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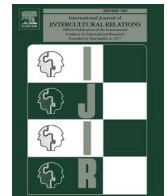
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## The role of perceived discrimination, intergroup contact and adoption in acculturation among four Dutch immigrant groups

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## ABSTRACT

Perceived discrimination, intergroup contact and acceptance are often encountered during acculturation processes. Based on large-scale survey data collected in the Netherlands among Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch immigrant groups, relations were tested between *acculturation antecedents* (perceived discrimination, intergroup contact, and perceived acceptance), *mediating conditions* (cultural maintenance and cultural adoption), and *acculturation outcomes* (psychological and sociocultural outcomes). Confirmatory factor analyses pointed to adequate psychometric qualities for all concepts in the total group and to invariance in the four Dutch immigrant groups. Structural equation modeling revealed a very good fit for our model in the total group and the four immigrant groups. The acculturation model captured similar experiences, notwithstanding the different cultural backgrounds of the four groups. Experiencing discrimination had a direct negative effect on sociocultural and psychological outcomes such as well-being, and indirectly via cultural adoption. The frequency of immigrants' contacts with various groups positively affected adopting the new culture and maintaining their own. This implies both attitudes are needed, that is, appreciating their background culture while also having a positive attitude toward Dutch society and more confidence in sociocultural skills. Surinamese-Dutch appeared to best fit the described acculturation process. However, there were also some differential effects. For example, for the Turkish-Dutch group, experiencing more discrimination did not result in a more negative attitude toward Dutch society. In addition, for Antillean-Dutch the frequency of contact with various cultures had no direct effect on mediating conditions. Further research should uncover general acculturation mechanisms without neglecting singular patterns within the various immigrant groups.

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## Introduction

Single-group studies dominate the acculturation literature; yet, it is clear that comparative acculturation studies advance the field substantially (Liebkind & Jasinskaja-Lahti, 2000; Sam, Jasinskaja-Lahti, Horenczyk, & Vedder 2013). Already in 1936, Redfield, Linton, and Herskovits (1936, p. 149) defined acculturation as including “those phenomena, which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups.” At the individual level, Berry (1997, 2001) described acculturation as an ongoing process and identified four acculturation orientations: integration (co-national identification), assimilation (host-national identification), marginalization (non-national identification), and separation (origin-national identification). These orientations are derived from two main aspects of acculturation, namely *cultural maintenance* (maintaining the characteristics of the culture of origin) and *cultural adaptation* of immigrant groups (adapting to the culture of the receiving society), resulting in a bi-dimensional acculturation model (Berry, 1997, 2001). Berry and Sabatier (2011) emphasized the importance of operationalization of acculturation strategies in acculturation models and it appeared that it does matter how and when acculturation attitudes are assessed. For example, authors have explored the second dimension as cultural adoption (Liebkind, 2001), examining the contrasting conceptualizations of contact versus adoption (Snauwaert, Soenens, Vanbeselaere, & Boen, 2003; Ward & Kus, 2012).

In the present study, we compare the individual acculturation process of the four largest non-Western Dutch immigrant groups in the Netherlands: Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch. Vedder, Wenink, and Van Geel (2017) argued that studies on intergroup relations should consider both positive and negative contact experiences. In line with this, we particularly focused on intergroup contact, perceived discrimination and perceived acceptance as relevant antecedents of acculturation. We were interested in these four groups because, as documented below, they have very different immigration cultures and history, which could have a bearing on their acculturation process. Therefore, the aim of our study is to better understand the diversity of the acculturation dynamics as perceived by the four largest immigrant groups in the Netherlands: Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch.

### *Diversity in the Netherlands*

Almost four million people of heritage descent live in the Netherlands, making up more than 24.3% of the Dutch population (CBS, 2020). In 2019, 10% western and 13.4% non-western immigrants live in the Netherlands. Schmeets and De Wit (2017) report that many immigrants have a non-western background and mainly live in the largest Dutch cities. Especially in these cities, the number of immigrants is rising rapidly. For instance, from 2017 to 2019 the percentage of the immigrant population in Amsterdam increased from 35.0% to 54.5% and in Rotterdam from 37.0% to 51.6% (CBS, 2020; Schmeets & De Wit, 2017). The four largest immigrant groups consist of 50% first and 50% second generation. For example, in the Netherlands there are 197,740 first and 219,642 second generation Turkish immigrants (CBS, 2020). Schmeets and De Wit showed the four largest Dutch immigrant groups in 2017 to be: Antillean (153,469), Moroccan (391,088), Surinamese (349,978), and Turkish (400,367). These groups have their own cultural and linguistic backgrounds. Antillean-Dutch and Surinamese-Dutch have a cultural heritage of being former Dutch colonies, in which they were frequently exposed to and spoke the Dutch language at home. These adults have a certain level of knowledge of the host society and are more familiar with its cultural values and beliefs. They do not need residence permit to work or study in the Netherlands, due to their colonial background. Therefore, these individuals are generally expected to have high scores on sociocultural outcome.

By contrast, first-generation labor immigrants from Morocco and Turkey were often poorly educated in their home country and migrated to the Netherlands for economic reasons (work and education). They had to apply for a residence permit to work and study in the Netherlands. However, since most of the labor immigrants arrived in the Netherlands in the 1970s, most of them have acquired full Dutch rights since then. Other Moroccan-Dutch and Turkish-Dutch arrived for reasons of family reunion or were born in the Netherlands, forming the second or third generation immigrants.

We follow standard definitions of first-, second-, and third-generation immigrants of non-Western and Western countries as provided by Statistics Netherlands (CBS, 2020). For international research coherence, we emphasize that when mentioning ‘immigrants’ in the current study, we mean ‘from an immigrant background’. First-generation immigrants are born outside of the Netherlands with at least one parent born in a foreign country. Second-generation immigrants are born in the Netherlands with at least one parent born in a foreign country. Third-generation immigrants are those who are born in the Netherlands (including both parents) with at least one grandparent born abroad. Here, majority Dutch refers to ethnic Dutch whose parents were born in the Netherlands regardless of the birthplace of the participants.

The scale of family reunion, and marriages between immigrants (i.e., the second and third generation of Turkish-Dutch and Moroccan-Dutch) and partners from their country of origin might be an obstacle to their acculturation process, since these partners from the country of origin have less knowledge of Dutch habits and the Dutch language. From immigrants’ and their descendants perspective the multicultural problems among non-western immigrants, such as discrimination and low well-being are increasing, especially in larger Dutch cities (Ooijevaar & Bloemendal, 2016; Schmeets & De Wit, 2017).

Several studies have been performed for acculturation predictors for immigrant groups in the Netherlands, such as age and economic status (Ooijevaar & Bloemendal, 2016; Schmeets & De Wit, 2017). Not many studies have been done for acculturation predictors such as intercultural contact, perceived discrimination and acceptance. For example, Schalk-Soekar and Van de Vijver (2008) studied an expected relation with acculturation and intergroup contacts as seen by Dutch majority members. Intergroup aspects like contact and knowledge appeared to be positively related with multiculturalism. In a study in Hong Kong, Hui et al. (2015) found a significant mediating effect of integration strategy and intercultural contact on perceived discrimination among Mainland Chinese immigrants.

