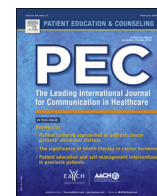


Contents lists available at [ScienceDirect](http://ScienceDirect)

## Patient Education and Counseling

journal homepage: [www.elsevier.com/locate/pateducou](http://www.elsevier.com/locate/pateducou)

# How doctors' communication style and race concordance influence African–Caribbean patients when disclosing depression<sup>☆</sup>

Adams A.<sup>a,\*</sup>, Realpe A.<sup>a</sup>, Vail L.<sup>a</sup>, Buckingham C.D.<sup>b</sup>, Erby L.H.<sup>c</sup>, Roter D.<sup>c</sup><sup>a</sup> Warwick Medical School, University of Warwick, Coventry, UK<sup>b</sup> Computer Science, Aston University, Birmingham, UK<sup>c</sup> School of Public Health, Johns Hopkins University, Baltimore, USA

## ARTICLE INFO

## Article history:

Received 26 January 2015

Received in revised form 11 August 2015

Accepted 13 August 2015

## Keywords:

Racial disparities

African–Caribbean

Doctor–patient communication

Depression disclosure

Depression treatment

Primary care

## ABSTRACT

**Objective:** To determine the impact of doctors' communication style and doctor–patient race concordance on UK African–Caribbeans' comfort in disclosing depression.

**Methods:** 160 African–Caribbean and 160 white British subjects, stratified by gender and history of depression, participated in simulated depression consultations with video-recorded doctors. Doctors were stratified by black or white race, gender and a high (HPC) or low patient-centred (LPC) communication style, giving a full 2 × 2 × 2 factorial design. Afterwards, participants rated aspects of doctors' communication style, their comfort in disclosing depression and treatment preferences

**Results:** Race concordance had no impact on African–Caribbeans' comfort in disclosing depression. However a HPC versus LPC communication style made them significantly more positive about their interactions with doctors ( $p=0.000$ ), their overall comfort ( $p=0.003$ ), their comfort in disclosing their emotional state ( $p=0.001$ ), and about considering talking therapy ( $p=0.01$ ); but less positive about considering antidepressant medication ( $p=0.01$ ).

**Conclusion:** Doctors' communication style was shown to be more important than patient race or race concordance in influencing African Caribbeans' depression consultation experiences. Changing doctors' communication style may help reduce disparities in depression care.

**Practice Implications:** Practitioners should cultivate a HPC style to make African–Caribbeans more comfortable when disclosing depression, so that it is less likely to be missed.

© 2015 The Authors. Published by Elsevier Ireland Ltd. All rights reserved. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)

## 1. Introduction

This paper aims to shed light on aspects of primary care practice which can improve the experiences of UK African–Caribbeans presenting with depression, and help reduce racial disparities in care. It explores the impact of different consultation conditions on African–Caribbeans' ability to disclose symptoms of depression. Specifically, it examines whether doctor–patient race concordance or a patient-centred communication style is important in facilitating the disclosure process.

### 1.1. Background

Depression is acknowledged to be difficult to diagnose, and is missed in about 50% of primary care consultations [1]. Reasons for this are due to a complex mix of patient and doctor factors, a key one of which is patients' difficulty in disclosing their symptoms [2].

Patients' ability to disclose symptoms of depression is affected by numerous factors, such as stigma and time constraints in primary care consultations which militate against their ability to create a full and coherent account of a phenomenon both difficult to understand and describe, particularly when experiencing low mood [3,4]. Worryingly, non-disclosure can occur more frequently amongst those whose need for help is greatest. Bushnell et al. [3] found that younger patients, those consulting more frequently and those with greater psychiatric disability were more likely to report non-disclosure. The most frequently given reasons for non-disclosure were beliefs that a general practitioner is not the 'right' person to talk to, and that mental health problems should not be discussed at all. Other studies suggest that patients contribute to non-detection by presenting their distress as somatic rather than

<sup>☆</sup> All underlying research materials can be accessed by contacting the corresponding author.

\* Corresponding author at: Warwick Medical School, University of Warwick, Coventry, CV4 7AL, UK.

E-mail addresses: [A.E.Adams@warwick.ac.uk](mailto:A.E.Adams@warwick.ac.uk) (A. Adams), [A.X.Realpe@warwick.ac.uk](mailto:A.X.Realpe@warwick.ac.uk) (A. Realpe), [Laura.Vail@warwick.ac.uk](mailto:Laura.Vail@warwick.ac.uk) (L. Vail), [c.d.buckingham@aston.ac.uk](mailto:c.d.buckingham@aston.ac.uk) (C.D. Buckingham), [droter@jhsph.edu](mailto:droter@jhsph.edu) (L.H. Erby), [lori.erby@nih.gov](mailto:lori.erby@nih.gov) (D. Roter).

emotional [5], and by normalising psychologically distressing symptoms [4].

Disclosing depression is difficult for anyone, but has long been recognised as particularly difficult for people of black African race compared with white people in developed countries, where primary health care is provided predominantly by white clinicians [6–9]. In the US, Cooper et al. [10] argued that ethnic-cultural differences in communication contribute to racial disparities in depression detection and treatment. This can arise because of racial differences in patients' modes of communication. UK African–Caribbeans are often misinterpreted [11], and this has been associated with poorer experiences and outcomes of care [6,12].

