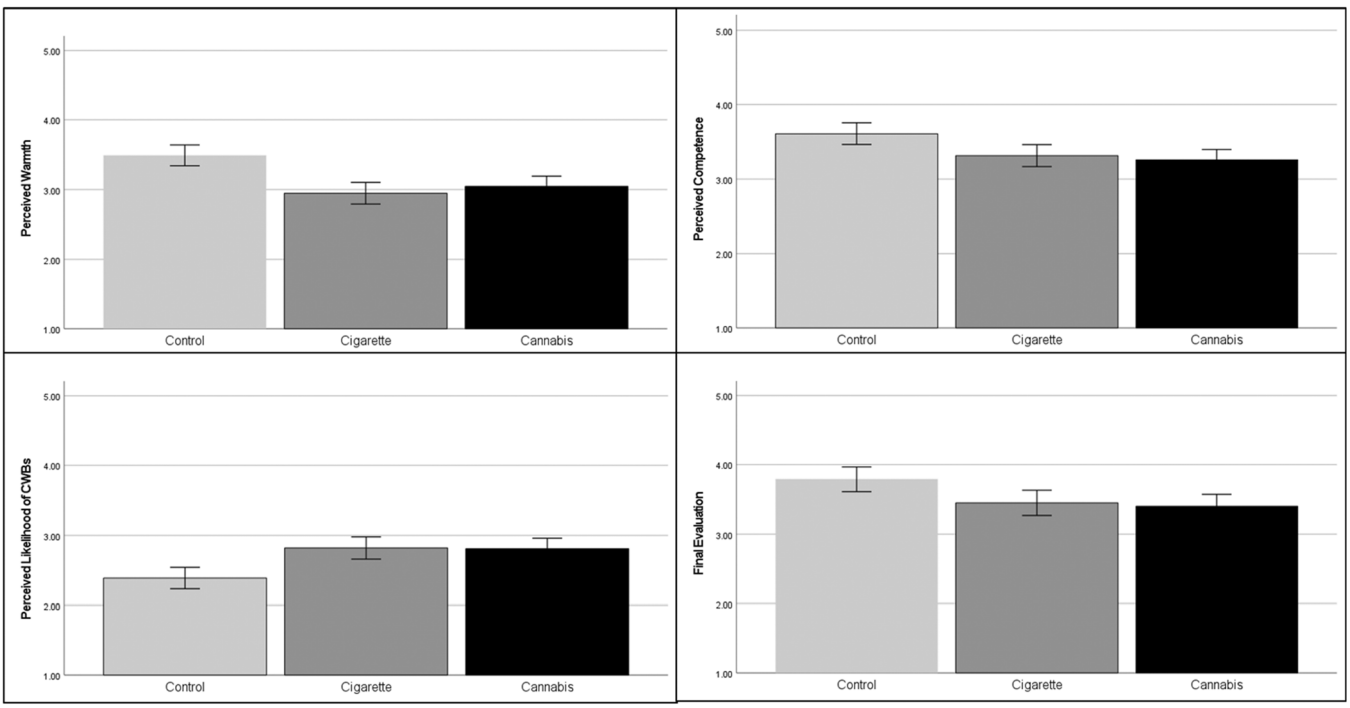

FIGURE 5 | Perceived warmth (top left), competence (top right), likelihood of CWBs (bottom left), and Final evaluation (bottom right) by condition for Study 2. Error bars represent 95% CI.

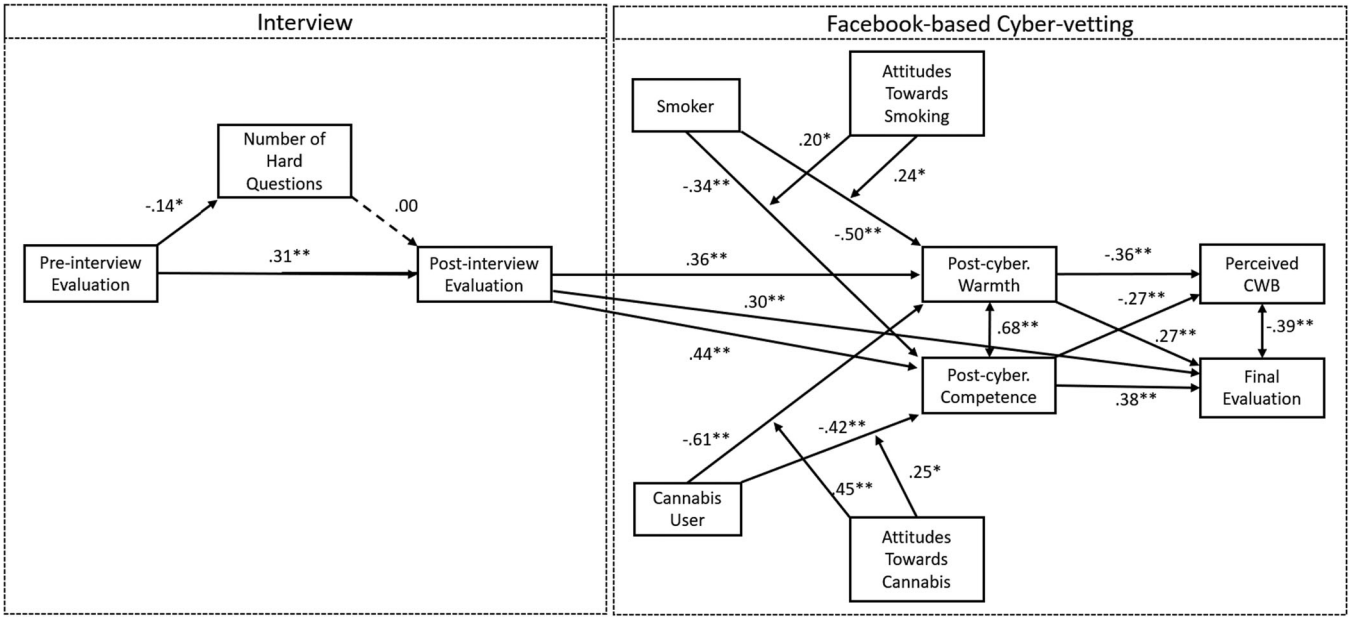

FIGURE 6 | Path model for Study 2. $N = 311$ students. Values are standardized beta values based on maximum likelihood estimations. Full lines show significant paths, dotted lines show nonsignificant paths. Note that direct paths between attitudes and warmth/competence are omitted for clarity but were included in the model. Model fit: $X^2 = 54.02$, $p = 0.01$; RMSEA 90% CI = 0.02–0.07; CFI = 0.98; TLI = 0.96, SRMR = 0.04. *$p < 0.05$; **$p < 0.01$.

Moreover, post-interview evaluations ($\beta = 0.36$, $p < 0.001$; $\beta = 0.44$, $p < 0.001$), and being a cigarette ($\beta = -0.50$, $p = 0.002$; $\beta = -0.34$, $p < 0.001$) or cannabis smoker ($\beta = -0.61$, $p < 0.001$; $\beta = -0.42$, $p < 0.001$), were associated with perceptions of warmth and competence, respectively. Altogether, these findings provide further support for H3.

Further, both perceived warmth ($\beta = 0.28$, $p < 0.001$) and competence ($\beta = 0.38$, $p < 0.001$) were positively associated with final evaluations. Similarly, both perceived warmth ($\beta = -0.36$, $p < 0.001$) and competence ($\beta = -0.28$, $p < 0.001$) were negatively associated with the perceived likelihood of engagement in CWBs. Moreover, analyses of indirect effects (not shown in Figure 6) highlighted that being a cigarette and cannabis smoker were both indirectly related to final evaluations ($\beta = -0.54$, $p < 0.001$, $\beta = -0.65$, $p < 0.001$) and CWB likelihood ($\beta = 0.48$, $p < 0.001$, $\beta = 0.58$, $p < 0.001$), thus supporting H5.

