Do not judge according to appearance: patients’ preference of a doctor’s face does not influence their assessment of the patient–doctor relationship

Soon-Ho Lee,1 Dong-Seon Chang,1 O-Seok Kang,1 Hwa-Hyun Kim,1 Hackjin Kim,2 Hyejung Lee,1 Hi-Joon Park,1 Younbyoung Chae1,2

1Acupuncture and Meridian Science Research Center, College of Oriental Medicine, Kyung Hee University, Seoul, Republic of Korea
2Department of Brain Cognitive Engineering, Korea University, Seoul, Republic of Korea

Correspondence to Professor Younbyoung Chae, Acupuncture and Meridian Science Research Center, Kyung Hee University, 1 Hoegidong, Dongdaemun-gu, Seoul 130-701, Republic of Korea; ybchae@khu.ac.kr

130-701, Republic of Korea; dong, Dongdaemun-gu, Seoul, Republic of Korea

INTRODUCTION

Faces are the principal source of information about other people, and trait judgements from faces can be made even after minimal time exposure.1 Moreover, it is known that impressions from other people’s faces are formed almost automatically and instantaneously.2 This can have important consequences for people who routinely face many people and have to provide a competent and trustworthy impression, such as medical doctors.

The initial clinical encounter between the patient and the doctor is crucial for the development of a patient–doctor relationship.3 During the first consultation the patient will develop a first impression of the doctor based on various factors, which includes the doctor’s verbal communication skills as well as non-verbal behaviour such as facial expressivity and eye contact, and even the doctor’s attire.4 5 It has been reported that, even in brief meetings with doctors, patients are responding more to patient-centred qualities of the doctor (eg, showing more empathy, providing more information, inviting participation in decision-making) than external factors such as the gender or race of the doctor.6

Empathy is considered to be central to all therapeutic relationships and has been shown to enhance and improve the patient–doctor relationship.7 The Consultation and Relational Empathy (CARE) measure has been developed and validated as a measure of the patient’s perception of the practitioner’s empathy and to assess the process of consultation between the patient and the doctor.8 It has been reported that the empathy of practitioners has a direct impact on patient’s health outcome during acupuncture treatment.9 These findings are noteworthy, with close relationships between physical therapists’ patterns of non-verbal communication and their therapeutic efficacy being found.10 Non-verbal communication, especially facial expressions, can play an important role in the interaction and relationship between individuals.11 Being aware of non-verbal communication mechanisms such as ‘emotional contagion’—a commonly observed phenomenon in human communication which denotes the tendency to mimic and synchronize facial expressions, vocalisations, postures and movements with those of another person—could aid the doctor’s empathy and ability to recognise the patient’s feelings.12–14

Faces play a unique and special role in forming first impressions, even though it seems that there is a decline in the centrality of face-to-face communication in the healthcare process.15 Patients are increasingly consulting the internet in order to find health information, which includes looking for online information to select their doctors.16–18 However, the

information they can find out about a doctor is often limited and their judgements can only be based on a few sources: the picture of the doctor which they can find online, information about the doctors uploaded by themselves or online reviews of other patients. Thus, the question of whether the preference of a briefly seen doctor’s face will have an influence on the patient–doctor relationship following a real clinical consultation becomes more and more relevant.

In the present study we investigated the possible association between patients’ preferences for a briefly presented doctor’s face and perceived empathy in the therapeutic relationship immediately after consulting the doctor in a real clinic.

METHODS
Participants
A total of 110 patients (32 men, 78 women, mean (SD) age=33.4 (10.9) years) participated in the study. All patients were recruited at a traditional Korean Medical Clinic in Seoul, Republic of Korea. Only patients who visited the clinic for the first time were included in order to control for prejudoements of the patients towards the doctor. Additionally, only patients who presented for acupuncture treatment of musculoskeletal pain were recruited in order to control for symptoms and treatments. Participants with abnormal vision or motor function problems were excluded from the study. Ethics approval for the study was obtained from the ethics committee of the Acupuncture and Meridian Science Research Center of Kyung Hee University, Seoul, Republic of Korea.

