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# “The interviewer is a machine!” Investigating the effects of conventional and technology-mediated interview methods on interviewee reactions and behavior

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## Abstract

Despite the growing number of organizations interested in the use of asynchronous video interviews (AVIs), little is known about its impact on interviewee reactions and behavior. We randomly assigned participants ( $N = 299$ ) from two different countries (Switzerland and India) to a face-to-face interview, an avatar-based video interview (with an avatar as a virtual recruiter), or a text-based video interview (with written questions) and collected data on a set of self-rated and observer-rated criteria. Overall, we found that whereas participants reported more negative reactions towards the two asynchronous interviews, observer ratings revealed similar performance across the three interviews and lower stress levels in the two AVIs. These findings suggest that despite technology-mediated interview methods still not being well-accepted, interviewees are not at a disadvantage when these methods are used in terms of how well interviewees perform and how stressed they appear to external observers. Implications are discussed.

## KEYWORDS

asynchronous video interview, face-to-face interview, performance, reactions, selection method

## Practitioner points

What is currently known about the topic of our study:

- Face-to-face (FTF) interviews are preferred over technology-mediated interview methods (e.g., videoconference interviews).
- The rating procedure (live vs. recorded ratings) influences interviewee performance ratings.
- Preparation time offered in asynchronous interviews influences interviewee performance ratings.

What our paper adds to this:

- Our study compares a FTF interview to two emerging asynchronous video interview (AVI) methods.

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- We compared interviewee reactions (e.g., perceived fairness) across the three interview methods.
- We compared interviewee self-rated levels of stress and performance to how observers rate the level of expressed stress and interviewee performance.
- We collected data in two different countries to assess whether the cultural context influences interviewee reactions and behavior depending on the interview method.

The implications of our study findings for practitioners:

- Interviewee performance as assessed by observers did not differ across the three interviews, suggesting that interviewees are not disadvantaged by the AVI methods.
- AVIs should be used with caution given that this method is less accepted than the conventional FTF method.
- Overall, the cultural context mostly did not influence the findings, hence increasing the generalizability of the practical implications.

## 1 | INTRODUCTION

Personnel selection is a highly time-consuming procedure and specifically so when it comes to initial applicant screening (Bauer et al., 2004). A prescreening step is essential to narrow down a first pool of applicants before starting the conventional face-to-face (FTF) interviews (Gatewood & Feild, 2001), such as through assessing applicant personality or cognitive abilities (Basch et al., 2022; Behling, 1998; Dunn et al., 1995; Schmidt & Hunter, 1998). Technological advances allow delegating this prescreening step through technology-mediated interviews (Brenner et al., 2016; Rasipuram & Jayagopi, 2018; Toldi, 2011). A growing number of organizations are interested in or already using these methods (Chapman et al., 2003; Dunlop et al., 2022; Hickman et al., 2022; Lukacik et al., 2022; Muralidhar et al., 2020; Stone et al., 2013), leading to the development of companies specialized in these new selection tools and specifically those allowing asynchronous video interviews (AVIs) (e.g., Hirevue, VidCruiter, SparkHire, MoSeeker).

On the one hand, there is a strong need for organizations to rely on these new methods to make their recruitment process more efficient (Bauer et al., 2004; Langer et al., 2016; Rasipuram & Jayagopi, 2018; Stone et al., 2013). On the other hand, little is known about their impact on interviewee reactions and behavior (Bauer et al., 2006; Blacksmith et al., 2016; Chapman et al., 2003; Guchait et al., 2014; Toldi, 2011). Past research mainly focused on the effects of synchronous technology-mediated interview methods (i.e., video-conference interviews) on interviewee reactions and performance ratings or compared the effects of such methods to FTF interviews (e.g., Basch, Melchers, et al., 2021; Chapman & Rowe, 2002). In the present work, we aim to compare conventional FTF interviews to asynchronous technology-mediated interview methods.

The present research aims to contribute to the literature in three ways. First, we investigate interviewee reactions towards two asynchronous technology-mediated interview methods—an avatar-based (AB) interview (i.e., in which an avatar plays the role of a recruiter) and a text-based (TB) interview (i.e., in which the interviewee reads the

questions)—as compared to the FTF method. Drawing on past research (Langer et al., 2017, 2019), we assess the extent to which interviewees have favorable reactions of the experienced method using three main criteria, namely, perceived opportunity to perform, fairness, and ambiguity (i.e., extent to which interviewees perceive the job interview situation as lacking clarity).

We also add to previous work by measuring interviewee overall perception of the method (i.e., perceived effectiveness of the method for selecting applicants) as well as interviewee stress and performance through both self-rated and observer-rated measures. We assessed whether a specific interview method induces an additional level of stress (experienced stress) and whether this additional level was observable (expressed stress), which might lead to negative outcomes (Powell et al., 2018; Schmid & Schmid Mast, 2013). Finally, performance is the ultimate outcome of an interview. It is thus crucial to assess whether a specific method leads to higher levels of performance and whether interviewee perception about personal performance fits with the performance rated by observers.

Second, we contribute to the literature by investigating the effects of the interview methods per se on interviewee reactions and behavior. Past research showed differences between conventional and technology-mediated interview methods (e.g., Basch, Melchers, et al., 2021; Melchers et al., 2021). However, subsequent studies revealed that these differences might be influenced by factors (i.e., rating procedure, preparation time) other than the interview method itself (e.g., Basch, Brenner, et al., 2021; Basch, Melchers, et al., 2021). The present study aims to assess whether the methods impact interviewees differently, above and beyond the different options that each method can offer. Hence, we maintain constant the rating procedure across the three tested methods (i.e., all interviewees were videotaped and the whole rating procedure was based on these videotapes) and we did not offer preparation time in the two asynchronous interviews.

Finally, past research investigating cultural differences in applicant perceptions and reactions towards selection methods revealed mixed results (e.g., Anderson et al., 2010; Anderson & Witvliet, 2008;

Brender-Ilan & Sheaffer, 2015; Phillips & Gully, 2002). Using an exploratory lens, we contribute to the literature by conducting the study in two culturally different countries: Switzerland and India.

Our work has important practical implications for personnel selection processes. Choosing the right interview method is crucial for organizations given that this choice can have detrimental consequences (Bauer et al., 2006; Gilliland, 1993; Hausknecht et al., 2004; Ryan & Ployhart, 2000). First, a job interview is a high-stakes situation for applicants (Langer et al., 2019) and participating in an interview using an innovative and not yet accepted method can be highly disturbing, which might negatively influence interviewee reactions and behavior during the interview (Brenner et al., 2016; Muralidhar et al., 2020). Second, a specific interview method can also penalize the organization such as by overlooking highly qualified individuals due to applicant withdrawal (see Hausknecht et al., 2004).

## 1.1 | Interview methods

### 1.1.1 | Conventional and technology-mediated methods

The conventional interview method refers to the FTF job interview that is widely used by organizations independently of their sizes (Chapman et al., 2003). A FTF interview involves an in-person meeting between an applicant and one or several recruiters. Whereas this format is essential to select applicants, it is costly in terms of time and human resources depending on the number of applications organizations receive for a single position. It might also require travel expenses that either the organizations or the applicants have to pay with no guarantee that the organization will find the right applicant or that the applicant will get the position (Guchait et al., 2014). Hence, more and more organizations are interested in implementing a remote prescreening step, through technology-mediated interview methods, aiming to narrow down the pool of applicants (Blacksmith et al., 2016; Toldi, 2011).

Technology-mediated methods (TMM) can be classified into two categories: synchronous and asynchronous methods. Synchronous interviewing mainly refers to remote selection methods in which recruiters conduct videoconference or telephone-based interviews. Despite these methods being more cost-effective than the conventional method (e.g., no physical presence, less administrative costs, no travel expenses), they are time and resource consuming because they still require recruiters to conduct the interviews. Asynchronous methods refers to interface-based interviews, also called AVIs, in which applicants log into a platform and conduct the interview by following the instructions while being recorded. The interview can be conducted either by a virtual recruiter or by questions appearing on the screen.