Intergroup contact can therefore play an important role in the perceived discrimination and acceptance of immigrants and it is important to investigate its effect on the attitudes and outcomes of acculturation among immigrant groups in the Netherlands.

### *Theoretical background*

Quite a number of studies focus on attitudes toward acculturation and multiculturalism of immigrants and majority members in the Netherlands (e.g., Schalk-Soekar & Van de Vijver, 2008; Schalk-Soekar, Van de Vijver, & Hoogsteder, 2004; Stupar, Van de Vijver, Te Lindert, & Fontaine, 2014). Different domains and dimensions have been researched, such as discrimination and prejudice (Breugelmanns & Van de Vijver, 2004; Gijssberts & Dagevos, 2004; Levin et al., 2012). These studies provide a good overview of explaining factors, especially at an individual level. Verberk, Scheepers, and Felling (2002) demonstrated that negative attitudes were more salient among less privileged, less educated and lower SES members of both the Dutch majority and immigrant groups.

### *Acculturation models*

Several acculturation strategies (Berry, 1997; Ward & Kus, 2012) and acculturation models have been developed (Arends-Tóth & Van de Vijver, 2003, 2004; Berry, 2011) since the early definition of Redfield et al. The research scope has been extended to a taxonomy of multiculturalism policies linked to Berry's model by Bourhis, Moïse, Perrault, and Senécal (1997), the so-called Interactive Acculturation Model. This model assumes that immigrants' choice of strategy depends on how the majority perceives the immigrant groups as well as how the immigrant groups perceive the majority (Bourhis, Barette, El-Geledi, & Schmidt, 2009; Ward, Fox, Wilson, Stuart, & Kus, 2010). In the present study we follow the three steps of the acculturation model, as distinguished by Arends-Tóth and Van de Vijver (2003). In the next part, we will describe the antecedent and mediating conditions and the acculturation outcomes.

### *Antecedent conditions*

Models in acculturation research distinguish three components in the acculturation process (e.g., Arends-Tóth & Van de Vijver, 2003, 2004): antecedent conditions (e.g., intercultural contact and discrimination), mediating conditions (e.g., acculturation orientations), and outcome variables (e.g., sociocultural outcome). Based on previous research (Arends-Tóth & Van de Vijver, 2003, 2004; Hui, Chen, Leung, & Berry, 2015; Te Lindert, Korzilius, Van de Vijver, Kroon, & Arends-Tóth, 2008), we distinguish the following three antecedent conditions: perceived discrimination, intergroup contact and perceived acceptance.

*Perceived discrimination.* Much research has addressed the relation between perceived discrimination and acculturation-related variables (Berry, 2013; Te Lindert et al., 2008; Van den Berg & Evers, 2006; Verkuyten & Thijs, 2002; Ward et al., 2010). The latter authors uncovered that less discrimination occurred in countries with longer integration histories (e.g., Australia and New Zealand). Van den Berg and Evers (2006) studied perceived discrimination in a survey research among 1700 participants originating from Morocco, Turkey, Surinam, the Dutch Antilles, Indonesia, and the Netherlands. The researchers found that 50% of the Turkish-Dutch and Moroccan-Dutch experienced racial discrimination at least once a year; 40% of the Surinamese-Dutch and 37% of the Antillean-Dutch reported discrimination, whereas among the participating Dutch mainstreamers only 2% experienced discrimination. Individuals experiencing discrimination are likely to reject close involvement with the national society and are more oriented on their own immigrant group or are confused or ambivalent about their involvement. Wrench et al. (2016) revealed that job discrimination among immigrants was a major problem and is a risk for developing psychological problems as a result of perceived discrimination. Schmitt, Branscombe, Postmes, and Garcia (2014) emphasized that it is important to examine the relationship between perceived discrimination and well-being, such as life-satisfaction, across different intergroup contexts in order to explore differences between these groups for further theoretical development. In a meta-analysis, Schmitt et al. confirmed that perceived discrimination was negatively related to psychological well-being across a wide range of well-being measures, especially the perception of pervasive discrimination. Recognizing discrimination could help people avoid situations in which they are vulnerable to maltreatment and strengthen their skills and abilities to compensate it. Wilson, Ward, and Fischer (2013) examined situational variables and showed that perceived discrimination had the largest effect size in relation to adaptation, and remained a huge challenge for some individuals. In a 13-country study of ethnic youth, Berry, Phinney, Sam, and Vedder (2006) showed that perceived discrimination predicted weaker integration. Perceived discrimination can lead to experienced institutional and interpersonal barriers in the host society by stigmatized groups (Berry, 2013).

*Intergroup contact.* Contact has been proposed as one of the most important mechanisms to reduce and overcome prejudice; this work is known as the contact hypothesis (Allport, 1954). Allport mentioned four conditions that are profoundly important for the quality of intercultural contact: equal status, intergroup cooperation, common goals, and authority support. This hypothesis predicts that direct contact with and knowledge about out-groups lead to more positive attitudes, more acceptance, and less prejudice (see Van Oudenhoven, Askevis-Leherpeux, Hannover, Jaarsma, & Dardenne, 2002). The relationship between prejudice, knowledge, and intergroup contact as described in the contact hypothesis has been examined in several studies (e.g., Forbes, 1997; Hewstone & Brown, 1986; Hewstone et al., 2014; Jasinskaja-Lahti, Liebkind, & Perhoniemi, 2006; Schalk-Soekar & Van de Vijver, 2008). Intergroup contact is related to attitudes toward immigrant groups, and these attitudes can be related to neighborhood. For example, people living in neighborhoods with more immigrants tend to show more negative attitudes (Coenders & Scheepers, 1998; Lubbers, 2001; Quillian, 1995). Pettigrew and Tropp (2006) found in a meta-analytic study among 515 studies that intergroup contact typically reduces prejudice. Multiple tests showed that this result was not due to participant selection or publication biases. Berry (2013) evidenced that

more intercultural contact is associated with more positive intercultural attitudes and lower levels of prejudice. However, he emphasized that appropriate conditions need to be present in order for contact to lead to positive intercultural attitudes. These conditions are generally met in Canada (Berry, 2013), such as promoting multiculturalism policy and practice, a sense of security in one's place by supporting heritage cultural communities, and intercultural contact by supporting participation in the larger society.

It is quite likely that acculturation-related variables such as perceived discrimination and psychological outcome (Te Lindert et al., 2008; Wilson et al., 2013); intergroup contact and sociocultural outcome, are linked to each other in feedback loops (Berry, 2013). As the current study does not employ a longitudinal design, we have limited scope to address such reciprocal relations. In line with earlier studies (e.g., Te Lindert et al., 2008, Van den Berg & Evers, 2006; Van Oudenhoven et al., 2002), we decided to study perceived discrimination and intergroup contact as predictors.

