

Ethnic Discrimination in Recruitment and Decision Makers' Features: Evidence from Laboratory Experiment and Survey Data using a Student Sample

Lieselotte Blommaert · Marcel Coenders · Frank van Tubergen

Accepted: 15 April 2013 / Published online: 27 April 2013
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Abstract This article examines which individual-level factors are related to people's likelihood of discriminating against ethnic minority job applicants. It moves beyond describing to what extent discrimination occurs by examining the role of individuals' interethnic contacts, education and religion in shaping their behavior towards ethnic minority job applicants. We derive expectations from theories from the interethnic attitudes literature. Data are collected via (1) a laboratory experiment in which student participants ($n = 272$) reviewed résumés of fictitious applicants who varied regarding ethnicity, gender, education and work experience and (2) a survey amongst the same participants. During the experiment, participants assess applicants' suitability for a job and select applicants for an interview. Additionally, participants complete a questionnaire including questions on several personal and background features. Results show that individuals who have more positive interethnic contacts, higher educational levels and higher educated parents are less likely to discriminate against ethnic minority applicants. Individuals whose parents are church members are more likely to discriminate, as are males. We find interesting differences regarding the role of decision makers' features between different stages of the recruitment process. First assessments of applicants' suitability for a job are predominantly affected by applicants' features. Differences between decision makers here are relatively small. Eventual choices about which applicants to invite for a job interview, however, are affected by both applicants' and decision makers' features; here differences between decision makers are more pronounced. Theoretical implications of these findings are discussed.

Keywords Discrimination · Ethnicity · Labor market · Interethnic competition · Interethnic contact · Laboratory experiment

L. Blommaert (✉) · F. van Tubergen
Department of Sociology, Utrecht University, Padualaan 14, 3584 CH Utrecht, The Netherlands
e-mail: l.blommaert@uu.nl

M. Coenders
Department of Migration and Ethnic Relations, Utrecht University, Padualaan 14, 3584 CH Utrecht,
The Netherlands

1 Introduction

Ethnic minorities on average hold less favorable positions in European labor markets than natives. Sizeable ethnic gaps exist in both employment and earnings (Bassanini and Saint-Martin 2008; Heath et al. 2008). Ethnic inequalities in economic outcomes can partly be explained by ethnic differences in human capital, social capital, or self-selection processes. First, compared to the ethnic majority, ethnic minorities generally have relatively low levels of education, less knowledge of labor market institutions, and are less proficient in the host-country language. This partially explains their unfavorable position on the labor market (Chiswick and Miller 1995; Van Tubergen and Kalmijn 2005). Yet, considerable gaps remain after controlling for these variations in human capital (Altonji and Blank 1999; Bassanini and Saint-Martin 2008). Second, ethnic differences in access to social capital play a role, in particular contacts with high-status individuals and majority group members can provide information or recommendations relevant for labor market opportunities (Aguilera and Massey 2003; Kanas et al. 2011). Differences in education, host-country knowledge and skills, or social networks may in turn lead to ethnic differences in work experience. Third, there may be self-selection of ethnic minorities into particular sectors and occupations (e.g., those in which they expect to face less discrimination) or into self-employment (e.g., as a solution to unemployment or poverty; Kanas et al. 2009).

Another potential explanation for ethnic inequality in the labor market is ethnic discrimination in recruitment. Unequal treatment of ethnic minority job applicants compared to similar natives by employers, personnel workers or recruiters (National Research Council 2004) may lead to unequal chances to attain a (higher level) job. Although the factors mentioned above also contribute to ethnic gaps in labor market outcomes, previous research has provided convincing evidence of ethnic discrimination in labor markets. Discrimination thus provides at least a partial explanation for ethnic differences in the labor market (Pager and Shepherd 2008; Riach and Rich 2002).

Ethnic discrimination in recruitment is difficult to identify (National Research Council 2004). To determine whether ethnic discrimination in recruitment has occurred, one needs to answer the counterfactual question ‘what would have happened to the same person in the same situation if only his or her ethnicity would have been different?’. Experiments are a compelling way to examine the prevalence and causes of discrimination because they most closely approach such a counterfactual design (Pager and Shepherd 2008; Quillian 2006). Hence, experiments have important advantages compared to other methods.¹ Specifically, analysis of observational data using statistical decomposition cannot rule out that differences in outcomes (e.g., wages) are caused by characteristics unobserved by the researcher. Studies based on reports from majority or minority group members may suffer from social desirability problems or incorrect attributions of negative outcomes to discrimination (National Research Council 2004; Pager 2007).

Several previous studies have used field experiment data to study ethnic discrimination in recruitment (for overviews see: Pager and Shepherd 2008; Riach and Rich 2002). In these experiments, discrimination was examined using sets of fictitious job applicants who belonged to different ethnic groups but were otherwise similar. These applicants reacted to real job vacancies using either a written or in-person approach. When an ethnic minority applicant did not receive a positive reaction (e.g., invitation for an interview) but a comparable native applicant did this is seen as discrimination. Evidence of ethnic discrimination in recruitment was found in labor markets across Europe (see e.g., Bovenkerk,

¹ Although these methods have merits of their own (National Research Council 2004).

Gras and Ramsøedh 1994; Carlsson and Rooth 2007; Dolfing and Van Tubergen 2005; Rooth 2010; Andriessen et al. 2010; Zegers de Beijl 2000), the United States (e.g., Bertrand and Mullainathan 2004; Pager and Quillian 2005; Pager, Bonikowski and Western 2009), Australia (Riach and Rich 1991) and Canada (Henry and Ginzberg 1985; Oreopoulos 2011).

These field experiments have been of great importance, convincingly documenting the existence of ethnic discrimination in the labor market. They consistently found strong evidence of ethnic discrimination (in excess of 25 %) against ethnic minority job applicants (Bassanini and Saint-Martin 2008; Pager 2007). Yet, these studies were not designed to examine predictions about the individual or contextual factors related to discrimination (Riach and Rich 2002). Therefore, important questions regarding the sources of ethnic discrimination or the conditions under which it is more likely to occur remain unanswered (Pager 2007; Reskin 2000). For instance, the role of (potential) discriminators' features has received very little attention in this line of research. Consequently, it remains unclear which individual characteristics influence whether or not a person discriminates (c.f., Quillian 2006).

Research on interethnic attitudes has provided more insight in the role of individual features. Numerous studies in this field have examined the determinants of such attitudes. Important theories in this body of literature focus on interethnic contact and ethnic competition (Zick et al. 2008). Results have shown that interethnic contacts and (features related to) ethnic competition are indeed important predictors of interethnic attitudes (Ceobanu and Escandell 2010). But individuals' behavior is not always in line with their attitudes (c.f., Schuman et al. 1983; for meta-analyses of attitude-behavior relations see: Dovidio et al. 1996; Schütz and Six 1996; Talaska et al. 2008). Recently, Pager and Quillian's study 'Walking the Talk? What Employers Say Versus What They Do' (2005) clearly demonstrated the relevance of considering attitudes and behavior separately. In short, it remains unclear whether features that are known to affect interethnic attitudes are also related to ethnic discrimination in the labor market.

