

Bias against foreign-born or foreign-trained doctors: experimental evidence

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OBJECTIVES Bias against foreign-born or -trained medical students and doctors is not well understood, despite its documented impact on recruitment, integration and retention. This research experimentally examines the interaction of location of medical education and nationality in evaluations of doctors' competence and trustworthiness.

METHODS A convenience sample of prospective patients evaluated fictitious candidates for a position as a doctor in community practice at a new local health clinic. All applicants were described as having the same personality profile, legal qualifications to practise, a multi-degree education and relevant work experience. The location of medical education (the candidate's home country or the UK) and national background (Australia or Pakistan) of the applicants were independently experimentally manipulated.

RESULTS Consistent with previous research on skills discounting and bias, foreign-born candidates were evaluated less favourably than native-born candidates, despite their comparable education level, work experience and personality. However, overseas medical education obtained in the First World both *boosted* evaluations (of competence and trustworthiness) and *attenuated* bias based on nationality.

CONCLUSIONS The present findings demonstrate the selective discounting of foreign-born doctors' credentials. The data show an interaction of location of medical education and birth nationality in bias against foreign doctors. On an applied level, the data document that the benefits of medical education obtained in the First World can extend beyond its direct outcomes (high-quality training and institutional recognition) to the indirect benefit of the attenuation of patient bias based on nationality.

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 INTRODUCTION

The migration of doctors and medical students affects not only the practitioners themselves, but also health authorities, politicians and citizens. Millions of dollars are at stake; millions of lives may be affected.¹ The difficulties involved in recruiting and retaining doctors are of intense concern around the world.² One solution for wealthy nations has been to recruit doctors from abroad, either on temporary visas for contract work or on permanent migration schemes for skilled workers. Wealthy nations also recruit foreign medical students and profit from these overseas medical graduates as their fees provide financial benefits to host universities, their intellectual contributions advance research and development and, over the longer term, many foreign-born graduates are lured to practise in the First World. (In this paper, the term 'First World' is used to represent high-income, industrialised countries including the USA, Canada, Australia, and countries in Western Europe.) Foreign doctors have been identified as critical to the vitality of health services in First World nations for the foreseeable future.^{3,4} However, over and above the ethical concerns raised by the selective recruiting of foreign doctors to wealthy nations, barriers to doctors' entry and integration remain high. In addition to institutional barriers, social bias against foreign-born or foreign-trained doctors may be observed.

Bias against foreign doctors

Medical students' and practitioners' experiences of discrimination have been documented on many dimensions, such as race⁵ and gender,⁶ which in turn impact on reactions to other medical practitioners' discriminatory behaviour.⁷ Anti-immigrant bias has not been studied against doctors specifically, but the social science literature demonstrates that anti-immigrant bias is widespread and that its effects on immigrants' quality of life manifest in poorer health,⁸ and lower employment and income.⁹ For example, the uniqueness and ethnicity of individuals' names have been shown to affect likeability and hiring.¹⁰ Relatively little anti-immigration research has focused on professional immigrants and the little research that has been performed points to a specific form of discrimination experienced primarily by this group: the selective discounting of professional credentials.¹¹

Institutional barriers typically require professionals from overseas to re-credential themselves by, for example, submitting their diplomas and record of

education to scrutiny by a professional body, passing examinations to test their knowledge, or even completing their professional training again. However, although some requirements may be explained by real differences in the quality of education provided in the source countries, unjustified prejudice is also a potential contributor. In survey research, racial minority immigrants with equivalent credentials have been found to be more likely to experience under-employment and unemployment.⁹ Similarly, in an experiment in which participants evaluated resumés, candidates' race and country of training interacted to predict the discounting of immigrants' skills, such that racial minority immigrants' overseas training was more negatively evaluated.¹¹

Moreover, not all foreign training is equivalent. There is a strong theoretical framework for the hypothesis that prejudice may bias evaluations of overseas professionals' credentials more strongly when the credentialing institution is less prestigious or unfamiliar.^{11,12} Ambiguous information provides two potential paths to the motivated devaluation of the target. Firstly, the ambiguity allows prejudice to bias the interpretation of the information in the direction of respondents' pre-existing views. Given uncertainty about the standard of training in university Y in country X, stereotypes about country X more broadly may be applied to judge the target. Secondly, the ambiguity allows the expression of bias by creating a pseudo-legitimate rationale for judging the target harshly. Both of these paths may promote the selective discounting of foreign doctors' credentials when their training occurred in less prestigious institutions, thereby reflecting an interaction of location of medical education and target nationality. Moreover, the findings suggest a dual path by which training in high-status First World nations will provide a benefit to foreign doctors. Firstly, medical education from a prestigious country should be evaluated more positively across the board, for all candidates. However, in addition, unambiguously positive credentials may defuse the expression of bias, reducing or eliminating the selective discounting of foreign doctors' credentials.

