

# Applicants' Reaction Towards Asynchronous Video Interviews in Predicting Behavioural Outcomes: The Role of Culture as a Moderator

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## Abstract

Organisations are increasingly using asynchronous video interviews to assess candidates. In view of the recent pandemic, Covid-19, hiring managers and HR practitioners had to think creatively to streamline their recruitment process. The current study utilised a cross-sectional method among 119 job applicants to investigate applicants' reaction in asynchronous video interviews in predicting their behavioural outcomes and whether culture moderates these relationships. It is hypothesised that applicants' reaction (i.e. applicants' perception of fairness and favourability) will significantly predict applicants' behavioural outcomes (i.e. applicants' recommendation intentions, withdrawal intentions and perceived procedure performance). Moderation analysis was conducted to examine the moderation effects of culture. Results demonstrated that applicants' perception of fairness towards AVIs significantly predict all behavioural outcomes. However, applicants' perception of favourability towards AVIs only predict recommendation intentions. Also, this study showed that culture only moderates the relationship between applicants' perception of favourability and perceived procedure performance. Limitations, suggestions for future direction and practical implications based on the findings were also discussed in this paper.

**Keywords:** Applicants' Reaction, Behavioural Outcomes, Culture, Asynchronous Video Interviews (AVIs).

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## 1. INTRODUCTION

Since the 2000s, the advancement of technology has emerged as a key medium in the Human Resource (HR) practice for personnel selection and recruitment (Lievens & Harris, 2003). According to research by CB Insights, HR technology industries have invested more than \$2 billion in promoting the use of technology to facilitate HR processes such as learning, recruitment, and employee engagement to improve human resource management (Bersin, 2016). Employment interview is one of the key roles of human resource management and also an essential component to the personnel selection process (Torres & Mejia, 2017). Due to the recent global pandemic (i.e. Covid-19), the use of technology in personal selection has significantly increased with 8 out of 10 hiring managers now utilising technology as a key part of their personnel selection (Steinberg, 2020).

Traditionally, the applicant selection process involved face-to-face assessments or interviews between the applicant and the interviewer(s). However, due to an increase in the usage of information technologies for personnel selection, the means of interviewing have undergone a major revolution. Preliminary interviews are now mostly conducted online. For example, Winzenburg (2011) found that skype interviews accounted for 12-18% of hiring interviews, bypassing traditional face-to-face interviews. HireVue a leading interview technology platform, supported over 10 million virtual interviews and has seen a 24% increase in users during the past

year (Cummings, 2021). Similarly, Modern Hire an interview technology organisation, mentioned that they have collectively conducted over 20 million online interviews and saw an increase of 40% in users in 2019 (Rubinstein, 2020). Furthermore, the amount of job applications have increased dramatically due to the Covid-19 pandemic, as individuals are aggressively seeking out for employment opportunities, similar to what was observed in the last recession (Weber, 2012). In the past year, it is also noticed that organisations have become more dependent on using technology-based interviewing platforms as part of their recruitment process (Cummings, 2021). By using technology-based interviewing platforms such as video interviews organisations can save costs and time, both for the organisation and the applicant. Additionally, there are other benefits to use new technology for personnel selection which includes amongst others, standardisation of recruitment process, efficiency and extension of applicant pool (Chapman and Webster, 2003). Conversely, Stephen et al. (2019) asserted that applicants perceive technology-based interviewing platforms as less fair and favourable, as they find it more challenging to regulate and understand conversations when done virtually as compared to face-to-face interviews.

Although there are potential advantages of implementing technology-based interviewing platforms as part of the selection process, the possibility of undesired effects experienced by the applicants (Brenner et al., 2016) should also be taken into consideration. The study of applicants' reaction is crucial as it does not only influence applicant's perceived organisational attractiveness, but also affects their intention to withdraw from the interview process, recommend the organisation to others, or accept the job offer (Steiner & Gilliland, 2001; Anderson et al., 2004; Hausknecht et al., 2004). Hence, understanding its prevalence and procedural fairness on applicants' reaction and acceptability of technology-based interviewing platforms as a selection process would shed great insights to this area of research now and in the future. Moreover, technology-based interviews will have staying power moving forward given the growing trends for use of technology in recent years. A study found that over 50% of hiring managers are performing interviews remotely during this pandemic and 20% of them believe this will be the new normal and a permanent benefit (Addison, 2020). Personnel selection and recruitment research over the past years have mainly focused on the organisational perspective whereas only a handful of studies have focused on applicants' reaction (Anderson et al., 2004) towards applicants' behavioural outcomes. Therefore, this study aims to expand the current research by examining applicants' reaction towards technology-based interviews in predicting applicants' behavioural outcomes.

In today's increasingly globalised workplace, more organisations are seeking to build and expand their workforce by hiring international employees to provide different insights and experiences. As such, technology-based interviews can help save time and money for organisations and job applicants who are geographically dispersed (i.e. applicant does not need to travel to the organisation for the interview), while expanding the applicant pool size and diversity range. However, little is known about how applicants from different background cultures specifically from collectivistic countries may react to technology-based selection process, given the majority of research and theories regarding applicants' reaction adopt a US-centric perspective (i.e. individualistic culture perspective) (Allen et al., 2014). This narrow outlook may be misleading, especially in today's increasingly global network of opportunities. It is uncertain whether the findings to date which mostly adopts individualistic culture perspective can be generalised to cultures from collectivistic countries. Moreover, in the field of organisational psychology and behaviour, scholars have found that 96% of the experiment participants are from Western countries, which only accounts for 12% of the world's population (Henrich et al., 2010). With the growing interest of most organisations to build an international workforce and adopting technology-based interviews as part of their recruitment process, exploring the cultural-level influences serve great insights to this area of research.

Based on the aforementioned and in light of the growing popularity of using technology-based interviewing platforms in these selection process and global recruitment, the present study

attempts to contribute by studying applicants' reaction towards technology-based interviews across individualistic and collectivistic cultures.

### **1.1 Technology-Based Interviews - Asynchronous Video Interviews (AVIs)**

Technology-based interviewing platforms (i.e. online and video interviews) fall into two categories: (i) synchronous video interview (SVI) and (ii) asynchronous video interview (AVI). SVIs are interviews that are conducted in real time, requiring all parties to be online simultaneously, such as Skype, or Facetime, or Adobe Connect; whereas AVIs are not conducted in real-time (non-live), allowing all parties greater flexibility in the scheduling component (O'Connor et al., 2008). In other words, AVIs are also known as 'one-way' interviews where applicants receive an invitation link from the organisation, and will then utilize a web camera to record an answer to the interview questions (Tolan, 2012). Although SVIs are relatively more popular, the usage of AVIs have been on an increasing trend for the past years. (O'Connor et al., 2008). Research has been unable to provide sufficient guidance since AVIs are a novel selection method in recent years and research in this area is nascent. Therefore, this study will utilise AVIs as a research context to understand applicants' reaction towards AVIs and how this affects their behavioural outcomes.

