Original Research

Sex and Culture Differences in Cultural Intelligence: A Study Comparing Saudi Arabians and Egyptians

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Abstract

Cultural Intelligence (CI) refers to the motivation and ability to understand and deal with cultural differences. As such, it is assumed to play a role in the effectiveness of social contact and communication between people from different cultures. Given its relevance to international relations, it is imperative to test which individual and group factors are associated with CI. Therefore, in the present study we examine cross-cultural and gender differences in CI. In one of their classes at their university, students ($N = 829$) from Egypt and Saudi Arabia completed a multidimensional measure of CI. The results showed an interesting pattern of interactions between country and gender, which indicated that Egyptian men did not significantly differ from co-national women, but Saudi men scored significantly lower than women. We suggest that the different patterns of results in the two countries may partly arise from different levels of exposure to different cultures and partly from subtle differences in the constitution of the samples. Knowledge of individual and group differences in cultural intelligence may potentially contribute to explaining differential levels of success in individuals or countries in dealing with cultural differences.

Keywords

cultural intelligence, gender differences, culture differences, Saudi Arabia, Egypt

Introduction

People show individual differences in the extent to which they are motivated and able to understand and interact with cultures, other than their own, where a "culture" is generally defined as a group, usually a nationality, with its own customs, history, traditions and ways of thinking and often with its own language (see Pederson, 1995). For example, some individuals seem to have a "feel" for cultural differences in communication and are able to adjust their behavior in such a way that it optimizes adequate exchange of information and lowers the chances of misunderstandings. Thus, intercultural communication involves much more than being able to communicate in the same language. In the literature, such sensitivity and ability with regard to different cultures has been placed under the label of "Cultural Intelligence" (CI: Ang & Van Dyne, 2008). "Intelligence" is commonly defined as the ability to solve cognitive problems, to make connections, and thus to comprehend or make sense of something (see Lynn, 2015). "Cultural Intelligence" is thus the ability to work effectively and communicate effectively across cultures, partly because you are able to comprehend how people

from other cultures are likely to think and thus react in a given situation. In their book, in which they introduced the concept of Cultural Intelligence, Earley and Ang (2003) define it as the ability to adapt to new cultural settings, but the ability to do this is underpinned by a certain form of comprehension.

The concept has attracted a great deal of attention since it was first proposed. CI—employed in business, education, and meta-academic research—was conceived of as a specific kind of competence: the capability to communicate and work

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effectively across cultures (Ang & Van Dyne, 2008; Earley & Ang, 2003). Yet, there is an ongoing debate over whether CI is simply a specific configuration of personality traits or whether it reflects a specific ability or trait. Some researchers, such as Gelfand et al. (2008), have argued that CI comprises of "cognition, motivation and behaviour" (p. 376) and, therefore, cannot simply be reduced to "personality" or "values." On the other hand, there is evidence that CI can partly be reduced to personality traits. Esmaeli et al. (2016) have found a correlation of $r = .37$ between Cultural Intelligence and "self-monitoring," which relates to the ability to regulate one's emotions.

Nikoopour and Esfandiari (2017) have found that CI is positively correlated with emotional intelligence, social intelligence, and spiritual intelligence. Another line of research has studied to what extent CI may overlap with general cognitive intelligence, which is often captured in the so-called g factor of general mental ability (Jensen, 1998). Rockstuhl et al. (2011) found, however, that CI was only weakly predicted by g. So, although CI may overlap with personality and general intelligence—as do many other traits—it is often assumed that CI is measuring something unique that makes it a worthy subject for investigation and has implications for various outcomes, such as international negotiations (see Lui & Lui, 2006). CI is highly germane in a globalizing world because more and more people are interacting with others who have been raised in different cultures. This increases the possibility of misunderstanding, conflict and other undesirable outcomes. But those who are high in CI will be better able to negotiate this new world and will be more successful as a result, something that is most obvious in the business world (Earley & Mosakowski, 2004) but also in work and life domains more broadly (see Peterson, 2011).