Finally, consistent with H6, we found significant interactions between applicant smoking status and participants' attitudes toward cigarette or cannabis smoking on perceptions of both warmth ($\beta = 0.24$, $p = 0.007$; $\beta = 0.45$, $p < 0.001$) and competence ($\beta = 0.20$, $p = 0.033$; $\beta = 0.25$, $p = 0.022$). The positive interaction terms confirm that the negative impact of smoking status is particularly strong when evaluators have negative attitudes toward smoking cigarettes or cannabis but weakened when such attitudes are more positive.[4]

Interestingly, pre-interview evaluations were negatively related to the number of hard questions asked in the interview ($\beta = -0.14$, $p = 0.009$). Yet, contrary to Study 1, the number of hard questions was unrelated to post-interview ratings ($\beta = 0.00$, $p = 0.98$). Perceived engagement in CWBs and final evaluations were also positively related (covariance = 0.68, $p < 0.001$).

4.3 | Discussion

Results of Study 2, which focused on applicants' strong interview performance, replicated the anchoring effects of initial impressions found in Study 1. They also replicated adjustments to final evaluations, demonstrated the effect of smoking status on complementary outcomes, and uncovered mediating mechanisms. Job applicants revealed as cigarette or cannabis smokers during post-interview cyber-vetting not only received lower final evaluations than in Study 1 but were also viewed as less warm and competent and more likely to engage in counterproductive behaviors at work, such as being late, taking longer breaks, or stealing. Final evaluations and CWB likelihood assessments were partially driven by lowered perceptions of warmth and competence for cigarette and cannabis smokers. And these perceptions of warmth and competence were lower still for those interviewers with more negative attitudes toward cigarette smoking or recreational cannabis use. In contrast to Study 1 where interviewers' negative cigarette and cannabis related attitudes did not impact final evaluations, this study found that negative interviewer attitudes did so for perceptions of warmth and competence, which then went on to influence final evaluations and perceived CWB likelihood. Differences in moderation effects between Studies 1 and 2 can be explained by the outcomes examined (i.e., warmth and competence vs. final evaluations). Stereotypes of smokers or cannabis users (such as being unhealthy and impulsive or amotivated "stoners," respectively) are conceptually related to judgments of the two core dimensions of human nature and could be activated especially for evaluators who hold negative views of such habits. It is worth reiterating that the negative smoker assessments triggered by cyber-vetting emerged despite applicants' strong performance in the interview.

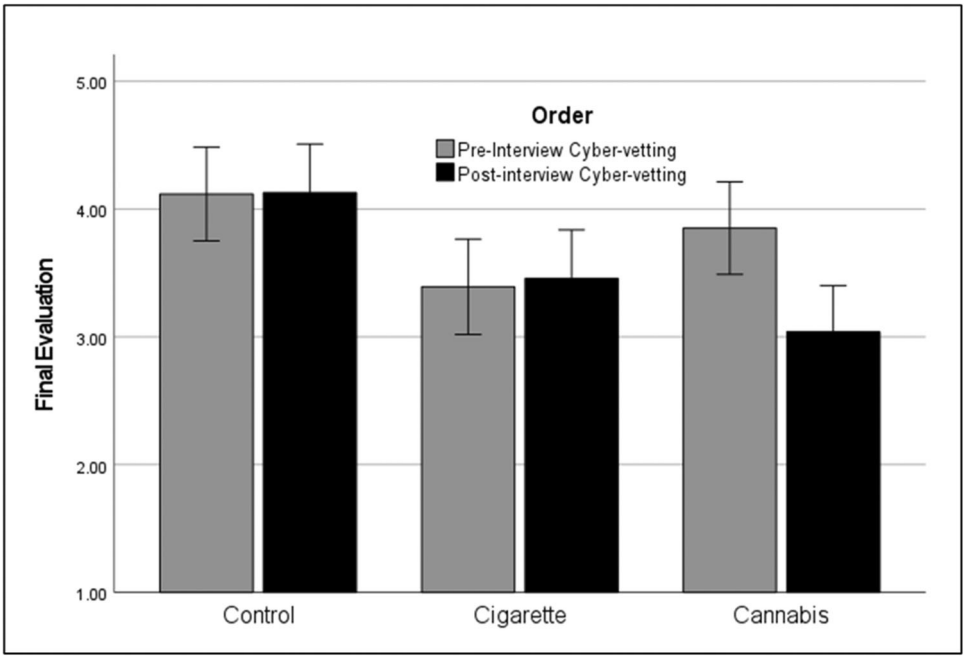

FIGURE 7 | Final evaluation by condition for Study 3. Error bars represent 95% CI.

HR managers can decide to cyber-vet applicants at varying points (e.g., Berkelaar 2017), and the implications of when this occurs in the overall selection process are unknown. In the next study, we shifted our focus from Canadian business student samples to a more ecologically valid sample of HR professionals in the U.S. We also examined the consequences of cyber-vetting before versus after the interview (RQ1).

5 | Study 3

5.1 | Methods

5.1.1 | Participants

We used the CloudResearch participant panel to recruit 185 U.S. HR professionals currently residing in California, a state chosen given its legalized recreational cannabis status (similar to Canada). The mean age was 36.19 (SD = 11.56). Participants were 53.3% female and 46.7% male, 52% White, 19% Hispanic/Latino, 14% Asian, 13% Black, 2% other races or mixed-race, and 95% employed (72% in a managerial role). Participants had conducted an average of 69.60 (SD = 207.04) job interviews in their careers. In addition, 30.4% of participants were cigarette smokers and 35% were cannabis users.

5.1.2 | Procedure and Design

Our selection simulation and materials were based on those used in the previous studies. As in Study 2, we focused our investigations on highly qualified applicants for a customer relationship manager position who provided strong interview responses. We extended our investigations to not only seasoned practitioners, but also to cyber-vetting that takes place either before or after the interview. Participants were therefore randomly assigned to one of six conditions in a 2 (cyber-vetting timing: pre- vs. post-interview) x 3 (smoking status: cigarette vs. cannabis vs. control) between-subjects experimental design. We again used the same manipulation check procedure as in Studies 1 and 2 and found that most participants correctly identified the applicant behavior that was portrayed (i.e., 87% for cigarette smoking, 78% for cannabis use).

5.1.3 | Measures

The measures were similar to those used in Studies 1 and 2: namely, pre-interview evaluations upon first encountering the applicant (four items, $\alpha = 0.88$), post-interview evaluations (four items, $\alpha = 0.91$), and post-cyber-vetting evaluations (four items, $\alpha = 0.93$), attitudes toward cigarette smoking (four items, $\alpha = 0.97$) and recreational cannabis use (four items, $\alpha = 0.98$), and the number of hard questions chosen/asked by participants (from 0 to 4). As the post-cyber-vetting evaluations were provided either upfront (in the pre-interview cyber-vetting condition) or at the end (in the post-interview cyber-vetting condition), the final evaluations represented either post-interview evaluations or post-cyber-vetting evaluations, respectively.