## **2. THEORETICAL FRAMEWORK**

The present study will adopt Gilliland's (1993) organisational justice theory framework (Truxillo et al., 2017) on applicants' reaction. This theory focuses on the perceived fairness of three components (a) procedures and rules used when making decisions (procedural justice), (b) outcome allocations (distributive justice), and (c) respect and sensitivity shown towards individuals (interpersonal justice). The principal assumption of the organisational justice theory in selection context is that applicants' perception towards selection procedures in terms of these three facets of justice will influence applicants' future attitudes, self-perceptions, intentions and behaviours (Hausknecht et al., 2004). For instance, the theory suggests that applicants who felt that they were treated unfairly during the selection process will have negative behavioural outcomes such as not recommending the organisation to others or withdrawing from the selection process. The present study focuses only on procedural justice perceptions because this study focuses on the fairness of the procedures and does not focus on how fair the process actually is which is measured by the other two justice perceptions.

Procedural justice rule refers to the perceived fairness of the procedure used to make organisational decisions (Cropanzano & Gilliland, 2007). According to Steiner and Gilliland (1996), procedural rules comprise of four dimensions: interpersonal treatment, opportunity to perform, perceived job relatedness and propriety of questions. Specifically, procedural rules suggest that these dimensions will influence applicant fairness perceptions of the selection process. Research has demonstrated that procedural justice perceptions influence applicant perspectives towards organisations (Cropanzano & Gilliland, 2007). For instance, if applicants perceive the selection process to be biased or unfair, applicants are more likely to develop negative attitudes towards the organisation (Nikolaou et al., 2019). As a result, applicants may withdraw from the process prior to the opportunity to acquire more information about the organisation or job role. This is because applicants who consider the selection process as unfair are more likely to consider the hiring process to be unfair as well. Likewise, a fair selection process will not only result in favourable applicants' reaction but also favourable outcomes towards and within the organisation (e.g. organisational trust, organisational attractiveness and employee commitment) (Kim, 2009). Therefore, procedural justice is a crucial facet of applicants' reaction towards personnel selection.

Applicant reaction is described as "attitudes, affect, or cognitions an individual might have about the hiring process" (Ryan & Ployhart, 2000, p.566). In this study, applicants' reaction refers to a job applicant's thoughts, feelings, and attitudes towards AVIs as part of their job application process. The study of applicant reaction is crucial because if applicant perceives the selection

process to be unfavourable or unfair, this may influence their behavioural outcomes. For instance, they are less likely to accept the job offer and to recommend the organisation to others. In fact, applicants who have negative experiences during the selection process may even dissuade future applicants from seeking employment with the organisation (Hausknecht et al., 2004). Essentially, a biased selection process may not only impose a negative image of the organisation on the applicants but may also cause the organisation to lose top candidates (Hausknecht et al., 2004). Therefore, it is important for organisations to take note of applicants' reaction to avoid potential losses to the company - be it in terms of losing top candidates, or in the worst cases, facing potential lawsuits.

The present study will examine how applicants' reaction predicts behavioural outcomes, focusing on perceived procedure performance, recommendation intentions and withdrawal intentions. Recommendation intentions refer to applicants' intentions to recommend the organisation to others (Konradt et al., 2013). Withdrawal intentions, on the other hand, refer to applicants' intentions to withdraw from the selection process (Ryan et al., 2000). Perceived procedure performance refers to applicants' self-assessed perceptions of performance with reference to the screening tools (Smither et al., 1993). It is important to study these outcomes because when applicants believe they performed poorly on the test, they may view the entire selection process negatively. As a result, applicants may form negative perceptions of the organisation which will then affect their recommendation and withdrawal intentions.

Additionally, Bauer et al., (2001) stated that applicants who feel they are treated fairly in the hiring process, are likely to have a positive impression of the organisation. Cropanzano and Gilliland (2007) also asserted that by having a fair selection process equates to building the foundation for a relationship of trust and justice with the applicants. Besides, in a series of studies by Ryan and his colleagues (e.g. Schmit & Ryan, 1997; Ryan et al., 2000) investigating the relationship between applicants' reaction and their withdrawal intentions to the selection process, found that 12% of the applicants who perceived selection process injustice reported withdrawing from the process. They also found a moderate relationship between justice and withdrawal (Ryan et al., 2000).

Given that applicants' reaction is crucial in personnel selection, and based on the procedural justice rule, it is important to understand applicants' perception of fairness towards AVIs with various applicants' behavioural outcomes. Hence, the following hypotheses are proposed:

H1: Applicants' perception of fairness towards AVIs significantly predict applicants' a) withdrawal intentions, b) recommendation intentions, c) perceived procedure performance.

While it is important to understand how applicants' perception of fairness influences their behaviour, researchers may be overlooking other perceptions that could also be influential. Even though applicants' reaction refers to applicant's attitudes, cognition or affect towards the hiring process, most of the research in this area has mainly focused on applicant's attitudes (i.e. perception of fairness on the selection process) based on the organisational justice theory. Ryan and Greguras (1998) noted that one of the limitations of this area of research is the narrow focus on fairness perceptions and that researchers overlook the fact that preference is a different notion from fairness. Therefore, researchers need to consider other perceptions to fully understand how applicants react to a selection process and how these perceptions may influence their behaviours (Ryan & Ployhart, 2000).

Past studies (Toldi 2011; Guchait et al. 2014) have focused on studying applicants' favourability preference to different selection tools or the overall favourability of the selection tool, but limited research has studied the direct link of how these perceptions influence applicant's behaviour or workplace attitudes. Hausknecht et al.,'s (2004) meta-analysis demonstrated that interviews and work samples were perceived more favourably than other selection methods (e.g. cognitive ability

test, personality inventories, honesty test and biodata). Toldi (2011) also asserted that overall favourability towards AVIs may be positively associated with applicants' behavioural intentions. However, it remains unknown as to what extent do applicants' preference for certain selection tools actually influence their behavioural outcomes as past studies have not directly measured this. Therefore, to address this gap, the following hypotheses are proposed:

H2: Applicants' perception of favourability towards AVIs significantly predict applicants' a) withdrawal intentions, b) recommendation intentions, c) perceived procedure performance.