Doctors' modes of communication with patients of African race also contribute to the problem. Johnson et al. [13] observed differences in doctors' communication styles with African American compared with White American patients, finding them to be more verbally dominant (by 23%) and engaging in 33% less patient-centred communication. More specifically, Ghods et al. [14] found doctors less likely to discuss depression, respond to emotional disclosures or recognise the significant emotional distress of their African American relative to their white patients, despite them screening positive for depression. Similarly in the UK, African–Caribbeans are less likely than white patients to receive a diagnosis of depression [15–17], and consequently are at risk of not getting the help they need. This is compounded by the fact that people of black African race living in predominantly white societies are also often wary of formal mental health care and the treatments used [18–21].

Race concordance between doctors and patients, i.e. where doctors and patients are of the same race, appears to be important for improving the experiences of black African race patients. Cooper-Patrick et al. [22] found that African American patients reported primary care consultations were more participatory under conditions of doctor–patient race concordance; and in prospective testing, race concordant consultations proved to be longer, and characterised by more satisfied patients displaying more positive affect [23]. Street et al. [24] explain that where patients see themselves as similar to their doctors in terms of personal beliefs, values and ways of communicating: trust, satisfaction and concordance with treatment are more likely.

In this study we do not examine how doctors and patients communicate with each other, but instead examine the *impact of doctors' communication on patients*. We explore a number of hypotheses. Firstly, that African–Caribbean (hereafter called 'black') compared with White British (hereafter called 'white') patients will find it more difficult to disclose depression to primary care doctors (Hypothesis 1); and secondly, that they will feel less comfortable overall in consulting with doctors about depression (Hypothesis 2). Hypothesis 3 is that all patients will rate their consultation experiences more positively when doctors have a high patient-centred (HPC) style compared with when doctors have a low patient-centred (LPC) style. Hypothesis 4 is that black patients will rate their consultation experiences with black doctors more positively than those with white doctors.

## 2. Research methods

We sought to recruit three hundred and twenty analogue patients (APs) aged 21–65 years, with an equal gender mix. (An analogue patient is defined as a research subject who simulates being a patient). Half of the sample was to be from the African–Caribbean population and half White British, mainly from the West Midlands. To enhance the study's validity, half of the sample was to have been previously treated for depression, whilst the other half was not. APs with a history of depression were to be identified via

primary care practices' and improving access to psychological therapies services' past patient lists. Those meeting the study criteria were sent letters and information sheets, inviting them to contact the research team if they would like to participate. APs who had not previously been diagnosed with depression were recruited using study posters and flyers, in-person presentations and by word of mouth via relevant community organisations and networks.

The study procedure involved APs being asked to envision themselves as a patient consulting with a primary care doctor during a time in their lives when things were especially difficult for them. This was a time when they felt sad and upset and/or emotionally and physically exhausted for more than a couple of weeks. They were then oriented to an interactive computer program in which a simulated doctor engaged them in a conversation about their symptoms.

Four actors were used in the production of the simulations. They were filmed in the US to facilitate a comparative US/UK study, with actors employing both US and UK accents. Actors' performances and scripts were reviewed by US and UK research teams, to ensure the ecological validity of simulations for both country contexts. The race (black versus white), gender and communication style (low versus a high patient-centred style) of the video doctors were experimentally manipulated to produce 8 conditions. (See Appendix A for communication scripts, highlighting differences between HPC and LPC styles). This constituted a full  $2 \times 2 \times 2$  factorial design, to explore the independent contribution of doctor communication style, as well as gender and race, on APs' responsiveness and receptivity to depression care, and their ability to disclose their experiences of depression. This paper focuses only on race and doctors' communication style. Gender effects are reported elsewhere [25].

The computer program randomly selected two simulations for each AP to interact with, thus assuring that the sequence in which simulations were presented was balanced (i.e. whether they encountered a male/female, or black/white doctor, with either a HPC/LPC style first or second). The program was also designed to ensure an overall equal balance of factor combinations, to provide the required systematic dataset. APs were instructed to respond directly back to the video doctor as naturally as possible, as if talking to their own doctor. The only caveat was that no questions should be asked. Patient disclosures were captured through the computer's video cam. A practice exchange with a video receptionist welcomed the AP to the surgery and asked about the weather. After verifying the program was being used correctly, the research assistant left the room, but remained available nearby if help was needed.

The program presented a series of nine brief video segments (average duration 30 s) portraying a doctor during a depression-focused primary care consultation. At the end of each segment the doctor asked a question to which the AP responded directly. The next segment began with a response scripted to be general enough to appear reasonably responsive to most patient statements, followed by a new topic, thus simulating a clinical conversation. Each simulation comprised an initial conversation with a practice nurse, exploring the nature of the patient's problem and how they had dealt with it. The patient then 'saw' the doctor who explored: why they had come; their symptoms and how these impacted their life; whether this could be depression; family history of depression; treatment options (medication or talking therapy); ability to concord with treatment; and follow-up care. Each simulation ended after an exchange with a video receptionist asking the AP to talk candidly about what they liked or disliked about the consultation.