The integration of overseas-trained doctors is of vital importance, not only for the sake of improving their quality of life, but also in order to retain them in their new communities. Bias against foreign doctors has been documented in qualitative studies of doctors' experiences,¹³ as well as in analyses of institutions' licensing procedures.¹⁴ The degree to which location of medical education and country of

birth interact to create or defuse bias against foreign doctors is unclear, however.

Taking this into account, the present experiment orthogonally manipulated two critical variables which might affect reactions to foreign doctors: the country of origin of the doctor (participants' home country versus abroad), and where the immigrant received his or her medical education (candidates' home country versus the UK). As a second contribution, the study documents bias against foreign doctors not only in selective discounting of credentials, but also on dimensions of *trust*. In addition to impacting adversely on foreign doctors' chances of employment and integration,¹³ the health communication literature demonstrates that patient mistrust affects health behaviour. Mistrust creates a self-fulfilling prophecy of poor doctor–patient interaction which harms patients' health (e.g. by constraining disclosure) and doctors' work experiences.¹⁵ Accordingly, the present study assessed not only evaluations of doctors' work experience and education, but also prospective patients' perceptions of doctors' trustworthiness.

The present study was conducted in Australia, which actively recruits foreign doctors to meet both regional shortages and shortages of particular specialists.¹⁶ Overseas-trained doctors, who obtained their primary medical qualifications outside Australia, can take up practice in Australia under programmes which vary by state, but which typically involve the submission of their degrees for evaluation, completion of qualifying examinations and re-certification, and service in regional areas. The context is thus similar to that in other First World nations.

METHODS

Participants

A convenience sample ($n = 93$) was employed for the experiment, consisting of students who were Australian citizens of European heritage born in Australia. Participants were predominantly female ($n = 63$; 68%) and ages ranged from 17 to 53 years (median = 19 years).

Procedure

The present study employed a deception paradigm, for which ethical clearance was obtained from the lead author's university. Participants completing a questionnaire on healthy eating were told when they reached the end of their first questionnaire that the

researchers had also been commissioned to solicit student feedback on doctor candidates for employment at a new after-hours medical centre near the campus. Participants were asked to read the advertisement for the post, a resumé and a 'personality test' for the ostensible candidate. They were then told that their evaluations would impact on the hiring process and were asked to rate the candidate by filling in a questionnaire. After the study, participants were probed for suspicion and fully debriefed both verbally and in writing. All were given the opportunity to withdraw their data; none did so. Participants were compensated AU\$10 for their time.

Specifically, participants read a pamphlet which began:

'As you may know, a new after-hours medical clinic is opening in the city to deal with health issues that occur outside of normal business hours. This clinic is to be called the [city name] After Hours Medical Clinic. ... [W]e will ask you to examine the resumé of one of the individuals who recently applied for a position at the [city name] After Hours Medical Clinic, and then to evaluate the applicant based on the curriculum vitae provided. When evaluating the applicant, please remember that your judgements may have considerable impact on the health and well-being of local residents, including students on this campus.'

Participants were then given the putative job advertisement, which was based on a real advertisement for a general practitioner at a medical clinic (the same across conditions), the candidate's ostensible resumé (which varied by condition) and, finally, the candidate's personality test profile (which remained the same across conditions).

The resumé described a male candidate, who had been born in either the participants' home country (Australia) or abroad (Pakistan), and who had been trained in either his home country (Pakistan or Australia) or abroad (in the UK). Nationality was manipulated at the top of the resumé by name and citizenship ('Ian Bell/Australian citizen' versus 'Samir Khan/Permanent migration visa'), and in the education section by location of the first undergraduate degree (a university in Sydney, Australia versus one in Karachi, Pakistan). Foreign medical education was manipulated by the location of the medical degree and internship (in the home city [Sydney / Karachi] versus in London, UK) **and the candidate's work experience record was manipulated** by the location of the candidate's first job as a 'staff physician–general practitioner' (in the home city [Sydney / Karachi] versus in London, UK).