### 1.1.2 | Advantages of asynchronous TMM

AVIs are receiving increased attention because they offer numerous advantages (Bauer et al., 2004; Daniel et al., 2022; Guchait et al., 2014;

Langer et al., 2017; Lukacik et al., 2022; Roulin et al., 2022; Suen et al., 2019). For instance, these methods allow large-scale interviewing because an unlimited number of interviews can be conducted at the same time, thus increasing an organization's chances of finding the best-qualified applicant for a specific position. This large-scale process is cost and time efficient because interviewees conduct their own job interview, hence reducing administrative costs. It allows recruiters to carefully evaluate interviewee verbal and nonverbal behaviors by watching the videotaped interviews as often as they wish. Organizations might also decide to focus on the verbal content of the interviews by providing only the audio-recordings, or even the transcripts (see Lukacik et al., 2022). To go further in the automatization of the pre-screening step, interviewee evaluation can also be delegated to algorithms designed to automatically extract data from videotapes (Hickman et al., 2022; Langer et al., 2019; Lukacik et al., 2022; Rao et al., 2017; Rasipuram & Jayagopi, 2018; Renier et al., 2021).

Applicants also benefit from these TMM such that they can choose when (still within a specific timeframe) and where (no geographical barrier) to conduct the interview (Langer et al., 2017). Another advantage for applicants is the highly structured format of the interviews (Campion et al., 1997; Levashina et al., 2014; Millar & Tracey, 2006). All applicants receive the same questions asked exactly in the same way, rendering these methods consistent in terms of content (Guchait et al., 2014; Millar & Tracey, 2006; Toldi, 2011). The questions are asked either in a written form or through the pre-programmed voice and behavior of virtual recruiters. In the case of virtual recruiters, this standardization implies that all interviewees are confronted with the same back-channeling (i.e., interviewer reaction while listening to the interviewee; see Frauendorfer et al., 2014; Hadar et al., 1985; Nguyen et al., 2012), hence avoiding recruiters giving an advantage to some applicants through more or less subtle nonverbal behaviors in reaction to interviewee answers (Langer et al., 2017; Nguyen et al., 2014; Nguyen & Gatica-Perez, 2015).

### 1.1.3 | Interviewee reactions to interview methods

Past research mainly focused on the effects of synchronous TMM on interviewee reactions or compared the effects of conventional and synchronous methods (Basch, Melchers, et al., 2021; Chapman & Rowe, 2002; Chapman et al., 2003; Kroeck & Magnusen, 1997; Melchers et al., 2021; Silvester et al., 2000; Straus et al., 2001). A meta-analysis revealed that interviewee reactions were less favorable with regard to synchronous TMM as compared to the FTF method (Blacksmith et al., 2016). Given that AVI methods represent a new step in the use of technology in personnel selection (Brenner et al., 2016), it is plausible to expect even more negative reactions. This meta-analysis also showed that synchronous TMM led to less positive ratings (i.e., on both general and specific criteria such as skills, competencies, fluency, or expressiveness).

Literature on reactions towards AVIs is still scarce (Basch et al., 2020; Brenner et al., 2016; Guchait et al., 2014; Toldi, 2011) and to date, research revealed mixed results. On the one hand, interviewees perceive AVIs as innovative and procedurally fair (e.g., no need to

travel, no need to take time off from work, standardized format) (Toldi, 2011; Zibarras et al., 2018). They also like the flexibility offered by the asynchronous format (Guchait et al., 2014; Toldi, 2011). Furthermore, interviewees indicate that they feel more at ease than in FTF interviews and they value the preparation time before recording their answers (Guchait et al., 2014).

Research also revealed several drawbacks. For instance, Guchait et al. (2014) showed that AVIs were perceived as impersonal and disturbing given the absence of feedback during the interview. Interviewees also felt that they could not give a realistic portrayal of themselves, were not able to learn about the organization, and did not have enough time to answer the questions. Furthermore, interacting with a computer instead of a recruiter was perceived as awkward and risky (i.e., fear of a technical issue during the recording). Zibarras et al. (2018) revealed further drawbacks suggesting AVIs to be perceived as suboptimal for selecting applicants. For instance, interviewees noted with regret the lack of human interaction (hence not giving them the opportunity to show their social skills), the lack of opportunity to really show who they are (e.g., through further discussion), and the risk of technical issues that might occur during the interview.

Studies comparing videoconference interviews to AVI also showed mixed results. For instance, Langer et al. (2017, 2019) showed that both methods were rated similarly in terms of fairness (see also Suen et al., 2019), whereas Basch et al. (2020) found that AVI was perceived as less fair. Findings also revealed diverging results such as in terms of behavioral control (i.e., feeling that the interviewees could influence the interview outcome), interpersonal treatment (i.e., the extent to which the interviewees were treated in a positive way), and opportunity to perform (Basch et al., 2020; Langer et al., 2017, 2019). Basch et al. (2020) showed that videoconference interviewing was perceived as giving less opportunity to perform than FTF interviewing, but as giving more opportunity to perform than AVI, whereas Langer et al. (2017) did not find any difference between videoconferencing and AVI. Langer et al. (2017) found that videoconferencing received a higher rating on interpersonal treatment than AVI, whereas similar ratings were found in Langer et al. (2019). Finally, Langer et al. (2019) showed that videoconferencing was associated to higher levels of perceived behavioral control than AVI, whereas Langer et al. (2017) did not find any difference.

These divergent findings might be explained by the fact that as compared to Langer et al. (2017), Langer et al. (2019) compared videoconference interviewing to *highly* automatized interviewing including automatic data extraction systems (i.e., AVI with a virtual recruiter). In Langer et al. (2019), to make the highly automated characteristic of the AVI salient, the avatar expressed that she noticed that the interviewee was nervous and that she adapted her behavior so that the interviewee would calm down. In Basch et al. (2020), participants neither experienced the interview methods nor watched a video of an interview. Instead, they were instructed to imagine that they were invited to a job interview and then rated their perception related to the interview method. Nonetheless, research revealed some converging findings such that AVIs were perceived as more ambiguous (i.e., felt uneasy and perceived the situation as lacking clarity) (Langer et al., 2017, 2019) and gave less satisfaction in terms of communication (Basch et al., 2020; Langer et al., 2017).

## 1.1.4 | Interview methods, level of stress, and performance

To date, only few studies have investigated the role of TMM on interviewee stress and related factors (e.g., state anxiety). For instance, Melchers et al. (2021) did not find any difference between interviewees who participated in a videoconference, FTF, or telephone interview in terms of strain and anxiety. Basch, Brenner, et al. (2021) found that the presence (vs. absence) of preparation time in AVIs did not influence interviewee level of experienced strain. Finally, Roulin et al. (2022) found that neither the presence (vs. absence) of preparation time and re-recording opportunities were related to interview anxiety. However, they found an effect of re-recording opportunities on interview anxiety through the indirect effect of rerecording attempts.

Regarding performance, past findings showed differences in ratings between the conventional method and TMM, such that interviewees in FTF interviews received more positive ratings (e.g., Basch, Melchers, et al., 2021; Blacksmith et al., 2016). Nonetheless, literature suggests that this difference was in part due to the rating procedure used to evaluate interviewees rather than to the interview methods per se. Specifically, Van Iddekinge et al. (2006) and Basch, Melchers, et al. (2021) showed that interviewees in a FTF interview received higher performance ratings when the rating was done directly after the interview as compared to when it was based on the interview recording (see Basch, Melchers, et al., 2021 for further details).

Langer et al. (2017) found that interviewees in AVIs received higher performance ratings than those in videoconference interviews. The authors suggested that this finding might be due to the preparation time offered in AVIs. Basch, Brenner, et al. (2021) further investigated this effect by comparing an AVI with and without preparation time and found a positive effect of preparation time on performance. Results also revealed this effect to be mediated by active response preparation (i.e., by taking notes and identifying the most important points to mention when answering the question). Supporting this finding, Roulin et al. (2022) found an effect of preparation time on interview performance through the indirect effect of the amount of preparation time used.

## 1.2 | The present research

### 1.2.1 | Brief description

We contribute to past research by investigating interviewee reactions and behavior across three interview methods. We compared the conventional method (i.e., FTF condition) to two AVI methods in which participants logged into a platform and the interview was conducted either by a virtual recruiter (i.e., AB condition) or by themselves by reading the questions (i.e., TB condition).

We collected data on a set of variables designed to capture the extent to which interviewees had favorable perceptions of the method, mainly the extent to which interviewees thought that the method gave them enough opportunity to perform and was fair, effective, and unambiguous. We also assessed the impact of the

methods on their behavior in terms of experienced and expressed stress and self-rated and observer-rated performance. Finally, we collected data in Switzerland and India to assess potential cultural context effects.

## 1.2.2 | Characteristics of the three methods

We draw on Potosky's (2008) framework of media attributes for personnel assessment processes to distinguish the three interview methods we investigated. This framework is composed of four attributes: social bandwidth, interactivity, transparency, and surveillance.