*Perceived acceptance.* The struggle to feel accepted is difficult for immigrant groups in the Netherlands. Compared to other nations of the European Union, the position of Dutch immigrants and their descendants is relatively favorable in terms of housing, their legal position, institutionalized religions (e.g., Muslim and Hinduism), and the right of self-organization. On the other hand, the education level of persons from a non-western immigrant background in the Netherlands is relatively low (CBS, 2020; Ooijevaar & Bloemendal, 2016; Phinney et al., 1998; Van den Berg & Evers, 2006, Van Praag, 2003). Perceived acceptance of Dutch immigrants as a predictor has often been studied (Dagevos & Huijnk, 2014; Gijsberts and Vervoort, 2009; Van den Maagdenberg & Van der Laan Bouma, 2004; Van Praag, 2003) with questions about *hospitality* and *given opportunities* in the Netherlands. Dagevos and Huijnk (2014) pointed out that almost 90% of the Moroccan-Dutch and Turkish-Dutch identified themselves with their immigrant background. Second-generation Moroccan-Dutch and Turkish-Dutch adolescents perceived more acceptance than their parents did. These authors mentioned that Moroccan-Dutch and Surinamese-Dutch perceived less acceptance, for example they did not experience the same *given opportunities* in the Netherlands as the majority group. These immigrants perceived less acceptance, especially well-integrated immigrants. This is called the integration paradox (Dagevos & Huijnk, 2014; Gijsberts & Vervoort, 2009).

#### *Mediating conditions*

Two mediating conditions are distinguished: *Cultural maintenance* (preference to preserve the characteristics of the immigrant background) and *Cultural adoption* (preference to adjust to the host culture; Berry, 1997, 2001; 'adaptation' adjusted to 'adoption' by Liebkind, 2001). Most acculturation research has focused on immigrant groups, especially acculturation outcomes referring to the integration aspect (e.g. Ward & Kennedy, 1994). Mediating effects of acculturation orientations have been studied among adolescent immigrant students in Germany (Schachner, van de Vijver, & Noack, 2017) and in Greece (Motti-Stefanidi, Pavlopoulos, & Asendorpf, 2018). Both studies showed that acculturation orientations mediated the link between antecedent conditions (e.g., perceived discrimination) and acculturation outcomes, such as aspects of well-being.

#### *Acculturation outcomes*

Acculturation outcome variables can be grouped into two major types: *psychological outcome* and *sociocultural outcome* (Searle & Ward, 1990; Ward et al., 2010). Long-term acculturative change has been divided and empirically demonstrated as belonging to these two conceptually related areas (Berry, Phinney, Sam, & Vedder, 2006; Searle & Ward, 1990).

*Psychological outcome.* The main dimensions of well-being can be labeled as psychological well-being or happiness and psychological distress (Bradburn, 1969; Diener, Emmons, Larsen, & Griffin, 1985). Psychological outcome mainly has been studied in the stress and coping tradition and is a matter of general satisfaction and mental health of immigrant groups (Ward et al., 2010).

According to Reid (2004), emotional components of well-being include the presence of positive outcomes (e.g., positive affect and happiness) together with the absence of negative outcomes (e.g., negative affect, loneliness). Te Lindert and Korzilius (2008) analyzed in their research among Iranian refugees in the Netherlands positive and negative feelings and topics about their past in Iran (such as powerlessness). The latter authors emphasized that it is important to acknowledge all positive and negative experiences. By acknowledging immigrants' background, one can understand present reactions (e.g., feeling homesick, or even conflicting and traumatic experiences) and ambiguous feelings toward the future. Schalk-Soekar et al. (2004) examined psychological outcome of Moroccan-Dutch, Turkish-Dutch, Antillean-Dutch, and Surinamese-Dutch adults. Moroccan-Dutch and Turkish-Dutch reported that they feel less comfortable living in the Netherlands than the latter two groups.

*Sociocultural outcome.* The main dimensions of sociocultural outcome are embedded in a cultural learning framework. This framework investigates antecedents and predictors focused on situational variables who are related to the learning process of adapting to a new culture (Ward et al., 2010; Wilson et al., 2013), including practice, experience and acquisition of culture-appropriate skills, communication skills and language fluency. Situational factors, such as intercultural contact or perceived discrimination and socio-cultural adaptation through co-national contact with 'locals' can be predictors and outcomes in this framework (Wilson et al., 2013).

In a study among Canadian-Chinese immigrants, Noels, Pon, and Clément (1996) made clear that lower levels of knowledge of the Canadian culture and competence in the English language are associated with a lower ability to meet daily needs in a new society. Daily needs are demands of integration including language fluency, knowledge of the majority culture such as norms and values, knowing how to organize one's life and how to obtain adequate information (Aroian, Norris, Tran, & Schappler-Morris, 1998). For example, immigrants in the Netherlands need to know how to find a house and a job. In contrast to most Dutch immigrants, Antillean-Dutch and Surinamese-Dutch have a high Dutch competence and can speak Dutch fluently, as pointed out before.

Based on the studies reviewed above, Table 1 summarizes the hypothesized effects of our acculturation model.

**Table 1**  
Hypothesized direct effects.

Direct effects	Cultural Maintenance	Cultural Adoption	Psychological Outcome	Sociocultural Outcome
Perceived Discrimination	+	-	-	-
Intergroup Contact	+	+	+	+
Perceived Acceptance	-	+	+	+
Cultural Maintenance			+	-
Cultural Adoption			+	+

In addition, we will test invariance of the total group model for the four immigrant groups and check for differential effects between antecedent and mediating conditions and acculturation outcomes for four immigrant groups: Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch.

## Method

### Participants

This study was conducted in Rotterdam, the Netherlands, which has a large immigrant population. As part of the psychology curriculum, students administered questionnaires in or near the city of Rotterdam. Convenience sampling was used. Participants completed the questionnaire anonymously and in the Dutch language. Ethical approval for this survey was not necessary as ethical standards for the social sciences in the Netherlands did not require this at the time of data collection (compulsory as of 2018). We did, however, take a number of precautions with respect to the researcher-participant relationship. Respondents were granted anonymity, confidentiality, and informed consent. They could withdraw from filling out the questionnaire at any moment. In addition, the first page of the questionnaire with personal information was deleted before data analysis. The total sample consisted of 681 respondents divided over four immigrant groups: 142 Antillean-Dutch, 178 Moroccan-Dutch, 187 Surinamese-Dutch, and 174 Turkish-Dutch immigrants. All respondents were resident in the Netherlands for more than 7 years and had a regular Dutch residence status. [Table 2](#) shows the socio-demographic characteristics of the immigrant sample. There were no differences in the distribution of the four immigrant groups for the variables gender, employment and education. However, there were some differences in generation, living situation and age in the immigrant groups.

### Measures

Responses were given on 7-point Likert scales, with response options ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), except for the Intergroup Contact scale that used a 5-point scale, ranging from 1 (no contact) to 5 (on a daily basis).

### Acculturation conditions

Three scales were used: Perceived Discrimination, Intergroup Contact, and Perceived Acceptance.