Accordingly, the main objective of the present study is to explore cross-cultural and gender differences in CI. Specifically, we will test whether men and women differ on CI in two Middle Eastern countries, namely Saudi Arabia and Egypt. Insomuch as CI is a concept that is interesting in its own right, it is an increasingly important one in a globalizing world in which people are interacting with other cultures (Dutton, 2012). As such, from a theoretical and practical perspective it is useful to understand the extent of differences in CI and their possible causes.

Secondly, there is a school of thought which avers that the Arab world is highly distinct from the West, leading, for cultural reasons, to incomparability (e.g., Murray, 2017). Thus, it is particularly important to explore CI as it pertains to the Arab world, which is precisely the object of this study. It might be argued that the "Arab World" is itself culturally diverse and that there are significant differences, for example, between Arab cultures in North Africa when compared to the Middle East. While this is true, there are also many points of commonality in these countries, meaning it is reasonable it to conceive of an Arab culture, in contrast, for example, to a European one, with it having been averred that

there is a strong sense of Arab identity (Barakat, 1993, p. 41). Thirdly, there may be practical benefits from understanding the nature of and causes of differences in Cultural Intelligence specifically in the Middle East. Specifically, understanding the level of CI in a region will allow foreigners who operate there, such as businessmen, to better empathize with and maintain relationships with locals (Chibili et al., 2019), and if the causes of differences are understood then these can be worked on by a local population, which could have accordant socioeconomic benefits, as has been found in South Africa, for example (Mtola, 2017).

Cultural and Gender Differences in Egypt and Saudi-Arabia

Regarding the different countries in this study, we predict that Egyptians would have greater CI than Saudis for a number of reasons. First, although nowadays social media more easily allows communication between people around the world, on average, Egyptians still have higher exposure, through more diverse tourism and the media, to other cultures. Egypt is a more cosmopolitan culture and hence it is expected that its inhabitants would see and meet more people from foreign cultures more often. In particular, many people from Western cultures holiday in Egypt. For example, from the 13 million tourist that visited Egypt in 2019, no less than 9.64 million people came from Europe, Asia, or the Americas (https://news.travelyalla.com/5470/13-2019 retrieved May, 2021). The Saudi city of Mecca, on the other hand, is a popular pilgrimage site for Muslims from around the world who are likely to be relatively culturally similar to Saudis when compared to Westerners who holiday in Egypt. Specifically, of the many people who visit Saudi-Arabia in a given year the vast majority are from Islamic countries. Whereas cultural differences among Islamic countries can be relatively large (e.g., Pakistan vs. Saudi-Arabia), it can reasonably be argued that those countries share more cultural aspects with each other than with non-Islamic countries such as those found in Europe, Asia, and the Americas. There will be many more pronounced differences between Westerners and Egyptians, even differences in walking speed, brought about by differences in the kinds of clothes that tend to be worn (Almejmaj et al., 2015), as well as differences in taboos (over female dress, for example) and values, especially with regard to the status of females (see Dutton, 2020).

Second, Saudi Arabia is a strongly religious society in comparison to Egypt. The form of Islam followed in Saudi Arabia is particularly devout even by Middle Eastern standards (Valentine, 2015). National religiousness predicts negative ethnocentrism, and more hostility toward and distrust of foreigners. This may be because religiousness has evolved, in part, as a mechanism to aid group survival and so repel foreign incurrence (Dutton et al., 2016). Religiosity is traditionally a central component of culture, and remains so in the Middle East. Accordingly, we would expect Middle Eastern

countries, due to being relatively religious, to have lower CI. Religiosity, especially monotheistic religiosity, tends to make people believe that they are the godly people, their culture is sanctioned by God, and thus deviations from these cultural norms are ungodly and immoral (de Benoist, 2004). Thus, they would have lower empathy towards or tolerance of those from other cultures. In accordance with this line of reasoning, we pose the following Hypothesis:

H1: Compared to Egypt, on average, people in Saudi Arabia score lower on cultural intelligence.