5.2 | Results

Descriptive statistics and correlations are presented in Table 3 of the online supplement. A multi-factor ANOVA was conducted on the final evaluation (which were either the post-interview or the post-cyber-vetting ratings, depending on whether the experimental condition included pre- or post-interview cyber-vetting, respectively) to further test H1 and explore RQ1. Results showed a significant main effect of applicant smoking status, $F\ (2,\ 177) = 8.89$, $p < 0.001$, but no

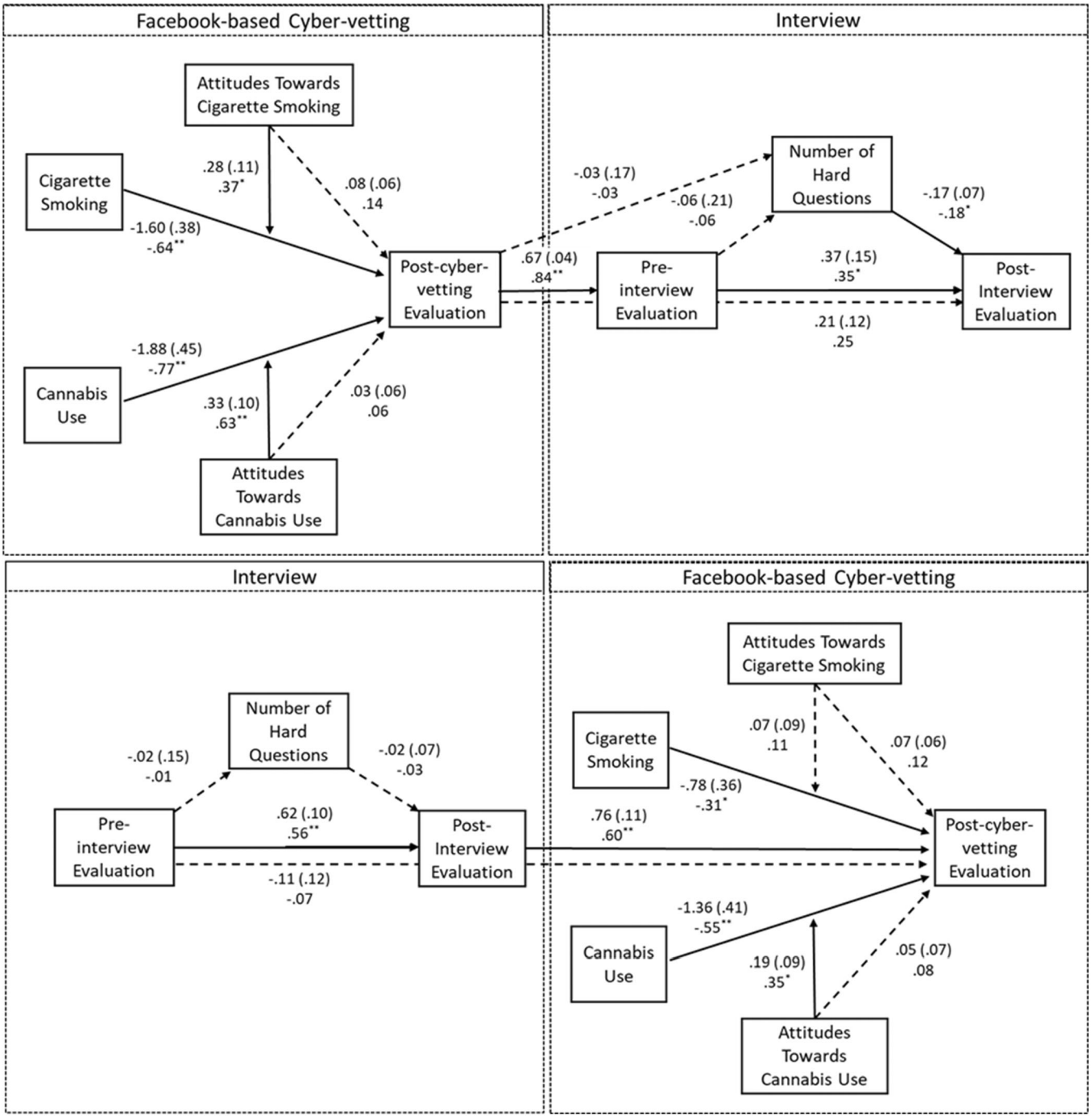

FIGURE 8 | Path models for the pre-interview (top) and post-interview (bottom) cyber-vetting conditions for Study 3. $N = 93$ and 90 Californian professionals; Unstandardized b values and standard errors are above the standardized beta values. Full lines show significant paths, dotted lines show nonsignificant paths. Model fit: $X^2 = 15.12/22.49$, $p = 0.30/0.21$; RMSEA 90% CI = 0.00–0.12/0.00–0.11; CFI = 0.98/0.98; TLI = 0.96/0.96, SRMR = 0.06/0.04. *$p < 0.05$; **$p < 0.01$.

main effect of cyber-vetting timing, F (1, 177) = 2.56, $p = 0.11$. However, there was a small but significant smoking status x timing interaction, F (2, 177) = 3.51, $p = 0.03$ (see Figure 7). Pairwise comparisons confirmed that the cigarette smoker ($M = 3.42$, SD = 1.16) and cannabis smoker ($M = 3.45$, SD = 1.24) received significantly lower final evaluations than the control candidate ($M = 4.12$, SD = 0.66), with medium-to-large effect sizes for the cigarette smoker versus control ($d = 0.74$, $p < 0.001$) and cannabis smoker versus control ($d = 0.68$, $p < 0.001$) conditions, providing further support for H1. In addition, while lower final evaluations for the cigarette smoker were observed both when cyber-vetting was conducted pre- (95% CI = 3.02–3.77) and post-interview (95% CI = 3.08–3.84), lower evaluations of the cannabis user were mostly prevalent when cyber-vetting was conducted post-interview (95% CI = 2.68–3.40), and less so when it took place pre-interview (95% CI = 3.49–4.21).

Path analyses (see Figure 8) were conducted separately for the two timing-related conditions. When social media

information was provided pre-interview, post-cyber-vetting evaluations were significantly impacted by being a cigarette smoker ($\beta = -0.64$, $p = 0.03$) or cannabis smoker ($\beta = -0.77$, $p < 0.01$), supporting H1. In addition, attitudes toward cigarette smoking ($\beta = 0.37$, $p = 0.01$) and recreational cannabis use ($\beta = 0.63$, $p < 0.001$) moderated the relationships between cigarette and cannabis smoking status and evaluations, supporting H2. Furthermore, post-cyber-vetting evaluations were associated with pre-interview ones ($\beta = 0.84$, $p < 0.001$), and pre-interview ratings were associated with post-interview ones ($\beta = 0.35$, $p = 0.02$). There was no significant relationship with the number of hard questions ($\beta = -0.05$, $p = 0.77$).

When social media information was provided post-interview (as in Studies 1 and 2), pre-interview evaluations were associated with post-interview evaluations ($\beta = 0.56$, $p < 0.001$). Post-cyber-vetting evaluations were also significantly impacted by being a cigarette ($\beta = -0.31$, $p = 0.03$) or cannabis smoker ($\beta = -0.55$, $p < 0.01$), as well as by post-interview evaluations ($\beta = 0.60$, $p < 0.01$), supporting relationships within our simulation and H1. Attitudes toward cigarette smoking did not play a moderating role (as in Study 1), contrary to H2a. However, attitudes toward cannabis use did moderate the relationship between the cannabis use manipulation and evaluations ($\beta = 0.35$, $p = 0.03$), suggesting that cannabis users are evaluated especially negatively by HR professionals who hold more negative attitudes toward recreational cannabis, supporting H2b. Finally, post-interview evaluations were not associated with the number of hard questions asked ($\beta = -0.01$, $p = 0.89$).

5.3 | Discussion

Overall, the key results found in Studies 1 and 2 were confirmed in Study 3, which relied on HR professionals (vs. business students in the previous studies): cigarette and cannabis smokers received lower final evaluations as compared to control candidates. When cyber-vetting took place in relation to the interview added further nuance. For cigarette smokers, negative effects were observed when information about smoking habits emerged both before and after the interview. For cannabis smokers, however, lowered evaluations while apparent at both stages were much more noticeable when discovery occurred after the interview, perhaps due to the salience of stigmatizing information proximal to final evaluation formation. In contrast, the negative effects of cannabis discovery before the interview were much smaller, due to possible compensation by the applicant's strong interview performance.