### *Social bandwidth and interactivity*

The attributes of social bandwidth and interactivity refer to the communication richness. Social bandwidth refers to the amount of relevant communication channels (e.g., verbal and nonverbal behaviors) offered by the method. A method high on social bandwidth allows many possibilities to communicate such that individuals see and hear each other. Interactivity refers to the degree of social interaction offered by the method, that is, the extent to which the method allows back-and-forth communication.

The FTF method consists of an in-person interview that allows exchanging a large amount of information between the applicant and the recruiter. Contrary to asynchronous settings, this method facilitates feedback (e.g., nonverbal behavior such as nodding) and social interaction between the interaction partners. Inversely, the written format of the TMM implies that the communication is only one-way (i.e., from the interviewee to the interface) and does not involve any social interaction. The interviewee reads and answers each question while looking at the webcam and clicking on the "next" button to get the following question.

The AB interview is a TMM mimicking a FTF interview in which a virtual recruiter is preprogrammed to behave like a human. This method implies that the communication is two-way but limited due to the high standardization of the virtual recruiter behavior (i.e., the verbal and nonverbal behavior of the virtual recruiter is preprogrammed, thus offering no opportunity to deviate from the script). This method represents an intermediary level between the conventional method and the fully TMM.

### *Transparency and surveillance*

The attributes of transparency and surveillance refer to the extent to which the interviewee realizes that the interview is technology-mediated. A high transparency method is characterized by the absence of obstacles during the interview such as in a FTF interview, as opposed to a TMM in which the communication medium is salient. Surveillance refers to the extent to which the interview can be viewed, interrupted, or monitored by a third party.

The two AVIs are low on transparency and high on surveillance because, in both cases, it is salient that the interviewees are interacting with an interface and are videotaped. Despite the virtual recruiter being designed to mimic a human recruiter, the high standardization of the

verbal and nonverbal behaviors makes the interaction unnatural, hence constantly reminding the interviewees that they are interacting with a computer. To note that in the present study we videotaped the FTF interview for rating purposes, which lowers the ecological validity of the FTF setting in that such interviews are normally not videotaped. We expect interviewees to be aware of the presence of the webcams filming them, and that they might become accustomed to this or forget about them altogether during the interview.

## 1.2.3 | Hypotheses

### *Reactions toward the methods*

Drawing on past findings as well as on Potosky's (2008) framework, we expect that the two AVI methods are perceived less positively than the FTF method such that these methods give less opportunity to perform (Hypothesis 1) and are less fair (Hypothesis 2), less effective (Hypothesis 3), and more ambiguous (Hypothesis 4). We expect this effect to be driven by the low degree of social bandwidth and interactivity, hence giving them less opportunity to disclose their competence and past experiences. Despite the AB method allowing for more social bandwidth and interaction possibilities than the TB method, the difference remains minimal as compared to the conventional method. The low degree of transparency and high degree of surveillance in the two AVI methods increase this gap even more.

To assess Hypothesis 4, we rely on the concept of ambiguity, defined as the extent to which individuals lack understanding in a specific situation and hence do not know how to behave (see Langer & König, 2018). Langer et al. (2017) showed that interviewees perceived asynchronous methods as ambiguous because they do not really know what to do during the interview. Indeed, AVIs are emerging methods, implying that they are most likely unfamiliar to the interviewees. Hence, we expect interviewees to react similarly to the two AVIs.

### *Experienced and expressed stress*

We assess the effect of the interview method on stress using an exploratory lens given mixed past research findings. On the one hand, research showed that interacting with a computer in an interview setting was perceived as awkward and risky (Guchait et al., 2014; Zibarras et al., 2018). These findings suggest that AVIs induce more stress because individuals do not feel comfortable with such emerging methods (see also Lukacik et al., 2022). On the other hand, past research proposed that synchronous TMM would lead to less anxiety due to reduced social presence (Chapman & Rowe, 2002). Research also showed that the absence of recruiters makes interviewees feel more at ease (Guchait et al., 2014).

### *Self-rated and observer-rated performance*

To date, research has revealed that the rating procedure can influence how interviewees are evaluated (Basch, Melchers, et al., 2021; Van Iddekinge et al., 2006). Contrary to these studies, which investigated whether the *rating procedure* (i.e., live vs. recorded ratings) influences interviewee ratings, the present research aims to assess whether the

interview method (i.e., conventional vs. AVIs) influences interviewee reactions and behavior. We use a standardized rating procedure across all three interview conditions (by videorecording also the FTF interview) to test whether participants show different levels of performance while making sure that the rating procedure does not influence interviewee performance ratings.

Furthermore, we increase the comparability of the methods by having all three interviews highly structured (Campion et al., 1997; Levashina et al., 2014; Millar & Tracey, 2006) and we do not offer preparation time in AVIs to avoid potential alternative explanations (see Basch, Brenner, et al., 2021). We do not expect any difference between the three methods in terms of observer-rated performance. Nonetheless, we expect interviewees in the two AVIs to report lower performance ratings as compared to those in the conventional method (Hypothesis 5). We suggest that this effect is driven by the negative perception of the methods (see Hypotheses 1–4).

### Cultural differences

We assess the role of culture using an exploratory lens. On the one hand, past research investigating cultural differences in applicant perceptions and reactions towards selection methods revealed similar patterns of results across different countries (e.g., Anderson et al., 2010; Anderson & Witvliet, 2008; Ryan et al., 2009). We might thus expect no difference between Switzerland and India. On the other hand, other studies showed cross-cultural differences (e.g., Brender-Ilan & Sheaffer, 2015; Griswold et al., 2022; Phillips & Gully, 2002). For instance, using a sample of 644,905 interviewees from 46 countries, Griswold et al. (2022) investigated the role of national culture (see Hofstede, 2001) in applicant reactions in terms of perceived effectiveness and overall satisfaction with the interview process. Applicants participated either in a synchronous interview (videoconference) or in an AVI.

First, results showed that overall applicants rated the synchronous interview more positively (perceived effectiveness and overall satisfaction). Second, results revealed a moderating effect of the culture, such that participants from countries high (vs. low) on uncertainty avoidance rated the synchronous interview as more effective. Results also showed that participants from countries with short-term (vs. long-term) orientation or low (vs. high) on indulgence were more satisfied with the synchronous interview.

Drawing on the work of Hofstede (2001) (see also Hofstede et al., 2010) and Hofstede Insights (2018), we know that Switzerland and India are two culturally different countries on these three dimensions such that Switzerland is characterized by a higher level of uncertainty avoidance, long-term orientation, and indulgence. The cultural dimension of uncertainty avoidance captures the extent to which the members of a culture feel threatened by ambiguous or unknown situations. The Swiss culture, and specifically the French speaking part of Switzerland (in which the data was collected), is characterized by strong codes of belief and behavior and tends to be reluctant to new, innovative situations (Hofstede Insights, 2018). Inversely, the Indian culture is characterized by a high tolerance for change and innovation. The cultural dimension of long-term orientation captures the extent to which a culture is future-oriented and hence

adapts to change through a pragmatic lens, as opposed to a culture which tends to value traditions and hence is less open to change. Finally, the cultural dimension of indulgence captures the extent to which a culture gives importance to leisure and happiness, as opposed to a culture which controls the desires of its members and which gives more importance to maintaining order. Drawing on Griswold et al. (2022), we might expect more negative reactions towards AVIs as well as a higher level of stress and lower level of performance in Switzerland if we focus on the uncertainty avoidance dimension. Nonetheless, we might expect the opposite with regard to the two other dimensions.

## 2 | METHOD

### 2.1 | Sample

The sample consisted of 299 male students ( $M_{\text{age}} = 22.18$ ,  $SD = 3.07$ ) from an Indian and a Swiss university ( $N = 151$  and  $N = 148$ , respectively). The majority of participants (58%) were Master students. On average, participants had little prior experience with job interviews in general ( $M = 3.57$ ,  $SD = 4.87$ ), with AB job interviews ( $M = 0.16$ ,  $SD = 0.64$ ), and with TB job interviews ( $M = 0.66$ ,  $SD = 1.97$ ). Students received an invitation email mentioning that we were looking for participants willing to train for job interviews. Once registered, participants received an email informing them about the location of their session.

At the beginning of each session, participants were randomly assigned to one of the three conditions composing the study: FTF, AB, and TB. The study lasted about 30 min in total. Swiss participants received 15 Swiss francs (about US\$16) and Indian participants received 50 Indian rupees (about US\$1) as monetary compensation for their participation. This monetary incentive was comparable between the two countries given that the average monthly disposable income in Switzerland is US\$6301 whereas this income in India is US\$452, representing a ratio of about 14:1 (NationMaster, 2014). The design and procedure of the study were identical in both countries.