Given that we tested participants in Egypt as well as in Saudi Arabia, we were also able to explore whether gender and culture may interaction on CI. Although, we did not have clear predictions regarding such an interaction (thus, we formulated no Hypothesis), there are several reasons for testing it. First, both countries have cultural similarities, but there are also substantial differences. For example, compared to Egypt, Saudi Arabia is more conservative and religious. This may also affect the relative positions of men and women in those countries. Specifically, Saudi Arabia is more conservative terms of female dress with it being strongly culturally, and until recently, legally-mandated that females veil and even cover their faces, but now the culture is changing (Reuters, 2018). In addition, as, compared to Saudi Arabia, Egypt is more strongly dependent on diverse tourism, Egyptians may have more exposure to different cultures. These cultural differences may potentially differentially affect the relative difference between men and women in CI.

H2: Compared to men, on average, women score higher on cultural intelligence.

Several studies have found that women tend to score higher than men on emotional intelligence, particularly emotional sensitivity and perceptiveness (e.g., Furnham, 2006). Various theories exist that may explain such gender differences. Social or sociological theories emphasize the traditional roles that men and women have in many societies, which cause them to acquire different skills (Eagly, 2013). For example, despite the fact that gender roles seem to be changing in many countries, it has been shown that women still more often take the role of social facilitator and tend to put more emphasis on creating and maintaining relationships (see Williams, 2017). Accordingly, they may have a higher motivation and skills related to interpersonal interactions.

Evolutionary-based theories, on the other hand, aver that differential skills may have evolved between men and women (e.g., Buss, 1995). Regardless of whether the gender differences in emotional sensitivity and perceptiveness are due to social roles or evolution, or a combination of both, the idea is that the empirically established better social and emotional skills of women (Eagly, 2013; Ellis, 2011) may also transfer to higher CI. This expectation is also based on previous empirical and theoretical work confirming that emotional and cultural intelligence show relevant overlap (e.g., Ang & Van Dyne, 2015).

Another reason to expect that women may score higher on CI is due to their higher verbal intelligence and facility with their own mother tongue and with foreign languages (Neisser et al., 1996). A better understanding of foreign languages may also improve understanding different cultures. Hence women may acquire greater CI in that respect. Therefore, Hypothesis 2 is as follows:

Method

Participants and Procedure

Overall, 829 students from Saudi and Egyptian universities participated. The Saudi sample of university students came from King Saud University College of Education. In Saudi Arabia, 450 students from different disciplines and levels of study were asked whether they would be willing to participate in the study. The response rate was 100%. However, 70 participants were excluded from the analyses because of missing data (32), not filling in their gender (18), or because they did not have Saudi nationality (20). The latter category was excluded because we aimed to keep the cultural dimension ('nationality' in this case) clear in the study. In the final Saudi sample, 380 participants were included of which 193 were men and 187 women. Their age ranged from 18 to 37 years ($M = 21.20$ years, $SD = 1.91$).

The Egyptian sample was drawn from the Faculties of Education and Arts at the University of Kafrelsheikh and Menoufia University. Five hundred students from different disciplines were asked to participate. The initial response rate also was 100%, but 51 questionnaires were excluded from the analyses due to missing data (28) or missing information about gender (23). Therefore, the final Egyptian sample consisted of 449 undergraduate students who were similarly to the Saudi sample, (199 men and 250 women). They were aged 18 to 33 years ($M = 20.09$ years, $SD = 1.05$).

The two samples both came from public universities in central areas that accept high- and mid-level students. More generally, the educational curricula (from primary school to University) in Egypt and Saudi-Arabia are also very similar. Moreover, all participants are comparable in culture as they all are part of a general Islamic Arabic culture. For example, in both samples, the language is Arabic (Egyptian dialect and Saudi dialect). All in all, participants' characteristics in terms of educational level, gender, and societal strata were similar, and they also showed substantial overlap in various cultural aspects (e.g., Islamic Arabic culture).

The study was conducted in line with APA ethical guidelines. Participation was voluntary and students who did participate provided written consent. The questionnaires were filled out in the classrooms. In both samples, the students were tested in sessions of about 10 to 15 minutes by using a

Table 1. Sample Reliabilities (Cronbach's Alpha and Split-Half Coefficients) of the Cultural Intelligence Scale.