In this ecologically valid sample, the HR professionals' attitudes toward cigarette and cannabis use mattered in varying ways, with some effects similar to those in Studies 1 and 2 and others not. When cyber-vetting was conducted post-interview, interviewer attitudes did not affect final cigarette smoker evaluations. This is compatible with Study 1 results. In a departure from these, cannabis smokers received lower evaluations from interviewers who possessed less favorable attitudes toward recreational cannabis use. Interestingly, for pre-interview cyber-vetting, both cigarette and cannabis smokers received lower evaluations from HR professionals who reported less favorable attitudes toward the substances used respectively. There may be two interpretations of these findings. First, cannabis stigmatization may be less ingrained compared to cigarette stigmatization (at least amongst hiring professionals in California), thus allowing for adjustments to initial applicant impressions. Only raters with very negative attitudes toward cannabis penalized smokers who already demonstrated strong qualifications within their interviews. Relatedly, the more experienced hiring professionals in Study 3 were more likely to use cannabis themselves (35% vs. 20.5%) and reported more positive attitudes toward cannabis use ($M = 3.83$ vs. 3.44) than business students in Study 1 (see Table S6 for more details). Second, when cyber-vetting occurs upfront, negative attitudes and evaluations may percolate alongside interview performance to temper subsequent evaluations. This may be amplified given that participants in Study 3 were more likely to smoke themselves (30.4% vs. 9.6%) and held less negative attitudes toward smoking ($M = 2.94$ vs. 2.05) than those in Study 1.

6 | General Discussion

Globally, an estimated 1.18 billion individuals 15 years or older regularly smoked tobacco in 2020 (Dai et al. 2022), and 219 million individuals used cannabis in 2021 (United Nations Office on Drugs and Crime 2023). Within these sizeable populations, cigarettes remain the main form of tobacco use (World Health Organization 2022), and cannabis smoking is popular (Health Canada 2019). The treatment received by these two groups of smokers in the important context of selection is worse as compared to non-smokers. The present research builds and expands on recent work that uncovered negative evaluations of cigarette smokers in job interviews (Roulin and Bhatnagar 2018, 2021) by using a realistic video-based selection simulation that incorporates both interviews and cyber-vetting. It also identifies underlying mechanisms (competence and warmth) and boundary conditions (attitudes toward cigarette smoking/recreational cannabis use). Additionally, it is amongst the first to extend into the cannabis arena and find similar detrimental hiring outcomes (overview of hypotheses and results in online Table S4).

6.1 | Theoretical Contributions

This research contributes to the personnel selection and stigmatization literatures in several ways. First, cyber-vetting literature has cautioned about the discovery of sensitive personal information when assessing job suitability (Hartwell and Campion 2020; Tews et al. 2020). At the same time, research on stereotypes about cigarette and cannabis smokers (Roulin and Bhatnagar 2018, 2021; Tews et al. 2023) has been limited to studies using simple scenarios or mock interviews. Our research integrates these previously siloed literatures and expands on preliminary findings using realistic simulations of the selection process. Our findings also shed some light on the treatment of not just cigarette but also cannabis smokers in hiring: we find that job applicants whose social media contains cigarette or cannabis content receive lower evaluations despite how well they interview. Although these findings can be interpreted as evidence of the stigmatization faced by smokers, they may also reflect justifiable concerns about the risks or costs (such as lowered productivity or heightened absenteeism) associated with hiring smokers (e.g., Shrestha et al. 2022; Weng et al. 2013).

Second, in Study 2, we use the Stereotype Content Model (Fiske 2018; Fiske et al. 2007) to test perceptions of warmth and competence as key mechanisms underpinning judgments of smokers. We also explore perceptions of the likelihood of engaging in CWBs as an additional outcome. Our results confirm that reduced cigarette and cannabis smoker evaluations and heightened counterproductive behavior expectations (such as being late, taking longer breaks, and stealing) are partially driven by lowered warmth and competence perceptions.

Third, we demonstrate that the sequence of cyber-vetting in relation to the interview matters. Cyber-vetting can take place before the interview (alongside application and resume screening) or afterwards (as an aid to background or reference checks; Berkelaar 2017; Hartwell and Campion 2020). In Study 3, we find that for cigarette smokers, negative judgments arise independently of the order in which cyber-vetting takes place. Theoretically, this suggests that assessments of smokers can be affected both by pre-interview anchoring mechanisms (Derous et al. 2016) and post-interview salience effects (Finkelstein and Burke 1998). For cannabis smokers, however, negative evaluations are particularly apparent when social media content is scrutinized *after* the interview, suggesting that salience matters most (or more updating takes place during the interview). Overall, these results could suggest a deep-seated stigmatization of cigarette smokers, whereas that for cannabis smokers appears to be more malleable and possibly compensated for by a strong subsequent interview. Alternatively, the results might suggest that hiring managers are more consistently concerned about the risk of lower work performance associated with cigarette smokers rather than recreational cannabis smokers. The latter perspective is possibly aligned with the more consistent negative work outcomes for tobacco (e.g., Weng et al. 2013) versus cannabis consumption (Bernerth and Walker 2020).

Finally, we show that, in line with theoretical propositions (e.g., Derous et al. 2016), hiring managers' own negative predispositions toward smoking cigarettes/using recreational cannabis can exacerbate their negative assessments. For cyber-vetting post-interview, these negative attitudes do not directly impact final assessments (in Study 1); they however play a larger role in judgments of the applicants' warmth and competence (in Study 2). This suggests that evaluators' attitudes matter more when assessing the applicant as a person, rather than their performance in a formal assessment. In Study 3, where there is more variance in evaluators' attitudes, the moderating effects are mostly prevalent for cannabis-related attitudes, with only hiring professionals with very low attitudes penalizing cannabis smokers. Moderation effects are also visibly stronger for pre-interview cyber-vetting, thereby confirming predictions by dual-process theories (e.g., Derous et al. 2016) that evaluators' attitudes can reinforce anchoring effects arising from early detection of stigmatizing information.

6.2 | Practical Implications

Negative evaluations of smokers arising from social media cyber-vetting may impact the large numbers of people who smoke tobacco or cannabis. It can be argued that disadvantaging job applicants for smoking on their own time oversteps work-life boundaries, discounts difficulties associated with overcoming addictions, and lacks empathy for the possibility of difficult life circumstances that underpin these behaviors. Low socioeconomic status, for example, is linked with cigarette smoking even amongst adolescents (Hanson and Chen 2007). That said, we need to also acknowledge that cigarette smokers may be associated with negative workplace outcomes such as higher absenteeism or lower performance (e.g., Shrestha et al. 2022; Weng et al. 2013); this however is not the case for after-work recreational cannabis use (Bernerth and Walker 2020).

People often share cigarette and cannabis related behaviors and content on their personal social media (Van Hoof et al. 2014; Willoughby et al. 2020; Yoo et al. 2016) and would benefit from coaching on stigma awareness and social media impression management tactics. These include defensive tactics (e.g., removing smoking-related content and enabling privacy settings) and honest assertive ones (e.g., including content on positive personal and professional accomplishments, Myers et al. 2021). Self- and other-focused impression management tactics have been shown to help enhance perceptions of competence and fit in job interviews (Amaral et al. 2019; Bourdage et al. 2018), and they could be used by smokers to counter reduced competence and warmth perceptions. On a note of caution, stigma awareness should be implemented with care so as not to trigger acceptance, self-stigmatization, and a subsequent loss in self-esteem and self-efficacy (Corrigan and Watson 2002). Pu et al. (2022), that found hiring bias arising from U.S. veterans' social media PTSD disclosures, recommended non-disclosure on platforms such as Facebook, and we offer similar advice for cigarette and cannabis smokers.