Compared to field experiments, laboratory experiments provide more opportunities to investigate the sources of discrimination (National Research Council 2004). Yet, although there are several laboratory studies dealing with interethnic behavior, discriminatory behavior that may affect ethnic inequalities in important domains like the labor or housing market remains under-researched (Deros et al. 2009). Moreover, studies that do deal with ethnic discrimination in recruitment behavior and its determinants have so far neglected the role of decision makers' interethnic contacts and characteristics related to ethnic competition (Quillian 2006).

The present study moves beyond documenting to what extent discrimination exists in the labor market and examines the relationships between individuals' personal features and their likelihood of discriminating against ethnic minority job applicants. We derive predictions about the influence of people's interethnic contacts, education and religion on their behavior towards minority job applicants, drawing on key theories from the interethnic attitudes literature—Contact Theory and Ethnic Competition Theory—as a starting point. To test these predictions, we apply a combination of experimental and survey data to obtain information on participants' personal characteristics as well as measures of the extent to which they discriminate. Specifically, information is collected via (1) a laboratory experiment in which participants reviewed résumés of fictitious applicants from different ethnic groups and (2) a survey amongst the same participants (students). During the recruitment experiment, participants assessed applicants' suitability for a job and selected applicants for an interview. The survey included questions on interethnic contacts, level of education, and religion. Hence, this approach allows us to gather more information about

decision makers but at the same time maintains the methodological strengths of experimental methods to identify discriminatory behavior.

The design of this study has several advantages compared to non-experimental methods and field experiment data (Falk and Heckman 2009; National Research Council 2004). First, as mentioned above, experimental methods are particularly suitable to directly observe discrimination. Second, a crucial advantage of the present study compared to field experiments is that this design makes it possible to gather crucial information on personal and background (i.e., parental) information of decision makers features via a questionnaire. In addition, unlike in field experiments, we have information on the total applicant pool. Third, in contrast to some field experiments (e.g., Pager and Quillian 2005; Rooth 2010) our approach prevents non-response and ensures that the personal characteristics and behavior of the same person are measured. Finally, the design used in this study allows us to measure decisions at different phases during the recruitment procedure and examine possible differences between these stages. Specifically, we study the assessments of applicants' suitability as well as decisions on which applicants to invite for an interview.

In short, by combining laboratory experiment data with survey data on interethnic contacts and individual features related to interethnic competition, we bring together elements from different strands of research that can complement each other. On the one hand, we build upon experimental studies which are particularly suitable to accurately identify discriminatory behavior towards ethnic minorities. On the other hand, we draw from more theory guided studies on the determinants of interethnic attitudes.

It should be noted that this research design also has limitations. It does not provide information on real-life recruitment decisions made by employers or recruiters. It does, however, provide information about the relevant behavior (discrimination of ethnic minority job applicants). In fact, the procedure in our laboratory experiment closely resembles the reality of recruitment processes in the sense that first evaluations and decisions to invite applicants for interviews are based on résumés. Moreover, given their relatively high educational level, the participants in our study can be expected to be relatively tolerant towards ethnic minorities. Results of this study are therefore likely to be an underestimation compared to expected outcomes amongst employers. Finally, the participants in our study are a relatively homogeneous group (e.g., regarding education and religiosity). However, this experiment does provide information on characteristics of the parents of participants, which offers insight in participants' living conditions during formative years and socialization experiences.

The context of this research is the Netherlands. We focus on discrimination of job seekers from two ethnic minority groups: Moroccan-Dutch and Turkish-Dutch applicants. These are the largest non-Western minority groups in the Netherlands. Over 95 % of members of these groups are Muslim. They have been at the centre of the Dutch debate on the social and economic integration of ethnic minorities. Moreover, research has shown that natives' attitudes towards Moroccan-Dutch or Turkish-Dutch individuals are more negative than towards other minority groups (Gijsberts et al. 2012; Verkuyten 2008; Verkuyten and Zaremba 2005).

2 Theoretical Background

In this section, predictions on the relationships between individuals' characteristics and their likelihood of discriminating against ethnic minority applicants will be formulated. To arrive at these expectations, we will draw on two influential theories in research on interethnic attitudes: Contact Theory and Ethnic Competition Theory.

2.1 Interethnic Contact

The central statement of what is now labeled as '(Intergroup) Contact Theory' was introduced when Allport (1954) formulated the 'contact hypothesis', arguing that contact between (ethnic) groups will reduce negative intergroup attitudes (when the contact situation involves equal status of the groups, common goals, intergroup cooperation, and support of authorities, law or custom). Since then, this theory has matured and inspired a large body of research covering various groups, societies and situations. A meta-analysis by Pettigrew and Tropp based on 515 studies confirmed that intergroup contact is typically related to less negative interethnic attitudes and "promotes positive intergroup outcomes" (2006: 765). Moreover, this study shows that, although the positive influence of contact on intergroup attitudes is stronger when Allport's conditions are fulfilled, the effect remains even when this is not the case. As interethnic contacts may also reduce the likelihood of discriminatory behavior, we predict that individuals who have interethnic contacts more frequently are less likely to discriminate.

In addition to individuals' current interethnic contacts, contact during formative years may affect interethnic behavior. In fact, contact during formative years may be particularly relevant because interethnic attitudes are formed at a young age (Aboud 2008). An important factor determining the frequency of contact with ethnic minorities during this phase is parents' interethnic contacts. Moreover, parents' interethnic contacts will affect parental interethnic attitudes, which may in turn affect one's own attitudes through socialization processes. We therefore expect that the more often someone's parents had interethnic contacts during his or her formative years the less he or she is less likely to discriminate.

It has been argued that, in addition to the frequency of intergroup contacts, the quality of such contacts influences people's interethnic attitudes (e.g., McLaren 2003). The influence of intergroup contacts is expected to be stronger when contact is more positive and intimate. Positive contact experiences, i.e. contacts that are evaluated by those involved as positive, for instance involve helping behavior or interesting conversations (Pettigrew 2008). Friendships are generally associated with the optimal conditions for positive contact effects; they typically involve cooperation, common goals and repeated equal-status contact. Negative contacts involve situations where a person feels threatened, abused, bullied or harassed (Pettigrew 2008; Pettigrew and Tropp 2011) and are related to involuntary contact (Pettigrew 2008; Pettigrew and Tropp 2011; Pettigrew et al. 2011). Previous research demonstrated that positive intergroup contacts reduce intergroup attitudes, whereas negative contact tends to increase such negative attitudes. Also, it underlined the particular importance of cross-group friendships in promoting more positive intergroup relations (Johnson and Jacobson 2005; Levin et al. 2003; Paolini et al. 2004; Pettigrew and Tropp 2006). Based on these considerations, we predict that individuals who have more positive interethnic contact experiences are less likely to discriminate.