Preferences for a doctor’s face
An independent experimenter instructed all patients to use a keypad in front of a monitor to participate in the two alternatives forced choice (2AFC) task. They had to watch 60 different pairs of doctors’ faces and choose one preferred face by pressing either the left (=1) or the right (=2) button as fast as possible (figure 1). All pictures were taken from the front and the face images were black and white, consisting of six different Asian male doctors (doctors A, B, C, D, E, F) aged 30–50 years and all wearing the same dress. Each pair of doctors’ faces was presented for 1 s and the interval between the presentations of pictures was 100–500 ms. Five different pairs were randomised and repeatedly shown 20 times, whereas the face image of doctor F was included in all pairs of faces shown in order to compare the assessment of the actual clinical consultation because doctor F carried out all actual consultations and treatments later in this study. The preference value for each doctor’s face was calculated as the percentage of how many times the face was preferred by the patients among the same 20 pairs shown (possible range of preference value 0–100%).

Clinical consultation
The clinical consultation was always carried out by doctor F who was one of the six doctors who appeared in the face picture 2AFC task. The first clinical consultation between the doctor and the patient always followed the same order and process. The consultation took about 10 min per patient and proceeded as follows: (1) asking about the main complaint, the pain (the location of pain, when did it start, how does it feel); (2) feeling the pulse for diagnosis; (3) palpation of the location of pain; (4) stating the doctor’s diagnosis; and (5) informing about matters that require attention during the time of the treatment and after the consultation.

Patient’s assessment of the consultation using the CARE measure
After each consultation, which was always the first clinical consultation for the patient, the patient–doctor relationship was assessed by an independent experimenter who asked the patient’s perceived empathy in the therapeutic relationship using the CARE measure. This questionnaire was developed by Mercer et al.5 in order to have a general consultation process measure which assesses empathy in the therapeutic relationship. This questionnaire consisted of 10 questions with possible answers on a 1–5 scale. The answers to all questions were added together, giving a total achievable score of 50.

Blinding
The participants had no previous knowledge of the purpose of each task and how they related to each other (face preference 2AFC task and filling out the CARE measure), even though they were informed about the general purpose of the study (‘We want to test what factors can influence the patient–doctor relationship’). An independent experimenter instructed and accompanied the participants during each of the three steps (2AFC task—clinical consultation—CARE measure), except for the clinical consultation part. The doctor who carried out the clinical consultation was blinded to which patients were those who participated in the current study, even though the exact consultation procedure as described above was followed for each patient.

Data analysis
All values are expressed as mean±SEM. An exploratory correlation analysis was performed to find a correlation between the patients’ preferences for the doctor’s face and the perceived empathy value in the therapeutic patient–doctor relationship using the CARE measure. The level of significance was set at 0.05 for all analyses. All data processing was done using MATLAB (Mathworks, Natick, Massachusetts, USA) and MS Excel (Microsoft, Redmond, Washington, USA). Statistical analysis was performed using the Statistical Package for Social Sciences for Windows V18.0 (SPSS, Chicago, Illinois, USA).

RESULTS
Comparing preferences for each doctor’s face
The most preferred pictures in the 2AFC task ranged from 27.1% to 65.8% (figure 2). Doctor B and Doctor C
Correlation analysis between preference for a doctor’s face and perceived empathy in the doctor–patient relationship

The average CARE measure score for Doctor F after the consultation was 36.0±0.8. An exploratory correlation analysis was performed between the preference for a doctor’s face and the patient–doctor relationship (figure 3). The x-axis shows the inferred preference value for a doctor’s face, which was calculated by the choice trial percentage for Doctor F among 20 trials. The y-axis shows the perceived empathy value of the doctor in the therapeutic relationship, assessed with the CARE measure. No significant correlation was found between the simulated preference values for the doctor’s face and the perceived empathy value of the doctor in the therapeutic relationship ($r=-0.024$, $p>0.809$).