### 2.2 | Procedure

#### 2.2.1 | Overview

Participants signed an informed consent form and then filled in a short online questionnaire designed to capture their personality traits for the purpose of another study. Next, they participated in a simulated job interview lasting about 10 min. We videotaped all interviews using webcams. Before the interview, participants chose a position they would like to apply for after their studies (e.g., employee/manager in IT, employee/manager in R&D, engineer) from a list. They received the instruction to behave as if they were really applying for this position. After the job interview, participants completed an online questionnaire designed to capture their reactions and their levels of stress and performance related to the job interview they had just taken part in. Finally, they received payment and were thanked for their participation.

## 2.2.2 | Job interview questions

Each job interview was composed of five questions, among which three were identical for all participants. The first question asked participants to present themselves and their current situation. The two following questions were past behavior questions. One question asked the participants to describe a situation in which they had to manage several tasks or projects at the same time and how they would handle this situation. The other question asked participants to give an example of a situation in which they had taken the initiative to get things done and in which they were successful. The two last questions were randomly drawn from a list of 20 questions including self-evaluation questions (e.g., how people usually describe them), past behavior questions (e.g., describing a challenge or conflict they had faced at work or during their studies, and how they had dealt with it), and some more general job interview-related questions (e.g., why they should be hired).

Each question was video-recorded separately in the two AVI conditions. In the FTF condition, the video-recordings were one single file for each participant. After completing the data collection and before starting the video rating phase, each video collected in the FTF condition was cut into five files, representing the five interview questions. Each video started when the recruiter began asking a question or when the participants started reading a question and ended when the participants finished giving their answer.

## 2.2.3 | Job interview conditions

### *FTF interview*

Participants in the FTF condition took part in an in-person interview. Once they completed the first questionnaire, the participants read the job interview instructions. Then, they were asked to sit at a table and to wait for the recruiter, while the experimenter turned on the webcam and left the room. The mock recruiter entered the room and directly started the interview as in a real-life job interview setting. Once the interview was over, the mock recruiter left the room and the experimenter entered the room, turned off the webcam and asked participants to fill in an online questionnaire. Before the study, we trained two male research assistants (i.e., one in each country) to play the role of the recruiter to ensure that they would display the same behavior across participants.

Specifically, we instructed the mock recruiters to only ask the predefined job interview questions and thus not to deviate from the script. They learnt the script by heart so that they could look at the participants while asking the questions. We also trained the recruiters to keep a neutral facial expression as much as possible. Nonetheless, to look natural, they were allowed to do some backchannelling (mainly nodding) when the participants answered the questions. To mimic a real job interview, we also instructed the recruiters to write brief notes when listening to the participants.

After each answer, the recruiters had to say "Thank you for your answer." If the participant could not find an answer to the question, the recruiters had to say "Ok, I will ask you the next question." If a

participant asked a question during the interview, the recruiters were instructed to answer in a yes/no format if possible. If this was not possible, they could answer the question in a very brief way. If a participant asked for clarification about the question such as "Which type of decision should I describe to you?," the recruiters were instructed to reply "It is up to you to decide which decision you would like to describe to me." Finally, the recruiters could repeat the questions if asked by a participant.

### *Asynchronous video interviews*

Similar to the FTF interview, after completing the first online questionnaire, the participants read the job interview instructions. Then, in both AVI conditions, the experimenter closed the online questionnaire and opened the job interview interface. Next, participants read instructions on how to use the interface and to calibrate the webcam. The experimenter ensured that the webcam worked and then left the room. Before leaving the room, she explained that if a technical issue occurred, she was just outside the room. Once ready, participants pressed the "start" button so that the interview could start. At the end of the interview, participants were instructed to ask the experimenter to come back into the room so as to continue the study.

In both conditions, participants logged into a self-developed platform. In the TB condition, the platform was similar to HireVue. Each question appeared on the screen and the participants read and answered the questions as if they were in front of a real recruiter. The platform included a self-view during the interview. In the AB condition, an avatar playing the role of a virtual recruiter asked the questions and participants answered each question as if they were in front of a real recruiter. In both conditions, once participants answered a question, they clicked on a "next" button to move on to the following question. In the AB condition, the participants could ask the virtual recruiter to repeat the question using a "repeat" button. In both countries, the virtual recruiter was similar to the FTF mock recruiter in terms of age and appearance. Furthermore, each virtual recruiter spoke with the voice of the corresponding mock recruiter.

In both conditions, there was neither preparation time after each question nor a time constraint to respond to each question. Preparation time and response time are common in AVIs (Dunlop et al., 2022). In the present study, we were interested in investigating differences in participants' reactions and behavior as a function of the interview method. Therefore, to increase the comparability between the three conditions, it is crucial to standardize all the aspects of the interviews as much as possible.

## 2.3 | Measures

The online questionnaire was designed to measure participants' reactions to the job interview. Specifically, we assessed participants' perceived opportunity to perform, fairness, effectiveness, and ambiguity of the method. We also captured participants' experienced and expressed level of stress as well as self-rated and observer-rated performance. For all self-rated measures, participants indicated the extent to which they agreed



	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Opportunity to perform	3.01	0.83	<b>.87</b>						
2. Fairness	3.21	0.97	.53***	<b>.90</b>					
3. Effectiveness	3.12	0.81	.48***	.63***	<b>.83</b>				
4. Ambiguity	2.71	0.82	-.27***	-.25***	-.37***	<b>.80</b>			
5. Experienced stress	2.34	1.06	-.03	.01	-.05	.41***	<b>.80</b>		
6. Expressed stress	1.62	0.58	.16**	.11*	.15**	.00	.07	<b>.82</b>	
7. Self-rated performance	3.11	0.84	.47***	.29***	.31***	-.46***	-.33***	-.08	<b>.82</b>
8. Observer-rated performance	3.90	0.81	.05	.07	.18**	-.18**	-.19***	-.25***	.23

Note: Alpha reliabilities in bold in the diagonal.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

with each item on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We collected other-rated data by asking independent raters to evaluate participants' level of stress and performance based on the interview videotapes using a 5-point Likert-type scale ranging from 1 (*not at all*) to 5 (*totally*). Table 1 reports the descriptive statistics of the variables and the correlation coefficients.

### 2.3.1 | Opportunity to perform

We assessed the extent to which participants thought that the method used to conduct the interview allowed them to show that they are competent for the position applied for. The measure was composed of six items among which two self-developed items (Bauer et al., 2001; Langer et al., 2017; Warszta, 2012). A sample item is "I could really show my skills and abilities through the interview."

### 2.3.2 | Fairness

We measured participants' perception relative to the fairness of the interview method using three items (Langer et al., 2017; Warszta, 2012). A sample item is "I think that this interview is a fair procedure to select people for the job."

### 2.3.3 | Effectiveness

We assessed participants' overall perception of the interview method using a measure designed to capture the extent to which participants perceived the method as effective for selecting applicants. This measure is composed of six self-developed items. We reverse-coded four items before averaging the six items to create the measure of effectiveness. A sample item is "Conducting job interviews like this is good practice for recruitment."

**TABLE 1** Descriptive statistics of the variables and correlations.

### 2.3.4 | Ambiguity

We assessed the extent to which participants thought that the interview method lacks clarity by adapting the five-item ambiguity measure (i.e., labeled *creepy ambiguity*) developed by Langer and Konig (2017). A sample item is "I did not know exactly how to behave in the job interview."

### 2.3.5 | Stress

#### *Experienced stress*

We measured participants' subjective level of stress using the following item: "I felt stressed during the job interview."

#### *Expressed stress*

We captured participants' stress by asking independent raters to evaluate the extent to which the participants appeared to be stressed during the interview using a single item. This rating was done for each job interview question separately. Before rating the videos, the raters were provided with descriptive anchors with regard to what was established as low, average, and high levels of stress. We then averaged the rating of the five questions to have a single measure of other-rated stress. Two raters were involved in the rating procedure, such that we assigned one rater per country who evaluated level of stress using the videotapes collected in the corresponding country. We established the inter-rater reliability by asking a third independent rater to evaluate a set of 30 videos for each country dataset. We computed two-way mixed, consistency, single-measures intraclass correlations (ICC; McGraw & Wong, 1996) and results showed an excellent ICC of .82 for the data collected in Switzerland (Cicchetti, 1994).