	N	Cronbach's alpha	Split-half coefficient
Metacognitive CQ			
Egypt	449	.460	0.469
Saudi	380	.862	0.873
Total	829	.696	0.710
Cognitive CQ			
Egypt	449	.720	0.804
Saudi	380	.851	0.681
Total	829	.783	0.744
Motivational CQ			
Egypt	449	.687	0.671
Saudi	380	.887	0.848
Total	829	.789	0.760
Behavioral CQ			
Egypt	449	.635	0.546
Saudi	380	.866	0.812
Total	829	.752	0.662
Total score CQ			
Egypt	449	.761	0.784
Saudi	380	935	0.853
Total	829	.869	0.723

pen and paper test. As the study was an anonymous questionnaire study without sensitive questions, the research team received approval from the concerned colleges in which the study was conducted.

Measure

Cultural intelligence. Cultural Intelligence was measured with the Cultural Intelligence Scale (CIS: Ang et al., 2007). This is a 20 item questionnaire that has four subscales and a total CI score. Each item is answered on 7-point Likert scale (ranging from 1 "Strongly disagree," to 7 "Strongly agree"). The four CI subscales are labeled, (1) Metacognitive CI (an example item is "I am conscious of the cultural knowledge I apply to cross-cultural interactions"), (2) Cognitive CI (e.g., "I know the legal and economic systems of other cultures"), (3) Motivational CI (e.g., "I enjoy interacting with people from different cultures"), and (4) Behavioral CI (e.g., "I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it").

The scale allows us to extract a total score representing general CI. The test has been evaluated for its construct, content, concurrent and predictive validity and reliability (Ang et al., 2007). For example, in several studies, the hierarchical structure with a general CI score and four subscales have been established with confirmatory factor analyses. Importantly, the scale's cross-cultural equivalence has also been confirmed and it has been used in in a wide variety of cultures (Ang et al., 2007). Table 1 provides the reliabilities of the subscales and the total score in each sample.

Gender. Gender was assessed with a single question in which participants had to indicate whether they were male or female.

Statistical Analysis

Before the main analyses, the main assumptions (e.g., normality) and characteristics (skewness) of the data were examined. No significant deviations from normality were found. The gender and national differences were tested by means of analysis of variance (ANOVA), with Gender and Culture as between-subject factors. As our main focus was on general cultural intelligence, we first used the general CI scores as dependent variable. This is in line with a wide range of previous studies with this instrument, who also focused on the general CI score (e.g., Thomas et al., 2008). We tested the main effects of Gender and Culture, as well as their interaction. In case of a significant interaction, we used post-hoc between-subject t-tests to compare the specific groups and identify the nature of the interaction. $P < .05$ was set as significant level. As a follow-up, we also tested gender and national differences on the CI subscales. In that case, we started with multivariate analysis of variance (MANOVA), with subsequent post-hoc analyses (ANOVAs, t-tests) when a multivariate effect reached significance. Given the classification of Cohen's D effect sizes, -0.2 is a small effect, 0.5 is a medium effect, 0.8 is a large effect-, the current sample sizes were large enough to detect small effects with a power of .89 ($DF = 828$, critical t-value is 1.65).

Results

The first and main analysis was with the overall CI score. This analysis showed that the main effect of Culture did not reach significance ($F [1, 825] = 3.44$, $p = .06$, $M_{Egypt} = 98.31$; $SD = 14.71$; $M_{Saudi} = 95.95$, $SD = 21.09$). The main effect of Gender was borderline significant as the p level was exactly .05. The latter main effect seemed to indicate that, on average, women scored higher ($F[1, 825] = 3.86$, $p = .05$, $M_{Men} = 96.12$, $SD = 18.79$; $M_{Women} = 98.12$, $SD = 16.64$). However, interestingly, there was a significant interaction between Culture and Gender ($F[1, 825] = 11.25$, $p = .001$) that further qualified the difference. The pattern of the interaction is depicted in Figure 1.

Post-hoc analysis (i.e., independent samples t-tests) revealed that, in Egypt, the difference between men and women did not reach significance ($t[447] = 1.36$, $p = .17$, $M_{Men} = 99.33$, $SD = 14.05$; $M_{Women} = 97.49$, $SD = 14.25$). In Saudi-Arabia, however, women scored significantly higher than men on CI ($t[378] = 2.99$, $p = .003$, $M_{Men} = 92.80$, $SD = 22.22$; $M_{Women} = 99.20$, $SD = 19.38$).