Other than these experimental manipulations, the resumés were identical. All candidates were described as having completed (in the same order) an undergraduate BSc in chemistry, an MBBS (Bachelor of Medicine and Bachelor of Surgery), an internship in family medicine, a 3-year position as a 'staff physician – general practitioner' in a medical centre, and another 2-year position. For all candidates, importantly, the last 2-year position was described as that of a 'staff physician – general practitioner' in a medical centre in a regional community in the participants' own state. Although this background would be somewhat unusual for an Australia-trained doctor, it would in fact be normal for overseas doctors who typically are required to work for an initial period in a regional centre before being eligible to transfer to employment in a large metropolitan area, such as the location of the experiment. Consistent with Australian regulations and requirements, all candidates were also described as having 'Full medical registration with the Medical Board of [state name]'. Thus all candidates were legally qualified and were possessed of previous relevant work experience in the participants' home country.

The bogus personality test described the candidate as scoring in the 60–80th percentiles for 12 pro-social traits (e.g. commitment, 73%; approachability, 64%; focus, 65%). The candidate's average personality was designed to establish a baseline of ambiguity in evaluations.

Dependent measures

Participants evaluated the candidate on five dimensions selected on the basis of previous research in employment discrimination.^{10,11} The internal consistency of the scales was assessed using Cronbach's α (a measure of scale reliability, with adequate reliability indexed by $\alpha > 0.70$). All scales were created by averaging responses to the items, which were rated on scales ranging from 1 (strongly disagree) to 7 (strongly agree). The five dimensions were: Recommendation for interview (four items, e.g. 'I suggest inviting this candidate for an interview at the new clinic' [$\alpha = 0.89$]); Personal trust (three items, e.g. 'If this person were hired, I would feel comfortable having this person as my physician' [$\alpha = 0.78$]); Social trust (six items, e.g. 'If hired, the candidate will be able to develop trust with patients at the new clinic' [$\alpha = 0.93$]); Education (four items, e.g. 'Overall, the candidate's education is suitable for the general practitioner position at the new clinic' [$\alpha = 0.77$]), and Work history (four items, e.g. 'Overall, the candidate's work experience is suitable for the general practitioner position' [$\alpha = 0.84$]).

RESULTS

A 2×2 between-subjects MANOVA was conducted comparing evaluations of the candidate based on national background and country of medical education. Evaluations differed based on candidate nationality ($F[7,82] = 2.26$, $p = 0.037$, $\eta_p^2 = 0.16$) and country of medical education ($F[7,82] = 3.21$, $p = 0.005$, $\eta_p^2 = 0.22$). As hypothesised, the interaction was also significant ($F[7,82] = 2.75$, $p = 0.013$, $\eta_p^2 = 0.19$). To contextualise the effect size measures: all three are 'small' using accepted standards for general science¹⁷ (0.20 'small' versus 0.50 'medium' versus 0.80 'large'), but large using accepted standards for social science¹⁸ (0.02 'small' versus 0.06 'medium' versus 0.14 'large'). Table 1 depicts the means and standard deviations by condition.

Follow-up analyses at the univariate level revealed that collapsing over country of medical education, the main effect of candidate nationality indicated that native Australian candidates' work experience and education were evaluated more favourably than those of foreign Pakistani candidates (all p -values < 0.017 , $\eta_p^2 > 0.064$); this effect was not evident for personal trust, social trust and recommendation for an interview (all p -values > 0.177 , $\eta_p^2 < 0.022$). Collapsing over national background, UK-trained doctors were preferred over home country-trained doctors: they were significantly more likely to be recommended for an interview; they were personally more trusted, and their work history and education were evaluated more favourably (all p -values < 0.05 , $\eta_p^2 > 0.043$); they also tended to be seen as more likely to be trusted by others ($p = 0.053$, $\eta_p^2 = 0.042$). Returning to the question of effect sizes, it is apparent that although the strength of the multivariate effect is large according to accepted standards for social science research,¹⁷ the effects for any single dimension are small.

Follow-up tests for the full interaction, as shown in Table 1, demonstrate a pattern whereby the Pakistani home country-trained candidate was devalued across the measures. Significant preferences were observed on work history and education for Australian home country-trained doctors over Pakistani home country-trained doctors (all p -values < 0.05 ; these interactions are shown in Fig. 1[a, b]). For candidates with UK credentials, by contrast, the expression of bias was defused or constrained: national background did not make a significant difference on any dimension (all p -values > 0.05).

