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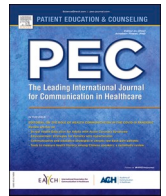
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## Intercultural effectiveness in GPs' communication and clinical assessment: An experimental study

Robin Vandecasteele<sup>a,\*</sup>, Stijn Schelfhout<sup>b,c</sup>, Fanny D'hondt<sup>d</sup>, Stéphanie De Maesschalck<sup>a,e</sup>,  
Eva Derous<sup>b,f</sup>, Sara Willems<sup>a,e,g</sup>

<sup>a</sup> Ghent University, Faculty of Medicine and Health Sciences, Department of Public Health and Primary Care, Research Group Equity in Health Care, University Hospital Campus entrance 42, C. Heymanslaan 10, 9000 Ghent, Belgium

<sup>b</sup> Ghent University, Faculty of Psychology and Educational Sciences, Department of Work, Organization and Society, Vocational and Personnel Psychology Lab, H. Dunantlaan 2, 9000 Ghent, Belgium

<sup>c</sup> Ghent University, Faculty of Psychology and Educational Sciences, Department of Experimental Psychology, Henri Dunantlaan 2, 9000 Ghent, Belgium

<sup>d</sup> Department of Sociology, Faculty of Political and Social Sciences, Ghent University, Sint-Pietersnieuwstraat 41, 9000 Ghent, Belgium

<sup>e</sup> Ghent University, Centre for the Social Study of Migration and Refugees, H. Dunantlaan 2, 9000 Ghent, Belgium

<sup>f</sup> Erasmus University Rotterdam, Erasmus School of Social and Behavioural Sciences, Burgemeester Oudlaan 50, 3062 Rotterdam, the Netherlands

<sup>g</sup> Ghent University, Faculty of Medicine and Health Sciences, Department of Public Health and Primary Care, Quality & Safety Ghent, University Hospital Campus entrance 42, C. Heymanslaan 10, 9000 Ghent, Belgium

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### ABSTRACT

**Objective:** This study aimed to investigate potential disparities in general practitioners' overall communication and clinical assessments based on patient ethnicity, while examining the influence of intercultural effectiveness.

**Methods:** Employing a 2 × 2 experimental study design, online video recorded consultations with simulated patients were conducted and analyzed using OSCEs. Each GP (N = 100) completed a consultation with both an ethnic majority and an ethnic minority patient. Additionally, a follow-up survey was administered to gather supplementary data. Paired sample t-tests explored ethnic disparities, correlation and regression analyses determined associations with intercultural attitudes, traits and capabilities.

**Results:** No statistically significant differences in GPs' communication or clinical assessment were found based on patients' ethnic background. Positive associations were observed between all aspects of intercultural effectiveness and GPs' consultation behavior. Intercultural traits emerged as a strong and robust predictor of clinical assessment of ethnic minority patients.

**Conclusion:** Intercultural traits, such as ethnocultural empathy, may play a critical role in GPs' clinical assessment skills during intercultural consultations.

**Practice implications:** Findings provide valuable insights into the determinants of intercultural effectiveness in healthcare, fostering promising targets for interventions and training programs aiming to ensure higher-quality and more equitable care delivery.

### 1. Introduction

Due to globalization and migration processes, health care providers encounter an increasingly diverse patient population. Also in Flanders, Belgium, primary health care has entered an era of 'superdiversity', indicating an unprecedented transformation towards a new patient demographic of various ethnicities, cultures and social backgrounds [1,2].

Extensive research demonstrated how this intercultural setting can be particularly challenging for both health care providers and patients [3–5].

Globally, ethnic minority groups exhibit significant disparities in health status when compared to their ethnic majority counterparts [6–8]. In the Belgian context, these disparities include more mental health issues, such as anxiety and depression, higher rates of chronic

**Abbreviations:** GP, General Practitioner; SP, Simulated Patient; MOH, Medical Overuse Headache; SI, Stress Incontinence; OSCE, Objective Structured Clinical Examination; ACD, Acceptance of Cultural Differences; CQ, Cultural Intelligence.

\* Corresponding author.

E-mail address: [robin.vandecasteele@ugent.be](mailto:robin.vandecasteele@ugent.be) (R. Vandecasteele).

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diseases, for instance type 2 diabetes, and poorer subjective overall health among ethnic minority populations [9–13].

Numerous studies have focused on elucidating the causes of ethnic health disparities, revealing that differential communication and clinical practices exhibited by healthcare providers when treating ethnic minority patients play a significant role in these inequalities. [7,14]. Furthermore, particular emphasis is placed on general practice, as general practitioners (GPs) play a key role in establishing health equity and often act as gatekeepers in healthcare [15,16].