DISCUSSION

If you prefer a doctor for your clinical consultation only based on the brief exposure to his facial features—for example, perceiving the face as more attractive or more trustworthy—will you also feel more empathy in the patient–doctor relationship with that particular doctor after visiting him?

Many inferences made from facial appearances of people can be characterised as automated ‘system 1’ processes according to recent models of social cognition and face perception, suggesting a distinction between fast unreflective effortless ‘system 1’ processes and slow deliberate effortful ‘system 2’ processes.\textsuperscript{19-21} In a previous study we demonstrated that doctors’ faces rated to be highly trustworthy were strongly correlated with doctors’ faces which were preferred more by patients, indicating an influence on perceived trustworthiness based on doctors’ facial appearances and ‘system 1’ processes.\textsuperscript{22} This result led us to wonder whether there was also an association between preference choices based on facial appearances of the doctors and perceived empathy in the patient–doctor relationship. It has been reported that, when people evaluate...
faces on multiple trait dimensions, these are highly correlated with each other (eg, attractiveness and trustworthiness). In addition, self-fulfilling prophecy effects would predict that, if patients prefer a doctor because of their positively inferred traits towards the doctor, their consequent behaviour would actually lead to developing and perceiving more empathy between the patient and the doctor. Furthermore, a halo effect would also presume that the patients would rate the perceived empathy of the doctor higher in general if they have already evaluated the doctor’s face as more preferable.

The results of the present study, however, showed no correlation between the patients’ preference for a doctor’s face and the patient’s assessment of the patient–doctor relationship, measured by the perceived empathy in the therapeutic relationship after the first consultation in the clinic. We presume that other factors during the clinical consultation count more for developing an empathic doctor–patient relationship than the mere preference of the doctor’s face based on his facial appearances. We believe that various forms of communication including verbal and non-verbal behaviours play a more essential role in influencing the patient–doctor relationship than the abovementioned self-prophecy or halo effects. The verbal content of communication is surely important and non-verbal behaviours such as ‘less time reading medical chart’, ‘more forward lean’, ‘more nodding’, ‘more gestures’, ‘closer interpersonal distance’ and ‘more gazing’ are also known to be crucial in improving patient satisfaction. It has been reported that patient satisfaction was also higher when physicians smiled a lot, had eye contact with the patient, leaned forward and had an expressive tone of voice and face. It is therefore conceivable that the doctor–patient relationship is influenced more by the sum of these non-verbal behaviours than by the preference for a doctor’s face alone.

This study has several limitations. First, we included only patients with musculoskeletal symptoms as the main complaint in the present study. It is still unclear whether this main symptom is specifically correlated with a certain way of patient–doctor relationship and whether these results can be extended to other clinical conditions. Second, the evaluated preference value for doctors’ faces was rather non-specific and a higher number of different personality traits such as inferred ‘attractiveness’ or ‘trustworthiness’ values could have been asked more specifically to the patients. Multilevel statistical modelling could then be used to explore variations in patient–doctor relationships in future studies. Third, the present study took place in a single practice setting in order to reduce the possible variations of consultation skills and styles. The healthcare setting conveys complex messages about the attitude of the

Figure 2 Comparing preferences for doctors’ faces in the two alternative forced choice (2AFC) task. Preferences are presented in preference percentages, which represent the average number of times that a particular doctor has been chosen among the same 20 pairs of doctors’ faces in percentages. 50% of preference percentage means random chance. Doctor B (65.8±2.5%, t=6.240, ***p<0.001) and Doctor C (62.0±2.7%, t=4.544, ***p<0.001) were significantly more preferred than random chance, Doctor A (27.1±2.9%, t=−7.806, ***p<0.001) and Doctor E (40.7±2.3%, t=−4.028, ***p<0.001) were significantly less preferred, and Doctor D (50.8±2.7%, t=0.306, p>0.760) and Doctor F (53.5±2.8%, t=1.258, p>0.211) were close to random chance.