2.2 Ethnic Competition

Ethnic Competition Theory combines notions from Social Identity Theory (Tajfel 1982; Tajfel and Turner 1979; Turner 1982) and Conflict Theory (Blalock 1967; Bobo 1988; Coser 1956). It argues that interethnic relations are shaped by individuals' fundamental need to perceive the own group as superior to other groups and the subsequent processes of identifying with the own group and not identifying with other groups, combined with actual competition over resources. Individual (e.g., economic status) and contextual (e.g., unemployment) factors influence to what extent a person experiences interethnic competition. Competition in turn leads to negative attitudes towards ethnic minorities (Scheepers

et al. 2002a). The nature of competition can be economic (e.g., over jobs) or cultural (e.g., over norms). Prior research has found support for the idea that perceived ethnic competition leads to negative attitudes towards ethnic minorities (e.g., Schlueter et al. 2008; Gorodzeisky and Semyonov 2009; Scheepers et al. 2002a; Schneider 2008).

In the context of this study, there may be differences in the level of perceived ethnic competition between students in higher vocational education and those in university.² In the Netherlands, the share of non-Western ethnic minority students in higher vocational education is higher (about 15 %) than in university (Statistics Netherlands 2011).³ Natives in higher vocational education are therefore more likely to experience economic competition (e.g., over jobs they will seek in the near future) than their peers in university. Consequently, compared to those in higher vocational education, university students are less likely to hold negative interethnic attitudes and display negative interethnic behavior. Previous studies have shown education to be a key determinant of interethnic attitudes, with higher levels of education being associated with less negative attitudes (Coenders and Scheepers 2003; Hello et al. 2002). To see whether the same holds for discrimination, we examine the expectation that individuals enrolled in higher vocational education are more likely to discriminate than those in university education.

In addition to individuals' own educational level, parents' educational level could play a role. Parental education to a large extent determines the socio-economic position of individuals during their formative years. Moreover, parents' educational levels influence their interethnic attitudes via perceptions of ethnic competition. Due to socialization processes, parental attitudes may in turn affect children's interethnic attitudes and behavior. Hence, we would expect that individuals whose parents are higher educated are less likely to discriminate.

Finally, a prominent theme in the Dutch debate on immigration and integration of ethnic minorities is religion. The vast majority (over 95 %) of individuals from Moroccan or Turkish descent in the Netherlands is Muslim (Gijsberts et al. 2012) whereas the majority of native Dutch people have a Christian background. More religious native Dutch individuals will perceive more cultural competition and be more likely to discriminate against Muslims (c.f., Scheepers et al. 2002b). Although many younger native Dutch individuals do not attend religious services and are not registered as church members, religious identity, norms and values may still have been important in their upbringing. Information on parents' church membership is used to examine the role of religious socialization. Therefore, our last prediction is that individuals whose parents are church members are more likely to discriminate than those whose parents are non-members.

3 Data and Measurement

3.1 Data Collection

The data were collected using a combination of experimental and survey methods. First, a laboratory experiment was conducted to measure the extent to which participants discriminate against (fictitious) ethnic minority job applicants during recruitment procedures.

² In the Netherlands, graduates from both higher vocational education and university have access to prestigious occupations on the local and on the national (and perhaps international) level. Hence, those with higher vocational education often compete with university graduates for the same jobs.

³ In 2010–2011, non-Western ethnic minorities made up 15 % of all students in higher vocational education and 13 % of those in university; a difference of 2 % points and about 15 %.

Second, to gather information about participants' personal and background features, the individuals who participated in the experiment also filled out a questionnaire.

The data were collected amongst 288 students in the city of Utrecht (the Netherlands) in February and March 2010. Individuals born in Morocco or Turkey or of whom at least one parent was born in these countries ($n = 16$) were excluded.⁴ Consequently, the number of respondents in the analyses is 272. Of these respondents, 188 (69 %) were female and 84 (31 %) were male; 193 respondents (71 %) were university students whereas 79 of them (29 %) attended higher vocational education. University students were approached using the ORSEE recruitment system⁵ (Greiner 2004); students in higher vocational education were recruited via posters on campus and school websites. Students were given a small monetary reward for participating.

There were two conditions in the experiment. One condition measured discrimination of Moroccan-Dutch applicants whereas the other assessed discrimination of Turkish-Dutch applicants. A between-subjects design was applied, meaning that some respondents ($n = 129$) were assigned to the condition measuring discrimination of Moroccan-Dutch applicants and others ($n = 143$) to the condition measuring discrimination of Turkish-Dutch applicants. These conditions were later combined so that this study deals with discrimination of applicants of either Moroccan or Turkish origin.

The first element of the study, the laboratory recruitment experiment, was designed to measure discrimination in recruitment. In this test, participants were asked to take on the role of employers or personnel managers during a recruitment procedure. They were provided with descriptions of two fictitious jobs and two accompanying sets of twenty-four fictitious résumés. One job opening was for a position as customer advisor at a bank for which intermediate or higher vocational education was required. The other vacancy was a position as recruiter within a human resource management organization. For this job, a higher vocational or university degree was required. Participants were asked to read one job descriptions and accompanying set of résumés and assess applicants in two ways. First they indicated how suitable they thought candidates were for the job by rating each résumé (0 being very unsuitable and 10 very suitable). In addition, participants selected three applicants that they would invite for a (fictitious) job interview (c.f., Derous et al. 2009). Subsequently, participants read the other job description and accompanying set of résumés and complete the same tasks as for the first set. The order in which the job descriptions and sets of résumés were presented to the participants was randomized.

For each job, there was a set of twenty-four résumés. Within a set, there were sixteen résumés in which ethnicity, gender, level of education and work experience were varied systematically. These sixteen fictitious applicants represented all possible combinations of those four features (see Table 4 in "Appendix"). Consequently, for each of the eight native Dutch applicants within the set, there was one Moroccan-Dutch or Turkish-Dutch applicant with the same gender, educational level and work experience.

In addition to the sixteen completely comparable résumés, another eight applicants were added to the sets in order to make the division of ethnic majority and minority applicants more realistic. These eight résumés included several more native Dutch applicants as well as minority applicants belonging to different ethnic groups than the previous eight minority

⁴ These individuals are expected to hold less negative attitudes towards ethnic minorities and to be less likely to discriminate. Hence, they may affect overall outcomes. However, their number is too small to reliably test this expectation.

⁵ Online Recruitment System for Economic Experiments, a widely used recruitment system for laboratory experiments.

applicants in that particular set (Surinamese, Antillean and Turkish-Dutch in the condition measuring discrimination of Moroccan-Dutch applicants; Surinamese, Antillean and Moroccan-Dutch in the condition measuring discrimination of Turkish-Dutch applicants, see Table 4 in “Appendix”). These extra résumés were not included in the analyses. During the experiment, the majority and minority applicants’ résumés were presented to participants in mixed order.

The ethnicity of applicants was signaled through names on the résumés (included in the headers) and nationality. The applicants had the nationality of the parents’ country of birth although they themselves were born in the Netherlands.⁶ Exceptions to this rule were Antillean applicants. Individuals born on the Antilles automatically receive the Dutch nationality, making it impossible to use their nationality to signal ethnic background. Instead, the place of birth of applicants from this group was a municipality on the Antilles.