For the Indian data, we followed a three-step procedure. First, we followed the same procedure as described above. This first step yielded an ICC of .51. As a second step, the two raters and the first author discussed their overall observations with regard to this rating. Three

sample videos for which the ratings differed by two or more points were used to supplement the discussion. The third step consisted of the final rating phase, yielding a fair ICC of .57 (Cicchetti, 1994).

### 2.3.6 | Performance

#### Self-rated performance

We measured the extent to which participants thought that they performed well during the interview using three questions related to their performance in general, their answers, and their nonverbal behavior. A sample question is "How do you evaluate the answers you provided during the job interview?"

#### Observer-rated performance

We captured participants' performance by asking independent raters to evaluate "the extent to which participants were successful during the job interview." Similar to the measure of expressed stress, this rating was done for each interview question separately. Before rating videos, raters were provided with descriptive anchors with regard to what was established as low, average, and high levels of performance (e.g., anchors with regards the clarity of the answer). We then averaged the rating of the five questions to have a single measure of other-rated performance. A rater (independent of those who evaluated participant level of stress) evaluated the performance of all participants in both countries and we established the inter-rater reliability by asking a second rater to evaluate a set of 30 videos for each country dataset. We computed two-way mixed, consistency, single-measures ICC (McGraw & Wong, 1996) and results showed excellent ICCs of .73 and .75 for the data collected in Switzerland and in India, respectively (Cicchetti, 1994).

## 3 | RESULTS

### 3.1 | Preliminary analyses

We performed preliminary analyses to check whether there were existing differences among participants between the two cultures and the three conditions in terms of age, education (current year of

study ranging from 1–Bachelor first year to 6–PhD) and prior experience with job interviews in general, with platform-based job interviews, and with AB job interviews.

First, we performed a set of *t*-tests to check differences between cultures. Results showed nonsignificant differences for all the tested variables (all *ps* > .20) except for age,  $t(296) = 2.20$ ,  $p = .29$ . Participants in India ( $M = 21.80$ ,  $SD = 2.22$ ) were younger than participants in Switzerland ( $M = 22.58$ ,  $SD = 3.71$ ).

Second, we performed a set of one-way ANOVAs to check differences between conditions. Results showed nonsignificant differences for all the tested variables (all *ps* > .05) except for age,  $F(2, 295) = 5.39$ ,  $p = .005$ . The post hoc tests showed that participants in the TB condition were older ( $M = 23.00$ ,  $SD = 4.24$ ) than participants in the FTF condition ( $M = 21.70$ ,  $SD = 2.27$ ) and than participants in the AB condition ( $M = 21.87$ ,  $SD = 2.13$ ), both *ps* < .03. We did not find any significant difference between participants in the FTF condition and participants in the AB condition.

Finally, we performed confirmatory factor analyses (CFAs) using Stata 17 (StataCorp, 2021) to assess the factor structure of the measures included in the study (Anderson & Gerbing, 1988; Fabrigar et al., 1999; Kline, 1998). First, we performed a CFA in which we included the two self-rated measures that we developed (i.e., effectiveness and self-rated performance). Second, we performed a CFA in which we included these two self-rated measures and the three other self-rated measures taken from past research (e.g., opportunity to perform, fairness, and ambiguity). Both analyses revealed an excellent fit (Bentler, 1990; Bentler & Bonett, 1980; Bollen, 1989; Kline, 1998). We report the fit indices of these analyses in the Supporting Information Appendix S1.

### 3.2 | Main analyses

To test the effects of the interview method and the culture on participant reactions and behavior, we used SPSS Version 28. We ran a 3 (method: FTF vs. AB vs. TB) by 2 (culture: Switzerland vs. India) analysis of variance (ANOVA) using each of our dependent variables, namely participant perceived (1) opportunity to perform, (2) fairness, (3) effectiveness, and (4) ambiguity, as well as on participant experienced (5) stress and (6) performance, and expressed (7) stress and (8) performance. Table 2

**TABLE 2** Means and standard deviations of the variables per condition and per culture.

	Swiss sample			Indian sample		
	FTF	AB	TB	FTF	AB	TB
Opportunity to perform	3.04 (0.76)	2.69 (0.73)	2.54 (0.75)	3.42 (0.75)	3.16 (0.80)	3.16 (0.89)
Fairness	3.17 (0.93)	3.15 (0.88)	2.74 (1.05)	3.89 (0.77)	3.18 (0.81)	3.14 (1.05)
Effectiveness	3.15 (0.70)	2.82 (0.78)	2.83 (0.80)	3.63 (0.78)	3.12 (0.74)	3.15 (0.80)
Ambiguity	2.74 (0.69)	2.90 (0.74)	3.06 (0.73)	2.20 (0.87)	2.79 (0.89)	2.61 (0.75)
Experienced stress	2.36 (1.06)	2.50 (0.95)	2.47 (1.20)	1.92 (0.85)	2.64 (1.21)	2.18 (0.95)
Expressed stress	1.77 (0.64)	1.44 (0.54)	1.47 (0.55)	1.82 (0.64)	1.60 (0.59)	1.59 (0.46)
Self-rated performance	3.14 (0.82)	2.80 (0.75)	2.84 (0.78)	3.52 (0.75)	3.15 (0.79)	3.22 (0.96)
Observer-rated performance	3.99 (0.83)	3.86 (0.82)	3.98 (0.78)	4.02 (0.82)	3.79 (0.73)	3.80 (0.89)

Abbreviations: AB, avatar-based condition; FTF, face-to-face condition; TB, text-based condition.

reports the means and standard deviations of these variables per condition and per culture. We also replicated these analyses by adding participant age as a covariate and we found similar results. Below we report the results of our main analyses excluding age as a covariate.

### 3.2.1 | Reactions towards the method

The first series of analyses revealed a significant effect of the method for each of the dependent variables, that is, opportunity to perform [ $F(2, 292) = 6.61, p = .002, \eta^2 = .04$ ], fairness [ $F(2, 292) = 10.21, p < .001, \eta^2 = .07$ ], effectiveness [ $F(2, 292) = 9.46, p < .001, \eta^2 = .06$ ], and ambiguity [ $F(2, 292) = 7.23, p < .001, \eta^2 = .05$ ]. Figure 1 reports these results. To further investigate these effects, we conducted follow-up analyses by comparing (1) FTF versus AB and (2) FTF versus TB. Findings revealed that participants in the FTF condition perceived that they had a higher opportunity to perform and that the method was more fair, more effective, and less ambiguous than participants in the AB condition or in the TB condition (all  $ps < .01$ ). These findings support our four first hypotheses (Hypotheses 1–4). Results revealed no significant difference when comparing AB to TB (all  $ps > .09$ ).

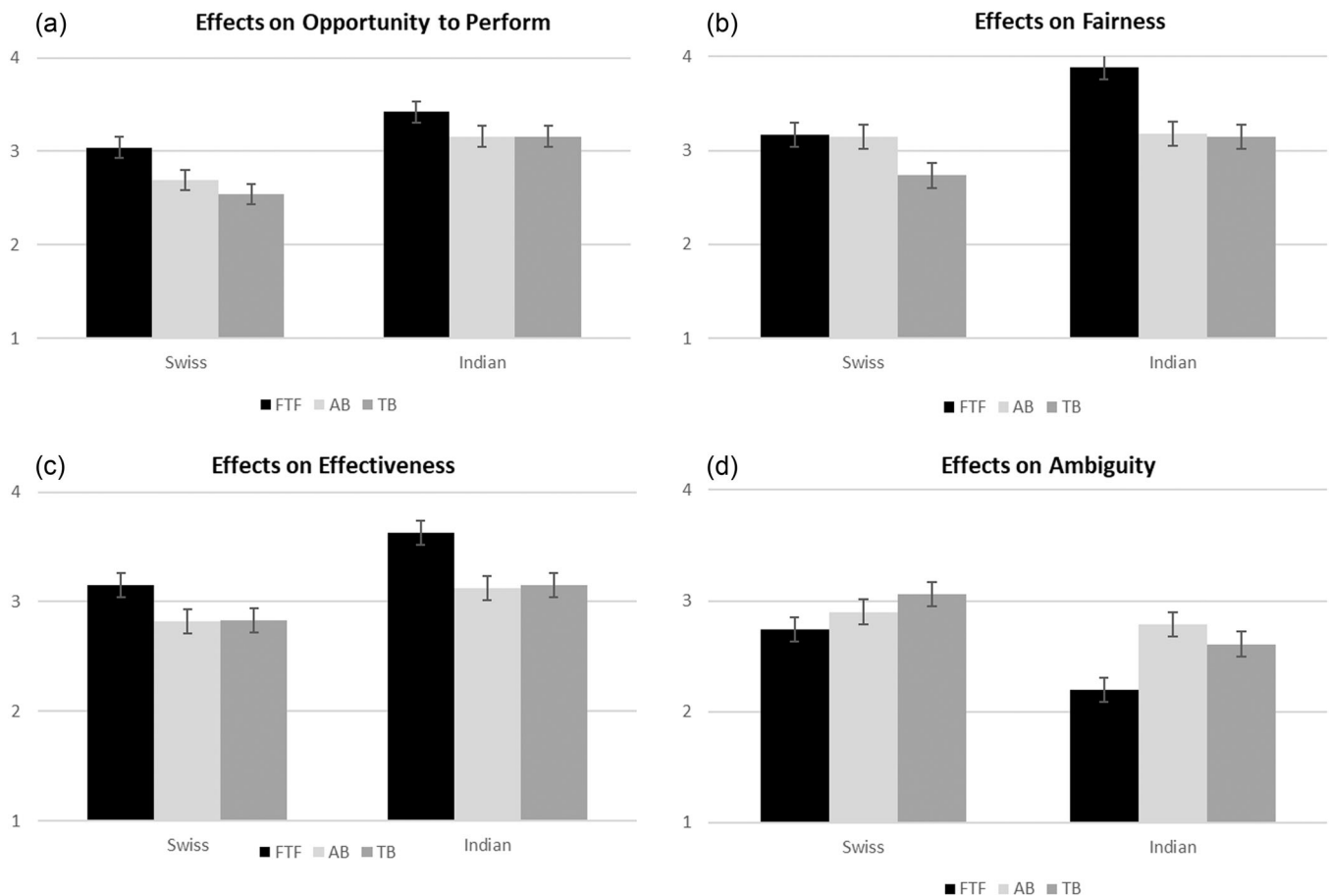
We also found a significant effect of the culture for each dependent variable, that is, opportunity to perform [ $F(1, 292) = 29.36, p < .001,$