### **2.1 Individualistic and Collectivistic Culture**

In today's increasingly globalised workplace with an increase in international hiring, it is essential to understand the impact of cultural influences have on the selection process to ensure smooth operations of the organisation. From the organisational justice perspective, Cropanzano (1998) asserts that culture is seen as a lens through which an individual will interpret the procedures and distribution performed by an organisation. While it often depends on what the individual expects in that specific context, culture is likely to influence these expectations as culture shapes the way an individual interprets events and defines what behaviours are deemed to be appropriate. Therefore, as recommended by Hausknecht and colleagues (2004), future research on applicants' reaction should incorporate cross-cultural differences. To date, research examining cultural differences mainly uses Hofstede's (1980) value dimensions, that is individualism-collectivism, uncertainty avoidance, power distance, and masculinity-femininity. These dimensions are potentially helpful in understanding the consequences and causes of national differences in organisational justice reactions (Steiner & Gilliland, 2001). The current study will operationalise culture as individualism-collectivism at a country level.

Specifically, individualism is defined as a preference for a loosely-knit social framework in which individuals are only concerned with themselves and their immediate family members (Hofstede & Bond, 1984). Conversely, collectivism is defined as a preference for a tightly-knit social framework in which individuals feel they belong to a larger in-group who looks after them in exchange for unquestioning loyalty (Hofstede & Bond, 1984). In other words, people from individualistic societies have high elements of personal self, (e.g. 'I am smart'), whilst people from collectivistic societies have elements of collectivistic self, (e.g. 'my family thinks I am smart'). Examples of typical individualistic societies are Western Europe, Great Britain, Australia and North America whereas examples of typical collectivistic societies are Asia, Africa, and South America (Triandis, 2001).

It was found that collectivists tend to be extrinsically motivated, improving and changing themselves to meet the demands of society whereas individualists tend to be intrinsically motivated, striving to attain success for themselves as they have a greater need to be seen as unique and to express their freedom of choice (Triandis & Suh, 2002; Barret et al., 2004). Collectivists are also more interpersonally engaged as compared to individualists. Generally, collectivists base their decisions and sense of life satisfaction on social norms and approval of others instead of emotions. Individualists on the other hand, base their own major decisions on their emotions; and it was also reported that positive emotions are strong predictors of individualist life satisfaction (Schimmack et al., 2002; Triandis & Suh, 2002).

Therefore, in an AVIs selection context when the presence of the interviewer is absent, collectivists may not favour this selection process as much as compared to individualists. This may be because, as mentioned, collectivists are more interpersonally engaged, and seek external motivation or approval, thus when interpersonal interactions (e.g. body cues, eye contact, nodding of interviewer in response of approving what they have said) are restricted due to the technology barrier of AVIs, collectivists may react negatively such as withdrawing from the process or having a negative perception of favourability towards AVIs. Besides, past research has proven that individualists favour dispositional explanations to explain their behaviour while

collectivists favour situational explanations (Krull et al., 1999). Therefore, when collectivists do not perform on AVIs, they may associate their failure to the situation (e.g. biased selection procedures). Conversely, when individualists do not perform, they may view themselves as the cause of their failure (e.g. his own ability), thus may not have any negative reactions towards the organisation or the selection procedure.

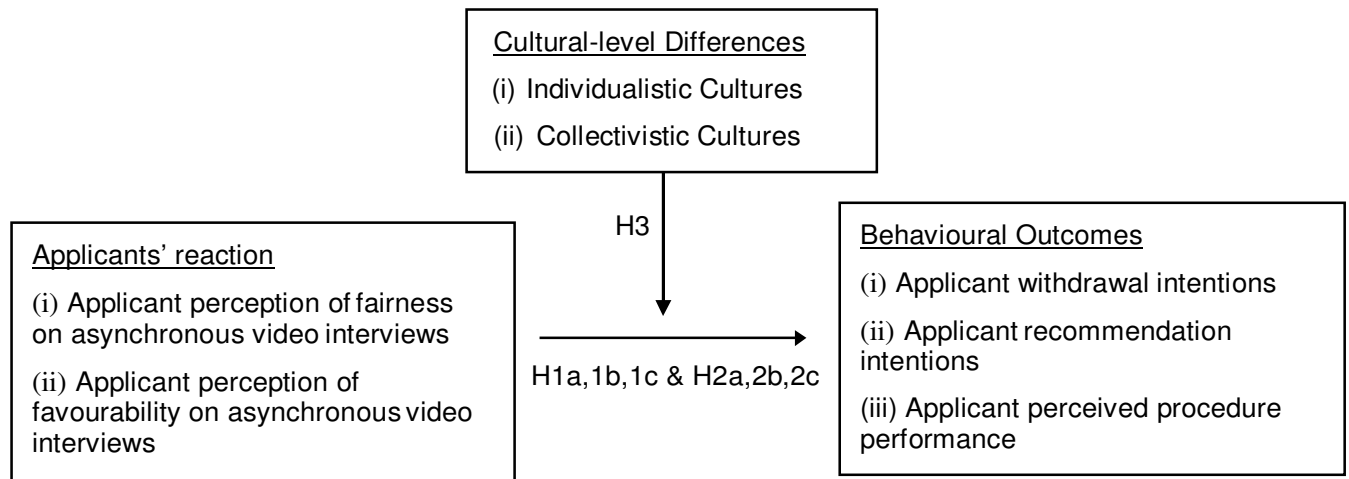
In addition, researchers have postulated that cultural-level influences may explain the variation in reactions to selection procedures (Steiner & Gilliland, 2001). For example, Walsh et al. (2010) investigated the moderating role of culture practices on the effect of selection process fairness and found that the relationship between organisational attractiveness and perceptions of selection process was positive among all applicants; specifically, applicants who are from societies that demonstrate high levels of performance-oriented practices. Conversely, Ryan et al. (2009) asserted that culture may affect the degree to which selection fairness perceptions predict behavioural outcomes. They attempted to investigate the relationship of selection fairness perception on outcomes moderated by societal culture and whether cultural values explained variability in the effect of perception of fairness on the selection process. However, their findings demonstrated that there were no evidences of moderating effect of culture at either level. In support, past studies that attempted to study the relationship between procedural justice perceptions of selection process and cultural values have also not found any consistent patterns in the relationship (Marcus, 2003; Ryan et al., 2009).