As CI, as measured in the present study, can be considered as an overall score but also in terms of its four subscales, we further tested whether the previous findings are due to specific subscales, or rather reflects a general pattern. The
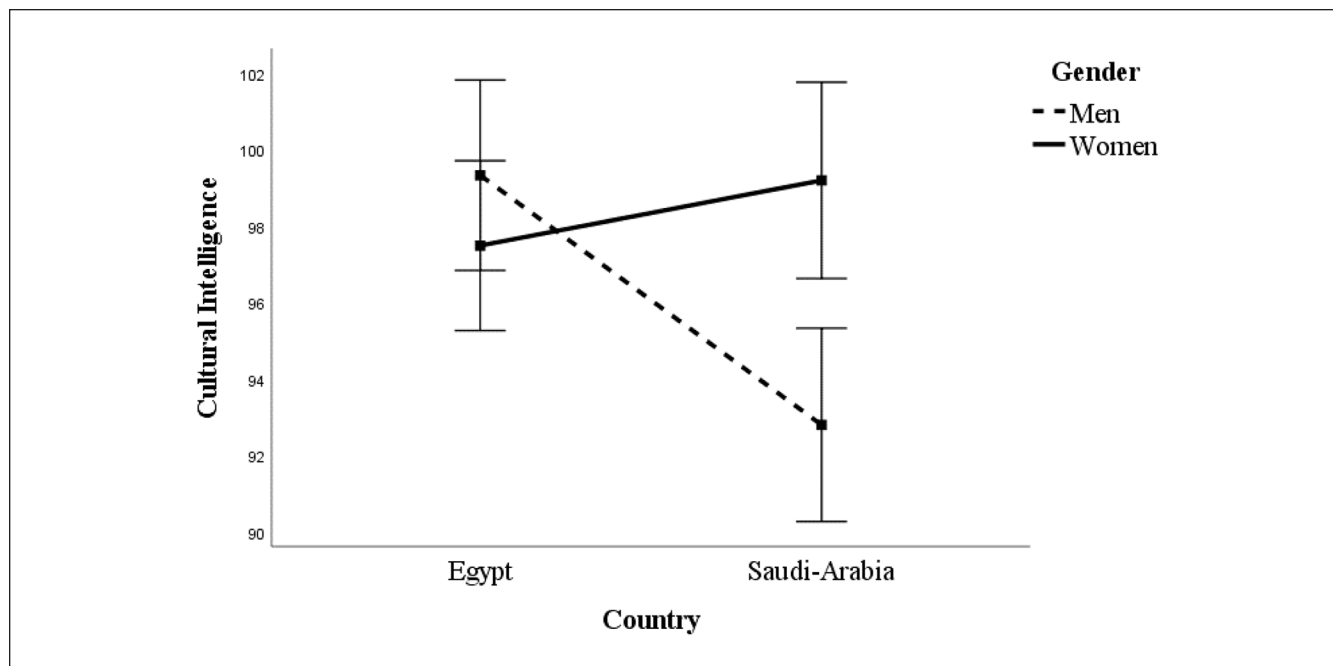
Figure 1. Gender differences in CI in Egypt and Saudi Arabia.

Table 2. Statistics for the CI Subscales.

Subscale	Gender $F(1, 825)$	p	Culture $F(1, 825)$	p	Gender × Culture $F(1, 825)$	p
Metacognition	5.92	.02	1.11	.29	9.39	.002
Cognition	0.94	.33	0.08	.78	4.04	.045
Motivational	0.87	.35	0.65	.42	5.78	.02
Behavioral	2.89	.09	15.97	$<.005$	8.37	.004

subsequent multivariate tests showed a main effect of Culture ($F[4, 822]=4.44$, $p=.001$). The post-hoc statistics are provided in Table 2 and show that this significant multivariate main effect of Culture was mainly due to country differences in behavioral CI. There was no significant multivariate main effect of Gender ($F[4, 822]=1.49$, $p=.20$), which somewhat differed from the main effect of Gender on the overall score.