$\eta^2 = .09$ ], fairness [ $F(1, 292) = 13.10, p < .001, \eta^2 = .04$ ], effectiveness [ $F(1, 292) = 16.77, p < .001, \eta^2 = .05$ ], and ambiguity [ $F(1, 292) = 16.46, p < .001, \eta^2 = .05$ ], such that overall Indian participants reported more positive reactions, independently of the interview method (see Figure 1).

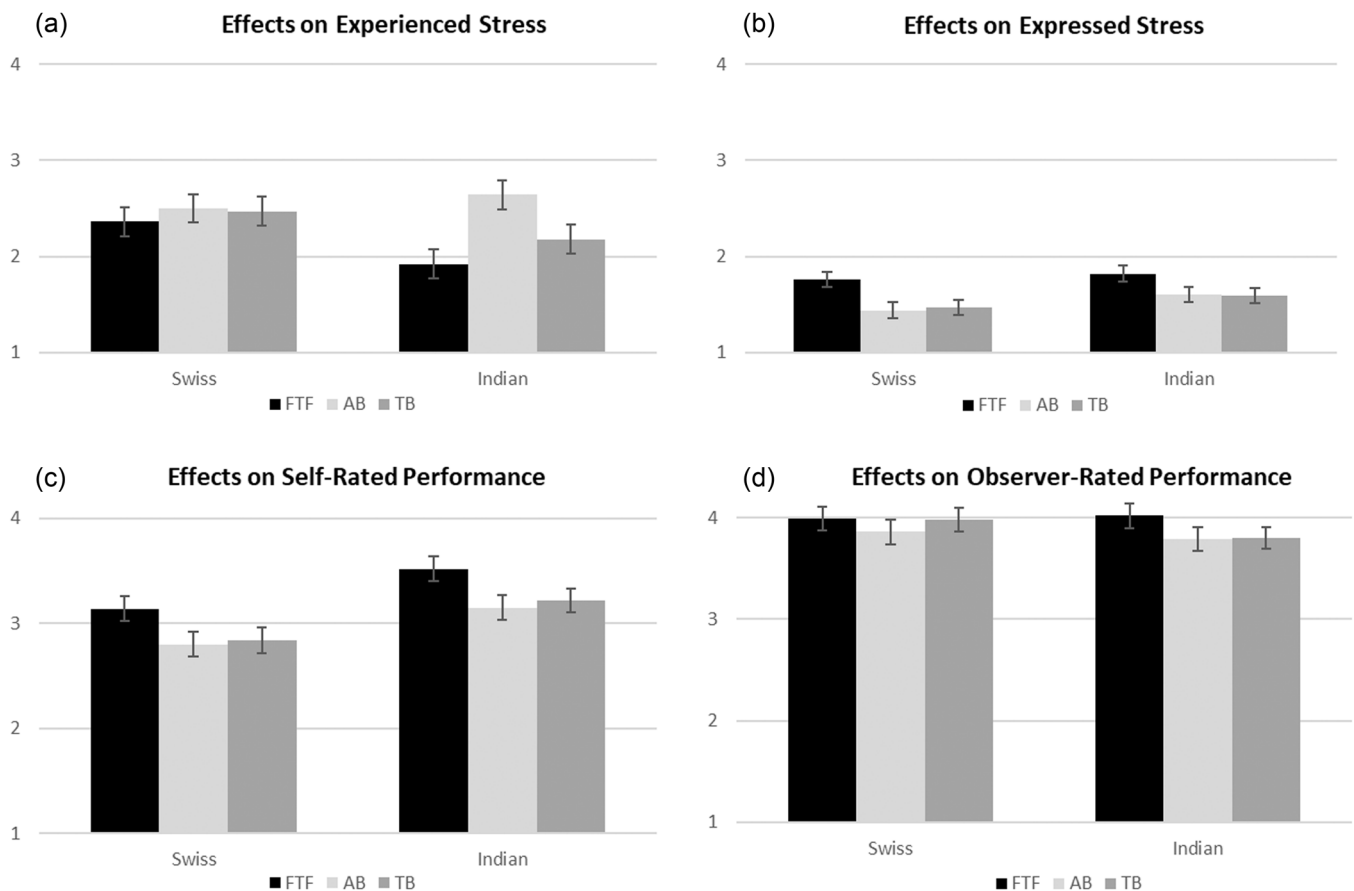
Finally, results showed a significant interaction effect between the method and the culture for fairness [ $F(2, 292) = 3.48, p = .032, \eta^2 = .02$ ]. Simple effects analyses revealed that Swiss participants in the FTF condition and in the AB condition reported similar levels of fairness ( $p = .914$ ), whereas Indian participants in the FTF condition reported a higher level of fairness than participants in the AB condition ( $p < .001$ ) (see Figure 1b). Finally, Swiss participants in the TB condition reported a lower level of fairness than those in the two other conditions ( $ps < .03$ ), whereas Indian participants in the AB condition and those in the TB condition reported similar levels of fairness ( $p = .844$ ) and those in the TB condition reported a lower level of fairness than those in the FTF condition ( $p < .001$ ). We did not find any significant interaction effect on the other dependent variables (all  $ps \geq .13$ ).

### 3.2.2 | Experienced and expressed stress

In a second series of analyses, we assessed the effects of the method and the culture on participant stress using both self-rated



**FIGURE 1** Bar chart reporting the estimated means and standard error bars related to participant reactions per condition and per culture. AB, avatar-based condition; FTF, face-to-face condition; TB, text-based condition.



**FIGURE 2** Bar chart reporting the estimated means and standard error bars related to participant stress and performance per condition and per culture. AB, avatar-based condition; FTF, face-to-face condition; TB, text-based condition.

and other-rated data. First, results showed a significant effect of the method on experienced stress [ $F(2, 292) = 4.27, p = .015, \eta^2 = .03$ ]. Follow-up analyses revealed that participants in the FTF condition reported a lower level of stress than participants in the AB condition ( $p = .004$ ). Results revealed no significant difference when comparing AB to TB ( $p = .096$ ) and FTF to TB ( $p = .221$ ). Figure 2a reports these results. We found neither a significant effect of the culture nor an interaction effect (all  $ps \geq .10$ ).

Second, results revealed a significant effect of the method on expressed stress [ $F(2, 291) = 7.08, p = .001, \eta^2 = .05$ ]. Follow-up analyses showed that participants in the FTF condition were perceived as more stressed than participants in the AB condition or in the TB condition ( $ps = .001$ ) (see Figure 2b). Results revealed no significant difference when comparing AB to TB ( $p = .946$ ). Finally, we found neither a significant effect of the culture nor an interaction effect (all  $ps \geq .10$ ).