Within general practice, evidence suggests that GPs are less engaged in the relational dimension of care with ethnic minorities, often as a result of implicit bias [8, 17, 18]. More specifically, previous research has demonstrated that GPs exhibit lower levels of patient-centeredness, less friendly communication, greater verbal dominance, and lower levels of empathy or positive affect towards minority patients [19–23]. Sub-optimal treatment of ethnic minority patients has subsequently been linked to lower trust in health care providers, lower satisfaction rates, an overall weaker clinical relationship, lower therapy adherence and worse health outcomes [17, 20, 24, 25].

As a result, ethnic minority patients often express a preference for seeking medical consultations with healthcare providers from the same ethnic background, previously associated with enhanced health outcomes [26,27]. Nevertheless, practical challenges of achieving ethnically concordant consultations emerge due to the underrepresentation of minority GPs within the healthcare workforce. Moreover, Western societies, including Belgium, are characterized by ‘superdiversity,’ whereby GPs engage with patients from a multitude of diverse cultural backgrounds. While ethnically concordant consultations may be feasible for certain ethnic groups, it remains a rare occurrence for the vast majority. This underscores the importance of GPs operating effectively when delivering care to diverse patient populations [28].

However, the understanding of which factors contribute to healthcare providers’ ability to act more effectively in intercultural encounters remains limited. In an effort to bridge this research gap, we draw upon the intercultural effectiveness framework developed by Leung and colleagues [29].

Leung and colleagues [29] introduced a framework to establish key determinants of intercultural effectiveness, consisting of intercultural attitudes, intercultural traits and intercultural capabilities. In theory, professionals from a variety of disciplines are able to act more appropriately and successfully in intercultural settings when exhibiting higher levels of these three components of intercultural competence. Also in health care, the Leung-framework of intercultural attitudes, traits and capabilities should predict more effective intercultural behavior [30]. Integrating this framework in health care research has the potential to identify competencies specific to the professional context of general practice, resulting in improved intercultural medical encounters [29].

Intercultural attitudes are conceptualized as how other cultures and information from other cultural worlds are perceived [29]. Previous research [31] reported associations between attitudes towards ethnic minority patients and patient centeredness, empathy and considering patients’ context during consultations. These findings emphasize the significance of intercultural attitudes in health care for delivering high-quality intercultural care [17,32]. However, further research is necessary to fully examine this phenomenon due to limited and inconsistent evidence [7,33].

Additionally, intercultural traits, referring to personality characteristics determining behavior in intercultural situations, have been strongly related to professionals’ success in such contexts [34,35]. Specifically the traits cultural empathy, emotional stability, flexibility, open-mindedness and social initiative reliably predict intercultural effectiveness. Also within the field of health care, intercultural traits have proven to influence behavior of future healthcare providers in intercultural settings, thereby potentially serving as reliable indicators of actual behavior in primary care [36,37].

Furthermore, intercultural capabilities have also been extensively

used to predict intercultural behavior [38,39]. Referring to an individual’s ability to function effectively in intercultural situations, intercultural capabilities have been positively associated with decision-making, adaptation and task performance in intercultural settings [40]. Recently, Schelfhout and colleagues [30] added that intercultural capabilities are a major predictor of more effective intercultural behavior among future health care practitioners. However, additional research is needed to confirm these theoretical relationships among GPs in practice and to investigate associations with real-time behavior.

In summary, the existing literature highlights the need for further investigation into equitable care delivery [7]. Specifically, innovative and mixed-method research designs are recommended to meaningfully address ethnic health disparities [33,41]. Moreover, integrating the framework proposed by Leung and colleagues [29] has the potential to enhance our understanding of the underlying mechanisms relating to intercultural effective behavior by exploring context-specific competencies relevant in intercultural interactions. Consequently, this paper has a two-fold aim: firstly, to examine whether and how GPs communicate and behave differently towards patients based solely on ethnicity, and secondly, to analyze the impact of intercultural attitudes, traits and capabilities on real-time intercultural behavior.

## 2. Method

### 2.1. Study design

We used an experimental mixed-method study design in which, in order to mimic real life behavior, a sample of Flemish GPs conducted two online video recorded consultations with simulated patients (SP). Utilizing remote video consultations has been demonstrated as a highly feasible approach for investigating intercultural health interactions [42–44]. Following the completion of each consultation, both the GP and the SP filled out a follow-up survey.

Each GP conducted a video consultation with a Flemish SP and one with a Flemish-Moroccan SP. The selection of these SPs aimed to represent an ethnic majority patient and an ethnic minority patient, respectively, given that individuals with a Moroccan-Maghreb background constitute one of the largest ethnic minority groups in Flanders.