Afterwards, APs completed assessment measures of verisimilitude (5 items), doctors' affective demeanour (12 items) and

nonverbal effectiveness (5 items), their comfort in disclosing emotions to the doctor and overall comfort with the doctor. In addition, they were asked about treatment options. For both medication and therapy they could opt to: receive it now, not receive it, or to wait and see how things developed. Demographic data about APs' education level, health literacy and numeracy were also collected, using the 8-item Rapid Estimate of Adult Literacy in Medicine (REALM-R) [26] and a 3 item numeracy measure [27].

All of the outcomes assessed are categorical variables, so the majority of the data analyses consisted of cross-tabulations with the binary variables of AP race, doctors' communication style and doctors' race, with application of the chi square measure of association. Concepts measured by a battery of items, e.g. doctors' affective demeanour, were tested using Cronbach's alpha, to assess their reliability as measurement scales. Relationships between these measures and the binary variables of interest were explored using *t*-tests.

However before examining racial differences in APs' responses to the videos, we firstly examined factors which we hypothesised might influence the results. First, we explored the age and education of the two race groups; and secondly we examined any differences in APs' demographic profiles by randomisation groups, i.e. between those 'seeing' black or white doctors, and doctors with HPC or LPC styles, to identify any bias due to unbalanced samples. Finally, we examined APs' verisimilitude ratings.

### 3. Results

#### 3.1. Analogue patients' demographic profiles

We achieved our target of recruiting 320 White British and African-Caribbean male and female analogue patients (160 of each), as described above, with a response rate of 20.7% for those recruited via clinical services. Table 1 shows no significant differences in the ages of the resulting two race groups, but that their education level, literacy and numeracy profiles are significantly different. Almost twice as many white compared with black

**Table 1**  
Analogue patients' demographic characteristics by race.

Demographics	Analogue patients' race		Significance Level
	Black (%)	White (%)	
Age Group (years)			
21–34	38.5	46.9	NS
35–50	40.4	29.4	
51–65	21.2	21.9	
65+	0	1.9	
Education level			
Up to A levels (US Advanced Placements)	57.1	42.9	$P=0.002^a$
First and higher college degrees	36.6	63.4	
Literacy <sup>c</sup>			
Less than adequate	40.6	6.2	$P=0.000^b$
Adequate	59.4	93.8	
Numeracy <sup>d</sup>			
Less than adequate	48.8	18.7	$P=0.000^b$
Adequate	51.2	81.3	
N=	160	160	Total $n=320$

<sup>a</sup> Chi square significant at the  $p < 0.05$  level.

<sup>b</sup> Chi square significant at the  $p < 0.001$  level.

<sup>c</sup> Literacy was defined as inadequate where participants hesitated for more than 5 s over one or more of the words presented in the REALM-R test; and adequate where participants could read all the words without hesitation.

<sup>d</sup> Numeracy was defined as inadequate where participants gave incorrect answers to at least one of the three questions; and adequate where participants got all three correct.

APs are educated to college degree level and above (63.4% versus 36.6%,  $p=0.002$ ), and this difference is reflected in literacy and numeracy scores, where fewer black than white APs achieved 'adequate' scores for both literacy (59.4% versus 93.8%,  $p=0.000$ ) and numeracy (51.2% versus 81.3%,  $p=0.000$ ). Literacy and numeracy were respectively deemed 'inadequate' where APs either hesitated over one or more words or gave at least one incorrect answer to the numeracy questions. These findings may be important for explaining any observed racial differences in APs' comfort ratings. No significant demographic profile differences were detected between the randomisation groups however.

#### 3.2. Verisimilitude

APs were asked five questions about the realism of the encounters (see Table 2). Each item was rated on a four point scale: 1 indicating a high degree of verisimilitude between the video encounters and real life experiences, and 4 indicating lack of verisimilitude. Mean responses were in the range of 1.54–2.57, indicating that APs found the simulated interactions 'more real than not', particularly during the second interaction, when mean ratings for almost all items were lower, as APs became more familiar with the exercise.

Overall, there are few racial differences in the verisimilitude ratings, although findings suggest that the white APs 'warmed' to the exercise the second time around more than the black APs. White, compared with black APs, rated the realism of their own portrayals (1.54 SD 0.65 versus 1.73 SD 0.81,  $p=0.02$ ) and responses to the doctor (1.58 SD 0.69 versus 1.91 SD 0.93,  $p=0.000$ ) as more real, suggesting they found it easier to get 'into role' than black APs. Importantly however, there were no racial differences in APs' ratings of their ease of imagining themselves as a patient talking to the video doctors, or in their direct ratings of the video doctors' realism and similarity to other doctors they have seen. On the strength of the findings about higher verisimilitude ratings for the second video, and bearing in mind guidance from protocol analysis methodology about allowing subjects to rehearse research tasks prior to data collection [28], all subsequent analyses are based on video 2 data.

#### 3.3. Racial differences in analogue patients' consultation experiences

To test Hypotheses 1 and 2, that black compared with white patients will find it more difficult to disclose depression to primary care doctors and feel less comfortable with doctors overall, we examined APs' responses to the questions: "To what extent did you feel COMFORTABLE disclosing your emotional state to this doctor?" and "To what extent did you feel COMFORTABLE, overall, with this doctor?" Table 3 shows there are no statistically significant differences between the two races; so Hypotheses 1 and 2 are rejected. We also examined these relationships controlling for APs' education level. However no significant differences in comfort ratings, either within or between the two race groups were evident.