**Table 2**  
Socio-demographic characteristics.

Variable	Total (N = 681)	Antillean-Dutch (n = 142)	Moroccan-Dutch (n = 178)	Surinamese-Dutch (n = 187)	Turkish-Dutch (n = 174)	$\chi^2 / F$	df	p
Age <sup>a</sup>	29.4 (11.7)	34.0 (13.9)	27.4 (10.8)	28.4 (10.8)	27.1 (9.2)	14.8	3, 671	< .001
Gender								
male	325 (47.7)	70 (49.3)	91 (51.1)	82 (43.9)	62 (47.1)	2.12	1	.55
female	356 (52.3)	72 (50.7)	87 (48.9)	105 (56.1)	92 (52.9)			
Generation <sup>b</sup>						109	3	< .001
first	444 (66.6)	50 (37.3)	126 (73.3)	109 (58.3)	159 (91.4)			
second	223 (33.4)	84 (62.7)	46 (26.7)	78 (41.7)	15 (8.6)			
Living Situation <sup>c</sup>						17.1	3	< .01
single	460 (79.4)	88 (67.7)	116 (80.6)	127 (76.5)	129 (87.8)			
together <sup>d</sup>	127 (21.6)	42 (32.3)	28 (19.4)	39 (23.5)	18 (12.2)			
Employment						9.67	9	.38
yes	512 (83.3)	150 (84.7)	125 (81.7)	103 (81.7)	134 (84.3)			
no	103 (16.7)	27 (15.3)	28 (18.3)	23 (18.3)	25 (15.7)			
Education						8.31	6	.22
no	53 (8.1)	11 (8.0)	17 (9.9)	16 (8.9)	9 (5.4)			
medium	287 (43.8)	70 (50.7)	71 (41.3)	68 (37.8)	78 (47.0)			
high	316 (48.2)	57 (41.3)	84 (48.8)	96 (53.3)	79 (47.6)			

Note. Cells contain mean (standard deviation in brackets) for the variable Age and frequencies (percentages between brackets) for the other variables.

<sup>a</sup> Games-Howell Post hoc tests showed that Surinamese individuals were significantly older than those of the other immigrant groups.

<sup>b</sup> There were relatively more first-generation Turkish-Dutch and Moroccan-Dutch individuals and second-generation Antillean-Dutch and Surinamese-Dutch individuals.

<sup>c</sup> There were relatively fewer Turkish-Dutch and relatively more Antillean-Dutch individuals living single.

<sup>d</sup> Living together with partner, or children, or parents, or other individuals.



*Perceived discrimination scale.* This scale was composed of two measures, one developed by Phinney, Madden, and Santos (1998) and one developed by Verkuyten (1998). The scale consisted of eighteen items, assessing feelings of not being accepted because of one's ethnicity in Dutch society in general and in job-related situations (e.g., "I am ignored or excluded because I am a foreigner", and "My colleagues treat me unfairly or negatively because I am a foreigner").

*Intergroup contact scale.* This scale measured contact with mainstream and contact with other immigrant groups, consisting of eight items. The following immigrant groups were assessed: Antillean, Moroccan, Surinamese and Turkish. In addition, contact with Dutch people was established. Contact with other immigrant groups differed for each group (e.g., for Surinamese individuals, their contact with Antillean, Moroccan, and Turkish people was inquired). We differentiated two sorts of contact: First, *personal* contact where participants reported contact with individuals of different cultural backgrounds than one's own. An example item was: "How often do you have personal contact with Turks?" Second, *other* contact where participants reported work or school contacts with other immigrant groups. An example item was: "How often do you have other contacts with Dutch individuals?"

*Perceived acceptance scale.* This scale consisted of four items, adopted from Van Praag (2003), measuring perceived acceptance of Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch in Dutch society (e.g., "The Netherlands is a hospitable country toward foreigners" and "The rights of foreigners are respected in the Netherlands").

#### *Mediating conditions*

Two scales were used: Cultural Maintenance and Cultural Adoption (Arends-Tóth & Van de Vijver, 2003; Breugelmans & Van de Vijver, 2004).

*Cultural maintenance scale.* Nine items measured attitudes toward behavior of the respondent's culture of origin (e.g., "I think that it is important to live according to Moroccan values and standards").

*Cultural adoption scale.* Nine items measured attitudes toward behavior of the Dutch culture (e.g., "I think that it is important to raise my children according to Dutch values and standards").

#### *Acculturation outcomes*

These outcomes were addressed by assessing psychological adjustment (positive and negative acculturation aspects) and socio-cultural adjustment (knowledge of the Dutch culture).

*Psychological outcome scale.* This scale consisted of ten positive and ten negative acculturation outcome items. These were measured by three instruments: the Satisfaction With Life Scale on well-being (five items, e.g., "I am satisfied with my life", Diener et al., 1985), the Bradburn Affect Balance Scale on positive and negative affect (ten items, e.g., "During the past few weeks, did you ever feel that things were going your way?", Bradburn, 1969) and, finally, negative acculturation aspects derived from a qualitative study on Iranians in the Netherlands (five items, e.g., "I miss the persons I left behind"; Te Lindert et al., 2008). The Bradburn Affect Balance Scale was transformed into a 7-point Likert scale, to make it commensurate with the other measurements.

*Sociocultural outcome scale.* This scale consisted of seven items that were adopted from the Language and Novelty subscales of the Demands of Immigration Scale (Aroian et al., 1998), measuring unfamiliarity or information deficits about simple or more complex tasks of everyday life and norms of social interaction. Of this scale, four items were derived from the Language Subscale (reversed) and three items from the Novelty Subscale (e.g., "I know how to arrange things in the Netherlands").

In order to assess the psychometric qualities of the scales we conducted confirmatory factor analyses (CFA, Table 3) using IBM SPSS AMOS (Version 25), for the total sample and for the four immigrant groups. Table 3 shows that the reliability of the constructs were acceptable ( $> .60$ ) for the total sample as well as the four immigrant groups. In addition, we performed multigroup CFAs. In general, the results reported in Table 3 show that all scales of the four immigrant groups had similar factor loadings (most scores for invariance of measurement weights met the fit criteria, i.e., SRMR  $< .08$ ; CFI  $> .95$ ; RMSEA  $< .08$ ). With comparable factor loadings across the groups, this means that configural equivalence was achieved (Fischer & Karl, 2019, p. 3), meaning that the factor model fits well for all concepts in all four immigrant groups.

For all scales, composite variables were calculated in which higher scores indicate a higher intensity level of the construct (e.g., more perceived discrimination).

#### *Statistical analyses*

We conducted three types of analyses. In a series of ANCOVAs we analyzed group differences per immigrant group controlled for Age and Living Situation, respectively. Next, we examined correlations for antecedent conditions, mediating conditions and acculturation outcomes. These analyses were done using IBM SPSS Statistics (Version 25). Finally, we ran IBM SPSS AMOS (Version 25) analyses to test the hypotheses and multigroup analyses, to test for invariance, and to explore differences between the four immigrant groups. In all analyses, we used an alpha level of .05.