Despite concerns about health, productivity, and healthcare costs, employers ultimately bear ethical responsibility for the practices that occur under their watch (Patel and Schmidt 2017). Initiatives cautioning hiring professionals about potential stigmatization of smokers and training for improved decision making may help in this regard (Fischhoff 1982). Periodical reminders or prompts may also ensure that interventions remain effective at work/after the training (Kahneman 2011; Sellier et al. 2019). We therefore recommend ongoing internal communications and clearly reiterated policies that employ non-stigmatizing terminology (e.g., the scientific term "cannabis" rather than informal stigma-laden words like "marijuana," "pot," "ganja," or "weed"; Steiner et al. 2019) as extensions of the organizational sensitivity toolkit.

While such strategies address the fallout from cyber-vetting, difficult conversations may be needed around the structure, ethicality, and legality of cyber-vetting itself, especially for personal platforms like Facebook that have a greater focus on informal content compared to professional ones like LinkedIn that emphasize formal job-related information (Roulin and Levashina 2019). Perhaps cyber-vetting on personal platforms should be avoided altogether, given the risk of adverse impacts or job-irrelevant influences as demonstrated within our set of studies. At a minimum, the need for a standardized and structured process, such as one based on the framework recommended by Hartwell et al. (2022), is indicated. A few

components might be particularly relevant for minimizing the inflow and impact of stigmatizing information: e.g., assessor training, separation between assessors and decision-makers, and job-relatedness of assessments. Moreover, obtaining informed consent may protect against claims of unfairness and questions about the ethicality and legal defensibility of social media cyber-vetting.

With respect to structured sequencing of the selection process, we suggest that hiring managers review cyber-vetted information before, rather than after, more formalized assessment methods such as interviews. This would give applicants an opportunity to disconfirm stigmatized expectations, especially where the stigma is not as embedded (as seems to be the case for cannabis). Cyber-vetting right at the end may undermine even a good interview due to the salience of stigmatizing information at the time of decision-making. However, such an approach would only be effective if all applicants went through both assessments (i.e., interview and cyber-vetting). When organizations rely on a multiple-hurdle process, some applicants might be eliminated in the cyber-vetting stage without being given the chance to demonstrate their qualifications in the interview. In such cases, given the risks associated with eliminating applicants because of job-irrelevant information found online, it might be safer for cyber-vetting to take place later.

Regulatory entities may also consider greater safeguards for cigarette and cannabis smokers. For instance, although 29 states and the District of Columbia prohibit the use of off-duty legal behaviors as a basis for employment decisions, cigarette smoking is not a federally protected ground for discrimination in the U.S. or Canada. Federal legalization in Canada gives adults the right to use cannabis, but not to be impaired at work. In the U.S., cannabis is legal in 38 states; of these, 23 offer some form of protection from employment discrimination for medical users, and only 7 do so for recreational users (National Conference of State Legislatures 2023).

6.3 | Limitations and Future Research Directions

While our findings are insightful, we interpret their external validity with care given our choice of methodology and some of the (student-based) samples used. Controlled experiments have advantages as they allow for tests of causality while removing confounds and irrelevant noise otherwise present in the field. At the same time, they can dilute the realism found in field settings. Behavioral scientists like Morales et al. (2017) have emphasized the importance of moving along the experimental to realism and intention to actual behavior spectrums. We addressed these issues by carefully mimicking video interviews and building on simulations developed by Roulin and Bhatnagar (2021). We also integrated an element of choice (i.e., to ask easier or more difficult interview questions to the applicant) to increase participants' immersion, attentiveness, and motivation to take the task seriously. Such an immersive approach is relatively novel, and while it was not the focus of the present study, it could be further explored in future research. We also supplemented our student samples with one consisting of real HR professionals. Regardless, we recommend field studies that supplement the studies here.

Our cyber-vetting experimental manipulations consisted of a fictitious Facebook profile that contained posts, photographs, and profile information congruent with our three conditions (i.e., cigarette/cannabis/control). While these were hypothetical stimuli, the materials developed closely simulated a real Facebook profile (rather than the single vignette style post used by Tews et al. 2023). Further, participants viewed this content within their native virtual environment via the online experiment administration system. Future studies could ask participants to browse actual Facebook content (or content on other social media platforms like Instagram or TikTok).

We focused on recreational cannabis smoking in the present studies. Future studies could examine additional forms of ingesting cannabis. It may be that ingesting edibles is less frowned upon than smoking or even vaping cannabis. This would be consistent with recent reports from Canada that smoking cannabis is on the decline (despite retaining its status as the most common method of consumption), with edible and vaping products becoming more prevalent (and especially so amongst youth; Government of Canada 2022).

Future research might also explore interventions to minimize subjectivity in smoker assessments. According to the Stereotype Content Model (Fiske 2018; Fiske et al. 2007), people viewed as low in warmth and competence trigger disgust and contempt; these, in turn, lead to negative outcomes. Interventions that lower such negative emotions could be tested. For example, perspective-taking activities (that put hiring managers in the shoes of the smokers) and sensitivity training videos (modeled after those used in hospitals and healthcare settings) may generate empathy and minimize negative emotions. Alternatively, context effects could be explored. According to Berger and Zickar (2016), cyber-vetted behaviors can be categorized as professional, prosocial, antisocial, or job-irrelevant. Stigmatizing posts (e.g., about smoking) sandwiched between prosocial or professional ones (e.g., those featuring community volunteerism, project work, good character traits, and good values) may portray applicants as warm, competent, and admirable individuals, and help buffer against negative outcomes. There may also be varying appetites for smoking by job type. More creative industries than banking, such as the arts, may be more accepting of cigarette and cannabis use. However, information about the banking industry was not predominant in our job descriptions. And Roulin and Bhatnagar (2018) did not find variations by jobs that did versus did not require customer contact.

Finally, researchers could examine whether impression management tactics where job seekers sanitize their social media are truly effective. Evidence for the "jay-dar" phenomenon, for instance, suggests that people can accurately identify cannabis users and draw inferences about their memory and learning abilities simply based on their appearance (Hirst 2017). If mere appearance is sufficient for classifying someone as a cannabis user, this calls into question the effectiveness of masking cannabis use for avoiding detection and associated perceptions.

7 | Conclusion

We departed from the piecemeal treatment of interviews and cyber-vetting in past selection research and extended existing models of interviewer judgments by incorporating the effects of both via a video-based simulation. We contextualized our examinations within

the widespread phenomena of cigarette and cannabis consumption and demonstrated negative evaluations of smokers triggered by post-interview cyber-vetting regardless of interview performance quality. Perceptions of applicant warmth and competence, especially for assessors with less favorable attitudes toward cigarettes or cannabis use, partially drove the effects on final applicant evaluations and expectations of CWBs. When cyber-vetting occurred mattered too. For cigarette smokers, damaged evaluations stayed independent of whether cyber-vetting occurred before or after a strong interview, possibly due to the entrenched nature of cigarette stigmatization. For cannabis smokers, however, negative evaluations were especially apparent when cyber-vetting took place *post*-interview, perhaps due to the salience of stigmatizing information at the time of judgment formation. For *pre*-interview cyber-vetting, progressions in cannabis legalization and social acceptance may have rendered stigmatization open to adjustment based on a subsequent strong interview performance.

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Ethics Statement

We have attained ethics approval for our studies (via University of Manitoba's REB No. HS23346). We have no known conflicts of interest to disclose.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are openly available in The Open Science Framework (OSF) at https://osf.io/7u8wt/?view_only=28b85ca6252b433db827cfe6bbf666a0.