The multivariate Gender by Culture interaction was significant ($F[4, 822]=3.14$, $p=.014$). Table 3 shows that the statistics for each of the CI subscales also reached significance. Inspection of the nature of the interactions revealed that all four interactions of the CI subscales were similar to the one found with the general CI score. That is, for each subscale men did not significantly differ from women in Egypt, but scored lower than women in Saudi Arabia.

Discussion

The results of the present study showed that, contrary to our expectations, Egyptians did not score significantly higher on general CI than Saudis. Even though the main effect reached significance, this main effect needs to be interpreted in relation to the found gender by country interaction. Specifically, we found that in Egypt, there were no significant gender differences in CI, even though CI was associated with emotional intelligence (Nikoopour & Esfandiari, 2017) which is higher in females (e.g., Furnham, 2006). In Saudi Arabia, on the other hand, women scored significantly higher than men on CI, possibly due to some of the cultural differences (see Valentine, 2015) earlier explored.

Multivariate analyses in which we tested the different CI subscales, rather than the overall score, revealed that the Gender by Culture interactions were significant for each of the subscales. Thus, the differential findings per country that we found for the general CI score could not be attributed to one or more of the subscales, but indeed seems to be a general pattern.

It is interesting that there is a clear and expected gender difference on CI in Saudi Arabia, but this is not the case in Egypt. There are a number of possible reasons for this which future research could further test. First, it may be germane that in Egypt, mainly the men may get in touch with foreigners and tourists, with women tending not work in tourism and frequently being confined to the home (Abou Zeid, 2006).

Table 3. Means (*SDs*) and Post-Hoc Statistics (*t*-Tests) on the Four CI Subscales for Men and Women in Egypt and Saudi-Arabia.

	Egypt				Saudi Arabia			
	Men	Women	*t*	*p*	Men	Women	*t*	*p*
Metacognition	20.76 (4.05)	20.52 (3.74)	0.65	.52	19.47 (5.66)	21.16 (4.50)	−3.21	<.01
Cognition	26.51 (5.97)	26.00 (7.12)	0.81	.42	25.39 (7.70)	26.85 (7.12)	−1.19	.06
Motivational	25.63 (5.54)	25.02 (5.56)	1.16	.25	24.28 (6.65)	25.68 (6.26)	−2.11	.04
Behavioral	26.43 (5.34)	25.95 (5.52)	0.93	.35	23.66 (6.39)	25.51 (5.79)	−2.98	.01

This may contribute to the finding that their scores were not significantly different from the women in their country. In other words, possibly, the men's higher intercultural experience may reduce the presumed gender differences. In Saudi Arabia, on the other hand, neither men nor women get in touch with foreigners a great deal compared with Egypt. As such, in Saudi Arabia the predicted gender difference may come to the surface because neither men nor women have much contact with foreigners at all. Mecca is a tourist hub but that is true of few other places in Saudi Arabia.

Obviously, we could not directly test whether the interaction we found was indeed due to differential exposure and, if so, to what extent. Thus, any interpretation of this finding remains somewhat speculative in nature. Nevertheless, there are several studies that underlined the notion that exposure to other cultures may increase CI. For example, Crowne (2008) concluded that having had more contact with different cultures is one of the factors enhancing CI. Engle and Crowne (2014) also tested the causal aspects this notion in a quasi-experimental design in which a group of students went on a short trip (7–12 days) in which they were exposed to another culture, versus a control group that did not. They found that after the trip, participants in the "exposure" group showed higher scores on CI, whereas no significant change was found in the control group.

Another possible explanation for the gender difference we found may lie in the average education level when we compare Egypt and Saudi Arabia. It has been found that in Saudi Arabia women are as likely as men to have a degree (OECD, 2019). In Egypt, however, only about 45% of students are women and this is declining (Megahed, 2010), so Egyptian female students can be considered less representative of Egyptian women, which may partly contribute to making sense of the difference we have found. For example, it may that the Egyptian sample of women possesses a more "masculinized ability and/or interest" profile, rendering them lower in empathy than the Saudi one (see Baron-Cohen, 2002). But, naturally, at this point we can only speculate about this.