**Table 3**  
Psychometric qualities of concepts for total sample and four immigrant groups.

Concept	Total	Construct reliabilities				Model comparison steps <sup>a</sup>	CFA model fit indices				
		A	M	S	T		$\chi^2/df$	<i>p</i>	SRMR	CFI	RMSEA
<i>Antecedent conditions</i>											
1 Perceived Discrimination	.84	.84	.84	.83	.84	1	2.16	< .001	.07	.94	.04
						2	2.03	< .001	.08	.94	.04
						3	2.02	< .001	.08	.94	.04
						4	2.05	< .001	.09	.92	.04
2 Intergroup Contact <sup>b</sup>	–	.67	.60	.66	.69	1	1.00	.45	.04	1.00	< .001
						2	1.65	.07	.05	.98	.06
						3	1.44	.11	.05	.99	.05
						4	1.43	.14	.04	.99	.05
3 Perceived Acceptance	.70	.71	.66	.72	.73	1	0.20	.94	.002	1.00	< .001
						2	0.64	.82	.02	1.00	< .001
						3	0.79	.70	.03	1.00	< .001
						4	1.28	.14	.05	.99	.02
<i>Mediating conditions</i>											
4 Cultural Maintenance	.80	.79	.82	.79	.83	1	2.54	< .001	.03	.97	.05
						2	2.24	< .001	.04	.96	.04
						3	2.20	< .001	.04	.96	.04
						4	2.39	< .001	.04	.93	.05
5 Cultural Adoption	.78	.75	.79	.77	.81	1	1.41	.02	.03	.99	.02
						2	1.67	< .001	.07	.98	.03
						3	1.65	< .001	.07	.98	.03
						4	1.70	< .001	.08	.97	.03
<i>Acculturation outcomes</i>											
6 Psychological Outcome	.72	.75	.72	.74	.69	1	1.76	< .001	.05	.95	.03
						2	1.70	< .001	.07	.94	.03
						3	1.69	< .001	.07	.94	.03
						4	1.85	< .001	.08	.91	.04
7 Sociocultural Outcome	.68	.70	.67	.68	.67	1	1.24	.18	.03	.99	.02
						2	1.53	.01	.05	.98	.03
						3	1.52	.01	.06	.98	.03
						4	1.86	< .001	.06	.95	.04

Note. A = Antillean-Dutch, M = Moroccan-Dutch, S = Surinamese-Dutch, T = Turkish-Dutch. CFA = Confirmatory Factor Analysis. Criteria, based on Byrne (2010) and Hair, Black, Babin, & Anderson (2010). Construct reliabilities between .6 and .7 acceptable,  $\geq .7$  good;  $\chi^2/df$  (ideally  $< 2$ ), *p* (not significant), Standardized Root-Mean-Square Residual (SRMR,  $< .08$  indicates a good fit; Hu & Bentler, 1999), Comparative Fit Index (CFI,  $> .95$  good fit); Root Mean Square Error of Approximation (RMSEA,  $< .08$  good fit).

<sup>a</sup> Following Byrne (2010, pp. 219-220), we used a four-step testing strategy applying increasingly more restrictions to the multigroup comparisons. Step 1 shows the unconstrained model. Step 2 tested for equivalence of estimated factor loadings. In addition to this, step 3 adds equivalence of factor variances and factor covariances. Finally, step 4 adds equivalence of error variances.

<sup>b</sup> Construct reliabilities for 'Contact other' could only be presented for the four immigrant groups separately.

## Results

In this part we will present the descriptives of the total and four group samples, differences between the four immigrant groups and, finally, we show the results of testing our hypotheses.

### Descriptives and immigrant group differences

We performed ANCOVAs to calculate the descriptives of the antecedents and mediating conditions and acculturation outcomes, and to test their differences in the four immigrant groups. Table 4 shows the results of ANCOVAs with Age as covariate.

It appeared that there were immigrant group differences in perceived discrimination and cultural maintenance (all with small effect sizes, see Table 4). In particular, Moroccan-Dutch reported higher scores on perceived discrimination than Antillean-Dutch and Surinamese-Dutch. In addition, Moroccan-Dutch and Turkish-Dutch had higher scores on cultural maintenance than Antillean-Dutch and Surinamese-Dutch. There was an effect of Age (the covariate) which appeared to be negative for intergroup contact and positive for perceived acceptance.

In a series of ANCOVAs we also tested whether Living Situation affected immigrant group differences for antecedent conditions, mediating conditions and acculturation outcomes. There appeared to be no effects except for cultural maintenance in the Moroccan-Dutch group: single individuals had lower scores than those living together (means 5.03 and 5.70, respectively, which is a small effect). In addition, there was an overall effect on psychological outcome where single individuals had lower scores than those living together (means 5.05 and 5.27; small effect).

The correlations between the antecedent conditions, mediating conditions and acculturation outcomes in the four immigrant groups are reported in Table 5.



**Table 4**  
ANCOVAs of antecedent and mediating conditions and acculturation outcomes per immigrant group controlling for Age.

Concept	Total (n = 672)	Antillean-Dutch (n = 140)	Moroccan-Dutch (n = 178)	Surinamese-Dutch (n = 185)	Turkish-Dutch (n = 169)	F (3, 667)	$\eta_p^2$	Post hoc tests <sup>a</sup>	Age (1, 667)
<i>Antecedent conditions</i>									
Perceived Discrimination	3.22 (1.14)	3.16 (1.13)	3.51 (1.16)	2.97 (1.09)	3.23 (1.12)	7.75***	.03	M > A, S	1.05
Intergroup Contact	3.17 (0.86)	3.11 (0.82)	3.12 (0.79)	3.22 (0.88)	3.23 (0.95)	1.41	.01		12.53*** <sup>b</sup>
Perceived Acceptance	4.58 (1.20)	4.58 (1.10)	4.40 (1.21)	4.76 (1.19)	4.57 (1.28)	1.79	.01		7.22** <sup>c</sup>
<i>Mediating conditions</i>									
Cultural Maintenance	5.33 (1.10)	5.18 (1.10)	5.56 (1.04)	5.00 (1.13)	5.58 (1.02)	12.25***	.05	M, T > A, S	0.22
Cultural Adoption	4.95 (1.06)	4.81 (1.01)	4.92 (1.11)	5.07 (0.96)	4.97 (1.14)	1.64	.01		0.01
<i>Acculturation outcomes</i>									
Psychological Outcome	5.21 (0.79)	5.24 (0.76)	5.20 (0.75)	5.30 (0.84)	5.12 (0.79)	1.24	.01		1.24
Sociocultural Outcome	5.61 (0.93)	5.48 (1.01)	5.57 (0.96)	5.71 (0.90)	5.66 (0.84)	2.50	.01		3.13

Note. <sup>a</sup> = Antillean-Dutch, M = Moroccan-Dutch, S = Surinamese-Dutch, T = Turkish-Dutch. Bonferroni post hoc comparisons were conducted. The effect of 'Age' was <sup>b</sup> negative or <sup>c</sup> positive. \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Our study found common correlational patterns in the four immigrant groups (see Table 5), for example between the psychological and sociocultural outcomes and between perceived discrimination and other variables. These patterns have meaningful directions such as the positive correlation between perceived acceptance and cultural adoption. There were also deviating correlational patterns, especially in relation to intergroup contact and cultural maintenance with different significance values and different directions of these associations per immigrant group. For instance, for the Antillean-Dutch, Moroccan-Dutch, and Turkish-Dutch the correlation between intergroup contact and cultural adoption was statistically significant, whereas for the Surinamese-Dutch it was not.