Applicants’ educational levels varied between intermediate and higher vocational education for the advisor job, and between higher vocational education and university for the recruiter job. All applicants followed their education in the Netherlands. Work experience varied between no work experience (just completed education) and around 1 year of work experience after completing the educational career. Finally, résumés included information on date and place of birth. The applicants were 22–25 years old. All are ‘second generation immigrants’, born in the Netherlands (except for applicants from the Antilles, as mentioned above).

The data were inspected for cases that may disturb the results because of abnormal answer patterns. For example, participants could rate applicants’ suitability or select them randomly instead of assessing the résumés features. Also, due to ‘fatigue’, participants might take their task seriously for the first résumés but lose their motivation or concentration later on. To identify such cases, the number of times participants assigned the same grade during the experiment was examined, as well as the possible effect of the order in which résumés were presented on suitability ratings (means and standard deviations) and the ratings that were assigned to the résumés that were selected and those that were not selected.⁷ Based on these tests, no cases were found that needed to be removed from the analyses.

The second element of this study, a survey amongst those who participated in the recruitment experiment, included items measuring the frequency and quality of participants’ own as well as their parents’ interethnic contacts, participants’ and their parents’ level of education, participants’ gender, and parental church membership. To avoid participants’ decisions during the recruitment experiment from being influenced by their answers to the questionnaire items, participants always completed the experiment first and filled out the questionnaire afterwards.

3.2 Measurement

3.2.1 *Dependent Variables*

This article focuses on two dependent variables, both on the applicant or résumé level: (1) ratings indicating participants’ evaluation of applicants’ suitability and (2) invitations for

⁶ This is common in the Netherlands, where most individuals of Moroccan or Turkish origin keep their nationality when they obtain the Dutch nationality. In fact, Morocco does not allow renunciation of the Moroccan nationality.

⁷ Mean suitability of those selected was 8.58 (SD = 0.76) and for those not selected 6.86 (SD = 1.27). This difference is significant ($p = 0.00$).

Table 1 Descriptive statistics

	Range	Mean	Std. dev.
<i>Dependent variables</i>			
Suitability ratings	0.00–10.00	7.081	1.352
Selected for interview	0.00–1.00	0.125	0.331
<i>Independent variables</i>			
Résumé characteristics (level 1)			
Native Dutch	0.00–1.00	0.500	
Male	0.00–1.00	0.500	
Education	0.00–1.00	0.500	
Work experience	0.00–1.00	0.500	
Participant characteristics (level 2)			
Frequency of interethnic contact	0.00–6.00	1.642	1.420
Frequency of interethnic contact parents	0.00–6.00	1.953	1.912
Quality of interethnic contact	0.00–4.00	2.309	0.723
University education	0.00–1.00	0.710	
Level of education parents	0.00–9.00	4.850	2.656
Church membership parents	0.00–1.00	0.357	
Male	0.00–1.00	0.309	

Source: Laboratory experiment of hiring practices amongst Dutch students 2010

N-participant = 272; N-résumé = 8,704

job interviews. The dependent variable indicating suitability ratings (which is a discrete variable) ranges between 0 (not suitable) and 10 (very suitable) with an average of 7.08.⁸ The mean score on the dichotomous variable indicating whether or not an applicant was invited for a job interview shows that 12.5 % of the fictitious applicants were selected for an interview (note that this is the result of our instruction to participants to select three job applicants out of a pool of twenty-four, for each job).⁹ Table 1 presents descriptive statistics for all variables.

3.2.2 Independent Variables

The analyses contain independent variables on two levels: the résumé or applicant level (level 1) and the participant level (level 2).

⁸ The average suitability rating was 7.11 for native Dutch applicants and 7.05 for minority applicants. A *t* test showed that this difference in means is statistically significant ($p = 0.03$).

⁹ Some applicants (25 %) were never selected; 68.75 % were selected more than once. These figures are the same for both native and minority applicants. This may seem remarkable at first sight, but bear in mind that some kind of pattern is to be expected here, due to the obvious qualitative differences between applicants that result from varying the four applicant features systematically. There are applicants that have lower education and no work experience (weaker candidates), applicants with higher education who do have work experience (stronger candidates), candidates who have a higher level of education but no work experience, and candidates who have a lower level of education but who do have work experience. Ethnic differences in the number of times applicants were selected for a job interview do exist. For native Dutch applicants, the mean number of times that they were selected is 35.5, whereas for ethnic minority candidates it is 33.2. This difference in means is statistically significant ($p = 0.01$). The maximum number of times that an applicant was selected is 158 for native Dutch candidates and 142 for ethnic minority applicants (not shown).

To assess whether discrimination occurs, effects of *applicant or résumé features (level 1)*—and in particular ethnicity—on applicants' suitability ratings and chances of being invited for an interview were examined. Regarding applicants' ethnicity, a distinction was made between native Dutch (1) and minority (0) applicants. Minority applicants are either Moroccan-Dutch or Turkish-Dutch. Furthermore, dichotomous variables representing applicants' gender, level of education and work experience were included as controls.

In order to assess the predictions formulated above, the role of *participant features (level 2)* was examined. First, to measure participants' *frequency of interethnic contact*, three questionnaire items were used which asked how often respondents came into contact with people with a Moroccan or Turkish background in their neighborhood, school or university and during leisure time. Answer categories for these three questions ranged from 'never' to '(almost) every day' on a seven-point scale. The mean score on these items was computed to obtain a measure of total interethnic contact. Second, *parents' interethnic contact frequency* was measured using two items about how often participants' parents came into contact with people with a Moroccan or Turkish background when respondents were about fifteen years old. Scores ranged from never (0) to (almost) every day (6). Next, the *quality of participants' interethnic contacts* was measured by means of two items asking how one evaluated contact experiences with Moroccan-Dutch or Turkish-Dutch individuals in general. Answers ranged from 'very negative' (0) to 'very positive' (4) on a five-point scale. Respondents who had no contact with members of these minority groups (about 28 %) were combined with the category 'not positive, not negative'.

Participants' *educational level* was taken into account, distinguishing between students in higher vocational education (0) and university (1). Moreover, information on the level of *parental educational level* was incorporated. One variable for parents' education was constructed by computing the mean educational level of mother and father using two items that distinguished between ten categories. For respondents of whom the score on one of these items was missing, the score of the other parent was used. Participants of whom neither of the parents' educational level was known (1.8 %) were assigned the mean score of parents' educational level within the data.¹⁰ In addition, information on *parents' church membership* was included using a dichotomous variable indicating whether (1) or not (0) at least one parent was member of a church.

Finally, several previous studies have shown that *gender* has a significant influence on interethnic attitudes such that men on average hold more negative attitudes towards ethnic minorities than women (Ceobanu and Escandell 2010). One could expect a similar relation between gender and discrimination. Moreover, gender may be related to other independent variables in our analyses. Hence, a dichotomous variable indicating participants' gender was incorporated in the analyses as a control variable.

4 Analyses and Results

4.1 Modeling Approach

We test our predictions using fixed effects multilevel regression analyses¹¹ of participants' assessment (rating) of the suitability of each applicant for the job and participants' choice

¹⁰ Analyses in which these participants were excluded did not lead to different outcomes.