Endnotes

[1] Our online supplement includes the job descriptions, the four difficult versus easy question choices, the scripts for the strong and average quality responses, screenshots of the social media content, and all measures/items (for all studies).

[2] Following the suggestion of a reviewer, we replicated our analyses using participants' habits (i.e., the number of cigarettes they smoked or the number of times they used cannabis per week) instead of their attitudes. Attitudes and habits were significantly correlated, although the prevalence of habits was somewhat low (see Table S6). Results for those alternative path models can be found in Figures S1.1, S1.2, and S1.3a/b. Findings were virtually identical to those presented in the manuscript for Study 1, largely similar for Study 3 (3/4 moderation effects were identical), but less consistent for Study 2 (only 1/4 moderation effects were identical).

[3] See online supplement for the job description used in Studies 2 and 3.

[4] For instance, a follow-up analysis using the Johnson-Neyman technique for the effect of cannabis smoking on perceived warmth illustrated that the effect was negative and significant for attitudes toward cannabis smoking at values lower than 2.95, nonsignificant for values between 2.95 and 5.07, and positive and significant for values above 5.07. Note also that the mean for such attitudes was 3.03 (SD = 1.84) in this study.

References

Amaral, A. A., D. M. Powell, and J. L. Ho. 2019. "Why Does Impression Management Positively Influence Interview Ratings? The Mediating Role of Competence and Warmth." *International Journal of Selection and Assessment* 27, no. 4: 315–327. https://doi.org/10.1111/ijsa.12260.

Arseneault, R., and N. Roulin. 2024. "Examining Discrimination in Asynchronous Video Interviews: Does Cultural Distance Based on Country-of-Origin Matter?" *Applied Psychology* 73, no. 1: 185–214. https://doi.org/10.1111/apps.12471.

Berger, J. L., and M. J. Zickar. 2016. "Theoretical Propositions About Cybervetting: A Common Antecedents Model." In *Social Media in Employee Selection and Recruitment*, edited by R. Landers and G. Schmidt, 43–57. Springer. https://doi.org/10.1007/978-3-319-29989-1_3.

Berkelaar, B. L. 2017. "Different Ways New Information Technologies Influence Conventional Organizational Practices and Employment Relationships: The Case of Cyber-Vetting for Personnel Selection." *Human Relations* 70, no. 9: 1115–1140. https://doi.org/10.1177/0018726716686400.

Berkelaar, B. L., and P. M. Buzzanell. 2014. "Cyber-Vetting, Person–Environment Fit, and Personnel Selection: Employers' Surveillance and Sensemaking of Job Applicants' Online Information." *Journal of Applied Communication Research* 42, no. 4: 456–476. https://doi.org/10.1080/00909882.2014.954595.

Bernerth, J. B., and H. J. Walker. 2020. "Altered States or Much to Do About Nothing? A Study of When Cannabis Is Used in Relation to the Impact It Has on Performance." *Group & Organization Management* 45, no. 4: 459–478. https://doi.org/10.1177/1059601120917590.

Bilimoria, D., and S. K. Piderit. 1994. "Board Committee Membership: Effects of Sex-Based Bias." *Academy of Management Journal* 37, no. 6: 1453–1477. https://doi.org/10.2307/256795.

Bourdage, J. S., N. Roulin, and R. Tarraf. 2018. "'I (Might Be) Just That Good': Honest and Deceptive Impression Management in Employment Interviews." *Personnel Psychology* 71: 597–632. https://doi.org/10.1111/peps.12285.

Chang, W., and J. M. Madera. 2012. "Using Social Network Sites for Selection Purposes: An Investigation of Hospitality Recruiters." *Journal of Human Resources in Hospitality & Tourism* 11, no. 3: 183–196. https://doi.org/10.1080/15332845.2012.668651.

Corrigan, P. W., and A. C. Watson. 2002. "The Paradox of Self-Stigma and Mental Illness." *Clinical Psychology: Science and Practice* 9, no. 1: 35–53. https://doi.org/10.1093/clipsy.9.1.35.

Dai, X., E. Gakidou, and A. D. Lopez. 2022. "Evolution of the Global Smoking Epidemic Over the Past Half Century: Strengthening the Evidence Base for Policy Action." *Tobacco Control* 31: 129–137.

Derous, E., A. Buijsrogge, N. Roulin, and W. Duyck. 2016. "Why Your Stigma Isn't Hired: A Dual-Process Framework of Interview Bias." *Human Resource Management Review* 26: 90–111. https://doi.org/10.1016/j.hrmr.20-15.09.006.

Derous, E., R. Pepermans, and A. M. Ryan. 2016. "Ethnic Discrimination During Résumé Screening: Interactive Effects of Applicants' Ethnic Salience With Job Context." *Human Relations* 70, no. 7: 860–882. https://doi.org/10.1177/0018726716676537.

European Monitoring Centre for Drugs and Drug Addiction. 2023. European Drug Report 2023: Trends and Developments. https://www.emcdda.europa.eu/publications/european-drug-report/2023_en.

Finkelstein, L. M., and M. J. Burke. 1998. "Age Stereotyping at Work: The Role of Rater and Contextual Factors on Evaluations of Job Applicants." *Journal of General Psychology* 125, no. 4: 317–345. https://doi.org/10.1080/00221309809595341.

Finkelstein, L. M., R. L. Frautschy Demuth, and D. L. Sweeney. 2007. "Bias Against Overweight Job Applicants: Further Explorations of When and Why." *Human Resource Management* 46: 203–222. https://doi.org/10.1002/hrm.20157.

Fischhoff, B. 1982. "Debiasing." In *Judgment Under Uncertainty: Heuristics and Biases*, edited by D. Kahneman, P. Slovic, and A. Tversky, 422–444. Cambridge University Press. http://assets.cambridge.org/97805212/84141/frontmatter/9780521284141_frontmatter.pdf.

Fiske, S. T. 2018. "Stereotype Content: Warmth and Competence Endure." *Current Directions in Psychological Science* 27, no. 2: 67–73. https://doi.org/10.1177/0963721417738825.

Fiske, S. T., A. J. C. Cuddy, and P. Glick. 2007. "Universal Dimensions of Social Cognition: Warmth and Competence." *Trends in Cognitive Sciences* 11, no. 2: 77–83. https://doi.org/10.1016/j.tics.2006.11.005.

French, M. T., K. Mortensen, and A. R. Timming. 2019. "Are Tattoos Associated With Employment and Wage Discrimination? Analyzing the Relationships Between Body Art and Labor Market Outcomes." *Human Relations* 72, no. 5: 962–987. https://doi.org/10.1177/0018726718782597.

Gilbert, G. R., E. L. Hannan, and K. B. Lowe. 1998. "Is Smoking Stigma Clouding the Objectivity of Employee Performance Appraisal?" *Public Personnel Management* 27, no. 3: 285–300.

Goffman, E. 1963. *Stigma: Notes on the Management of Spoiled Identity*. Prentice-Hall.

Government of Canada. 2022. Taking Stock of Progress: Cannabis Legalization and Regulation in Canada. https://www.canada.ca/en/health-canada/programs/engaging-cannabis-legalization-regulation-canada-taking-stock-progress/document.html.

Van Green, T. 2022 November 22. *Americans Overwhelmingly Say Marijuana Should be Legal for Medical or Recreational Use*. Pew Research Centre. https://www.pewresearch.org/short-reads/2022/11/22/americans-overwhelmingly-say-marijuana-should-be-legal-for-medical-or-recreational-use/.

Hanson, M. D., and E. Chen. 2007. "Socioeconomic Status and Health Behaviors in Adolescence: A Review of the Literature." *Journal of Behavioral Medicine* 30, no. 3: 263–285. https://doi.org/10.1007/s10865-007-9098-3.