Both Flemish and Flemish-Moroccan SPs were alike in gender, age, socioeconomic background and language proficiency. Flemish-Moroccan SPs were however given a typical Moroccan fictitious name and wore a headscarf. The latter is commonly associated in Belgium with Islam (e.g. [45]). SPs were trained by experts in the field of intercultural healthcare and communication to use a standardized script and to display similar expressions and feelings.

To minimize learning effects, each GP conducted two consultations in which the SPs displayed different cases. Cases were created by an expert group, ensuring that the two scenarios were comparable in terms of difficulty level and evaluation criteria, whilst also being sufficiently distinct to minimize potential learning effects. The selected cases for this study were medical overuse headache (MOH) and stress incontinence (SI). These cases, along with the follow-up survey, underwent testing, evaluation, and approval in a pilot study conducted with a small group of GPs. In addition, a 2 × 2 crossover design was implemented to limit potential sequence effects. This design entailed half of the GP sample conducting consultations with a Flemish SP first, followed by a Flemish-Moroccan SP and vice versa. Furthermore, the two cases MOH and SI, were altered between consultations.

All video-recorded consultations were analyzed using the Calgary-Cambridge Guide, a widely utilized tool for assessing healthcare providers’ communication skills, focusing on both content and process [46–50] during Objective Structured Clinical Exams (OSCEs). Within the “gathering information” and “explanation and planning” part, case-specific medical history and information checklists were incorporated based on evidence-based medicine guidelines for headache and urinary incontinence to assess participants’ case-specific clinical skills.

In online settings, where clinical interactions are recorded on video, OSCEs are considered highly acceptable, feasible and a valid evaluation method [51,52].

For the analysis of the video recordings, a single coder received training to ensure consistent and effective coding, as established in previous studies [47]. This training aimed to promote standardized interpretations of scoring rubrics, in line with OSCE practices [51]. To enhance reliability further, a second coder independently analyzed a randomly selected subset of 10% of all consultations and compared findings with the initial coder. Both coders reached consensus on this subset, agreeing on all OSCE ratings, confirming the validity of the coding process.

## 2.2. Data collection and sample

Data were collected from March 2021 to May 2022. GPs were randomly selected from a list of active GPs in Flanders and recruited through e-mail and telephone communication, until a sufficient sample was reached. GPs were offered a financial incentive of €50 upon completion of both consultations and the subsequent survey. The participants were informed that the study aimed to examine determinants of qualitative video consultations, without disclosing the full purpose to avoid social desirability bias. After obtaining informed consent, both GP and SP were issued a Zoom invitation via e-mail to facilitate their online video-recorded consultation at a mutually agreed time. Following the second consultation, SPs prompted the GP to complete the Qualtrics survey provided in the invitation mail.

We approached a total of 2.665 GPs in order to recruit 105 GPs (response rate 3.94%). Based on power analyses (moderate expected effect of different treatment based on patient ethnicity  $d=.3$ ,  $\alpha = 0.05$ ,  $\beta = 0.80$ ; paired t-test), at least 90 GPs were required [53]. Four participants withdrew during the study because they were no longer able to attend two consultations due to Covid induced time- and work-pressure. One additional participant was excluded due to technical issues regarding the video recording that impeded appropriate analysis of non-verbal expressions and behavior during the video recording. Consequently, the final sample used in the analysis comprised 100 GPs.

## 2.3. Measures

### 2.3.1. Intercultural attitudes

To measure intercultural attitudes, the study utilized an adaptation of the EMP-3 scale assessing health care providers' attitudes towards ethnic minority patients [31]. This scale comprises 10 items on a 5-point Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree) and consists of three subscales: Task Perception, Context Evaluation and the Perception of Minority Patients' Need for Communication. Example items from the EMP-3 include statements such as "Physicians should be aware of the cultural identity of each patient", "Patients' social background determines their health", or "Minority patients prefer a paternalistic consultation style".

### 2.3.2. Intercultural traits

Intercultural traits were conceptualized by 'Acceptance of Cultural Differences' (ACD), a subscale of the 'Scale of Ethnocultural Empathy' [54]. Focusing on the cultural empathy trait, the ACD scale comprises five items that focus on the understanding, accepting and valuing of culturally different traditions and customs. The items were rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), with example items including "I feel irritated when people of different racial or ethnic backgrounds speak their language" (reversely coded).