### 3.2.3 | Self-rated and observer-rated performance

In a third series of analyses, we assessed the effects of the method and the culture on participant performance using both self-rated and other-rated data. First, results revealed a significant effect of the

method on self-rated performance [ $F(2, 292) = 5.49, p = .005, \eta^2 = .04$ ]. Follow-up analyses revealed that participants in the FTF condition reported higher performance than participants in the AB condition or in the TB condition ( $ps < .01$ ), supporting H5. Results revealed no significant difference when comparing AB to TB ( $p = .648$ ) (see Figure 2c).

We also found a significant effect of the culture [ $F(1, 292) = 15.67, p < .001, \eta^2 = .05$ ], such that overall Indian participants reported a higher performance, independently of the interview method. Results did not reveal any significant interaction effect ( $p = .989$ ). Second, results related to observer-rated performance revealed neither a significant effect of the method and the culture, nor an interaction effect (all  $ps \geq .28$ ) (see Figure 2d).

### 3.3 | Supplementary analyses

We further investigated the effects of the interview methods and the culture by replicating the analyses related to other-rated stress and performance per interview question type. The interviews were composed of three types of questions, namely a self-presentation question (i.e., Question 1), two past-behavior questions (i.e., Questions 2 and 3), and two questions randomly

drawn from a list of 20 questions (i.e., Questions 4 and 5). This list of 20 questions included general job interview questions, such as self-evaluation questions (e.g., how people usually describe them, how they deal with pressure or stressful situations) and questions related to their career plan as well as their personal life (e.g., what goals, including career goals, they have set for themselves, what they like to do apart from work). This list also included five past behavior questions.

Past behavior questions are a specific type of question that requires interviewees to produce narrative responses and hence to structure their answer in a comprehensive manner such that interviewers understand the situation at stake and what happened through a temporal or a causal lens (Bangerter et al., 2014). This implies that interviewees need to explain a sequence of events starting from the description of the initial situation (e.g., the issue and the people involved in the situation) to how they behaved and what were the effects. These questions are challenging given that interviewees should find relevant examples to provide as compared to other types of questions (e.g., career-related questions) that do not require such storytelling skills (Broisy et al., 2020) and that can be expected and hence prepared in advance.

Using an exploratory lens, we assessed whether the method and the culture had an effect on other-rated stress and performance depending on the question types. To this purpose, we computed six new measures, i.e. a measure of each of these two other-rated variables for the three question types (i.e., self-presentation question, the average of the two past behavior questions, and the average of the two last questions labeled general questions). Table 3 reports the means and standard deviations of these variables per condition and per culture.

First, we found similar patterns of results across the three types of questions with regard to the main effect of the method on expressed stress ( $ps < .01$ ). These findings replicated results we found with the five questions averaged, such that participants in the FTF condition were perceived as more stressed than participants in the AB condition or in the TB condition ( $ps < .01$ ). Results revealed no significant difference when comparing AB to TB ( $ps > .10$ ). We found neither a significant effect of the culture nor an interaction effect ( $ps \geq .10$ ), except for the general questions in which we found a

significant main effect of culture [ $F(2, 288) = 9.14, p = .003, \eta^2 = .03$ ]. Overall, Indian participants were rated as more stressed than Swiss participants, independently of the interview method.

Second, findings related to the past behavior questions and the general questions in terms of observer-rated performance replicated results we found with the five questions averaged, such that we found neither significant main effects nor an interaction effect ( $ps > .10$ ). With regard to the self-presentation question, we found a main effect for the method [ $F(2, 289) = 12.47, p < .001, \eta^2 = .08$ ] such that participants in the FTF condition received higher ratings than participants in the AB condition or in the TB condition ( $ps < .001$ ). We found no difference when comparing AB to TB ( $p = .132$ ). Results also revealed a significant effect of culture [ $F(2, 289) = 7.80, p < .008, \eta^2 = .02$ ], such that Swiss participants received higher ratings than Indian participants, independently of the interview method. Finally, we found no interaction effect ( $p = .808$ ).

## 4 | DISCUSSION

The goal of the present research was to investigate interviewee reactions and behavior towards the emerging interview methods of AVI. We compared the conventional FTF method to two AVI methods: an AB interview (in which the interview is conducted by a virtual recruiter) and a TB interview (in which the interviewee conducts the interview by reading the questions). We found that the FTF interview received more positive reactions than the AVIs. In line with past research, the present work shows that the conventional FTF interview is still the most appreciated method. We also found that participants in the FTF interview reported a higher level of performance than those who participated in the two AVIs. However, the measure of observer-rated performance did not reveal any difference across the three methods.

Findings also revealed that whereas interviewees reported higher levels of stress in the AB interview as compared to the FTF interview, observer ratings showed that participants in the FTF interview were perceived as more stressed than those in the two AVIs. Finally, we found similar reactions and behavior towards the job interview

**TABLE 3** Supplementary analyses: Means and standard deviations of the variables per condition and per culture.

	Swiss sample			Indian sample		
	FTF	AB	TB	FTF	AB	TB
SPQ—Expressed stress	1.98 (0.77)	1.61 (0.84)	1.60 (0.71)	1.84 (0.80)	1.53 (0.74)	1.58 (0.65)
SPQ—Observer-rated performance	4.26 (0.75)	3.49 (1.14)	3.81 (0.87)	3.94 (1.01)	3.26 (1.12)	3.39 (1.29)
PBQ—Expressed stress	1.84 (0.74)	1.51 (0.62)	1.51 (0.64)	1.86 (0.74)	1.68 (0.70)	1.63 (0.55)
PBQ—Observer-rated performance	3.76 (1.01)	3.91 (0.96)	4.01 (1.07)	3.85 (1.06)	3.68 (0.92)	3.70 (0.98)
GQ—Expressed stress	1.58 (0.66)	1.30 (0.48)	1.36 (0.58)	1.79 (0.76)	1.56 (0.65)	1.55 (0.56)
GQ—Observer-rated performance	4.09 (1.02)	3.99 (1.02)	4.04 (0.97)	4.21 (0.93)	4.16 (0.67)	4.16 (0.91)

Abbreviations: AB, avatar-based condition; FTF, face-to-face condition; GQ, general questions (Questions 4 and 5); PBQ, past behavior questions (Questions 2 and 3); SPQ, self-presentation question (Question 1); TB, text-based condition.

methods across Switzerland and India, except that in general, Indian participants reported more positive ratings. The only interaction effect we found showed that Swiss participants reported the FTF and the AB methods as closer in terms of fairness as compared to Indian participants who reported the AB and the TB interviews as being similarly fair.

#### 4.1 | Practical implications

Results from the present paper should be interpreted with caution given that further empirical research is needed before making clear recommendations to practitioners. Nonetheless, we can highlight four main practical implications from our work. First, findings reveal that AVIs do not seem to disadvantage interviewees such that interviewees performed similarly across the three interview methods, despite participants in AVIs perceived their performance as lower. The difference between these two performance outcomes might be explained by the absence of a human interviewer in AVIs and hence the absence of nonverbal cues from the interviewer, making it difficult to assess how they were perceived. These results are promising because they show that, despite the fact that interviewees preferred the conventional method, observer-rated performance was similar across the three methods. These findings inform practitioners interested in the use of AVIs that these methods do not necessarily negatively affect interviewee performance, and hence might be a valid selection tool during the prescreening stage of the recruitment process.

Findings from the supplementary analyses revealed a difference in observer performance ratings for the self-presentation, such that interviewees in the FTF condition received higher ratings than interviewees in AVIs. This finding is surprising given that this question is commonly asked at the beginning of each job interview. Hence, interviewees should be highly prepared to start off with this question. It is plausible to expect that this difference is due to the time needed by the interviewees in the two asynchronous conditions to become familiar with the method used to conduct the interview, such that they were disturbed during the first question, but then got accustomed to the medium and were able to perform as they would in a conventional interview. Furthermore, it is noteworthy that the presented findings hold in standardized interview settings, in which no preparation time is offered to interviewees and in which interviewee ratings are based on the video-recording of the interviews. Additionally, our findings apply to the tested TMM, namely AB and TB AVIs. AVI-related technology is in constant development, implying that these methods are continually evolving towards implementing new features or new formats, which might differently influence interviewee reactions and behavior.