### Hypotheses testing

We used a two-step approach in model testing. Firstly, we tested our hypotheses regarding the acculturation model for the total sample and checked for possible confounding effects of the control variables Age and Living Situation. Based on the outcomes, we secondly conducted a multigroup analysis in which we tested for invariance of the total sample model and checked for differential effects in the four immigrant groups.

In the first step, a model for the total sample was tested with the relationships between the predictors Perceived Discrimination, Intergroup Contact, and Perceived Acceptance. As mediating variables we used Cultural Maintenance and Cultural Adoption,<sup>2</sup> and as dependent variables we used Psychological Outcome and Sociocultural Outcome (see Table 6 and Fig. 1). We treated all constructs as observed variables (Jöreskog & Sörbom, 1993). The total group model showed a very good fit with the data ( $\chi^2/df = 0.94$ ,  $p = .48$ , SRMR = .02, CFI = 1.00, RMSEA < .001; see Table 3 for explanation of fit measures). Explained variance of the mediating conditions and acculturation outcomes ranged from 9% to 37%, indicating quite substantial explanatory power (see Table 6). There was a correlation between Perceived Discrimination and Perceived Acceptance and between Psychological Outcome and Sociocultural Outcome (other correlations appeared non-significant).

We tested the *direct* effects as hypothesized in Table 1. For Perceived Discrimination there was a positive effect on Cultural Maintenance and negative effects on Cultural Adoption, Psychological Outcome, and Sociocultural Outcome. We also confirmed the positive effects of Intergroup Contact on Cultural Maintenance, Cultural Adoption and Sociocultural Outcome, but not for Psychological Outcome (which was negative and not significant;  $\beta = -.06$ ,  $p = .10$ ). In addition, there was evidence for a direct positive effect of Perceived Acceptance on Cultural Adoption, but not for the other effects (Cultural Maintenance  $\beta = -.04$ ,  $p = .28$ ; Psychological Outcome:  $\beta = .03$ ,  $p = .38$ ; and Sociocultural Outcome  $\beta = -.02$ ,  $p = .62$ ). Finally, we demonstrated positive effects of Cultural Adoption on Psychological and Sociocultural Outcome.

There were also a number of *indirect* effects in which especially Cultural Adoption appeared to significantly mediate the effects of Perceived Discrimination, Intergroup Contact and Perceived Acceptance on Sociocultural Outcome.

To check for possible confounding effects we followed Arbuckle (2011), Chapter 9) and added the control variables Age and Living Situation to the model as independent variables, and estimated their direct effects on the mediating conditions and acculturation outcomes, as well as covariances between the controls and the antecedent conditions. Inspection of the standardized regression weights showed no significant effects of Age on the mediators ( $ps .55$  and  $.78$ ) or the outcomes ( $ps .13$  and  $.23$ ). For Living Situation there were no significant effects on Cultural Adoption and the two acculturation outcomes ( $ps .59$ ,  $.07$ , and  $.29$ ) and only a significant but small effect on Cultural Maintenance ( $\beta = .09$ ,  $p < .05$ ). We tentatively conclude that there is empirical support for the hypothesized total group model with no substantial influences of the controls.

As a second step, we conducted a multigroup analysis (see Table 7).

A comparison of Model 1 and 2 in Table 7 shows that for a model assuming equivalence of regression weights, fit indices SRMR, CFI and RMSEA were relatively good, but  $\Delta\chi^2$  was significant ( $p < .01$ ), meaning that there was no full invariance (see Byrne, 2010, p. 221). However, Table 6 shows that on a total of 68 effects (44 direct and 24 indirect effects) there were 12 (17.6%) non-invariant parameters (8 in direct effects, 4 in indirect effects); meaning that partial non-invariance for regression weights was achieved (as the percentage of non-invariant parameters was smaller than 25%; Davidov & Meuleman, 2019, p. 19). In a follow-up analysis, we additionally explored whether the four immigrant groups were completely independent or not. As stated above, the Moroccan-Dutch and Turkish-Dutch share a number of similarities, as do Antillean-Dutch and Surinamese-Dutch. In SEM we ran a model in which we constrained the paths to be equal for the two pairs of groups (Model 5 in Table 7). Comparing Model 1 with Model 5 shows a less well-fitting model and a significant  $\Delta\chi^2$  ( $p < .05$ ). More importantly, 10 of the 12 non-invariant parameters were sign switches or changes of significance between the paired comparisons of Moroccan-Dutch and Turkish-Dutch and Antillean-Dutch and Surinamese-Dutch, respectively (see Table 6). Therefore, there was no support for a model constraining immigrant groups based on shared similarities. In sum, the multigroup analyses showed partial invariance of regression weights in a model with four immigrant groups and thus that configural equivalence was achieved to a fair extent (Fischer & Karl, 2019).

Finally, we looked into the differences between the four immigrant group models. The explained variance of the mediating conditions and acculturation outcomes ranged from 7% to 47%, indicating quite substantial explanatory power in all four groups (see Table 6).

<sup>2</sup> We also tested the interaction of Cultural Maintenance and Cultural Adoption as a third variable in the mediation model capturing acculturation strategies as explained in the Introduction. The analysis showed that there was an effect of Intergroup Contact and Perceived Acceptance on this interaction term but not of Perceived Discrimination. In addition, the interaction term did not appear to have an effect on Psychological Outcome and on Sociocultural Outcome. In conclusion, the interaction term did not have a mediating role in the model and therefore we decided to limit the mediating conditions to Cultural Maintenance and Cultural Adoption.

**Table 5**  
Correlations between the antecedent conditions, mediating conditions and acculturation outcomes for the four immigrant groups.