Hartwell, C. J., and M. A. Campion. 2020. "Getting Social in Selection: How Social Networking Website Content Is Perceived and Used in Hiring." *International Journal of Selection and Assessment* 28, no. 1: 1–16. https://doi.org/10.1111/ijsa.12273.

Hartwell, C. J., J. T. Harrison, R. S. Chauhan, J. Levashina, and M. A. Campion. 2022. "Structuring Social Media Assessments in Employee Selection." *International Journal of Selection and Assessment* 30: 330–343. https://doi.org/10.1111/ijsa.12384.

Health Canada. 2019, May 14. What You Need to Know If You Choose to Consume Cannabis. https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/resources/what-you-need-to-know-if-you-choose-to-consume-cannabis.html.

Health Canada. 2022. *Canadian Cannabis Survey 2022: Summary*. Government of Canada. https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2022-summary.html.

Hirst, R. B., R. H. Enriquez, R. E. Wickham, et al. 2017. "Marijuana Stereotypes and the 'Jay-Dar': Perceptions of Cannabis Use and Memory Abilities Based Upon Appearance." *Personality and Individual Differences* 110: 131–138. https://doi.org/10.1016/j.paid.2016.12.056.

Van Hoof, J. J., J. Bekkers, and M. Van Vuuren. 2014. "Son, You're Smoking on Facebook! College Students' Disclosures on Social Networking Sites as Indicators of Real-Life Risk Behaviors." *Computers in Human Behavior* 34: 249–257. https://doi.org/10.1016/j.chb.2014.02.008.

Huffcutt, A. I., C. H. Van Iddekinge, and P. L. Roth. 2011. "Understanding Applicant Behavior in Employment Interviews: A Theoretical Model of Interviewee Performance." *Human Resource Management Review* 21: 353–367. https://doi.org/10.1016/j.hrmr.2011.05.003.

Van Iddekinge, C. H., S. E. Lanivich, P. L. Roth, and E. Junco. 2016. "Social Media for Selection? Validity and Adverse Impact Potential of a Facebook-Based Assessment." *Journal of Management* 42, no. 7: 1811–1835. https://doi.org/10.1177/0149206313515524.

Kahneman, D. 2011. *Thinking, Fast and Slow*. Farrar, Straus and Giroux. https://psycnet.apa.org/record/2011-26535-000.

Kang, S. K., K. A. DeCelles, A. Tilcsik, and S. Jun. 2016. "Whitened Résumés: Race and Self-Presentation in the Labor Market." *Administrative Science Quarterly* 61, no. 3: 469–502. https://doi.org/10.1177/0001839216639577.

Kim, S. H., and J. Shanahan. 2003. "Stigmatizing Smokers: Public Sentiment Toward Cigarette Smoking and Its Relationship to Smoking Behaviors." *Journal of Health Communication* 8, no. 4: 343–367. https://doi.org/10.1080/10810730305723.

Krings, F., S. Sczesny, and A. Kluge. 2011. "Stereotypical Inferences as Mediators of Age Discrimination: The Role of Competence and Warmth." *British Journal of Management* 22: 187–201. https://doi.org/10.1111/j.1467-8551.2010.00721.x.

Link, B. G., and J. C. Phelan. 2001. "Conceptualizing Stigma." *Annual Review of Sociology* 27: 363–385. https://doi.org/10.1146/annurev.soc.27.1.363.

Manthey, J., J. Rehm, and U. Verthein. 2024. "Germany's Cannabis Act: A Catalyst for European Drug Policy Reform?" *Lancet Regional Health - Europe* 42: 100929. https://doi.org/10.1016/j.lanepe.2024.100929.

McCarthy, J. 2022, August 15. What Percentage of Americans Smoke Marijuana? Gallup News. https://news.gallup.com/poll/284135/percentage-americans-smoke-marijuana.aspx.

McElroy, J. C., J. K. Summers, and K. Moore. 2014. "The Effect of Facial Piercing on Perceptions of Job Applicants." *Organizational Behavior and Human Decision Processes* 125, no. 1: 26–38. https://doi.org/10.1016/j.obhdp.2014.05.003.

Mönke, F. W., N. Roulin, F. Lievens, M. T. Bartossek, and P. Schäpers. 2024. "Validity of Social Media Assessments in Personnel Selection: A Systematic Review of the Initial Evidence." *European Journal of Psychological Assessment* 40: 445–460.

Morales, A. C., O. Amir, and L. Lee. 2017. "Keeping It Real in Experimental Research—Understanding When, Where, and How to Enhance Realism and Measure Consumer Behavior." *Journal of Consumer Research* 44, no. 2: 465–476. https://doi.org/10.1093/jcr/ucx048.

Muraven, M., and R. F. Baumeister. 2000. "Self-Regulation and Depletion of Limited Resources: Does Self-Control Resemble a Muscle?" *Psychological Bulletin* 126, no. 2: 247–259. https://doi.org/10.1037/0033-2909.126.2.247.

Myers, V., J. Price, N. Roulin, A. Duval, and S. Sobhani. 2021. "Job Seekers' Impression Management on Facebook: Scale Development, Antecedents, and Outcomes." *Personnel Assessment and Decisions* 7, no. 1: 0. https://doi.org/10.25035/pad.2021.01.010.

National Conference of State Legislatures. 2023, April 10. Cannabis and Employment: Medical and Recreational Policies in the States. https://www.ncsl.org/health/cannabis-and-employment-medical-and-recreational-policies-in-the-states.

Newheiser, A. K., and M. Barreto. 2014. "Hidden Costs of Hiding Stigma: Ironic Interpersonal Consequences of Concealing a Stigmatized Identity in Social Interactions." *Journal of Experimental Social Psychology* 52: 58–70. https://doi.org/10.1016/j.jesp.2014.01.002.

Patel, R. R., and H. Schmidt. 2017. "Should Employers Be Permitted Not to Hire Smokers?: A Review of US Legal Provisions." *International Journal of Health Policy and Management* 6, no. 12: 701–706. https://doi.org/10.15171/ijhpm.2017.33.

Pu, W., P. L. Roth, J. B. Thatcher, C. L. Nittrouer, and M. Hebl. 2022. "Post-Traumatic Stress Disorder and Hiring: The Role of Social Media Disclosures on Stigma and Hiring Assessments of Veterans." *Personnel Psychology* 76, no. 1: 41–75. https://doi.org/10.1111/peps.12520.

Reid, M. 2020. "A Qualitative Review of Cannabis Stigmas at the Twilight of Prohibition." *Journal of Cannabis Research* 2, no. 1: 46. https://doi.org/10.1186/s42238-020-00056-8.

Robinson, S. L., and R. J. Bennett. 1995. "A Typology of Deviant Workplace Behaviors: A Multidimensional Scaling Study." *Academy of Management Journal* 38, no. 2: 555–572. https://doi.org/10.2307/256693.

Roth, P. L., P. Bobko, C. H. Van Iddekinge, and J. B. Thatcher. 2016. "Social Media in Employee-Selection-Related Decisions: A Research Agenda for Uncharted Territory." *Journal of Management* 42, no. 1: 269–298. https://doi.org/10.1177/0149206313503018.

Roth, P. L., R. Roth, and M. A. McDaniel. 2019. "A Meta-Analysis of Social Media Assessment Frequency: Used a Lot, Studied a Little?" *Academy of Management Proceedings* 2019, no. 1, Article : 10224. https://doi.org/10.5465/AMBPP.2019.10224abstract.