¹¹ When we estimate standard multilevel regression models, results and conclusions remain unchanged.

concerning which applicants to invite for a job interview. The models involve two levels: the first level is the applicant or *résumé* level ($n = 8,704$) and the second the participant level ($n = 272$).¹² The advantage of fixed effects models is the ability to isolate within-participant variation in the grades they assigned to *résumés* and in the selection decisions they made and to estimate the effects of *résumé* features 'within' candidates. In other words, in this procedure the ratings assigned by a participant to one *résumé* are compared to those assigned to other *résumés* by the same participant (Verbeek 2000). Because this study focuses on discrimination (i.e., differences between outcomes for minority and majority applicants) and its predictors, we are interested in the effect of applicants' ethnicity on outcomes of application procedures and in the influence that participants' characteristics have on this effect (not in main effects of participants' features on grades or the likelihood to be selected for a job interview). The fixed effects analyses allow us to do just this.

Table 2 presents the results of fixed effects multilevel linear regression analyses for the grades that were assigned to the *résumés*. Table 3 shows outcomes (odds ratios) of a fixed effects multilevel logistic regression analysis for whether or not a fictitious applicant was selected for a job interview.¹³ We specified our models as follows. Model 1 includes all *résumé* characteristics, including applicants' ethnicity. Therefore, these models test whether—controlled for applicants' gender, educational level and work experience—applicants' ethnicity affects grades and decisions on selection for job interviews (i.e. whether there is ethnic discrimination). Model 2 includes interaction effects of applicants' ethnicity and participant characteristics.¹⁴ These models examine whether the effect of applicants' ethnicity is moderated by features of the participants assigning the grades and making selection decisions. Hence, they form the test of our predictions.

4.2 Results

4.2.1 Suitability Ratings

The results presented in Model 1 of Table 2 show that, controlled for applicants' gender, level of education and work experience, there is a statistically significant relationship between applicants' ethnicity and the suitability ratings assigned to them. Native Dutch applicants are generally judged as more suitable than Moroccan-Dutch or Turkish-Dutch applicants. In other words, these results provide evidence of ethnic discrimination in terms of suitability ratings.

Moreover, Model 1 shows that there are significant effects of fictitious applicants' gender, educational level and work experience on the suitability ratings assigned to the applicants. Candidates with higher educational levels and more work experience are considered more suitable. Note that education and particularly work experience seem more important in this regard than ethnicity. This indicates that while ethnicity plays a

¹² Strictly speaking, our data consist of three levels: the *résumé*, job, and applicant level. But as models controlling for the three-level structure led to the same results as two-level models, we omitted the job level from our analyses.

¹³ For the multilevel linear and logistic regressions we used the *xtreg* and *xtlogit* commands in Stata 11, using the 'fe' option for fixed effects in both cases and the 'or' (odds ratios) option in the logit model.

¹⁴ Note that using fixed effects models makes it unnecessary (and impossible) to include the main effects of participant features; only the interactions are entered into the analyses (Verbeek 2000).

Table 2 Fixed effects multilevel linear regression analysis for suitability ratings

	Model 1		Model 2	
	Coeff	SE	Coeff	SE
<i>Constant</i>	5.884	0.019	5.884	0.019
Résumé features				
Native Dutch	0.054	0.017**	0.142	0.077*
Male	-0.056	0.017**	-0.056	0.017**
Education	0.877	0.017**	0.877	0.017**
Work experience	1.158	0.017**	1.518	0.017**
Interactions résumé ethnicity × participant features				
Native × frequency of interethnic contact participant			-0.000	0.014
Native × frequency of interethnic contact parents			0.003	0.010
Native × quality of interethnic contact participant			-0.011	0.025
Native × university education			-0.067	0.039*
Native × level of education parents			-0.007	0.007
Native × church membership parents			-0.011	0.036
Native × male participant			0.052	0.037~
F (<i>df</i> -participant, <i>df</i> -résumé)	2.641.09 (4, 8,428)		960.97 (11, 8,421)	

Source: Laboratory experiment of hiring practices amongst Dutch students 2010

N-participant = 272; N-résumé = 8,704

Significance (1-tailed): ** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$

Table 3 Fixed effects multilevel logistic regression analysis selection for interview

	Model 1		Model 2	
	Odds ratio	SE	Odds ratio	SE
Résumé features				
Native Dutch	1.140	0.084*	3.781	1.294**
Male	0.768	0.057**	0.766	0.057**
Education	7.327	0.644**	7.404	0.652**
Work experience	78.214	17.792**	79.083	17.997**
Interactions résumé ethnicity × participant features				
Native × frequency of intergroup contact participant			0.942	0.057
Native × frequency of intergroup contact parents			0.956	0.039
Native × quality of intergroup contact participant			0.795	0.089*
Native × university education			0.714	0.123*
Native × level of education parents			0.921	0.026**
Native × church membership parents			1.310	0.206*
Native × male participant			1.235	0.200~
LR Chi ² (df)	2,113.03 (4)		2,139.91 (11)	

Source: Laboratory experiment of hiring practices amongst Dutch students 2010

N-participant = 272; N-résumé = 8,704

Significance (1-tailed): ** $p < 0.01$; * $p < 0.05$; ~ $p < 0.10$

significant role it is not the most important feature upon which participants based their assessment of candidates' suitability.

Applicants' gender has a perhaps somewhat surprising effect. In our experiment, male applicants were on average judged as somewhat less suitable than female applicants. Keeping in mind that the majority of our participants are female, we ran additional analyses¹⁵ to check whether this could be explained by a preference of participants for applicants of their own gender. Results showed, however, that this is not the case; both male and female participants favor female over male applicants when assigning suitability ratings. One may argue that this is in contrast with evidence from previous research showing that women are underrepresented in higher level jobs and are on average less well paid than men for similar jobs (e.g., England 2005). Experimental research on gender discrimination in recruitment, however, is relatively scarce and provides mixed results (e.g., Hosoda et al. 2003; for an overview see: Riach and Rich 2002).¹⁶

¹⁵ First, we conducted analyses including the interaction effect of participants' and applicants' gender in our model. Second, we ran separate models for male and female participants.

¹⁶ Additional analyses examining interaction-effects between résumé characteristics showed that the positive relation between education and work experience on suitability ratings and invitations for interviews are generally somewhat stronger for minority applicants than for native applicants. No significant interactions between applicants' ethnicity and gender were found.

To test our predictions, the interaction effects of applicants' ethnicity and participant features are added in Model 2. Results show a significant interaction of applicants' ethnicity and participants' level of education. The difference in suitability ratings between native Dutch applicants and ethnic minority applicants, in favor of natives, is smaller amongst university students than amongst those in higher vocational education. Phrased differently, compared to university students, those in higher vocational education appear to be more prone to discriminate against ethnic minority applicants in terms of suitability ratings.

The analyses provide no support for the predictions on the role of interethnic contacts, parents' educational level and parents' church membership. These features appear unrelated to ethnic discrimination in terms of suitability ratings. Interestingly, the results do show that the interaction of applicants' ethnicity and participants' gender (which we included as a control variable) is statistically significant at the 0.10 level. The difference in suitability ratings between native Dutch candidates and ethnic minority candidates appears to be smaller amongst female than amongst male participants. In other words, men seem to be more likely to discriminate against ethnic minority applicants in terms of suitability ratings than women.