Antillean-Dutch (N = 142)							
Condition/Outcome	Concept	1	2	3	4	5	6
<i>Antecedent conditions</i>	1 Perceived Discrimination						
	2 Intergroup Contact	-.12					
	3 Perceived Acceptance	-.39**	.29**				
<i>Mediating conditions</i>	4 Cultural Maintenance	.30**	-.06	-.01			
	5 Cultural Adoption	-.35**	.26**	.44**	-.16		
<i>Acculturation outcomes</i>	6 Psychological Outcome	-.46**	.08	.29**	.08	.34**	
	7 Sociocultural Outcome	-.50**	.27**	.41**	-.18*	.62**	.48**
Moroccan-Dutch (N = 178)							
Condition/Outcome	Concept	1	2	3	4	5	6
<i>Antecedent conditions</i>	1 Perceived Discrimination						
	2 Intergroup Contact	.03					
	3 Perceived Acceptance	-.39**	-.09				
<i>Mediating conditions</i>	4 Cultural Maintenance	.33**	.14	-.25**			
	5 Cultural Adoption	-.32**	.27**	.27**	-.03		
<i>Acculturation outcomes</i>	6 Psychological Outcome	-.49**	-.07	.25**	-.05	.35**	
	7 Sociocultural Outcome	-.30**	.07	.16*	-.07	.61**	.37**
Surinamese-Dutch (N = 187)							
Condition/Outcome	Concept	1	2	3	4	5	6
<i>Antecedent conditions</i>	1 Perceived Discrimination						
	2 Intergroup Contact	.17*					
	3 Perceived Acceptance	-.45**	-.16*				
<i>Mediating conditions</i>	4 Cultural Maintenance	.20**	.22**	-.07			
	5 Cultural Adoption	-.41**	.04	.46**	.07		
<i>Acculturation outcomes</i>	6 Psychological Outcome	-.51**	.04	.30**	.10	.47**	
	7 Sociocultural Outcome	-.42**	.13	.30**	-.06	.58**	.43**
Turkish-Dutch (N = 174)							
Condition/Outcome	Concept	1	2	3	4	5	6
<i>Antecedent conditions</i>	1 Perceived Discrimination						
	2 Intergroup Contact	-.06					
	3 Perceived Acceptance	-.48**	.14				
<i>Mediating conditions</i>	4 Cultural Maintenance	.15	.19*	-.17*			
	5 Cultural Adoption	-.13	.31**	.38**	-.04		
<i>Acculturation outcomes</i>	6 Psychological Outcome	-.31**	.03	.25**	.15	.21**	
	7 Sociocultural Outcome	-.26**	.27**	.24**	.18*	.44**	.35**

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

For the four immigrant groups there were a few *differential direct* effects. There was a negative effect of Perceived Discrimination on Cultural Adoption, but this was non-significant for the Turkish-Dutch group. Next, we saw an effect of Perceived Discrimination on Sociocultural Outcome and of Cultural Maintenance on Psychological Outcome in all immigrant groups except for the Moroccan-Dutch. Finally, in the Antillean-Dutch immigrant group there was an absence of significant effects of Intergroup Contact on Cultural Maintenance and Cultural Adoption and Sociocultural Outcome. The latter also held for the Moroccan-Dutch group.

We also witnessed a *differential indirect* effect; in particular, there was mediation of Intergroup Contact via Cultural Maintenance and Cultural Adoption on Psychological Outcome and Sociocultural Outcome in the Moroccan-Dutch, Surinamese-Dutch and Turkish-Dutch but not in the Antillean-Dutch immigrant group.

## Discussion and limitations

A large-scale survey was held in the Netherlands among Antillean-Dutch, Moroccan-Dutch, Turkish-Dutch, and Surinamese-Dutch immigrant groups. The aim of this study was to better understand the diversity of the acculturation dynamics as perceived by the four largest immigrant groups in the Netherlands. To reach this goal, we tested a set of hypothesized effects regarding our acculturation model for the total sample and checked for possible confounding effects of the control variables Age and Living Situation between *antecedent conditions* (perceived discrimination, frequency of intergroup contact, including Dutch majority members, and perceived acceptance in Dutch society), via the *mediating conditions* (attitudes toward cultural maintenance and cultural adoption), on the *acculturation outcomes* (psychological outcome, such as well-being, and sociocultural outcome, i.e., language fluency and cultural knowledge) for the total group. In addition, in a multigroup analysis we tested for invariance of the total sample model and checked for differential effects in the four immigrant groups: Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch.

The acculturation model (Arends-Tóth & Van de Vijver, 2004; Berry, 1997, 2001) was confirmed for the total group, had a very

**Table 6**  
Total group and multigroup outcomes.

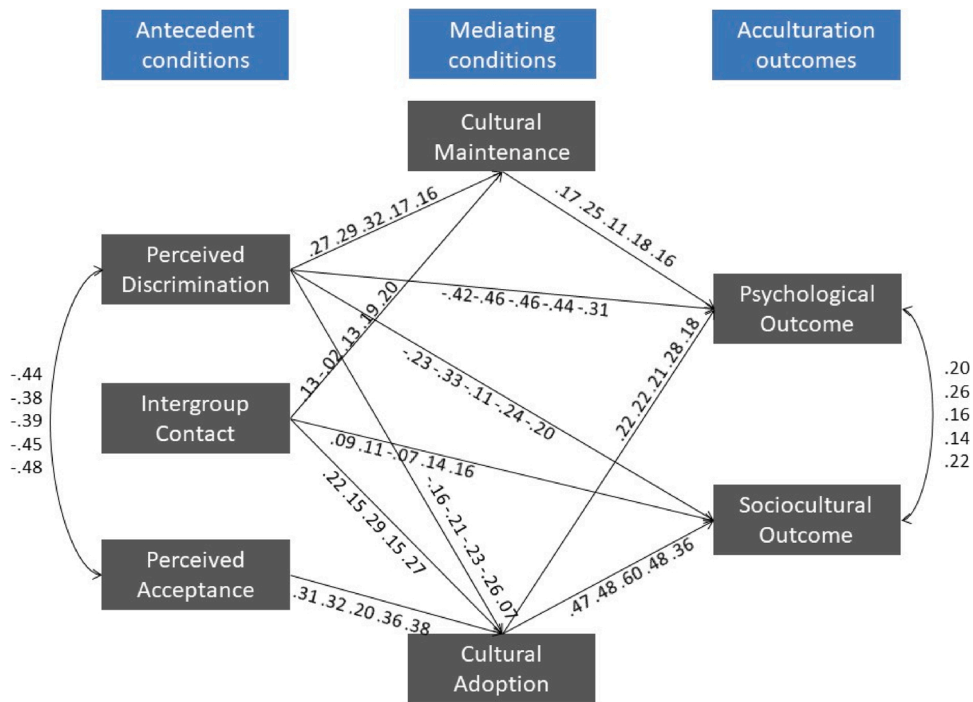
Concepts	Total	Antillean-Dutch	Moroccan-Dutch	Surinamese-Dutch	Turkish-Dutch
<b>Direct effect</b>					
<i>Perceived Discrimination</i>					
Cultural Maintenance	.27***	.29**	.32**	.17*	.16*
Cultural Adoption	-.16***	-.21*	-.23**	-.26**	.07 <sup>ns</sup>
Psychological Outcome	-.42***	-.46**	-.46**	-.44**	-.31**
Sociocultural Outcome	-.23***	-.33**	-.11 <sup>ns</sup>	-.24**	-.20*
<i>Intergroup Contact</i>					
Cultural Maintenance	.13***	-.02 <sup>ns</sup>	.13*	.19**	.20**
Cultural Adoption	.22***	.15 <sup>ns</sup>	.29**	.15*	.27**
Sociocultural Outcome	.09**	.11 <sup>ns</sup>	-.07 <sup>ns</sup>	.14*	.16*
<i>Perceived Acceptance</i>					
Cultural Adoption	.31***	.32**	.20*	.36**	.38**
<i>Cultural Maintenance</i>					
Psychological Outcome	.17***	.25**	.11 <sup>ns</sup>	.18**	.16*
<i>Cultural Adoption</i>					
Psychological Outcome	.22***	.22**	.21*	.28**	.18**
Sociocultural Outcome	.47***	.48**	.60**	.48**	.36**
<b>Indirect effect</b>					
<i>Perceived Discrimination</i>					
Psychological Outcome	.01 <sup>ns</sup>	.03 <sup>ns</sup>	-.02 <sup>ns</sup>	-.02 <sup>ns</sup>	.04 <sup>ns</sup>
Sociocultural Outcome	-.08**	-.10*	-.14**	-.14**	.02 <sup>ns</sup>
<i>Intergroup Contact</i>					
Psychological Outcome	.07**	.03 <sup>ns</sup>	.08**	.08**	.08**
Sociocultural Outcome	.10**	.07 <sup>ns</sup>	.18**	.18*	.09**
<i>Perceived Acceptance</i>					
Psychological Outcome	.07**	.07**	.04*	.04**	.07**
Sociocultural Outcome	.15**	.15**	.12*	.12**	.14**
<i>Explained variance</i>					
Cultural Maintenance	.09	.09	.12	.07	.06
Cultural Adoption	.21	.22	.22	.31	.20
Psychological Outcome	.27	.31	.29	.38	.15
Sociocultural Outcome	.37	.47	.39	.42	.24