Roth, P. L., J. B. Thatcher, P. Bobko, K. D. Matthews, J. E. Ellingson, and C. B. Goldberg. 2020. "Political Affiliation and Employment Screening Decisions: The Role of Similarity and Identification Processes." *Journal of Applied Psychology* 105, no. 5: 472–486. https://doi.org/10.1037/apl0000422.

Roulin, N., and A. Bangerter. 2013. "Social Networking Websites in Personnel Selection: A Signaling Perspective on Recruiters' and Applicants' Perceptions." *Journal of Personnel Psychology* 12, no. 3: 143–151. https://doi.org/10.1027/1866-5888/a000094.

Roulin, N., and N. Bhatnagar. 2018. "Smoking as a Job Killer: Reactions to Smokers In Personnel Selection." *Journal of Business Ethics* 149, no. 4: 959–972. https://doi.org/10.1007/s10551-016-3101-2.

Roulin, N., and N. Bhatnagar. 2021. "Examining the Impact of Applicant Smoking and Vaping Habits in Job Interviews." *Human Relations* 74, no. 8: 1211–1239. https://doi.org/10.1177/0018726720912320.

Roulin, N., and J. Levashina. 2019. "LinkedIn as a New Selection Method: Psychometric Properties and Assessment Approach." *Personnel Psychology* 72, no. 2: 187–211. https://doi.org/10.1111/peps.12296.

Sackett, P. R., C. Zhang, C. M. Berry, and F. Lievens. 2022. "Revisiting Meta-Analytic Estimates of Validity in Personnel Selection: Addressing Systematic Overcorrection for Restriction of Range." *Journal of Applied Psychology* 107, no. 11: 2040–2068. https://doi.org/10.1037/apl0000994.

Schaeffer, K. 2024, April 10. *9 Facts About Americans and Marijuana*. Pew Research Centre. https://www.pewresearch.org/short-reads/2024/04/10/facts-about-marijuana/.

Scheier, L. M., and K. W. Griffin. 2021. "Youth Marijuana Use: A Review of Causes and Consequences." *Current Opinion in Psychology* 38: 11–18. https://doi.org/10.1016/j.copsyc.2020.06.007.

Seiter, J. S., H. J. Weger, M. L. Merrill, R. Mark McKenna, and M. L. Sanders. 2010. "Nonsmokers' Perceptions of Cigarette Smokers' Credibility, Likeability, Attractiveness, Considerateness, Cleanliness, and Healthiness." *Communication Research Reports* 27, no. 2: 143–158. https://doi.org/10.1080/08824091003738073.

Sellier, A.-L., I. Scopelliti, and C. K. Morewedge. 2019. "Debiasing Training Improves Decision Making in the Field." *Psychological Science* 30, no. 9: 1371–1379. https://doi.org/10.1177/0956797619861429.

Shrestha, S. S., R. Ghimire, X. Wang, K. F. Trivers, D. M. Homa, and B. S. Armour. 2022. "Cost of Cigarette Smoking–Attributable Productivity Losses, U.S., 2018." *American Journal of Preventive Medicine* 63, no. 4: 478–485. https://doi.org/10.1016/j.amepre.2022.04.032.

Skumlien, M., C. Mokrysz, T. P. Freeman, et al. 2023. "Anhedonia, Apathy, Pleasure, and Effort-Based Decision-Making in Adult and Adolescent Cannabis Users and Controls." *International Journal of Neuropsychopharmacology* 26, no. 1: 9–19. https://doi.org/10.1093/ijnp/pyac056.

Smith, M. 2017. Disgracebook: One in Five Employers Have Turned Down a Candidate Because of Social Media. YouGov. https://yougov.co.uk/topics/politics/articles-reports/2017/04/10/disgracebook-one-five-employers-have-turned-down-c.

Solmi, M., M. De Toffol, J. Y. Kim, et al. 2023. "Balancing Risks and Benefits of Cannabis Use: Umbrella Review of Meta-Analyses of Randomised Controlled Trials and Observational Studies." *BMJ* 2023 382: e072348. https://doi.org/10.1136/bmj-2022-072348.

Spector, P. E. 2011. "The Relationship of Personality to Counterproductive Work Behavior (CWB): An Integration of Perspectives." *Human Resource Management Review* 21: 342–352. https://doi.org/10.1016/j.hrmr.2010.10.002.

Steiner, L., A.-M. Nicol, and A. Eykelbosh. 2019. "How We Talk About "Pot" Matters: Strategies for Improved Cannabis Risk Communication." *Environmental Health Review* 62, no. 1: 8–13. https://doi.org/10.5864/d2019-005.

Stuber, J., S. Galea, and B. G. Link. 2009. "Stigma and Smoking: The Consequences of Our Good Intentions." *Social Service Review* 83, no. 4: 585–609. https://doi.org/10.1086/650349.

Tews, M. J., S. Pons, and H. Yu. 2023. "Marijuana Use and Perceptions of Employment Suitability." *Journal of Personnel Psychology* 22: 201–214. Advance online publication. https://doi.org/10.1027/1866-5888/a000332.

Tews, M. J., K. Stafford, and E. P. Kudler. 2020. "The Effects of Negative Content in Social Networking Profiles on Perceptions of Employment Suitability." *International Journal of Selection and Assessment* 28, no. 1: 17–30. https://doi.org/10.1111/ijsa.12277.

United Nations Office on Drugs and Crime. 2023. World Drug Report 2023: Special Points of Interest. https://www.unodc.org/res/WDR-2023/Special_Points_WDR2023_web_DP.pdf.

Viinikainen, J., P. Böckerman, C. Hakulinen, et al. 2025. "Tobacco Smoking in Early Adulthood and Labor Market Performance: The Cardiovascular Risk in Young Finns Study." *Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco* 27: 1289–1293. https://doi.org/10.1093/ntr/ntae296.

Wade, J. T., P. L. Roth, J. B. Thatcher, and M. Dinger. 2020. "Social Media and Selection: Political Issue Similarity, Liking, and the Moderating Effect of Social Media Platform." *MIS Quarterly* 44, no. 3: 1301–1357. https://doi.org/10.25300/MISQ/2020/14119.

Weng, S. F., S. Ali, and J. Leonardi-Bee. 2013. "Smoking and Absence From Work: Systematic Review and Meta-Analysis of Occupational Studies." *Addiction* 108, no. 2: 307–319. https://doi.org/10.1111/add.12015.

Willoughby, J. F., S. J. T. Hust, J. Li, L. Couto, S. Kang, and S. Domgaard. 2020. "An Exploratory Study of Adolescents' Social Media Sharing of Marijuana-Related Content." *Cyberpsychology, Behavior and Social Networking* 23, no. 9: 642–646. https://doi.org/10.1089/cyber.2019.0721.

World Health Organization. 2022, May 24. Tobacco. https://www.who.int/news-room/fact-sheets/detail/tobacco.

Yoo, W., J. Yang, and E. Cho. 2016. "How Social Media Influence College Students' Smoking Attitudes and Intentions." *Computers in Human Behavior* 64: 173–182. https://doi.org/10.1016/j.chb.2016.06.061.

Yu, L., J. Zhong, W. Lam, Y. Wang, and H. Chen. 2023. "Healthy Lifestyle Is a Signal: How Applicants' Healthy Lifestyle Information Affects Recruiter Judgments." *Journal of Business Research* 167: 114148. https://doi.org/10.1016/j.jbusres.2023.114148.

Zhang, L., C. H. Van Iddekinge, J. D. Arnold, et al. 2020. "What's on Job Seekers' Social Media Sites? A Content Analysis and Effects of Structure on Recruiter Judgments and Predictive Validity." *Journal of Applied Psychology* 105, no. 12: 1530–1546. https://doi.org/10.1037/apl0000490.

Supporting Information

Additional supporting information can be found online in the Supporting Information section.
Supplementary Information.