### 2.3.3. Intercultural capabilities

Intercultural capabilities were operationalized as cultural intelligence (CQ) and assessed using the 'Cultural Intelligence Scale' [55]. This scale consists of 20 items and is organized into four factors: Cognitive

CQ, Metacognitive CQ, Motivational CQ, and Behavioral CQ. Example items include "I know the cultural values and religious beliefs of other cultures" (Cognitive CQ), "I am conscious of the cultural knowledge I apply to cross-cultural interactions" (Metacognitive CQ), "I am confident that I can socialize with locals in a culture that is unfamiliar to me" (Motivational CQ) and "I change my non-verbal behavior when a cross-cultural situation requires it" (Behavioral CQ). Participants rated all items on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

### 2.3.4. Outcome measures

The evaluation of GPs' consultation behavior was based on two components, communication skills and clinical assessment through case-specific medical history taking and information giving.

**2.3.4.1. Communication skills.** The first component of GPs' performance pertains to communicative behavior. This aspect includes elements such as active listening, attention for patient expectations, needs and emotions and patient-centeredness. Hereby rating scales were used as these allow a more wide spectrum of performance evaluation [51,56]. The OSCE checklist consisted of 19 items, standardized to establish a total score ranging from 0 to 10 (with 0 being the lowest score and 10 the highest score). Sample items included 'The GP explored patients' expectations regarding the consultation', 'The GP included patient in a shared-decision making process', and 'The GP displayed adequate non-verbal communication'.

**2.3.4.2. Clinical assessment.** The second aspect of the analysis evaluated GPs' case-specific clinical assessment, focusing on the quality of the medical history taking and information provision regarding diagnosis and treatment. Given the limitations of online consultations, physical examinations were not feasible, and thus not included in the evaluation. GPs were informed beforehand that physical examinations were not required for either case. The checklists consisted of 36 items for the MOH case and 32 items for the SI case. Each item was scored either 0 or 1, indicating whether the GP addressed the specific issue. Scores for both cases were standardized, constituting a total score ranging from 0 to 10 (0 representing the lowest score and 10 the highest score). Sample items for the MOH case included 'GP asks about duration of headache', 'Did the GP diagnose MOH', 'Did the GP suggest keeping a headache diary'. Examples of items for the SI case included 'Did the GP ask about the quantity of urine loss', 'Did the GP diagnose SI', and 'Did the GP refer the patient to a physiotherapist'.

## 2.4. Statistical analyses

First, paired sample t-tests were conducted to examine significant differences in outcome measures according to the ethnic background of the patient, determining whether and how GPs treat patients differently based on their ethnicity. Next, Pearsons' correlations were calculated to explore the relationships between intercultural attitudes, traits and capabilities on the one hand, and communication skills and clinical assessment with ethnic minority patients on the other hand. Finally, multiple linear regression analysis was employed to measure the effects of these variables on GPs' intercultural performance.

## 3. Results

### 3.1. Sample characteristics

Among the 100 GPs in our sample, 52 are female and 48 are male, with a mean age of  $M = 42.76$  years ( $SD = 12.41$ ). More than half of the GPs (57%) reported treating ethnic minority patients daily or multiple times a week. A substantial proportion of the GPs (95%) were born in Belgium, while the remaining 5% were born in Congo ( $n = 2$ ), France ( $n = 1$ ), Senegal ( $n = 1$ ) and Peru ( $n = 1$ ). This distribution aligns closely

with the national composition of GPs, slightly favoring Belgian native GPs, signifying a notable absence of diversity in the GP demographic makeup [57,58]. Notably, a large majority (86%) has never received any form of training related to culturally or diversity-sensitive care. Full characteristics are displayed in Table 1.

### 3.2. Differences in outcome by patient ethnicity

The outcomes of the paired sample t-tests, which aimed to explore differences in GPs' communication skills and clinical assessment based on patient ethnicity, are presented in Table 2.

The results indicate no significant differences in the treatment of minority SP compared to non-minority SP: no associations were found between patient ethnicity and GPs' clinical assessment or communication skills. Although mean differences for both outcome variables slightly favored consultations with Flemish-Moroccan patients, these differences did not reach statistical significance.

### 3.3. Explaining GP variation in intercultural consulting

To identify factors influencing effective behavior in intercultural situations, we singled out GPs' consultations with Flemish-Moroccan SPs. We then explored associations between GPs' communication skills and clinical assessment, and intercultural attitudes, traits and capabilities. Lastly, regression analyses were employed to assess which associations transferred into causal relations.

#### 3.3.1. Communication skills

Concerning GPs' communicative behavior during consultations with Flemish-Moroccan SPs, we did not find any associations with intercultural attitudes or intercultural traits (Table 3). However, intercultural capabilities displayed a positive association with GPs' communication during intercultural consultations. Specifically, the CQ Metacognitive subscale is positively correlated with GPs' communication skills ( $r = .216 *$ ), suggesting that GPs with higher scores on this subscale (i.e. reflecting greater cultural awareness during interactions with individuals from different cultural backgrounds), are more likely to exhibit better communication skills.