4.2.2 Selection for Job Interviews

The results of the analyses for the selection of candidates for job interviews are presented in Table 3. First, the outcomes presented in Model 1 show that, controlled for applicants' gender, education and work experience, applicants' ethnicity has a significant effect on their chances of selection. Native Dutch applicants were more likely to be selected for an interview than Moroccan-Dutch or Turkish-Dutch applicants. The odds ratio for the dichotomous variable distinguishing native from minority applicants is 1.14, showing that the odds that native applicants are selected are 1.14 times higher than the odds that Moroccan-Dutch or Turkish-Dutch candidates are selected. Hence, we can conclude that ethnic discrimination in selection for job interviews did indeed occur amongst the participants in our experiment.¹⁷

Applicants' educational level and work experience again turn out to be most influential. Yet, interestingly, the role of applicants' ethnicity compared to other applicant features seems somewhat more important for selection decisions than for suitability ratings. The effects of other applicant features on their chances of receiving an invitation show that those with higher educational levels or more work experience are more likely to be selected for an interview. Moreover, in line with the outcomes for suitability ratings, applicants' gender has a significant effect on their likelihood of being invited for an interview. Male applicants are less likely to be selected than female applicants. This time, however, additional analyses revealed that this effect is due to the fact that (only) female participants prefer female applicants when inviting candidates for an interview. Male participants in our study did not significantly favor female over applicants.

¹⁷ Additional analyses were conducted which included suitability ratings as a control variable in the model for selection for an interview as an additional test for discrimination. Outcomes showed that this did not affect our results; the other associations remain the same.

In Model 2,¹⁸ the odds ratio for native applicant is 3.78, meaning that the odds of being selected are about 3.8 times higher for native Dutch than for Moroccan-Dutch or Turkish-Dutch candidates. The outcomes presented show that there is a significant interaction effect of applicants' ethnicity and the quality of participants' interethnic contacts. The odds ratio of 0.79 indicates that the difference between native and minority candidates when they are rated by participants who have *negative* interethnic contacts is about 0.79 times this difference when rated by participants who have *very negative* interethnic contacts (c.f., Buis 2010; and so on for the four remaining categories). Hence, the relationship between applicants' ethnicity and their likelihood of being selected is weaker amongst participants who evaluate their contacts with members of other ethnic groups more positively. Phrased differently, individuals who have more positive interethnic contacts are less likely to discriminate against minority applicants in terms of selection.¹⁹ This supports our expectation concerning the role of the quality of interethnic contacts. However, our predictions about the role of the frequency of one's own interethnic contacts and parents' interethnic contacts are not confirmed.

Furthermore, the results show a significant interaction effect of applicants' ethnicity and participants' level of education. The odds ratio of 0.71 shows that the difference between native and minority applicants when they are rated by participants with a University education is 0.71 times the difference between native and minority applicants when rated by participants at higher vocational level. That is, university students are less likely to discriminate against minority applicants in terms of selection than students in higher vocational education. This is in line with what we predicted. Moreover, there is a significant interaction effect of applicants' ethnicity and the level of education of participants' parents. The odds ratio of 0.92 indicates that the difference between native and minority participants when rated by participants whose parents followed lower vocational education is 0.92 times the difference when rated by participants whose parents followed only primary education (and so on for the nine remaining categories). In other words, for participants with higher educated parents the relationship between applicants' ethnicity and their chances of being selected is weaker; they are less likely to discriminate against Moroccan-Dutch and Turkish-Dutch applicants in terms of invitations for job interviews. This corroborates our expectations.

Also, there is a significant interaction effect between applicants' ethnicity and church membership of participants' parents. The difference between native and minority applicants when rated by participants whose parents are church members is 1.31 times this differences when candidates are rated by participants whose parents are non-members. Hence, in line with our prediction, individuals whose parents are members of a church are more likely to discriminate against minority applicants when selecting candidates for a job interview.

¹⁸ In addition to analyses that combined outcomes for Moroccan-Dutch and Turkish-Dutch applicants, analyses were conducted to check whether results are comparable across these ethnic groups. Outcomes showed that the findings are robust and largely insensitive to ethnic group differences; patterns emerging from the results are the same for both ethnic minority groups. There are a few minor, non-systematic differences mainly due to some relations becoming insignificant when analyses are conducted for the groups separately. However, all relations remained in the expected directions. It is likely that these group differences are due to the relatively small number of participants in this experiment. They should, therefore, be interpreted with caution.

¹⁹ This conclusion remains the same if a dichotomous variable for interethnic contact quality (contrasting individuals who classify their interethnic contacts as (very) negative to those who perceive their contacts as neutral to (very) positive).

Finally, we again find a significant interaction effect of applicants' ethnicity and participants' gender. The difference between native and minority candidates when rated by male participants is 1.24 times this difference when rated by females. That is, male participants are more likely to discriminate against minority applicants in terms of selection for job interviews.²⁰

5 Conclusions and Discussion

This article examined which characteristics of individuals are related to their likelihood of discriminating against ethnic minority applicants during recruitment procedures. We set out to build upon previous experimental studies on ethnic discrimination in recruitment by examining under which conditions discrimination is more or less likely to emerge. We did so by studying the role of decision makers' features, deriving expectations from well-known theories from the interethnic attitudes literature: Contact Theory and Ethnic Competition Theory. Our predictions were tested by means of a data from both a laboratory experiment involving students participants and a survey amongst those participating in the experiment.

Results showed, first of all, that discrimination of ethnic minority applicants occurs even amongst the participants in this study, who were students in higher education. It should be noted that the effect of applicants' ethnicity on suitability ratings and (to a lesser extent) selection decisions, although significant, was relatively small compared to effects of other applicant features. Yet, given that higher educated individuals are generally relatively tolerant (Coenders and Scheepers 2003) our results are most likely an underestimation of discrimination among real employers. This outcome indicates that even individuals who generally endorse ethnic equality might discriminate under certain conditions. A relatively new line of research focusing on one possible explanation for such phenomena deals with implicit or unconscious interethnic attitudes (see for example: Fiske and Molm 2011; Quillian 2008; and for research on the link between implicit interethnic attitudes and ethnic discrimination in the labor market see for example: Blommaert et al. 2012; Rooth 2010). Such research deserves further attention in the future.