To examine further racial differences in APs experiences, we explored the reliability of doctors' affective demeanour and non-verbal effectiveness items as measurement scales. Both demonstrated high reliability, with Cronbach's alpha scores of 0.97 and 0.92 respectively. APs' responses to scale items were added together, and mean results explored using *t*-test comparisons. Affective demeanour items were rated on a 1–10 point scale, with APs' mean scores ranging from 1.01 to 9.24. Non-verbal effectiveness items were rated on a 1–6 point scale, with APs' mean scores also ranging from 1 to 6. Table 3 shows no statistically significant differences in APs' ratings of doctors' affective demeanour or the effectiveness of their non-verbal communication by race.

**Table 2**  
Analogue patients' ratings of the verisimilitude of the video encounters by race.

Item	Mean score (SD)		Significance level	Mean score (SD)		Significance level
	Video 1			Video 2		
	Black patients	White patients		Black patients	White patients	
1. How easy was it for you to imagine yourself as a patient when talking to the doctor in the video?	1.94 (0.83)	1.97 (0.77)	NS	1.82 (0.84)	1.67 (0.72)	NS
2. To what extent was the situation you talked about and the feelings you described an accurate description of what happened to you?	1.69 (0.86)	1.58 (0.64)	NS	1.73 (0.81)	1.54 (0.65)	$P=0.02$
3. How similar were your responses to the doctor in the video as you think they would be to an actual doctor under the same circumstances?	1.99 (1.02)	1.92 (0.78)	NS	1.91 (0.93)	1.58 (0.69)	$P=0.000$
4. How similar did the doctor in the video seem to other doctors you have seen?	2.42 (1.07)	2.57 (0.86)	NS	2.28 (1.00)	2.09 (0.86)	NS
5. How 'real' did the doctor in the video seem to you?	2.07 (1.00)	2.20 (0.75)	NS	1.99 (1.01)	1.87 (0.77)	NS
N=	160	160		160	160	Total $n=320$

Items are rated on a 1–4 scale: 1 indicates a high degree of verisimilitude and 4 a lack of verisimilitude.

Instead there are racial differences in APs' treatment preferences. White APs are more inclined to agree to take medication (37.1% versus 22.9%), whilst black APs prefer to wait and see how their symptoms develop (51.6% versus 38.4%,  $p=0.015$ ). With regard to talking therapy, white APs are clearer that they do not want it (21.5% versus 12.1%), whilst again black APs prefer to 'wait and see' (51.6% versus 38.6,  $p=0.025$ ).

#### 3.4. The impact of doctors' communication style on APs' consultation experiences

We went on to test Hypothesis 3, that all patients will rate their consultation experiences more positively when doctors have a high patient-centred (HPC) style compared with when doctors have a low patient-centred (LPC) style. Consequently, we re-examined all of the relationships presented in Table 3 under HPC versus LPC conditions.

Table 4 demonstrates support for Hypothesis 3. It shows that black and white APs are more comfortable disclosing depression to doctors with a HPC versus LPC style ( $p=0.001$  and  $p=0.000$  respectively). For example, 40% versus 25.9% black and 59.5% versus 19.8% of white APs stated the degree of comfort they experienced was 'very much'; whilst 18.7% versus 48.2% black and 6.3% versus 44.4% of white APs stated their degree of comfort was 'none to somewhat' under these conditions. Results for overall comfort with the doctor demonstrate a similar pattern ( $p=0.003$  and  $p=0.000$  respectively). Also under HPC versus LPC conditions, black and white APs rated doctors' affective demeanour and the effectiveness of their non-verbal communication more highly ( $p=0.000$  respectively). Whilst Table 3 demonstrates significant differences between black and white APs' treatment preferences, Table 4 shows that doctors' communication style affected black but not white APs' thoughts about treatment. Most black APs wished to 'wait and see' how their symptoms developed rather than agreeing to take medication, regardless of doctors' communication style. However it is noticeable that under HPC conditions, more than twice as many black APs stated they would not take medication than under LPC conditions (36% versus 15.9%,  $p=0.01$ ). Regarding therapy, the opposite was true, with 6.7% versus 17.1% black APs stating they did not want it under HPC versus LPC conditions. However more than twice as many black APs expressed a wish to have therapy under HPC versus LPC conditions (52% versus 22%,  $p=0.000$ ). Indeed, this was the most frequently cited response to the question about therapy under HPC conditions; whereas for black APs consulting with LPC doctors, the most frequent response was to 'wait and see'.

#### 3.5. Race concordance and black analogue patients

To test Hypothesis 4, we explored whether there were any differences in black APs' ratings of the same outcome variables described above, when consulting with black versus white doctors. However Table 5 shows no significant differences at the  $p<0.05$  level in black or white APs' outcome ratings, either in race concordant or discordant conditions.