#### 3.3.2. Clinical assessment

Regarding GPs' clinical assessments in intercultural consultations, all aspects of intercultural effectiveness displayed positive associations (Table 3). Intercultural attitudes are significantly linked to GPs' clinical assessment, as indicated by a statistically significant correlation coefficient ( $r = .231 *$ ) with the Perception of Minority Patients' Need for Communication EMP-3 subscale. At least partially, this indicates that

GPs with more positive attitudes towards ethnic minority patients, clinically perform better with these patients. Similarly, intercultural traits are positively correlated ( $r = .337 **$ ), indicating that GPs who understand and accept culturally specific customs and traditions achieve better clinical assessment scores with patients of different ethnicities. Additionally, intercultural capabilities positively correlate with GPs' clinical assessment, particularly the motivational subscale ( $r = .227 *$ ), suggesting that GPs with higher motivation and interest in interacting with people from different cultures, tend to achieve higher scores in intercultural consults.

Yet, after conducting linear regressions and controlling for GP socio-demographic variables, most observed associations in our dataset become non-significant, indicating an absence of causal relationships (Table 4). For instance, the effects of intercultural attitudes and capabilities on clinical assessment become non-significant when controlled for GP gender, age, previous culturally or diversity-sensitive training and frequency of treating minority patients. Likewise, the effect of intercultural capabilities on communication skills loses significance when controlled for the same socio-demographic variables. However, the effect of intercultural traits on clinical assessment remains very strong when accounting for control variables ( $p = .001$ ), indicating that GPs' ethnocultural empathy is a strong and robust predictor of clinical assessment during interactions with patients of a different ethnic background. Accounting for assumptions of linear regression and rendering an  $R^2$  of .278, the effect of intercultural traits on GPs' clinical assessment in intercultural consultations far outweighs other associations in our data. Table 5.

#### 3.4. Sensitivity analysis

Upon request of an anonymous reviewer, we performed an additional sensitivity analysis to compare correlations with consultations involving patients from the ethnic majority (Table 6). We largely observe similar associations within consultations with ethnic majority patients, suggesting general patterns of care. There is however a notable difference in associations, namely the EMP-3 scale and the EMP-3 Task Perception subscale. Both the full EMP-3 scale and the EMP-3 subscale Task Perception significantly and positively correlate with GPs' communication during consultations with a Flemish patient. These correlations maintain a positive trend in consultations with Flemish-Moroccan patients, although they do not reach statistical significance. Therefore, the effect of higher scores on these scales can be interpreted as larger during consultations with patients of a similar ethnic background.

## 4. Discussion and conclusion

### 4.1. Discussion

Using an innovative experimental mixed-method research design replicating real-life behavior in general practice, this study aimed to examine potential ethnic variations in GPs' communicative and clinical behavior with Flemish and Flemish-Moroccan SPs. Additionally, we explored how intercultural attitudes, traits and capabilities might explain variations in GPs' consultations with ethnic minority patients.

#### 4.1.1. Differences in outcome by patient ethnicity

When comparing GP interactions with ethnic minority and majority patients, our analysis did not expose any significant differences, suggesting that patient ethnicity did not exert any influence on GPs' communication skills or clinical assessment.

Unlike previous studies (e.g. [19]), GPs in our sample did not display significant differences in patient-centeredness, positive affect or non-verbal communication. Lepièce and colleagues [18] did find differences in communicative behavior, but also failed to expose differential clinical assessments with minority patients. This further adds to

**Table 1**  
GP Characteristics (N = 100).

GPs characteristic (N = 100)	N / M (SD)
Age	42,76
min	26
max	72
Gender	
female	52
male	48
other	0
Yrs experience	15
min	0
max	42
Frequency of treating minority patients	
(almost) never	4
once or a couple times a month	18
once a week	20
multiple times a week	29
daily	28

Note: GP = General Practitioner

**Table 2**  
Differences in outcome by patient ethnicity.

Outcome variables	N	Flemish SP mean (SD)	Flemish-Moroccan SP mean (SD)	Diff	Cohen's d	p value
OSCE Communication Skills	100	4.56 (1.50)	4.66 (1.43)	.10 (1.54)	0.0635	.527
OSCE Clinical Assessment	100	3.52 (1.09)	3.68 (.96)	.16 (1.25)	0.1239	.218

Note: SP = Simulated Patient, OSCE = Objective Structured Clinical Examination.

the complexity of researching ethnic disparities and discrimination in health care, as Schouten and Meeuwesen [23] for instance also found contradictory results in a review of the literature, with several studies indicating suboptimal treatment of minority patients and others finding more positive and affective behavior towards minority patients.