Table 1 Reactions to the candidate as a function of nationality and location of medical education*

	Trained in birth country		Foreign-trained in the UK	
	Foreign background (Pakistan) Mean (SD)	Native background (Australia) Mean (SD)	Foreign background (Pakistan) Mean (SD)	Native background (Australia) Mean (SD)
Recommend for interview	5.24 (1.28)	5.40 (1.08)	5.93 (0.93)	5.91 (0.80)
Personal trust	4.86 (1.42)	5.09 (1.05)	5.24 (1.00)	5.62 (0.71)
Social trust	5.00 (1.14)	4.88 (1.10)	5.23 (0.77)	5.46 (0.82)
Education	4.97 ^a (0.91)	5.86 ^b (0.70)	6.03 ^c (0.73)	6.23 ^c (0.68)
Work history	4.87 ^a (1.33)	5.85 ^b (0.78)	6.11 ^c (0.73)	6.09 ^c (0.69)

* Items were rated on scales ranging from 1 (unfavourable) to 7 (favourable)

^{a-c} Simple effect tests of nationality are represented where appropriate such that means with different superscripts are significantly different from one another

SD = standard deviation

DISCUSSION

The present study documents the selective discounting of credentials for foreign-born doctors trained in their country of birth relative to native doctors. The effects were small and, as elaborated below, our convenience sample raises questions about the generalisability of the results. However, the multivariate effects are relatively large and the findings are consistent across the variables. Foreign doctors' work experience and medical education were evaluated significantly less favourably. There was also bias in favour of doctors trained in the UK. According to the present data, these UK-trained doctors were rated as superior in terms of work experience and medical education, and evalua-

tions of the candidates' trustworthiness were also boosted, as were recommendations to interview. Importantly, and consistently with expectations, foreign medical education from a prestigious First World nation not only benefited targets as a main effect, but interacted with participant nationality. First World medical education in this case eliminated the bias against foreign-born doctors, which was observed when the latter were represented as having trained in their country of birth (Pakistan).

Implications and contributions

Anti-immigrant hostility is well documented, but little research has addressed bias against foreign profes-

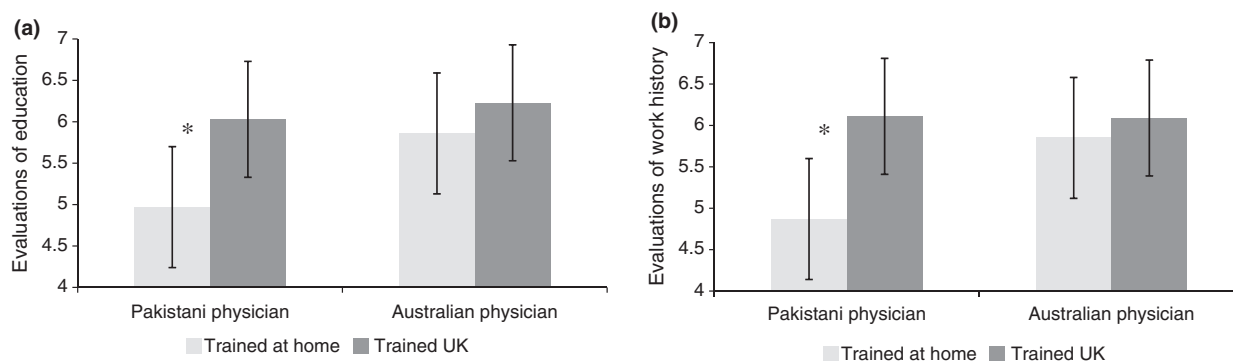


Figure 1 (a) Evaluations of doctors' education as a function of nationality and location of medical education. (b) Evaluations of doctors' work history as a function of nationality and location of medical education. Note: candidates' education and work history were rated on multi-item scales ranging from 1 (unfavourable) to 7 (favourable). For education, a sample item is 'Overall, the candidate's education is suitable for the general practitioner position at the new clinic' (1 = strongly disagree, 7 = strongly agree). Means are based on averaging across education items or across work history items

sionals in general and no published research, to our knowledge, has addressed bias against foreign doctors specifically. On an applied level, the data suggest the utility of international medical graduates' pursuit of medical training abroad as extending beyond the training content and institutional benefits to the more subjective but critical arena of patient trust. In addition, lack of trust in foreign doctors may lead to harmful health behaviours, such as delaying access to health care or less detailed sharing of information with the doctor:¹⁵ in this area, ironically bigots themselves may suffer as a result of their own prejudice. At the collective level, many nations around the world are facing a shortage of doctors caused by factors such as higher expectations and ageing populations, as well as emigration by doctors in search of better lives.¹ By studying prejudices against foreign doctors or in favour of medical education in the First World, policymakers may seek to improve the retention of incoming doctors in their new communities as well as the quality of life of the doctors themselves.