Second, findings from this study showed that interethnic contacts are related to individuals' likelihood to discriminate against ethnic minority applicants. However, only the quality (not the frequency) of interethnic contacts influences ethnic discrimination. Those who have more positive contacts are less likely to discriminate. This is in line with previous studies showing that high-quality contact experiences reduce negative intergroup attitudes (e.g., Johnson and Jacobson 2005; Levin et al. 2003; Paolini et al. 2004). These results lend partial support to Contact Theory and in particular to scholars arguing that we need to take into account the types of intergroup contacts that people have in order to

²⁰ Additional analyses were conducted to verify if difficulties associated with estimating interaction effects in logistic regressions (such as described in Norton et al. 2004) may have affected our conclusions. These analyses were conducted using the `inteff` command in Stata which is explicated by Norton and colleagues. This command is, to the best of our knowledge, not available for multilevel or fixed effects regression analyses, which would be most suitable. Hence, we opted for logistic analyses with cluster controls. Outcomes of these additional analyses generally confirm the results presented in Model 2 of Table 3. In fact, some of the interaction effects in the additional analyses (those with parental church membership and participants' gender) are stronger than the ones presented in Table 3. Other effects (those with own and parents' interethnic contact frequency as well as interethnic contact quality) remain the same in size and significance level. One interaction effect (with participants' education) was slightly weaker but remained significant, and one interaction effect (with parental education) became insignificant.

understand how such contacts lead to positive or negative intergroup attitudes and behaviors (e.g., McLaren 2003). Note that most previous studies on the influence of intergroup contacts on interethnic attitudes focused on positive contact experiences (Pettigrew and Tropp 2006). Future research could enhance our understanding of how interethnic contacts affect interethnic relations (including discriminatory behavior) by further examining the role of “both positive and negative factors in the contact situation” (Pettigrew and Tropp 2006: 768) in shaping interethnic attitudes as well as (discriminatory) behavior.

Furthermore, this article showed that students in higher vocational education (and those whose parents are lower educated) are more likely to discriminate against ethnic minority applicants than university students and those whose parents are higher educated. This confirms previous research, which found more negative interethnic attitudes among the lower educated (e.g., Hello et al. 2002). Moreover, these findings are in line with Ethnic Competition Theory, which argues that individuals in higher socio-economic positions experience less ethnic competition and are therefore less likely to hold negative interethnic attitudes and display negative interethnic behavior. Note, however, that there are more interpretations of the role of education. For example, education is often argued to have a general ‘liberalizing effect’; it leads to “broader knowledge, increased reflexivity, a more critical stance, greater personal and familial security, substantial exposure to foreign cultures, higher acceptance of diversity” (Ceobanu and Escandell 2010: 319). Therefore, further research is needed to identify which mechanisms underlie this relationship between education and ethnic discrimination. Studies combining experimental and survey data are needed to answer this type of questions; as such an approach allows researchers to document discrimination in the most appropriate way (i.e., using experimental techniques; National Research Council 2004) and at the same time collect information on individuals’ personal features and attitudes.

Moreover, the present study showed that individuals whose parents are church members are more likely to discriminate against minority applicants with regard to invitations for job interviews. This is in line with our argument that individuals who are more religious perceive Muslim minorities as a cultural threat and are therefore more likely to behave negatively towards minority group members. However, we do not know whether perceived cultural competition indeed mediates the relationship between church membership and discrimination or whether a different mechanism is at work. Moreover, previous research on the association between religion and interethnic attitudes is inconclusive and has emphasized the need to distinguish between different dimensions of religiosity (e.g., Scheepers et al. 2002a, b). Therefore, the development and testing of predictions on the relationship between religion and interethnic behavior deserves more scholarly attention in the future.

A factor which was included in our analyses as a control variable but turned out to affect participants’ likelihood to discriminate both in terms of suitability ratings and in terms of invitations for interviews is decision makers’ gender. Although it should be noted that these effects are significant only at the 0.10 level, and results should therefore be interpreted with some caution, the outcomes indicate that men discriminate more often than women. Although such gender effects have been found in research on interethnic attitudes before (Ceobanu and Escandell 2010) there seems to be little consensus on the interpretation of this relationship. One possible explanation is that men are generally more attached to the labor market and are therefore more aware of interethnic competition in this domain. This would in turn lead to more negative interethnic attitudes

and a stronger tendency to discriminate amongst men compared to women. Other possible explanations are that men generally have more authoritarian personalities (Adorno et al. 1950) or a higher social dominance orientation (Sidanius et al. 2004) than women. Like religiosity, therefore, the influence of gender on interethnic attitudes and behavior merits more attention in future studies, which should aim at uncovering how and why such gender differences exist.

An important conclusion that can be drawn based upon our results relates to the fact that the design of the experiment allowed us to measure decisions at different stages of the recruitment procedure (i.e., assessments of applicants' suitability after first reviewing the résumés and subsequent decisions on who to invite for an interview). Our findings indicate that first judgments about applicants' suitability are predominantly determined by applicant features. The role of decision makers' features is relatively small at this stage; many relations are statistically insignificant. When it comes to deciding who to invite for a job interview, however, characteristics of decision makers are also of influence. Moreover, although applicants' ethnicity has a significant effect in both phases of the selection process, it is relatively more important for invitations for interview than for suitability ratings. One possible reason for this is that participants' ratings of the job applicants are not binding, whereas invitations for interviews are. Given that prejudice and discrimination are commonly condemned nowadays, we can assume that most individuals would like to be perceived as unprejudiced for as long as this is easily achievable. Assigning equal ratings to equivalent ethnic minority and majority candidates does not involve any real costs for a recruiter or organization. Confronted with the choice to choose potential employees for one's organization, one might consider the different options more seriously and perhaps let preferences prevail over social desirability concerns. This may lead to more pronounced differences between decision makers in later phases of the recruitment process. Alternatively, the difference between discrimination in suitability ratings and in selection could be interpreted in terms of the complexity of the task. Evaluating applicants' suitability for a job may be seen as a relatively straightforward task in which one has to process a limited amount of information (i.e., *one* applicant's educational level, work experience, gender and ethnicity). On the other hand, selecting a small number of applicants from a larger pool of candidates for a job interview can be seen as a more complex decision, which involves the comparison of a many multifaceted résumés. It therefore requires one to process a large amount of information simultaneously (c.f., Blommaert et al. 2012). This too could lead to larger differences between decision makers in the later stages of recruitment procedures. In any case, differences between phases in the hiring process merit attention on future research on discrimination in recruitment.

There are some drawbacks to the present study that deserve consideration. First, unlike field experiments on discrimination, this laboratory experiment does not measure recruitment decisions in real-life application procedures. It does, however, measure behavior. In effect, the tasks which participants carried out during this experiment closely resemble the first stages of actual recruitment procedures, where the initial assessment of applicants' suitability and decisions on who to invite for interviews are based on résumés. Second, participants in this study were students enrolled in higher education. One cannot be sure that their reactions to the (fictitious) applicants are similar to reactions of actual employers or personnel managers if they would have been confronted with the same résumés. Yet, there is evidence that similar effect sizes are found with actual recruiters as with students (Hosoda et al. 2003). Moreover, regarding key features, namely ethnicity and educational level, the participants in our study are quite similar to employers. For example, employers in the Netherlands are almost exclusively

(91 %) native Dutch, and predominantly (78 %) higher educated (42 % has a university degree; 36 % a higher vocational degree or university bachelor's degree). Furthermore, employers in the Netherlands are often (70 %) male, whereas of our participants only 30 % was male.²¹ Note, however, that both the rather strong over-representation of females and the much smaller over-representation of higher educated in our data will probably have led us to underestimate the extent to which discrimination actually occurs in real-life hiring settings. As mentioned above, women (Ceobanu and Escandell 2010) and higher educated individuals (Coenders and Scheepers 2003) generally hold more positive attitudes towards minorities compared to men and those with lower levels of education. In light of this, finding significant effects of decision makers' features on discrimination even for this relatively tolerant group provides strong support for our ideas. Research amongst decision makers in real-world recruitment procedures is required to assess whether stronger effects will indeed be found amongst employers or personnel managers.