**Table 3**  
Analogue patients' consultation experiences by race.

Analogue patients' race	Significance level		
	Black APs	White APs	
Degree to which APs felt comfortable disclosing their emotional state (% APs)			
Not at all—somewhat	34.4	25.6	NS
Moderately	27.5	32.5	
Very much	32.5	39.4	
No response	5.6	2.5	
N=	160	160	Total $n=320$
Degree to which APs felt comfortable overall with doctors (% APs)			
Not at all—somewhat	35.0	31.9	NS
Moderately	23.1	18.8	
Very much	33.1	38.1	
No response	8.8	11.2	
N=	160	160	Total $n=320$
Ratings of doctors' affective demeanour (mean (SD))			
	6.07 (2.27)	6.48 (1.93)	NS
N=	149	157	Total $n=306$
Ratings of the effectiveness of doctors' non-verbal communication (mean (SD))			
	3.76 (1.38)	3.96 (1.33)	NS
N=	151	159	Total $n=310$
APs' preferences regarding medication (% APs)			
Take it	22.9	37.1	$P=0.015^*$
Not take it	25.5	24.5	
Wait and see	51.6	38.4	
N=	157	159	Total $n=316$
APs' preferences regarding talking therapy (% APs)			
Want it	36.3	39.9	$P=0.025^*$
Do not want it	12.1	21.5	
Wait and see	51.6	38.6	
N=	157	158	Total $n=315$

\* Results significant at the  $p<0.05$  level.

**Table 4**  
Analogue patients' consultation experiences by race and doctors' communication style.

Doctors' Communication Style	Analogue patients' race				Significance level	
	Black		White		Within Black	Within White
	HPC	LPC	HPC	LPC	APs	APs
Degree to which APs felt comfortable disclosing their emotional state (% APs)						
Not at all—somewhat	18.7	48.2	6.3	44.4	$P=0.001^{**}$	$P=0.000^{**}$
Moderately	36.0	20.0	32.9	32.1		
Very much	40.0	25.9	59.5	19.8		
No response	5.3	5.9	1.3	3.7		
N=	75	85	79	81	160	160
Degree to which APs felt comfortable overall with doctors (% APs)						
Not at all—somewhat	21.3	41.7	10.1	53.1	$P=0.003^*$	$P=0.000^{**}$
Moderately	24.0	22.4	17.7	19.8		
Very much	45.3	22.4	62.0	14.8		
No response	9.4	13.5	10.1	12.3		
N=	75	85	79	81	160	160
APs' ratings of doctors' affective demeanour (mean (SD))						
	7.01 (1.74)	5.21 (2.35)	7.83 (0.90)	5.18 (1.76)	$P=0.000^{**}$	$P=0.000^{**}$
N=	75	85	79	81	160	160
APs' ratings of the effectiveness of doctors' non-verbal skills (mean (SD))						
	4.23 (1.27)	3.34 (1.34)	4.65 (1.12)	3.29 (1.18)	$P=0.000^{**}$	$P=0.000^{**}$
N=	75	85	79	81	160	160
APs' preferences regarding medication (% APs)						
Take it	22.7	23.2	30.8	43.2	$P=0.01^*$	NS
Not take it	36.0	15.9	30.8	18.5		
Wait and see	41.3	61.0	38.5	38.3		
N=	75	85	79	81	160	160
APs' preferences regarding talking therapy (% APs)						
Want it	52.0	22.0	46.2	33.8	$P=0.000^{**}$	NS
Do not want it	6.7	17.1	15.4	27.5		
Wait and see	41.3	61.0	38.5	38.8		
N=	75	85	79	81	160	160

\*\* Results significant at the  $p < 0.001$  level.

## 4. Discussion

### 4.1. Discussion and conclusion

There was no evidence to support Hypotheses 1 and 2, that black compared with white patients find it (a) more difficult to disclose depression, and (b) feel less comfortable overall consulting doctors about it. These are encouraging although unexpected findings, given previous findings about the wariness of formal mental health care amongst people with black African race origins living in predominantly white societies [18–21]. We consider reasons for our findings below, when we reflect on study limitations.

Our third hypothesis was that patients of both races will rate consultation experiences more positively where doctors have a HPC versus LPC style, and, as expected, this was strongly supported. Under HPC versus LPC conditions, APs demonstrated more comfort in disclosing depression, and with doctors overall. This is likely due to their more positive perceptions of doctors' interaction styles, demonstrated in higher ratings of both their affective demeanour and the effectiveness of their non-verbal communication. These skills displayed by doctors, allowed APs to feel more comfortable overall, and particularly in relation to sharing their symptoms of depression.

Racial differences were evident in treatment preferences however. White APs were more definite about wanting medication and not talking therapy; while black APs prefer to wait and see how their symptoms develop before committing to any treatment. This is not surprising, given the wariness of mental health treatments

amongst people of black African race living in predominantly white societies noted above [18–21]. Black APs' treatment preferences were shown to be sensitive to doctors' communication style however, whilst white APs' were not. HPC conditions were associated with black APs being more willing to accept therapy than taking their 'default' 'wait and see' stance. Doctors' communication style made no difference to black APs' willingness to take medication however, but significantly more APs consulting with a HPC doctor were able to state their preference not to take it. For talking therapy, the opposite was true. Significantly more black APs consulting with a LPC doctor stated a preference not to receive it. So both communication styles are associated with black APs feeling able to say 'no' to (different) depression treatments.

It is perhaps not surprising that a HPC style is more likely to lead to black patients choosing a more patient-centred approach to treatment, which demands the costly and active participation of patients, but with benefits of learning more about themselves and ways of coping. This is instead of taking medication in the first instance, which, whilst proven effective, is less attractive to African Caribbean patients and can be viewed as a more passive, medically-driven solution. This finding may have important implications for black patients' ability to engage in treatment and the choices they can make, because research shows doctors tend to be less patient-centred when speaking to black compared with white patients [13,14].