Given the differences between individualistic and collectivistic cultures, it is believed that there may be cultural differences regarding how applicants perceived the fairness and favourability towards AVIs in selection processes. Also, to my knowledge and in reviewing the literature for this topic, the effect of culture on applicants' reaction towards AVIs has not been adequately evaluated in the applicants' reaction literature, therefore the present study would be an exploratory study exploring whether culture influences applicants' reaction towards AVIs in predicting their behavioural outcomes. Hence the following hypothesis is proposed:

H3: Culture moderates the relationship between applicants' reaction towards AVIs and applicants' behavioural outcomes.

### **3. THE PRESENT STUDY**

The aims of the present study are (i) to investigate how applicants' reaction (i.e. perception of fairness and favourability) towards AVIs predict behavioural outcomes and (ii) to investigate how cultural differences moderate the ability of applicants' reaction to predict behavioural outcomes. Past research mainly used lab participants or students as sample, thus the present study will address this issue by using real job applicants instead. Similarly, Chapman et al. (2005) states that fairness perceptions of actual job applicants, as compared to students or non-applicants, towards selection processes are stronger predictors of outcomes. Besides that, there is a narrow line of research in applicants' reaction literature whereby most studies mainly focus on organisational justice theory or perceptions of fairness. Hence, as a new approach, the present study will explore perception of favourability as one of the predictors of outcomes. Additionally, cultural-level influences will also be investigated. The hypothesis of the study are applicants' perception of fairness and favourability are a significant predictor of applicants' behavioural outcomes; and an exploratory study is also conducted to investigate if culture plays a role in moderating these relationships. The results of the present study will highlight whether applicants' perception fairness and favourability towards AVIs predict key outcomes such as recommendation intentions, withdrawal intentions and perceived procedure performance. The present study aims to provide insight for organisations to develop strategies to improve their selection processes, and act as launching pad for future cross-cultural studies in applicants' reaction towards AVIs and behavioural outcomes. The research model of the present study is illustrated in Figure 1 below.



**FIGURE 1:** Research Model.

### 3.1 The Research Context

To study applicants' perception towards AVIs, the present study collaborated with Sonru - a technology company that provides automated online video interviewing for screening candidates. Sonru is used by organisations from a wide variety of industries including organisations listed in the Fortune Global 500 companies. Sonru's automated online video interviews are asynchronous. The candidate records their interview answers online through a webcam or mobile device. The interviewers are then able to view the interviews whenever they want. Once the company has invited the candidates to complete a video interview, candidates have a specific timeframe to go online and complete it. During that timeframe, candidates log on to Sonru's website and begin the process. Instructions and practice sessions are given prior to the interview to ensure that the candidate's webcam and microphone are functioning properly. As the interview begins, the candidate will have a specific timeframe to view the question and then respond to that specific question, depending on the interviewer's request. For instance, the candidate views the question on their computer screen or mobile device for 1 minute and then they have up to 2 minutes 30 seconds to respond to that specific question. The process is similar for each question. Upon completion, candidates can replay their answers to see how they have performed, but they are unable to change their answers. Interviewers are notified once the video interview has been completed so they can log on to their account and evaluate the interview in their own time.

## 4. METHODOLOGY

### 4.1 Participants

Initially there were 148 respondents, but 29 were excluded as they did not complete the questionnaire. Hence, the sample consisted of N = 119 respondents. Demographic forms were given to all participants to elicit their demographic data as shown in Table 1 below. Participants were grouped into the individualistic culture and collectivistic culture based on their nationality only. This study does not consider where they currently reside.

Demographics	Descriptions
Sample size	N = 119 respondents
Gender	58.7% females (N = 71) and 40.3% males (N = 48)
Age	18 to 64 years old (M = 39.8, SD = 11.5)
Culture	60.5% individualists (N=72) and 39.5% collectivists (N=47)

**TABLE 1:** Participants demographic details.

This study adopts a voluntary response sampling. The inclusion criteria for the study was any job applicant of various roles who used Sonru's AVIs as part of their application process and were 18 years old and above. Participation for this study was entirely voluntary. The exclusion criteria were individuals with hearing or vision disabilities. Since the present study context involved video interviewing, applicants with hearing and vision disabilities may have more extreme responses as they may feel they are at a disadvantage in this selection tool, and this may potentially skew the results of the study. Apart from that, the job profile, organisation and industry of the job application was not controlled.

#### 4.2. Procedure

The questionnaire was administered using Qualtrics, an online survey tool. An invitation to the participant was sent through an online link posted on Sonru's platform. The link was revealed to all job applicants who undertook Sonru's AVIs as part of their application process and it directed participants to the questionnaire on Qualtrics. Participants responses were assured of confidentiality and anonymity. Before starting the questionnaire, all participants were asked to give their consent to participate. Below is the description of the invitation participants received through Sonru's platform:

"An MSc in Organisational Psychology student from City University, London, is currently conducting research to understand more about applicant experiences of video interviews. This research aims to ascertain if applicants from different cultures react differently to asynchronous video interviews. It would involve completing another short online questionnaire that will take no longer than 15 minutes.

This additional survey is voluntary and will in no way affect the outcome of your video interview. Your participation would be greatly appreciated. Click here for more information and to complete the survey."

#### 4.3 Measures

**Applicant Perception of Fairness towards AVIs.** Fairness was measured with 12 items that were adopted from Guchait et al.,'s (2014) research. Participants were asked to rate to what extent they agreed with each statement based on the recent AVI they took. A sample item is "The video interview method will detect the individual's important qualities differentiating them from others." The score of the scale is calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1) questions 3, 4, 6 and 8 and summing the remaining questions. Hence, higher scores indicate higher perception of fairness towards AVIs. The Cronbach's alpha for the scale was .85.

**Applicant Perception of Favourability towards AVIs.** Favourability was measured with 10 items that were adapted from Toldi's (2010) perceptions of video interview scale. Participants were asked to rate to what extent they agreed with each statement based on the recent AVI they took. A sample item is "Video interviewing was a positive experience" The score of the scale is calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1) questions 3 and 5 and summing the



remaining questions. Hence, higher scores indicate higher perception of favourability towards AVIs. The Cronbach's alpha for the scale was .89.