Participants in our study showed overall remarkably low scores on communication items with both patients, despite dedicating a comparable amount of time to each consultation, aligning with the typical duration of real-life clinical encounters [59,60]. Considering the importance of patient-centered communication, active listening and empathy as crucial parts of culturally sensitive communication [61], these overall low scores indicate a lesser likelihood of showing culturally sensitive communication. Nevertheless, it is crucial to recognize that cultural sensitivity plays a pivotal role in ensuring high-quality and equitable health care [62,63], even within the confines of typically concise consultations. Our goal is not to advocate for prolonging consultation times, but to emphasize the necessity of effective and targeted questioning within the current time constraints.

The low OSCE scores may be attributed to the use of remote video consultations. For example, a recent review of remote consultations [64] highlighted potential negative effects of remote consultations on medical performance, caused by more reported difficulties and loss of non-verbal communication. Similarly, other studies reported that during video consultations, GPs tend to provide less medical information and fewer empathic expressions compared to face-to-face consultations [65, 66]. Moreover, prior to the COVID-19 pandemic, Belgian GPs had little to no experience using video consultations and some may have initially felt uncomfortable with this mode of interaction [67]. The challenge of conveying empathic and positive communication in remote consultations, whilst maintaining medical proficiency by asking questions and exchanging information, may explain the lower OSCE scores in our study [68].

#### 4.1.2. Explaining GP variation in intercultural consulting

Subsequently, in order to assess determinants of intercultural effective behavior, we found several interesting associations when analyzing GPs' consultations with Flemish-Moroccan SPs. As hypothesized [29, 30], intercultural attitudes, intercultural traits and intercultural capabilities all positively correlate with GPs' behavior in an intercultural setting. All aspects of intercultural effectiveness displayed significant correlations with GPs' clinical assessment during intercultural consultations and a subscale of intercultural capabilities is associated with GPs' communication skills. These findings at least partially offer empirical support for prior theoretical assumptions, confirming their validity through the analysis of real-life, context-specific behavior, albeit within an experimental framework involving a specific ethnic group.

Specifically, the Metacognitive subscale of Cultural Intelligence positively associated with GPs' communication skills. This subscale refers to GPs' awareness of patients' cultural preferences during interactions with patients from diverse cultural or ethnic backgrounds, whilst also being able to question their own cultural assumptions and adjust behavior. It can be suggested that this capability may enhance GPs' patient-centeredness and empathy in their communication, potentially by asking more questions regarding patients' ideas, needs and expectations.

The association between the Motivational dimension of Cultural Intelligence and GPs' clinical assessment in intercultural consultations, could be attributed to higher motivational capacities facilitating more

effective goal-accomplishment [40]. The goal in this case being diagnosing accurately through adept anamnesis, resulting in a better clinical assessment OSCE.

Interestingly, the EMP-3 subscale Perception of Minority Patients' Need for Communication also correlates with higher clinical assessment scores. This association could be attributed to the operationalization of this particular subscale. It measures GPs' perceptions of whether minority patients prefer a paternalistic consultation style and require less information due to a presumed lack of understanding. Accordingly, more positive attitudes towards minority patients' needs in communication might suggest a tendency to maintain proficient communication styles while simultaneously providing adequate medical information. The latter could cause GPs to exhibit higher scores on the clinical assessment OSCE.

Acceptance of Cultural Differences, an indication of the intercultural trait of ethnocultural empathy, also correlates with GPs' clinical assessment. Previous studies already established the relation between empathy and general medical performance (e.g. [69]), our results add to this knowledge by demonstrating a positive association of GPs being understanding and accepting of cultural traditions and their clinical assessment skills when consulting with patients from different ethnic backgrounds.

Moreover, intercultural traits proved to be a strong and robust predictor of GPs' clinical assessment. Whereas the other associations in our data became non-significant when exploring causal relations and controlling for socio-demographic variables, intercultural traits emerged as an important determinant of GPs' performance, and therefore, effectiveness. These findings suggest that the development of intercultural traits, such as ethnocultural empathy, may play a key role in establishing more equitable and higher-quality health care for ethnic minority patients.

Additionally, the observed difference in favor of the consultations with the Flemish SPs, as indicated by the sensitivity analysis, may stem from GPs potentially identifying more strongly with individuals sharing their own ethnic background. This enhanced identification could facilitate a more positive communication dynamic within such consultations. For example, items in the EMP-3\_TP subscale, such as '*Physicians should be empathic toward every patient, even if they have completely different opinions*', suggest that GPs may find it easier to demonstrate empathy when interacting with patients from the same ethnic background. A similar point is illustrated by the item '*Physicians should be aware of the cultural identity of each patient*', suggesting that cultural awareness may be more readily enacted when the cultural distance between the GP and the patient is smaller. These findings, while not the primary focus of our study, provide valuable insights into potential contextual factors influencing communication dynamics in ethnically diverse healthcare settings.