Finally, we explored the hypothesis that black patients will rate their consultation experiences more positively with black versus white doctors; but unlike others [22–24], we found no supporting evidence. This was surprising, but may reflect UK primary care

**Table 5**  
Consultation experiences by analogue patients' and doctors' race.

Doctors' race	Analogue patients' race				Significance level	
	Black		White		Within Black	Within White
	Black	White	Black	White	APs	APs
Degree to which APs felt comfortable disclosing their emotional state (% APs)						
Not at all—somewhat	35.4	33.3	24.7	26.6	NS	NS
Moderately	26.6	28.4	33.3	31.6		
Very much	34.2	30.9	39.5	39.2		
No response	3.8	7.4	2.5	2.5		
N=	79	81	81	79	160	160
Degree to which APs felt comfortable overall with doctors (% APs)						
Not at all—somewhat	32.9	37.0	34.6	29.1	NS	NS
Moderately	21.5	24.7	17.3	20.3		
Very much	35.4	30.9	37.0	39.2		
No response	10.2	7.4	11.1	11.4		
N=	79	81	81	79	160	160
APs' ratings of doctors' affective demeanour (mean (SD))						
	6.00 (2.34)	6.13 (2.20)	6.44 (1.94)	6.52 (1.95)	NS	NS
N=	79	81	78	79	160	160
APs' ratings of the effectiveness of doctors' non-verbal skills (mean (SD))						
	4.23 (1.27)	3.34 (1.34)	4.65 (1.12)	3.29 (1.18)	NS	NS
N=	75	85	79	81	160	157
APs' preferences regarding medication (% APs)						
Take it	23.4	22.5	37.5	36.7	NS	NS
Not take it	22.1	28.7	30.0	19.0		
Wait and see	54.5	48.8	32.5	44.3		
N=	79	81	80	78	160	158
APs' preferences regarding talking therapy (% APs)						
Want it	36.4	36.3	46.3	33.3	NS	NS
Do not want it	9.1	15.0	21.3	21.8		
Wait and see	54.5	48.8	32.5	44.9		
N=	79	81	80	78	160	158

\*Results significant at the  $p < 0.05$  level.

\*\*Results significant at the  $p < 0.001$  level.

reality, where African–Caribbeans are much less likely to consult with a doctor of their own race than is the case for African Americans. African–Caribbeans are likely to have got used to consulting with white doctors and accepted this as the norm.

#### 4.1.1. Study limitations

With the exception of the findings about doctors' communication style, we did not find support for any of our hypotheses about how black patients would respond to the simulated depression consultations. This may be due to the design of our experiment, involving video simulations rather than real depression consultations, which others have used [22,23]. While video doctors appeared to respond to what APs said, it was not possible for APs to ask the doctors any questions. Gordon et al. [29] state that limited information exchange between doctors and patients can be an integral part of poor communication, which could have affected observed APs' ratings of their experiences.

Another factor which may have influenced the lack of expected findings about race concordance is the fact that the black doctor actors were not African Caribbeans. They were African Americans who spoke with an English accent, so that our findings reflect black race concordance rather than concordance between African Caribbean doctors and patients: which might have told a different story.

Talking to a computer is also unusual, and may have influenced APs' comfort. Ratings may have been higher than expected for black APs, because they found it easier to talk about depression to a doctor not physically present in the room, but on-screen, in pre-

recorded form. Some APs' remarks following formal data collection are consistent with this notion, and merit further investigation.

Overall, verisimilitude ratings indicated that APs found the interactions with the video doctors 'more real than not'. Absence of higher ratings may be due to factors discussed above, and to the simulations being filmed in the US. Care was taken to ensure ecological validity for the UK and the US, but some residual influences may have remained. To maximise verisimilitude, we analysed findings for the second video only. However, ideally we will strive for ratings of less than 1.5 for all verisimilitude items in future work. Our experimental design did however allow us to manipulate the depression consultation conditions in ways well-nigh impossible in real clinical practice. For example, only 0.2% of all UK doctors have an African Caribbean background [11].

Another possible limitation concerns the race samples being significantly different in educational backgrounds, literacy and numeracy: indicating disparity in their socio-economic statuses, so that we were not comparing 'like with like'. However, this made no differences to APs' comfort ratings; and the samples do reflect UK social reality, where African–Caribbeans are traditionally disproportionately located in lower socio-economic status groups [30].

One final potential limitation relates to the scripting of doctors' communication styles, and its influence on APs' treatment responses. Both HPC and LPC scripts mentioned the two possible treatment options, but HPC doctors invited APs to say which one they thought would help them most, while the LPC doctor said "I would like to start you on medication right away." These differences are integral to our depiction of the two communication

styles, however it is possible that the strong medication recommendation biased APs' responses under LPC conditions.

4.2. Conclusion

Doctors' communication style appears to be more important than patient race or race concordance in influencing APs, and particularly black APs', depression consultation experiences. This is good news, since changing doctors' communication style is more achievable than changing the racial demographic profile of UK primary care doctors. Where doctors have a HPC style, black APs are more likely to be comfortable with them, particularly with talking about the difficult subject of depression, and more inclined to agree to talking therapy rather than waiting to see how their symptoms develop. This should help reduce disparities in care.