**Behavioural outcomes. Recommendation intentions** was measured using the scale adopted from Smither et al. (1993) studies. The item was 'I would recommend this company to others.' Hence, higher scores indicate higher recommendation intentions. **Withdrawal intentions** was measured using the scale adopted from Macan et al. (1994) studies. The item was 'I will continue participation in the application process.' The score for applicants' withdrawal intentions was calculated by reverse scoring (1=5, 2=4, 3=3, 4=2, 5=1). Hence, higher scores indicate higher withdrawal intentions. **Perceived procedure performance** was measured with the three-item scale from Macan et al. (1994). The items were 'I believe I have performed well on the interview that I did today', 'I have control over the factors that influenced my performance on the interview', 'The interview was fair.' The Cronbach alpha for the scale was .58. Due to the relatively low Cronbach alpha, the item 'I believe I have performed well on the interview that I did today' was removed from this study, thus, increasing the Cronbach alpha to 0.64. The score was calculated by summing both remaining items. Hence, higher scores indicate higher perceived procedure performance.

## 5. RESULTS

The descriptive statistics (means, standard deviation, alphas, and correlation coefficients) for all measures are presented in Table 2.

Variable	Mean	SD	1	2	3	4	5
1. Applicants' perception of fairness	45.09	6.57	(0.85)				
2. Applicants' perception of favourability	30.72	7.52	0.661**	(0.89)			
3. Recommendation intentions	3.97	0.878	0.710**	0.581**	-		
4. Withdrawal intentions	1.72	0.736	-0.537**	-0.428**	-0.457**	-	
5. Perceived procedure performance	7.20	1.65	0.696**	0.552**	0.454**	-0.442**	(0.64)

Note.  $n=119$ ; \*\* $p < .01$  (two-tailed). All correlations are Pearson's correlation coefficients ( $r$ ).

Cronbach's are in parentheses on the diagonal.

**TABLE 2:** Summary of Means, Standard deviations, Cronbach's alpha and Correlations between the variables.

### 5.1 Regression Analysis

Hypothesis 1a and 2a predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' withdrawal intentions. By using multiple regression, the results (see Table 3) show that a significant model emerged,  $R = .55$ ,  $r^2 = .30$ ,  $F(2,116) = 24.56$ ,  $p < .001$ . It was found that applicants' perception of fairness ( $\beta = -.451$ ,  $p < .001$ ) significantly predicted withdrawal intentions. Thus, as applicants' perception of fairness increases by 1 unit, withdrawal intentions decrease by  $-.451$ ,  $t = -.435$ ,  $p < .001$ . Hence, hypothesis 1a is supported where applicants' perception of fairness towards AVIs is a significant predictor of applicants' withdrawal intentions. Conversely, applicants' perception of favourability ( $\beta = -.130$ ,  $p = .21$ ) did not significantly predict their withdrawal intentions. Hence, hypothesis 2a is not supported.

Predictors	B	SE (B)	$\beta$	t
1. Applicants' perception of fairness	- 0.51	0.012	-0.451	- 4.35***
2. Applicants' perception of favourability	- 0.13	0.10	-0.130	- 1.25

Note. \*\*\* $p < .001$

**TABLE 3:** Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of withdrawal intentions.

Hypothesis 1b and 2b predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' recommendation intentions. By using multiple regression, the results (see Table 4) show that a significant model emerged,  $R = .73$ ,  $r^2 = .53$ ,  $F(2,116) = 64.50$ ,  $p < .001$ . It was found that applicants' perception of fairness ( $\beta = .58$ ,  $p < .001$ ) and favourability ( $\beta = .20$ ,  $p = .02$ ) significantly predicted their recommendation intentions. Thus, as applicants' perception of fairness increases by 1 unit, recommendation intentions increase by .580,  $t = 6.81$ ,  $p < .001$  and as applicants' perception of favourability increases by 1 unit, recommendation intentions increase by .197,  $t = 2.32$ ,  $p < .05$ . Hence, both hypothesis 1b and 2b is supported where applicants' perception of fairness and favourability towards AVIs are significant predictors of applicants' recommendation intentions.

Predictors	B	SE (B)	$\beta$	t
1. Applicants' perception of fairness	0.078	0.011	0.580	6.81***
2. Applicants' perception of favourability	0.023	0.010	0.197	2.32*

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

**TABLE 4:** Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of recommendation intentions.

Hypothesis 1c and 2c predicted that applicants' perception of fairness and favourability towards AVIs significantly predicted applicants' perceived procedure performance. By using multiple regression, the results (see Table 5) show that a significant model emerged,  $R = .71$ ,  $r^2 = .50$ ,  $F(2,116) = 57.83$ ,  $p < .001$ . It was found that applicants' perception of fairness ( $\beta = .59$ ,  $p < .001$ ) significantly predicted their perceived procedure performance. Thus, as applicants' perception of fairness increases by 1 unit, perceived procedure performance increase by .588,  $t = 6.72$ ,  $p < .001$ . Hence hypothesis 1c is supported where applicants' perception of fairness towards AVIs is a significant predictor of applicants' perceived procedure performance. Conversely, applicants' perception of favourability ( $\beta = .163$ ,  $p = .06$ ) did not significantly predict their perceived procedure performance. Hence, hypothesis 2c is not supported.

Predictors	B	SE (B)	$\beta$	t
1. Applicants' perception of fairness	0.148	0.022	0.588	6.718***
2. Applicants' perception of favourability	0.036	0.019	0.163	1.861

Note. \*\*\* $p < .001$

**TABLE 5:** Summary of multiple regression analysis for applicant perception of fairness and favourability towards AVIs as predictors of perceived procedure performance.

## 5.2 Moderation Analysis

To examine the moderation effects of culture on applicants' perception of fairness and favourability towards AVIs and behavioural outcomes, Hayes (2012) PROCESS macro was conducted.

**Perception of Fairness - Recommendation Intentions as Moderated by Culture.** Results showed that the overall model of applicants' perception of fairness on recommendation intentions moderated by culture was significant,  $F(3,115) = 33.55, p < .001, R^2 = .51$ . As for individual predictors, culture was found not significant  $b = .16, t(115) = 1.38, p = .17$  whereas applicants' perception of fairness was significant,  $b = .10, t(115) = 9.96, p < .001$  on recommendation intentions. The interaction effect was found to be non-significant,  $b = -.01, t(115) = -.48, p = .63$ . Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and recommendation intentions (see Table 6).