Another drawback of the present study is that, although we have so far assumed that more positive (and more frequent) interethnic contacts lead to a lower likelihood to discriminate, the causality of this relationship might in fact be reversed. That is, individuals who hold negative interethnic attitudes may experience interethnic contacts as more negative (and may be more prone to discriminate). Our research design does, strictly speaking, not enable us to determine the causality of the association we found between the quality of interethnic contact on the one hand and discrimination regarding invitations for job interviews on the other hand. Future research could address this matter.

Moreover, the relatively low number of participants in this study may have caused some of the results to be insignificant. Further research based on larger numbers of cases could provide more conclusive evidence. Finally, this study focused on discrimination of Moroccan-Dutch and Turkish-Dutch individuals. Whether the results hold for other (e.g., non-Muslim or Western) ethnic minority groups and in other settings remains a question for future research.

Despite these limitations, this study can be seen as a step towards more systematic (experimental) research on ethnic discrimination that moves beyond describing to what extent discrimination occurs and contributes to our understanding of the *conditions* under which discrimination is more or less likely to occur. Such research is vital to both the scientific community seeking to better understand which mechanisms underlie ethnic discrimination as well as policy makers and organizations trying to reduce the role of prejudice and discrimination in the current labor market.

Appendix: Fictitious Applicants and Their Characteristics

See Table 4.

²¹ Own calculations based on labour force survey micro data ('Enquête Beroepsbevolking') retrieved from Statistics Netherlands); a representative sample of the population of the Netherlands aged fifteen and older.

Table 4 Overview of fictitious applicants and their characteristics

Nr	Recruiter						Advisor					
	Name	Ethnicity	Gender	Education	Experience		Name	Ethnicity	Gender	Education	Experience	
1	Sanne de Groot	Native Dutch	Female	High	Little		Fleur Timmer	Native Dutch	Female	High	None	
2	Marieke Zijlstra	Native Dutch	Female	High	None		Anke Meijerink	Native Dutch	Female	High	Little	
3	Maartje Janssen	Native Dutch	Female	Low	Little		Marloes van Dijk	Native Dutch	Female	Low	None	
4	Femke van Leeuwen	Native Dutch	Female	Low	None		Lotte Smits	Native Dutch	Female	Low	Little	
5	JeroenWillemse	Native Dutch	Male	High	Little		Sander Vos	Native Dutch	Male	High	None	
6	Daan Kuipers	Native Dutch	Male	High	None		Thijs Aalbers	Native Dutch	Male	High	Little	
7	Bas de Wit	Native Dutch	Male	Low	Little		Maarten De Vries	Native Dutch	Male	Low	None	
8	Michiel van den Broek	Native Dutch	Male	Low	None		Wouter Brinkman	Native Dutch	Male	Low	Little	
9a	Zeynep Topal	Turkish-Dutch	Female	High	Little		Ayşe Güven	Turkish-Dutch	Female	High	None	
10a	Nesrin Ünsal	Turkish-Dutch	Female	High	None		Öslem Karan	Turkish-Dutch	Female	High	Little	
11a	Gizem Ayhan	Turkish-Dutch	Female	Low	Little		Nuray Çörtüz	Turkish-Dutch	Female	Low	None	
12a	Elvan Oktay	Turkish-Dutch	Female	Low	None		Yıldız Erdem	Turkish-Dutch	Female	Low	Little	
13a	Ümit Korkmaz	Turkish-Dutch	Male	High	Little		Emre Çetin	Turkish-Dutch	Male	High	None	
14a	Engin Öcalan	Turkish-Dutch	Male	High	None		Serhan Erkin	Turkish-Dutch	Male	High	Little	
15a	Mehmet Yalçın	Turkish-Dutch	Male	Low	Little		Erdal Aydoğdu	Turkish-Dutch	Male	Low	None	
16a	FatihOkur	Turkish-Dutch	Male	Low	None		Bülent Cosar	Turkish-Dutch	Male	Low	Little	
9b	Fatima Haddou	Moroccan-Dutch	Female	High	Little		Hakima Alaoui	Moroccan-Dutch	Female	High	None	
10b	Bahar Abdellah	Moroccan-Dutch	Female	High	None		Zainab Alami	Moroccan-Dutch	Female	High	Little	
11b	Naïma Tahiri	Moroccan-Dutch	Female	Low	Little		Samira Yacoubi	Moroccan-Dutch	Female	Low	None	
12b	Safia Bakkali	Moroccan-Dutch	Female	Low	None		Aïsha Ben Allal	Moroccan-Dutch	Female	Low	Little	
13b	Kamal Idrissi	Moroccan-Dutch	Male	High	Little		Samir Mahmoud	Moroccan-Dutch	Male	High	None	
14b	Munir Amrani	Moroccan-Dutch	Male	High	None		Rashid Adlouni	Moroccan-Dutch	Male	High	Little	
15b	Driss Bennani	Moroccan-Dutch	Male	Low	Little		Adil Hamdaoui	Moroccan-Dutch	Male	Low	None	

Table 4 continued

Nr	Recruiter						Advisor					
	Name	Ethnicity	Gender	Education	Experience	Name	Ethnicity	Gender	Education	Experience		
16b	Mohammed Yassir	Moroccan-Dutch	Male	Low	None	Murad El Morabet	Moroccan-Dutch	Male	Low	Little		
17	Renske Toorenburg	Native Dutch	Female	High	Little	Roos van Veen	Native Dutch	Female	High	None		
18	Ronda Domacasse	Antillean	Female	High	None	Kathelijne Blom	Native Dutch	Female	High	Little		
19	Jasmijn Hamer	Native Dutch	Female	Low	Little	Emine Uzülmez/Rabiah El Zhar	Turkish-/ Moroccan-Dutch	Female	Low	None		
20	Letitia Grooffaam	Surinamese	Female	Low	None	Boukje Kramer	Native Dutch	Female	Low	Little		
21	Roel van den Brink	Native Dutch	Male	High	Little	Bryan Debisarun	Surinamese	Male	High	None		
22	Hakan Buruk/Yunis Ammi	Turkish-/ Moroccan-Dutch	Male	High	None	Matthijs Jonkers	Native Dutch	Male	High	Little		
23	Teun Schipper	Native Dutch	Male	Low	Little	Devon Janga	Antillean	Male	Low	None		
24	Joris Ouwehand	Native Dutch	Male	Low	None	Remco Meijer	Native Dutch	Male	Low	Little		

Participants in the Turkish-Dutch condition were presented with résumés 1–8, 9a–16a and 17–24; participants in the Moroccan-Dutch condition were presented with résumés 1–8, 9b–16b and 17–24

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