#### 4.1.3. Limitations

Several limitations of our study need to be acknowledged. Firstly, utilizing video-recorded consultations may have introduced a bias in participant behavior. The awareness of being recorded may have prompted participants to modify their behavior or become self-conscious, potentially influencing their natural communication and clinical conduct.

Secondly, the relatively small sample size compromises the generalizability of our findings. This limitation largely stems from the low response rate during participant recruitment, which can be attributed to

**Table 3**  
Correlation matrix.

	M (SD)	OSCE_COM	OSCE_MED	EMP-3	EMP-3_TP	EMP-3_CE	EMP-3_PNC	CQ	CQ_Motivation	CQ_Knowledge	CQ_Metacognitive	CQ_Behavior	ACD
OSCE_COM	4.66 (1.43)	1											
OSCE_MED	3.68 (.96)	.307 *	1										
EMP-3	4.12 (.37)	.183	.196	1									
EMP-3_TP	4.15 (.44)	.117	.158	.773 **	1								
EMP-3_CE	4.14 (.59)	.137	.052	.702 **	.301 **	1							
EMP-3_PNC	4.06 (.51)	.141	.231 *	.709 **	.484 **	.115	1						
CQ	3.25 (.44)	.092	.116	.227 *	.430 **	.479 **	.056	1					
CQ_Motivation	3.80 (.55)	.119	.227 *	.430 **	.479 **	.130	.379 **	.667 **	1				
CQ_Knowledge	2.43 (.71)	.092	.116	.227 *	.430 **	.479 **	.130	.379 **	.667 **	1			
CQ_Metacognitive	3.21 (.63)	.031	.013	.026	.026	.026	.030	.050	.090	.729 **	1		
CQ_Behavior	3.57 (.63)	-.031	.013	.026	.026	.026	.030	.050	.090	.729 **	.398 **	1	
ACD	4.07 (.58)	.216 *	.107	.170	.231 *	.105	.051	.747 **	.631 **	.384 **	.326 **	.228 *	1

Note: OSCE\_COM = Objective Structured Clinical Examination Communication Skills, OSCE\_MED = Objective Structured Clinical Examination Clinical Assessment, EMP-3\_TP = Task Perception, EMP-3\_CE = Context Evaluation, EMP-3\_PNC = Perception of Needs in Communication, CQ = Cultural Intelligence, ACD = Acceptance of Cultural Differences. \* p < 0.05, \*\* p < 0.01.

**Table 4**

Multiple linear regression analyses with OSCE Clinical assessment as dependent variable (N = 100).

	Unstandardized regression coefficient (β)	SE	95% CI	p-value
<b>Model 1 (sig = .002)</b>				
Constant	.392	.904	-1.402 – 2.187	.665
ACD	.466	.173	.122 – .810	.008
EMP-3_PNC	.207	.198	-.186 – .599	.298
CQ_Motivation	.148	.187	-.224 – .519	.431
<b>Model 2 (sig = .002)</b>				
Constant	-.803	1.328	-3.442 – 1.837	.547
ACD	.635	.190	.256 – 1.014	.001
EMP-3_PNC	.175	.202	-.226 – .576	.388
CQ_Motivation	.243	.195	-.145 – .631	.216
GP gender (ref cat = female)	-.162	.192	-.543 – .2205	.401
Age	.017	.032	-.047 – .082	.603
# yrs of experience	.004	.032	-.060 – .067	.903
Frequency treating minority patients (ref cat = multiple times a week)				
(almost) never	.422	.500	-.572 – 1.415	.401
once or a couple times a month	-.109	.277	-1.553 – .492	.696
once a week	.437	.268	-.096 – .970	.107
daily	-.475	.243	-.959 – .009	.054
Followed diversity sensitive training (ref cat = no)	.305	.269	-.230 – .840	.261

Note: GP = General Practitioner, ACD = Acceptance of Cultural Differences, EMP-3\_PNC = Perception of Needs in Communication, CQ = Cultural Intelligence.

the considerable time and effort required for GPs to engage in two online consultations and complete an extensive survey. The demanding nature of these study requirements within the context of general practice settings, characterized by time and workload pressures, likely contributed to the limited participation. Consequently, the small sample size restricts the statistical power of our analyses, potentially reducing our ability to detect significant associations. Nonetheless, it is worth considering that this limitation may suggest that the associations we did identify are even more pronounced in reality. Further research with a larger sample size could provide a more comprehensive exploration of potential effects. In addition, alternative research designs, such as the use of mystery patients, are recommended to investigate GP behavior in intercultural consultations, as they may offer a less labor-intensive and costly approach.