**Perception of Fairness - Withdrawal Intentions as Moderated by Culture.** Results showed that the overall model of applicants' perception of fairness on withdrawal intentions moderated by culture was significant,  $F(3,115) = 11.47, p < .001, R^2 = .30$ . As for individual predictors, culture was found not significant  $b = .12, t(115) = .98, p = .33$  whereas applicants' perception of fairness was found to be negatively significant,  $b = -.06, t(115) = -5.19, p < .001$  on withdrawal intentions. The interaction effect was found to be non-significant,  $b = -.02, t(115) = -.65, p = .52$ . Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and withdrawal intentions (see Table 6).

**Perception of Fairness - Perceived Procedure Performance as Moderated by Culture.** Results showed that the overall model of applicants' perception of fairness on perceived procedure performance moderated by culture was significant,  $F(3,115) = 36.20, p < .001, R^2 = .49$ . As for individual predictors, culture was found not significant  $b = -.013, t(115) = -.06, p = .95$  whereas applicants' perception of fairness was significant,  $b = .148, t(115) = 2.91, p < .005$  on perceived procedure performance. The interaction effect was found to be non-significant,  $b = 0.20, t(115) = .55, p = .59$ . Thus, this confirms that culture does not moderate the relationship between applicants' perception of fairness towards AVIs and perceived procedure performance (see Table 6).

Outcomes	coeff	se	t	p (LLCI, ULCI)
1. Withdrawal intentions	-0.015	0.023	-0.65	0.520 (-0.0609, 0.0310)
2. Recommendation intentions	-0.009	0.019	-0.48	0.629 (-0.0474, 0.0288)
3. Perceived procedure performance	0.195	0.036	0.55	0.586 (-0.0513, 0.0902)

Note. Moderator: Individualists-Collectivists

**TABLE 6:** Summary of moderation model of culture differences on applicant perception of fairness on behavioural outcomes.

**Perception of Favourability - Recommendation Intentions as Moderated by Culture.** Results showed that the overall model of applicants' perception of favourability on recommendation intentions moderated by culture was significant,  $F(3,115) = 24.84, p < .001, R^2 = .35$ . As for individual predictors, culture was found not significant  $b = -.21, t(115) = -1.65, p = .10$  whereas applicants' perception of favourability was significant,  $b = .07, t(115) = 8.08, p < .001$  on recommendation intentions. The interaction effect was found to be non-significant,  $b = .01, t(115) = .50, p = .61$ . Thus, this confirms that culture does not moderate the relationship between applicants' perception of favourability towards AVIs and recommendation intentions (see Table 7).

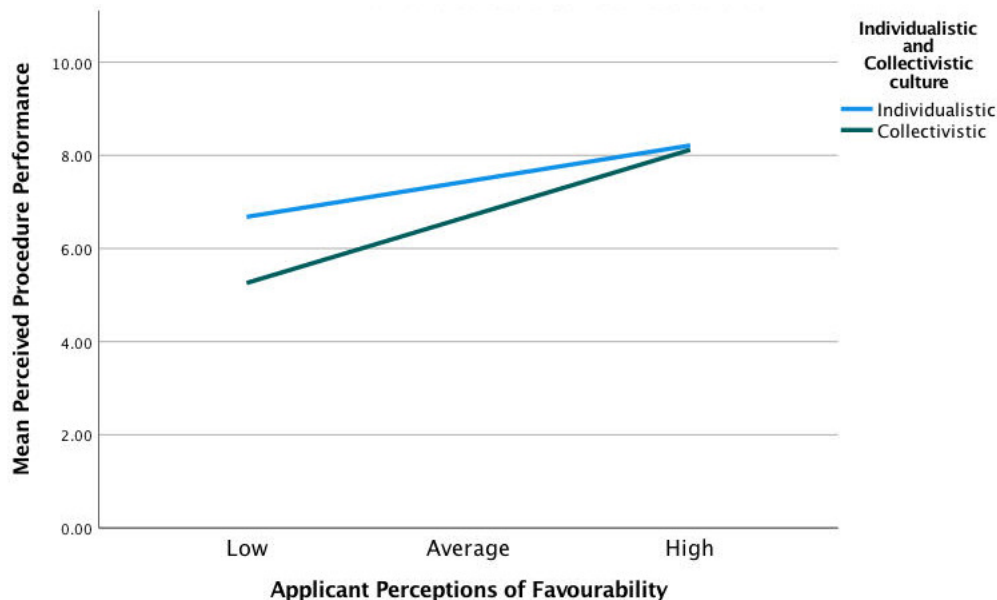
**Perception of Favourability - Withdrawal Intentions as Moderated by Culture.** Results showed that the overall model of applicants' perception of favourability on withdrawal intentions moderated by culture was significant,  $F(3,115) = 8.50, p < .001, R^2 = .26$ . As for individual predictors, culture was found significant  $b = .39, t(115) = 2.81, p = .006$  and applicants' perception of favourability was found to be negatively significant,  $b = -.05, t(115) = -4.45, p < .001$  on withdrawal intentions. However, the interaction effect was found to be non-significant,  $b = -.03, t(115) = -1.31, p = .19$ . Thus, this confirms that culture does not moderate the relationship between applicants' perception of favourability towards AVIs and withdrawal intentions (see Table 7).

**Perception of Favourability - Perceived Procedure Performance as Moderated by culture.** Results showed that the overall model of applicants' perception of favourability on perceived procedure performance moderated by culture was significant,  $F(3,115) = 23.33, p < .001, R^2 = .38$ . As for individual predictors, culture was found significant  $b = -.76, t(115) = -3.00, p = .003$  and applicants' perception of favourability was not significant,  $b = .01, t(115) = .28, p = .78$  on perceived procedure performance. The interaction effect was also significant at,  $b = .09, t(115) = 2.47, p = .015$ . Thus, this confirms that culture does moderate the relationship between applicants' perception of favourability towards AVIs and perceived procedure performance (see Table 7). As a follow-up analysis, an interaction plot was plotted (see Figure 2).

Outcomes	coeff	se	t	p (LLCI, ULCI)
1. Withdrawal intentions	-0.032	0.024	-1.31	0.194 (-0.0794, 0.0163)
2. Recommendation intentions	0.009	0.017	0.50	0.616 (-0.0254, 0.0427)
3. Perceived procedure performance	0.0883	0.036	2.47	0.015 (0.0175, 0.1590)

Note. Moderator: Individualists-Collectivists

**TABLE 7:** Summary of moderation model of culture differences on applicant perception of favourability on behavioural outcomes.



**FIGURE 2:** Applicants' perception of favourability and culture interaction in predicting perceived procedure performance.