4.3. Practice implications

It is important to cultivate HPC communication skills to help ensure that black patients feel comfortable in talking about depression, and that it is not missed.

Acknowledgments

This research was funded by the Economic and Social Research Council (ESRC), grant RES-177-25-0014, as part of the ESRC/NIH Disparities Initiative. The ESRC played no role in the conduct of the research, or in writing and deciding to submit this paper for publication. Ethical approval for the research was granted by the Black Country NHS Research Ethics Committee, ref. 10/H1202/35. We wish to thank all the analogue patients who generously gave their time to participate in the study, and our excellent team of data collectors, without whose commitment and determination this rich dataset would not have been possible: Earle and Anne Lergie, Pastor Leopold and Mary Strachan, Nick Tipple, Rachel Russell, Bola Olanle, Natasha Odumenya, Anne Chafer of Lincolnshire NHS Foundation Trust and Hannah Antoniadis of Somerset NHS Foundation Trust.

Appendix A.

Segment of video scripts illustrating doctors' communication styles.

High patient-centered	Common script	Low patient centered
Good morning, I'm Dr. XXXX. I know you spoke with our nurse and I have her notes which are helpful. But, I want to hear directly from you . . .		Good morning, I'm Dr. XXXX.
	What brings you in today?	
I am sorry to hear that. .get to know you a bit and understand what is happening. Then, we can make a decision together about what can be done to help you. What do you think I should know about how you are feeling and the difficult time you are going through?	What I would like to do today is..	Ok, so you are having some trouble. . . . talk about your symptoms and what I think could help. About your symptoms . . . .how long have you been feeling this way? What about your sleep – is that a problem – too much? Too little?

(Continued)

High patient-centered	Common script	Low patient centered
No wonder you are exhausted—anyone would be.	How else has your life been different—any loss of appetite, loss of concentration, lack of interest in things you used to enjoy?	
I appreciate that these are not easy things to talk about, but now I can better understand what you're going through. Is there anything else you would like to tell me about how you are feeling physically or emotionally	Have you noticed any other changes in your day to day mood or activities?	I see, is there anything else I forgot to ask?
Your problem is having a negative impact on many aspects of your life and I can see you are suffering.	The symptoms you are describing could be depression but depression is sometimes difficult to diagnose.	Your problem is having a negative impact on many aspects of your life.
What do you think is going on?		Could it be depression in your case?
High patient-centered People differ a lot in how they act and what they say about family members who are depressed. Have you heard about anyone in your family – parents, siblings, uncles, aunts or cousins – who you think has had depression or any other psychological problems?	Common script Lots of health problems, including depression can run in families. Knowing a bit more about your family might help with a diagnosis.	Low patient centered You may not know about everyone in your family, but as far as you know has anyone – parents, siblings, uncles, aunts or cousins – had depression or any other mental illness?
High patient-centered Considering all that you have said, I think you are depressed. I have seen a lot of patients with depression and what works for one person may or may not work for another. What do you think would help you the most?	Common script There are a number of things that may help you feel better. Medications are effective for some patients and some patients are helped by talking to a therapist.	Low patient centered Considering all that I have heard, I think you are depressed. I have seen a lot of patients with depression and I do not think you should wait to start treatment. I would like to start you on medication right away. If I prescribe a medication for you will you take it?

References

- [1] A.J. Mitchell, A. Vaze, S. Rao, Clinical diagnosis of depression in primary care: a meta-analysis, *Lancet* 374 (2009) 609–619, doi:http://dx.doi.org/10.1016/S0140-6736(09)60879-5.
- [2] J. Cape, Y. McCulloch, Patients' reasons for not presenting emotional problems in general practice consultations, *BJGP* 49 (1999) 875–879.
- [3] J. Bushnell, D. McLeod, A. Dowell, C. Salmond, S. Ramage, S. Collings, P. Ellis, M. Kljakovic, L. McBain: MaGPle research group, do patients want to disclose psychological problems to GPs? *Fam. Pract.* 22 (2005) 631–637.
- [4] L. Tait, To disclose or not to disclose psychological problems to GPs, *BJGP* 59 (2009) 638–639, doi:http://dx.doi.org/10.3399/bjgp09X454034.
- [5] S. Mallinson, J. Popay, Describing depression: ethnicity and the use of somatic imagery in accounts of mental distress, *Social Health Illn.* 29 (2007) 857–871.