**4.2. Conclusion**

The findings of this study provide valuable insights into the communicative and clinical behavior of general practitioners (GPs) during intercultural consultations. Our results demonstrate that patient ethnicity did not exert a significant influence on the communication skills or clinical assessment by GPs. Overall, participants displayed remarkably low scores, indicating a deficiency of patient-centered

**Table 5**

Multiple linear regression analyses with OSCE Communication Skills as dependent variable (N = 100).

	Unstandardized regression coefficient ( $\beta$ )	SE	95% CI	p-value
<b>Model 1 (sig =.073)</b>				
Constant	3.372	.748	1.887 – 4.857	< .001
Metacognitive CQ	.414	.228	-.039 – .866	.073
<b>Model 2 (sig =.128)</b>				
Constant	3.733	1.636	.480 – 6.985	.018
Metacognitive CQ	.497	.239	.022 – .971	.041
GP gender (ref cat = female)	-.241	.296	-.829 – .347	.417
Age	-.011	.050	-.110 – .088	.825
# yrs of experience	-.005	.050	-.105 – .095	.920
Frequency treating minority patients (ref cat = multiple times a week)				
(almost) never	-.159	.753	-1.655 – 1.337	.981
once or a couple times a month	-.141	.422	-.979 – .698	.740
once a week	.318	.412	-.500 – 1.136	.441
daily	-.696	.371	-1.434 – .042	.064
Followed diversity sensitive training (ref cat = no)	.249	.438	-.622 – 1.120	.571

Note: GP = General Practitioner, CQ = Cultural Intelligence.

**Table 6**

Sensitivity analysis comparing correlations with ethnic majority patient consultations.

	Flemish-Moroccan SP		Flemish SP	
	OSCE_COM	OSCE_MED	OSCE_COM	OSCE_MED
EMP-3	.183	.196	.251 *	.127
EMP-3_TP	.117	.158	.241 *	.126
EMP-3_CE	.137	.052	.176	-.002
EMP-3_PNC	.141	.231 *	.137	.171
CQ	.092	.116	.104	.112
CQ_Motivation	.119	.227 *	.014	.073
CQ_Knowledge	-.031	.013	.017	.078
CQ_Strategy	.216 *	.107	.206 *	.073
CQ_Behavior	-.031	.002	.049	.087
ACD	.157	.337 **	.126	.277 **

Note: OSCE\_COM = Objective Structured Clinical Examination Communication Skills, OSCE\_MED = Objective Structured Clinical Examination Clinical Assessment, EMP-3\_TP = Task Perception, EMP-3\_CE = Context Evaluation, EMP-3\_PNC = Perception of Needs in Communication, CQ = Cultural Intelligence, ACD = Acceptance of Cultural Differences. \* p < 0.05, \*\* p < 0.01.

communication and cultural sensitivity. Nonetheless, the study underscores the significance of intercultural effectiveness during interactions with patients from different ethnic backgrounds. Intercultural traits, in particular, emerge as strong and robust predictors of intercultural clinical assessment proficiency.

**4.3. Practice implications**

The present findings have important implications for general practice. Firstly, health care providers and researchers should prioritize the development and enhancement of intercultural attitudes, traits and

capabilities as key competencies in intercultural care provision. Targeted training programs, practical interventions and continuous education initiatives, focusing on ethnocultural empathy, can improve GPs' understanding and appreciation of cultural differences, resulting in more effective clinical assessments with patients from diverse ethnic backgrounds [36,70].

Moreover, intercultural traits such as ethnocultural empathy can be enhanced through intergroup contact, which may also promote the development of more positive attitudes towards diversity [71]. Incorporating internships or educational programs in multicultural practices could be valuable in fostering intercultural competence among GP trainees. Such immersive experiences would expose trainees to diverse patient populations, allowing them to gain firsthand knowledge and understanding of different cultural perspectives and healthcare needs. By actively engaging with diverse communities, trainees can cultivate their ethnocultural empathy, broaden their cultural awareness, and learn to appreciate the positive aspects of diversity.

**Ethical approval**

The present study received ethical approval from the Commission for Medical Ethics, UZ UGent, BC-08924. Explicit informed consent was requested from all participants.

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**CRedit authorship contribution statement**

**Derous Eva:** Writing – review & editing, Project administration, Conceptualization. **Willems Sara:** Writing – review & editing, Supervision, Resources, Project administration, Conceptualization. **D'hondt Fanny:** Writing – review & editing, Methodology, Conceptualization. **De Maesschalck Stéphanie:** Writing – review & editing, Supervision, Conceptualization. **Vandecasteele Robin:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Schelfhout Stijn:** Writing – review & editing, Visualization, Validation, Methodology, Formal analysis, Conceptualization.

**Declaration of Competing Interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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