As seen in the graph Figure 2 above, it was predicted that at lower levels of perception of favourability, individualists tend to have higher perceived procedure performance than collectivist. These cultural differences reduce as the perception of favourability increases. Specifically, both individualistic culture  $b = .102$ ,  $t(115) = 5.23$ ,  $p < .001$  and collectivistic culture  $b = .190$ ,  $t(115) = 6.36$ ,  $p < .001$  significantly moderate the relationship between applicants' perception of favourability and their perceived procedure performance. All in all, culture only moderates applicants' perception of favourability towards AVIs and their perceived procedure performance. Culture did not moderate the relationship between applicants' perception of fairness towards AVIs and their behavioural outcomes as well as applicants' perception of favourability and their recommendation and withdrawal intentions.

## 6. DISCUSSION

The present study is aimed to ascertain whether applicants' reaction (i.e. perception of fairness and favourability) towards AVIs predict applicants' behavioural outcomes (i.e. recommendation intentions, perceived procedure performance and withdrawal intentions) as well as to investigate to what extent culture moderates these relationships. Findings from this study showed that applicants' perception of fairness towards AVIs is a significant positive predictor for recommendation intentions and perceived procedure performance, whereas withdrawal intentions, on the other hand, were found to have a significant negative prediction. Applicants' perception of favourability towards AVIs were found to be non-significant for withdrawal intentions and perceived procedure performance however, there is a significant positive predictor for recommendation intentions. It was found that the higher the applicant favourability towards AVIs were, the higher the applicants' intentions of recommending the organisation to others. The study also investigated if culture moderates applicants' perception of fairness and favourability on their behavioural outcomes, however the findings showed that culture did not moderate any of the above relationships except for applicants' perception of favourability towards AVIs and their perceived procedure performance.

Consistent with Gilliland's (1993) organizational justice theory framework (Truxillo et al., 2017) this study provided support for the notion that applicants' perception of fairness towards AVIs significantly predicted applicants' behavioural outcomes such as recommendation intentions, withdrawal intentions and perceived procedure performance. Specifically, higher perception of the AVIs as a fair selection tool predicted higher recommendation intentions, higher perceived procedure performance and lower withdrawal intentions among the applicants. This suggests that applicants who viewed the AVIs selection process as fair, were more likely to recommend the organisation to others, believe they had performed well and were less likely to withdraw from the process. While past research, utilizing non-applicants, has shown that positive applicant experiences are associated with enhanced recommendation intentions, organisational attractiveness and lower withdrawal intentions (Hunthausen, 2000; Ryan et al., 2000; & Konradt et al., 2013), the present study, utilizing actual job applicants, strengthens the evidence that applicants' reaction does predict their behavioural outcomes. This comparable result, indicates that the use of non-applicants as participants do indeed reflect the perceptions and behaviours of actual job applicants.

The findings of this study are also in line with Toldi's (2011) prediction that higher perception of favourability towards AVIs predicted higher recommendation intentions. On the contrary, the finding of this study found that applicants' perception of favourability did not significantly predict withdrawal intentions and perceived procedure performance. When a simple regression was conducted, applicants' perception of favourability towards AVIs significantly predicted both withdrawal intentions ( $\beta = -.43$ ,  $t = -5.12$ ,  $p < .001$ ) and perceived procedure performance ( $\beta = .55$ ,  $t = 7.16$ ,  $p < .001$ ). However, when a multiple regression (see Table 3 and 5 above) was conducted, although the overall model remains significant, these individual predictors and their behavioural outcomes vanished. As such, further analysis was conducted and it was found that

applicants' perception of fairness and favourability tends to increase together with a correlation of  $r = 0.66$ . Hence, when we look at the relationship between applicants' perception of favourability with withdrawal intentions and perceived procedure performance while holding applicants' perception of fairness constant, the relationship disappeared. This may be because when applicants perceive the selection process of utilising AVIs is fair, their perception of favourability towards AVIs increases together as well. While past studies have mainly focused on applicants' reaction based on organisational justice theory (Hunthausen, 2000; Ryan et al., 2000; & Konradt et al., 2013), these findings provide novel evidence that applicants' perception of favourability are highly correlated with their perception of fairness and their behavioural outcomes. Yet, there are still limited theories that explain this relationship. Therefore, future research should consider studying this perspective of applicants' reaction.

A major focus of this study was to provide evidence regarding cross-cultural differences (i.e. individualistic-collectivistic) on applicants' reaction towards AVIs and their behavioural outcomes. The results indicated that the ability of applicants' perception of fairness and favourability to predict both recommendation intentions and withdrawal intentions did not depend on cultural-level influences. This suggests that when applicants believe that the AVIs selection process is fair and have a positive feeling towards the process, they would be more likely to recommend the organisation to others and less likely to withdraw from the process regardless of whether the individual is of an individualistic or collectivistic culture. Similarly, this study demonstrated that there is no relationship between applicants' perception of fairness towards AVIs with culture in predicting applicants' perceived procedure performance. This shows that culture did not strengthen or weaken the relationship between applicants' perception of fairness towards AVIs and their perceived procedure performance. These findings suggest that individualistic and collectivistic culture did not moderate applicants' perception of fairness towards AVIs in predicting their behavioural outcomes. Applicants' perception of favourability towards AVIs were moderated by culture for perceived procedure performance but not for recommendation and withdrawal intentions. Examination of the interaction plot demonstrated that although higher levels of perception of favourability predicted higher levels of perceived procedure performance for both individualists and collectivists, certain differences exist as seen in the graph Figure 2 above. At lower levels of perception of favourability, individualists tend to have higher perceived procedure performance than collectivists and these perceptions due to cultural differences gradually reduce as perception of favourability increases. This is due to individuals from individualistic societies being more achievement-oriented as they believe that they have to prove their worth by placing greater value on demonstrating their skills, abilities and achievements (Ryan et al., 2009); and also believe that they have control over the environment in achieving their goals (Trompenaars & Hampden-Turner, 1998). Therefore, even if they do not favour AVIs, their characteristics will motivate them to make an effort to excel in the interview in contrast to collectivists. Hence, this may be one of the reasons why culture has an interaction effect on applicants' perception of favourability in predicting their perceived procedure performance. This study's findings also contribute to building on existing research on the knowledge of moderators on the effect of applicants' perceptions on their behavioural outcomes towards AVIs in which different cultural-levels (i.e. individualistic-collectivistic) manifest.