- [6] C. McLean, C. Campbell, F. Cornish, African–Caribbean interactions with mental health services in the UK: experiences and expectations of exclusion as (re) productive of health inequalities, *Soc. Sci. Med.* 56 (2003) 657–669.
- [7] D.R. Levy, White doctors and black patients: influence of race on the doctor–patient relationship, *Paediatrics* 75 (1985) 639–643.
- [8] M. Dwight-Johnson, C. Sherbourne, D. Liao, K. Wells, Treatment preferences among depressed primary care patients, *J. Gen. Intern. Med.* 15 (2000) 527–534.
- [9] J. Brown, S. Casey, A. Bishop, M. Prytys, N. Whittinger, J. Weinman, How black African and white British women perceive depression and help-seeking: a pilot vignette study, *Int. J. Soc. Psychiatry* 57 (2010) 362–374, doi:<http://dx.doi.org/10.1177/0020764009357400>.
- [10] L.A. Cooper, D.E. Ford, B.K. Ghods, D.L. Roter, A.B. Primm, S.M. Larson, J.M. Gill, C.J. Noronha, E.K. Shaya, N.Y. Wang, A cluster randomised trial of standard quality improvement versus patient-centered interventions to enhance depression care for African Americans in the primary care setting, *Implement Sci.* 5 (2010) 18.
- [11] General Medical Council, List of registered medical practitioners–statistics. 2014 [http://www.gmc-uk.org/doctors/register/search\\_stats.asp](http://www.gmc-uk.org/doctors/register/search_stats.asp) [accessed 24.06.14].
- [12] F. Keating, African and Caribbean men and mental health. Retrieved from: <http://www.better-health.org.uk/sites/default/files/briefings/downloads/health-brief5.pdf>, 2007 (12.11.13).
- [13] R.L. Johnson, D. Roter, N.R. Powe, L.A. Cooper, Patient race/ethnicity and quality of patient–physician communication during medical visits, *Am. J. Public Health* 94 (2004) 2084–2090.
- [14] B.K. Ghods, D.L. Roter, D.E. Ford, S. Larson, J.J. Arbelaez, L.A. Cooper, Patient–physician communication in the primary care visits of African Americans and whites with depression, *J. Gen. Intern. Med.* 23 (2008) 600–606.
- [15] K. Lloyd, Depression and anxiety among African–Caribbean general practice attenders, *Int. J. Soc. Psychiatry* 39 (1993) 1–9.
- [16] S.M. Odell, P.G. Surtees, N.W. Wainwright, M.J. Commander, S. Sashidharan, Determinants of general practitioner recognition of psychological problems in a multi-ethnic inner-city health district, *Br. J. Psychiatry* 171 (1997) 537–541.
- [17] A. Adams, L. Vail, C.D. Buckingham, J. Kidd, S. Weich, D. Roter, Investigating the influence of African American and African Caribbean race on primary care doctors' decision making about depression, *Soc. Sci. Med.* 116 (2014) 161–168.
- [18] A.K. Das, M. Olfson, H.L. McCurtis, M.M. Weissman, Depression in African Americans: breaking barriers to detection and treatment, *J. Fam. Pract.* 55 (2006) 30–39.
- [19] J.J. Gallo, H.R. Bogner, K.H. Morales, D.E. Ford, Patient ethnicity and the identification and active management of depression in late life, *Arch. Intern. Med.* 165 (2005) 1962–1968.
- [20] Y.R. Pickett, K.N. Bazalais, M.L. Bruce, Late-life depression in older African Americans: a comprehensive review of epidemiological and clinical data, *Int. J. Geriatr. Psychiatry* 28 (2013) 903–913.
- [21] L. Cooper, D.B. Ghods, D. Ford, D. Roter, A. Primm, S. Larson, J. Gill, J. Noronha, E. Shaya, N. Wang, Comparative effectiveness of standard versus patient-centered collaborative care interventions for depression among African Americans in primary care settings: the BRIDGE study, *Health Serv. Res.* 48 (2013) 150–174, doi:<http://dx.doi.org/10.1111/j.1475-6773.2012.01435.x>.
- [22] L. Cooper-Patrick, J.J. Gallo, J.J. Gonzales, H.T. Vu, N.R. Powe, C. Nelson, D.E. Ford, Race, gender and partnership in the patient–physician relationship, *J. Am. Med. Assoc.* 282 (1999) 583–589.
- [23] L.A. Cooper, D.L. Roter, R.L. Johnson, D.E. Ford, D.M. Steinwachs, N.R. Powe, Patient centred communication, ratings of care, and concordance of patient and physician race, *Ann. Intern. Med.* 139 (2003) 907–915.
- [24] R.L. Street Jr., K.J. O'Malley, L.A. Cooper, P. Haidet, Understanding concordance in patient–physician relationships: personal and ethical dimensions of shared identity, *Ann. Fam. Med.* 6 (2008) 198–205.
- [25] D.L. Roter, L.H. Erby, A. Adams, C.D. Buckingham, L. Vail, A. Realpe, S. Larson, J.A. Hall, Talking about depression: an analogue study of physician gender and communication style on patient disclosures, *Patient Educ. Couns.* 96 (2014) 339–345.
- [26] P.F. Bass III, J.F. Wilson, C.H. Griffith, A shortened instrument for literacy screening, *J. Gen. Intern. Med.* 18 (2003) 1036–1038.
- [27] M.M. Schapira, S.L. Davids, T.L. McAuliffe, A.B. Nattinger, Agreement between scales in the measurement of breast cancer risk perceptions, *Risk Anal.* 24 (2004) 665–673.
- [28] K.A. Ericsson, H.A. Simon, *Protocol Analysis: Verbal Reports as Data*, MIT Press, Cambridge MA, 1993.
- [29] H.S. Gordon, R.L. Street Jr., B.F. Sharf, J. Soucek, Racial differences in doctors' information giving and patients' participation, *Cancer* 107 (2006) 1313–1320.
- [30] Ethnic Minorities in Britain: Diversity and Disadvantage, in: T. Modood (Ed.), *Policy Studies*, London, 1997.