Limitations

The present research benefits from the strengths of experimental research: it provides clear evidence of the direction of causality and its findings are generalisable because of the design strength of random assignment to conditions. However, the study employed a convenience sample of prospective patients who were students of European heritage. The study does not address important potential moderating variables, such as participant background and occupational status (e.g. whether bias would differ in other cultural groups or cross-nationally or in non-student samples), knowledge of regulatory systems and experience of community health care (e.g. whether these would defuse bias), gender (e.g. whether patient gender and doctor gender would modify the degree of nationalistic bias), age (e.g. whether older patients with more health needs and experience would show a different pattern of response), or location (e.g. whether hospital versus general clinic patients would have different expectations or needs). In addition, participants had no face-to-face contact with the targets, which might have altered the impact of prejudice (e.g. by lowering or increasing the salience of cues to the doctor's foreignness, such as accent). Exploring these moderators provides valuable direction for future research. It is also important to note that the sample evaluated doctors from a patient's perspective and patients do not exert direct hiring influence in most cases. However, we believe the results will generalise

in that the present findings are consistent with population studies showing that skilled immigrant professionals are underemployed and underpaid relative to natives with equivalent credentials.^{11,12} Although doctors' experiences may vary and prejudice is not universal, foreign doctors have reported many subjective instances of perceived prejudice.¹³

Another methodological limitation in the present experiment is that, consistent with the real demographic differences in the two countries, the national origin of the targets (Australia versus Pakistan) was also associated with differences in the ethnic or racial backgrounds of the candidates (Anglo-European versus South Asian). Crossing ethnic and cultural background (South Asian versus Anglo-European), country of birth (Australia versus Pakistan) and location of medical education (Australia, Pakistan or the UK) in a $2 \times 2 \times 3$ design is feasible. Most of the cells involved would be both rare and beyond the scope of the present study, but, for example, we might expect that to the extent that racial prejudice is a factor, Anglo-European doctors trained in Pakistan would be given the benefit of the doubt more readily by Anglo-European participants than South Asian doctors would be. We would also expect that a doctor stigmatised for any reason (here, foreign nationality, but also, according to past research, gender⁷ or ethnic or cultural background⁶) might expect the same profile of biased responding and the same pattern of attenuation or elimination when a favourable dimension is made salient (here, prestigious location of medical education).

More broadly, which countries' training is seen as prestigious or devalued should depend upon historical factors that have shaped the relationships between the countries referred to. In the present research, we see Australian participants valuing foreign medical education obtained in the UK and devaluing that of a Pakistani candidate trained in his birth country. Future research might investigate whether the effect generalises to American or European samples and whether, for example, participants in countries such as Afghanistan would value foreign medical education obtained in Pakistan (a regional centre of excellence in medical training) and distrust or devalue overseas-born doctors from the UK.

Some may argue that the selective discounting of foreign credentials has a basis in real differences in training quality between some countries. These perceived differences in training quality may be compounded by racial prejudice or perceived high-quality education may overwhelm any racial prejudice, and

the point of balance between these two forces may depend upon the supply of alternative potential appointees. The validity of this argument is largely beyond the scope of this paper. However, we note that in the present experiment, all targets were reportedly credentialed by the participants' own state authority and all had 2 years of prior work experience in the participants' own state, yet differential evaluations persisted. The findings thus highlight the strength of participants' concerns, or negative stereotypes, about foreign doctors' education, trustworthiness and work experience. Although some individual foreigners may in reality be poorly trained, systematic bias against immigrant medical students and doctors is a social justice problem and poses a barrier to their recruitment, integration and retention.

CONCLUSIONS

The present results document discrimination against foreign-born doctors competing for a job in a new clinic: they were evaluated less favourably than native-born candidates. However, participants rated candidates with overseas medical education obtained in the First World (the UK) more positively and First World (UK) training eliminated bias based on nationality. Although future research must confirm the generalisability of the findings and address the many important potential moderators of the results, the study contributes to the growing awareness of discrimination and prejudice against skilled professionals^{11,12} and helps to develop understanding of prejudice against doctors specifically.¹⁴

Contributors: the study was co-designed by all three authors. Data were collected by research assistants under the supervision of WRL. WRL analysed the data and wrote the manuscript; RNL and VME contributed to the framing of the data and provided feedback on revisions of the manuscript. All authors approved the final manuscript for submission.

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Conflicts of interest: none.

Ethical approval: this study was approved by the Behavioural and Social Sciences Ethical Review Committee of the University of Queensland.

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