### **6.1 Theoretical and Practical Implications**

The findings of this study hold various implications. First, this study has provided a better understanding regarding applicants' reaction and behavioural outcomes with the justice theory. This study's findings supported the notion that positive applicants' perception of fairness in technology-based interviews predicted positive behavioural outcomes which includes lower intentions to withdraw from the interview process, more likely to recommend the organisation to others, and increase perceived procedure performance. This is in line with the justice theory and past researches that had examined perception of fairness of traditional selection processes (i.e. face-to-face interviews and behavioural outcomes). Therefore, this provides additional evidence to the current applicants' reaction literature.

Additionally, the present study looked at other aspects of applicants' reaction (i.e. perception of favourability) to study if this perception had similar effects as the justice theory in predicting behavioural outcomes. Interestingly, the findings demonstrated that perception of favourability towards AVIs while holding perception of fairness constant, did not predict applicants' withdrawal intentions and perceived procedure performance. However, applicants' perception of fairness and favourability are both positively correlated with recommendation intentions. Thus, as applicants' perception of favourability and fairness of the selection process increases, this resulted a significant relationship with applicants' intention to recommend the organisation to others. This demonstrated that organisations that uses technology-based interviewing platforms, specifically AVIs will need to cater for fairness of the selection process as applicants' perception of fairness increases with applicants' perception of favourability. As such, organisations should be certain that applicants do not only fully understand how AVIs function, but also how AVIs fits into the selection process. Hence, employers can take precautionary steps by informing applicants about the process and how the information will be used to increase applicants' perception of fairness of the process. Moreover, it was found that applicants who favours the selection process (i.e. AVIs) are likely to recommend the organisation to others.

While the current research provides evidence on applicants' perception and their behavioural outcomes, this area of research is still nascent. Therefore, future studies could explore this area in more detail covering a wider scope or to replicate the study to check the consistency of the results. The findings show that culture does not moderate applicants' reaction towards AVIs on any behavioural outcomes (with the exception of perceived procedure performance), indicates that organisations can adopt AVIs to recruit candidates globally because there is no significant relationship between these two aspects. More specifically, this study suggests that AVIs perform fairly in the selection process for global recruitment because it eliminates the assumption of cultural biases moderating the relationship of applicants' reaction and behavioural outcomes in the selection process (5 out of the 6 relationships measured indicated no cultural differences). The effect of culture in moderating selection fairness and favourability perceptions and behavioural outcomes is small, global organisations may not need to tailor their selection procedures specifically to meet the needs of applicants in different countries. Although the study found that culture does affect the strength of the relationship between applicants' perception of favourability and their perceived procedure performance, the cultural effect decreases as the applicants' perception of favourability increases. Findings showed that there were minimal differences between individualist and collectivists on their perceived procedure performance when their perception of favourability is high. Therefore, organisations can consider taking precautions (e.g. ensure the entire video interview process provide positive experience for the applicant) to minimise the perception of cultural differences, the extent possible.

## **6.2 Limitations and Future Research Recommendations**

There are limitations to this study that should be highlighted. Firstly, the present study did not examine the applicant job positions or level of management, type of jobs or job profiles and industry the applicant is applying to. In order to further explore the patterns found in this study, it will be beneficial for future research aiming to replicate the present study to include a larger sample size and to focus on applicant's managerial responsibilities, types of jobs, different applicant's job profiles and industry. This is because there is a possibility that AVIs are favoured for entry-level positions that does not require hands-on demonstration but possibly not for upper level management positions that require other competencies such as stakeholder management, networking, impact and influence etc. (Guchait et al., 2014) which would be difficult to measure using AVIs. Also, future studies may consider exploring the fairness and favourability of AVIs as a selection tool in different industry job application, as there is a possibility that in industries where technical competencies are critical such as hiring of technicians in a manufacturing industry may view AVIs as a selection tool unfavourably or unfair as AVIs limit their ability to demonstrate their technical skills.

Secondly, the study of the impact of culture on applicants' perception of fairness and favourability premise on the individualism-collectivism dimension at a country level might not capture all the applicants' cultural differences on their reaction. In order to further explore the patterns found in this study regarding culture as a moderating variable, it will be beneficial for scholars to explore other constructs and other notable cultural differences that would further support this area of studies. Gelfand et al., (2007) also asserted that the unpacking of cultural differences in an organisational psychology context, researchers need to move beyond the focus of individualism-collectivism, through studying the nature of roles, strength of social norms and beliefs about social and physical world. Thus, future research should consider the impact of culture as discussed in the present study in more detail by incorporating the emic and etic value of the culture (Wang et al., 2012).

Lastly, future research could consider exploring this area of research from a qualitative perspective (e.g. using open-ended questionnaires or interviews). Since AVIs are a novel tool in the selection process, applicants' feedback may provide valuable insights to organisations regarding the use of this new selection tool. For example, a survey conducted by Toldi (2011) found that some applicants are still unfamiliar with using webcams. There is a possibility that applicants who feel unfamiliar and nervous with webcams, may feel the selection process is unfair and unfavourable and thus drop out from the process. Besides that, considering the changing nature of selection process as well as the impact of technology in the 21<sup>st</sup> century on employee recruitment and selection, there is a need for new studies on applicants' reaction on selection methodology in this digital age.

## 7. CONCLUSION

In conclusion, the present study has examined cross-cultural applicant reactions towards AVIs and their behavioural outcomes. The present study also demonstrated that when applicants believe technology-based interviewing selection process is procedurally fair and are more open towards it, the results showed positive applicants' behavioural outcome, specifically on their recommendation intentions, perceived procedure performance and lower withdrawal intentions. The study also found that there are no significant relationships between applicants' favourability towards technology-based interviewing selection process on any of the behavioural outcomes (with the exception of recommendation intentions). Additionally, this study suggests that culture did not moderate applicants' perception of fairness and favourability towards AVIs on any the behavioural outcomes (with the exception of applicants' perception of favourability towards AVIs on their perceived procedure performance).

Although culture moderated applicants' perception of favourability towards AVIs and their perceived procedure performance, the findings showed that individualists and collectivists have similar perceived procedure performance when there is high perception of favourability towards AVIs (applicants' cultural differences on their reaction reduces). Therefore, organisations can continue to embrace AVIs in their selection and recruitment process while keeping in mind that they will have to establish a fair and favourable AVIs selection process, as an unfavourable and unfair selection process may lead to negative behavioural outcomes. Since job applicants are mostly geographically dispersed and most organisations are starting to hire from abroad and adopt AVIs as their selection tool, hence the study in this area makes a valuable contribution to the personnel selection literature.

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