It would be useful if future research were to attempt to replicate our findings by controlling for degree of exposure to foreigners, for example by employing samples from different countries that specifically work in the tourism industry.

Limitations

Although the present study provided insight in CI levels across gender and two different cultures, there were several limitations that need to be taken into account when interpreting the findings. First, the samples consisted of university students, which is a rather specific population that is not representative of the entire population. In the two countries in this study, this limitation may even be more relevant compared to studies in Western countries, because in Egypt and Saudi Arabia the percentages of young people attending universities are even smaller than in many Western countries. A second limitation is that all measures were based on self-reports. It has to be noted, though, that self-reports measures and the associated common-method bias are considered to be more problematic for main effects and less so for interaction effects (e.g., Francis et al., 2019). As such, this limitation may not strongly compromise the conclusions regarding the interaction in this study. A third limitation is that we were not able to explore CI using Facebook, and other social media, as a research tool. It would be potentially enlightening if future research did so.

Concluding Remarks

As politics and economies become more globalized, adequate intercultural communication is essential. Cultural intelligence is assumed to play a role in the effectiveness of such communication. Knowing whether countries or groups differ in CI may, therefore, be important and has potential practical implications. For example, if countries are aware of their average CI levels, compared to other countries they may use that information in order to improve their skills, if that is necessary, or otherwise, they could take their limitations into account when having to deal with other cultures. The latter is based on the principle of "knowing thyself," which assumes that it would be useful to know one's strengths and weaknesses. The present study contributes to this by testing gender and cultural differences in two countries. We hope that the present findings also encourage other researchers to address similar questions and test similar comparisons in different countries and with different groups. In addition, more research would be useful that elaborates on the possibility that the level of intercultural experiences may alter

more personality-related or temperamental differences in CI between individuals or groups.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Compliance with Ethical Standards

All participants were provided informed consent prior to participation to the study.

Informed Consent

All study procedures were conducted in accordance with appropriate institutional ethical review boards.

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References

Abou Zeid, G. (2006). Women's access to the decision-making process across the Arab nation. In D. Dahlerup (Ed.), *Women, quotas and politics* (pp. 168–193). Routledge.

Almejmaj, M., Meacham, B., & Skorinko, J. (2015). The effects of cultural differences between the west and Saudi Arabia on emergency evacuation-clothing effects on walking speed. *Fire and Materials*, *39*, 353–370.

Ang, S., & Van Dyne, L. (2008). Conceptualization of cultural intelligence: Definition, distinctiveness, and nomological network. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 3–15). M.E. Sharpe.

Ang, S., & Van Dyne, L. (2015). *Handbook of cultural intelligence: Theory, measurement, and applications*. Routledge.

Ang, S., Van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group & Organization Management*, *31*(1), 100–123.

Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review*, *3*, 335–371.

Barakat, H. (1993). *The Arab World: Society, culture, and state*. University of California Press.

Baron-Cohen, S. (2002). The extreme male brain theory of autism. *Trends in Cognitive Sciences*, *6*, 248–254.

Buss, D. M. (1995). Psychological sex differences: Origins through sexual selection. *American Psychologist*, *50*, 164–168.

Chibili, M., de Bruyn, S., Benhadda, L., Lashley, C., Penninga, S., & Rowson, B. (2019). *Modern hotel operations management*. Routledge.

Crowne, K. A. (2008). What leads to cultural intelligence? *Business Horizons*, *51*, 391–399.

de Benoist, A. (2004). *On being a Pagan*. Ultra.

Dutton, E. (2012). *Culture shock and multiculturalism*. Cambridge Scholars Publishing.

Dutton, E. (2020). *Islam: An evolutionary perspective*. Washington Summit Publishing.

Dutton, E., Madison, G., & Lynn, R. (2016). Demographic, economic, and genetic factors related to national differences in ethnocentric attitudes. *Personality and Individual Differences*, *101*, 137–143.

Eagly, A. H. (2013). *Sex differences in social behavior: A social-role interpretation*. Psychology Press.