Figure 3 Correlation analysis between preference for a doctor’s face and the doctor–patient relationship. The x-axis shows the inferred preference value for a doctor’s face, which is calculated by choice trial percentage for Doctor F among 20 trials. The y-axis shows the doctor’s empathy value measured with the Consultation and Relational Empathy (CARE) measure. There is no significant correlation between the simulated preference values for a doctor’s face and the doctor’s empathy (r=−0.024, p>0.809).
practice towards its patients. Complementary and alternative medicine (CAM) might meet more mundane patient needs which may enable patients to cope better with illness, such as speed and convenience of access and a tailored service.\(^3\) Acupuncture treatment has been characterised by the elaborate and comprehensive communication between the acupuncturist and the patient.\(^2\) It was also reported that patients rated practitioner appearance and explanatory literature as very important factors in shaping first impressions and influencing their confidence in the complementary practice.\(^3\) We therefore thought that, in Korea, a traditional Korean medical clinic would be a good clinical setting to examine the possible association between the first impression from a doctor’s face and the doctor–patient relationship. However, in future studies, different and more variable practitioner characteristics (eg, gender, age, level of experience, style of practice) should also be included. For example, it would have been interesting to see if we could have tested all six doctors after the first clinical consultation. Further research is needed to extend and generalise our findings.

In summary, in our study population and setting we found no significant interrelationship between the preference for a doctor’s face and perceived empathy in a therapeutic relationship. This could be due to many factors, but indicates that the preference for a doctor’s face might not be such a critical factor for establishing empathy in the patient–doctor relationship. The first impression of a doctor is often determined by the doctor’s appearance and look. However, whether or not the patient particularly prefers a doctor’s face does not seem to matter much in developing a good patient–doctor relationship. In other words, if you choose a doctor, do not judge according to appearance but judge with righteous judgement (John 7: 24).

**Summary points**

- Patients’ preference for one doctor over another were scored by comparing photographs.
- The preferences did not correlate with the degree of empathy when consulting the doctor.

**Contributors**

YC designed the study, monitored data collection and drafted and revised the paper. S-HL, H-HK and D-SC conducted the experiment and drafted sections of the paper. O-SK and HK designed the statistical plan, analysed the data and drafted relevant sections of the paper. HL and H-JP co-designed the study, monitored data collection and analysed the data.

**Funding**

This research was supported by Basic Science Research Programme through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (No. 2005-0049404). S-HL was supported by the Undergraduate Research Programme (URP) grant funded by Kyung Hee University College of Oriental Medicine.

**Competing interests**

None.

**Patient consent**

Obtained.

**Ethics approval**

Ethics approval for the study was obtained from the ethics committee of the Acupuncture and Meridian Science Research Center of Kyung Hee University, Seoul, Republic of Korea.

**Provenance and peer review**

Not commissioned; externally peer reviewed.

**REFERENCES**


Do not judge according to appearance: patients' preference of a doctor's face does not influence their assessment of the patient–doctor relationship

Soon-Ho Lee, Dong-Seon Chang, O-Seok Kang, Hwa-Hyun Kim, Hackjin Kim, Hyejung Lee, Hi-Joon Park and Younbyoung Chae

*Acupunct Med* 2012 30: 261-265 originally published online August 21, 2012
doi: 10.1136/acupmed-2012-010164

Updated information and services can be found at: http://aim.bmj.com/content/30/4/261

**References**

This article cites 29 articles, 2 of which you can access for free at: http://aim.bmj.com/content/30/4/261#ref-list-1

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to: http://www.bmj.com/company/products-services/rights-and-licensing/

To order reprints go to: http://journals.bmj.com/content/subscribers

To subscribe to BMJ go to: http://group.bmj.com/subscribe/