As a second practical implication, results showed that interviewees were rated as more stressed in the FTF interview. This finding brings important information given that past research showed that stress or anxiety during a job interview is associated with negative outcomes (Powell et al., 2018; Schmid & Schmid Mast, 2013). Relying

on AVI seems to induce no additional *apparent* stress, and even leads interviewees to be perceived as less stressed during the interview, hence sending a positive signal to the observers. Nonetheless, interviewees in the two AVIs indicated a similar or a higher level of stress when compared to interviewees in the FTF condition. Further evidence should be provided before making clear conclusions about the stress induced by these interview methods. First, it is plausible that in a high-stakes situation, as opposed to a simulated job interview, the stress induced by the use of AVI might be exacerbated, which would negatively affect recruiters' ratings. Second, it is noteworthy that interviewees experienced higher levels of stress when the interview was conducted by a virtual interviewer as opposed to when the interview was conducted by a human interviewer.

This finding suggests that the presence of a virtual interviewer disturbed interviewees. Langer et al. (2019) also compared a human interviewer (videoconference condition) to a virtual interviewer (AVI condition) and found that participants had more negative reactions towards the latter interview format. The authors acknowledged that their findings might be driven by the presence of a virtual interviewer rather than by the medium used to conduct the interview. The virtual interviewer might be perceived as eerie, and hence lead to negative feelings elicited by an uncanny valley effect (see Langer et al., 2019; Mori et al., 2012). The presence of a virtual (vs. human) interviewer might thus constitute a third factor (adding to the rating procedure and the preparation time) that explains interviewee reaction and behavioral differences when comparing conventional and TMM as well as when comparing synchronous to AVI.

The third practical implication refers to the absence of cultural difference for most analyses. These results complement past research revealing mixed findings (e.g., Griswold et al., 2022). Overall, we mostly found similar findings across Switzerland and India, which are two culturally distinct countries (Hofstede, 2001; Hofstede Insights, 2018). Nonetheless, further evidence is needed before being able to make clear recommendations to practitioners.

Finally, as a fourth practical implication, in line with past research, findings showed that AVIs are not yet well-accepted as compared to the conventional FTF method. Despite the rapid development of these methods, interviewees still believe that participating in such interviews put them at a disadvantage in several regards (e.g., opportunity to perform). Accordingly, practitioners should implement these TMM with caution given that the choice of selection methods, including pre-screening methods, can have detrimental effects on applicants and organizations (Bauer et al., 2006; Gilliland, 1993; Hausknecht et al., 2004; Ryan & Ployhart, 2000). As a potential solution, literature suggested that providing applicants with information on the organizational choice of interview methods might contribute to the acceptance of these methods (see Basch & Melchers, 2019; Lukacik et al., 2022).

Relatedly, schools, universities, and other organizations, such as employment offices, might contribute to the acceptance of these methods by adapting their programs to train individuals in the use of AVIs. Therefore, apart from increasing organizational communication regarding the use of these methods, training programs for young

adults and job seekers might also include asynchronous video interview-related information as well as practice units, in addition to training units related to conventional methods. The primary goal of these units would be to offer people the opportunity to experience these types of interviews. As a side effect, we would expect these methods to be more accepted, which would subsequently lower interviewee stress and perception of suboptimal performance. This practical implication in terms of training is pressing given that these interview methods have become commonplace and especially with the COVID-19 pandemic context (Constantin et al., 2021; Daniel et al., 2022; Roulin et al., 2022).

## 4.2 | Limitations

The first limitation of our study is that we relied on a convenience sample by recruiting male students to participate in a simulated interview, hence lowering the generalizability of the findings on three main aspects. First, despite having asked students to take the study seriously, the simulated job interviews were a low-stakes situation. It is plausible to expect that interviewees would show stronger reactions in a real job interview in which their future is at stake. For instance, drawing on the work of Langer et al. (2019), we might expect that in a high-stakes situation, interviewees would report even more negative reactions, higher levels of stress, and lower levels of performance when participating in a technology-mediated interview as compared to a FTF interview.

Second, the use of this convenience sample prevents generalizing our findings to older candidates. Indeed, students are familiar with new technologies, implying that they might be less critical towards the use of these TMM as compared to older interviewees with less experience with new technologies (Straus et al., 2001) and who might react even more negatively to AVIs. Langer et al. (2018) found that computer experience did not influence individuals' reactions towards new technology-based selection methods. However, in their study, these researchers also relied on a convenience sample of students and compared reactions of computer science students to those of noncomputer science students. Hence, we expect that replicating the present study using a population of working adults would lead to more pronounced results in favor of the FTF interview.

Third, we relied on a laboratory setting for the three conditions of our study, for which participants in the two AVI conditions also came to the laboratory to take part in the simulated job interview. This setting increases the internal validity of the study, but lowers its ecological validity given that one of the main advantages of AVIs is the flexibility offered to the interviewees (i.e., interviewees decide when and where to participate). Furthermore, our experimental setting implied that we had to videotape participants in the FTF condition, which contributed to lower the ecological validity of the study and rendered this condition more similar to the two other conditions in terms of surveillance (see Potosky, 2008). Despite the fact that we expected that participants become accustomed to the webcams or forget about them during the interview, we did not include a measure allowing to test whether this was indeed the case.

## 4.3 | Future research

We call for future research to further investigate the impact of using AVIs. Given the increasing attention drawn towards these new methods, it appears crucial to further understand whether and to what extent using these methods influences interviewee reactions and ratings (Constantin et al., 2021; Lukacik et al., 2022). For instance, in Guchait et al. (2014), participants reported negative reactions towards AVIs and suggested including a virtual recruiter to mimic two-way communication. The present research reveals that adding a virtual recruiter to AVI did not influence interviewee reactions, such that interviewees in the two tested asynchronous methods reported similar reactions. They also reported and showed similar levels of performance, revealing that increased performance was neither felt nor apparent in the presence of a virtual recruiter. Nonetheless, we observed a difference in terms of experienced stress when comparing the presence of a human versus a virtual recruiter. Further research is needed to be able to draw clear conclusions about the added value (vs. drawback) of including a virtual recruiter in AVI.

It would also be interesting to further investigate the effects we found in the supplementary analyses. If interviewees need several minutes to become familiar with the method used to conduct the interview, then organizations might consider asking a first test question so that interviewees can get accustomed to the medium. The relevant interview questions can then be asked after this time of adaptation. Furthermore, in the present study, we investigated interviewee reactions through four main criteria designed to capture the extent to which interviewees have favorable perceptions regarding the experienced method (i.e., opportunity to perform, fairness, effectiveness, and ambiguity). Testing the four media attributes of Potosky's (2008) framework across these three methods would contribute to a better understanding of the differences between the conventional and asynchronous TMM. Langer et al. (2019) assessed the four media attributes when investigating the two TMM of videoconference and AVI and concluded that AVI (operationalized as highly automated interviews in their work) was perceived as offering less social bandwidth, interactivity, and transparency. It would be interesting to replicate their work by comparing the two asynchronous TMM we tested to the FTF method. In this case, if the experimental design required to videotape all the conditions, then researchers should make sure that the cameras in FTF interviews are hidden to better distinguish the different interview conditions in terms of surveillance (Potosky, 2008).

Finally, future research should investigate interviewee reactions and ratings using a more diverse sample in terms of age, gender, professional activity, and in high-stakes situations. For instance, Langer et al. (2019) manipulated both the interview methods (videoconference interview vs. AVI) and the stakes of the situation (low-stakes: training vs. high-stakes: selection). Findings suggest that a high-stakes situation seems to induce stronger reactions. Nonetheless, further research is needed. It would also be interesting to assess the effects of the situation by replicating the present research in other countries to give clear recommendations to practitioners in

different countries and in different cultures. Specifically, the internationalization of companies implies the need to implement strategic human resources practices, including global staffing. Implementing prescreening standardized worldwide procedures using AVI can lead to more efficiency in the recruitment process.

## 5 | CONCLUSION

The present work shows that the conventional FTF interview is still the most favored selection method as compared to AVIs, such that this method was perceived as giving more opportunity to perform and as being more fair, more effective, and less ambiguous. Interviewees in the FTF interview also felt as stressed or even less stressed and reported better performance. Nonetheless, these reactions are not reflected in observer ratings. Observer ratings revealed that interviewees were more stressed in the FTF interview. More importantly, findings revealed that they had similar levels of performance across the three tested interview methods. Overall, the present study provides promising empirical evidence suggesting that the use of AVIs (without preparation time) does not influence interviewee ratings, contrary to interviewee expectations. Further research is however needed to better understand the impact of using asynchronous TMM on interviewee reactions and behavior, such as identifying features that might benefit interviewees as opposed to disadvantaging them (e.g., TB vs. AB interviews).

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## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in OSF at <https://osf.io/9cegu/>.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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