Earley, P., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford University Press.

Earley, P., & Mosakowski, E. (2004). Cultural intelligence. *Harvard Business Review*.

Ellis, L. (2011). Identifying and explaining apparent universal sex differences in cognition and behavior. *Personality and Individual Differences*, *51*(5), 552–561.

Engle, R. L., & Crowne, K. A. (2014). The impact of international experience on cultural intelligence: An application of contact theory in a structured short-term programme. *Human Resource Development International*, *17*, 30–46.

Esmaeli, A., Akbarzadeh, E., Mohammedi, Y., Nemati, M., & Raeisoon, M. (2016). Relationship between IQ, cultural intelligence and self-monitoring in the students of Birjand University of Medical Sciences. *Journal of Birjand University of Medical Sciences*, *23*, 268–276.

Francis, K. B., Gummerum, M., Ganis, G., Howard, I. S., & Terbeck, S. (2019). Alcohol, empathy, and morality: Acute effects of alcohol consumption on affective empathy and moral decision-making. *Psychopharmacology*, *236*, 3477–3496.

Furnham, A. (2006). Explaining the popularity of emotional intelligence. In K. Murphy (Ed.), *A critique of emotional intelligence* (pp. 141–159). LEA.

Gelfand, M. J., Imai, L., & Fehr, R. (2008). Thinking intelligently about cultural intelligence: The road ahead. In S. Ang & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 375–387). ME Sharpe.

Jensen, A. R. (1998). *The g factor: The science of mental ability*. Praeger.

Lui, W., & Lui, L. A. (2006, May). Cultural intelligence in international business negotiation [paper presentation]. *IACM 2006 Meetings Paper, Montreal*, QC, Canada.

Lynn, R. (2015). *Race differences in intelligence: An evolutionary analysis*. Washington Summit Publishing.

Megahed, N. (2010, October 13) *Access to the university and women's participation in higher education in Egypt*. Middle East Institute. https://www.mei.edu/publications/access-university-and-womens-participation-higher-education-egypt

Mtola, S. G. (2017). *The influence of cultural intelligence on the relationship between social capital and entrepreneurial performance: A study of foreign traders in Johannesburg's informal economy* [Master's thesis]. University of Witwatersrand.

Murray, D. (2017). *The strange death of Europe*. Bloomsbury.

Neisser, U., Boodoo, G., Bouchard, T. J., Boykin, A. W., Brody, N., Ceci, S. J., Halpern, D. F., Loehlin, J. C., Perloff, R., Sternberg, R. J., & Urbina, S. (1996). Intelligence: Knowns and unknowns. *American Psychologist*, *51*, 77–101.

Nikoopour, J., & Esfandiari, N. (2017). The relationship between emotional, social, cultural, spiritual intelligence and EFL teachers' teaching effectiveness. *Journal of Language Teaching and Research*, *8*, 138–148.

OECD. (2019). *Education at a glance, 2019: Saudi Arabia*. Author.

Pederson, P. (1995). *The five stages of culture shock: Critical incidents around the world*. Greenwood Press.

Peterson, B. (2011). *Cultural intelligence: A guide to working with people from other cultures*. Hachette.

Reuters. (2018, March 19). Saudi crown prince says Abaya not necessary. *Gulf News*. https://gulfnews.com/world/gulf/saudi/saudi-crown-prince-says-abaya-not-necessary-1.2190993

Rockstuhl, T., Seiler, S., Ang, S., Van Dyne, L., & Annen, H. (2011). Beyond general intelligence (IQ) and emotional intelligence (EQ): The role of cultural intelligence (CQ) on cross-border leadership effectiveness in a globalized world. *Journal of Social Issues*, *67*, 825–840.

Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J. L., Poelmans, S., Brislin, R., Pekerti, A., Aycan, Z., Maznevski, M., Au, K., & Lazarova, M. B. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross Cultural Management*, *8*, 123–143.

Valentine, S. (2015). *Force and fanaticism: Wahabism in Saudi Arabia and beyond*. Oxford University Press.

Williams, J. (2017). *Women vs feminism: Why we all need liberating from the gender wars*. Emerald Publishing.