Note. Standardized regression coefficients. \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$ . Explained variance =  $R^2$ ; effect sizes .02 small, .15 medium, .35 large (Cohen, 1992).

good fit and there were no substantial influences of the control variables. As expected, perceived discrimination had a large direct negative impact on psychological outcome, such as well-being and life-satisfaction, and also, but to a lesser extent, on sociological outcome, such as language fluency and knowledge of Dutch culture in order to manage one's daily needs (see also Dagevos & Huijnk, 2014; Motti-Stefanidi et al., 2018; Schachner et al., 2017; Van Praag, 2003). Moreover, perceiving discrimination directly leads to maintaining one's own cultural background and leads to a negative stance toward Dutch culture. Together, this underscores the significance of experiencing discrimination in acculturation, which is in line with previous research on the acculturation model (Breugelmans & Van de Vijver, 2004; Levin et al., 2012; Wilson et al., 2013; Wrench et al., 2016). In sum, higher levels of perceived discrimination lead to less well-being and less skills in dealing with life in the Netherlands and less familiarity with Dutch norms and values. This is reinforced by the negative effect of perceived discrimination on cultural adoption, which reduces an embracing attitude toward Dutch culture (see Te Lindert et al., 2008).

As predicted, the frequency of contacts with other groups, the majority Dutch as well as other immigrant groups, leads to an increase in maintaining one's background culture as well as in adopting to the new culture. This confirms the study of Brown and Hewstone (2005) and Hewstone et al. (2014), that contact should be frequent, long-lasting and close, leading to smaller differences in attitudes between groups (see also Van Oudenhoven et al., 2002). The apparently contrasting result on maintaining and adopting is in agreement with Liebkind (2001), who emphasized these distinct conceptualizations (Snauwaert et al., 2003; Ward & Kus, 2012). This implies that in the acculturation process, both maintenance and adoption are needed. Frequent contact between immigrants and their descendants with various groups results in both appreciating their background culture while also having a positive attitude toward Dutch society. More frequent interactions also directly lead to more confidence in arranging daily needs and, via maintenance and adoption, indirectly lead to more well-being and life satisfaction. However, more research is needed into the role of cultural maintenance (Motti-Stefanidi et al., 2018) and intergroup contact (Berry, 2013; Pettigrew and Tropp, 2006; Van Oudenhoven et al., 2002) in the acculturation process of the different immigrant groups.

In the acculturation model, perceived acceptance primarily influenced outcomes via cultural adoption. This means that experiencing more acceptance does not directly lead to higher well-being and improved sociocultural skills, but indirectly through a more positive attitude toward Dutch society. This result of our study is partly in contrast with earlier research (Dagevos and Huijnk, 2014; Gijbets and Vervoort, 2009) and therefore requires follow-up research to narrow down the mechanism that is set in motion in relation to cultural adoption. Furthermore, it seems important to disentangle the effect of perceiving acceptance from that of experiencing discrimination in future research, as the two are negatively related.



**Fig. 1.** Empirical model for Total Group and Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch. *Note.* Correlations and standardized regression coefficients for Total Group, and four immigrant groups: Antillean-Dutch, Moroccan-Dutch, Surinamese-Dutch, and Turkish-Dutch, respectively. Indications of significance are reported in Table 6.

**Table 7**  
Results of the Multigroup Analysis.

Model comparison steps	NPAR	$\chi^2$ (df)	$\chi^2/df$	p	SRMR	CFI	RMSEA	$\Delta\chi^2$	$\Delta df$
1	80	64.3 (32)	2.01	< .001	.06	.97	.04	–	–
2	50	123.5 (62)	1.99	< .001	.08	.94	.04	59.2	30
3	38	135.2 (74)	1.83	< .001	.08	.94	.03	11.6	12
4	23	157.2 (89)	1.77	< .001	.08	.93	.03	22.9	15
5	60	98.9 (52)	1.90	< .001	.07	.95	.04	34.6	20

*Note.* NPAR = number of parameters; SRMR = Standardized Root-Mean-Square Residual, CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation (see Byrne, 2010; Hair et al., 2010). See Table 3 for fit criteria. Multigroup comparison steps (based on Byrne (2010, pp. 271–272): 1 unconstrained model, 2 adding equivalence of structural regression weights, 3 adding equivalence of variances and covariances, 4 adding equivalence of error variances; 5 constrained model with equal paths for Moroccan-Dutch and Turkish-Dutch, and Antillean-Dutch and Surinamese-Dutch, respectively.

In addition, in our model there is a positive association between psychological outcome and sociocultural outcome, although lower than reported in earlier important research (Ward et al., 2010). It means that the acculturation outcomes are to some extent inter-related, which warrants further investigation through a qualitative study to reveal immigrants’ experiences and how they articulate their coping mechanisms in this respect.

Our research shows that the total sample model is generally comparable for the four immigrant groups, meaning that there are common patterns in the acculturation process in these groups, which points to similar experiences notwithstanding the cultural background. The acculturation process as described above appeared to fit best for the Surinamese-Dutch.

However, there are also some differential effects. For Turkish-Dutch immigrants, perceiving more discrimination does not lead to a negative attitude toward Dutch society, whereas this effect is visible in the other groups. For Moroccan-Dutch immigrants, and in contrast to the other immigrant groups, perceiving discrimination does not affect sociocultural skills, and maintaining their background culture does not impact their well-being. For Antillean-Dutch immigrants there are no direct effects of contact frequency on mediating conditions. Thus, the described effects of perceived discrimination, acceptance, intergroup contact and cultural maintenance are not unequivocal, which is in accordance with findings of previous research (Ooijevaar & Bloemendal, 2016; Schalk-Soekar & Van de Vijver, 2008; Van den Berg & Evers, 2006). Future research should therefore seek to uncover general acculturation mechanisms without neglecting singular patterns in the various immigrant groups.

This study has several *limitations*. In total, the sample size is quite substantial but the subsamples of immigrant groups are relatively

small. Therefore, the findings may not hold for the groups as a whole and further research is necessary using larger samples in other parts of the Netherlands. Since Moroccan-Dutch and Turkish-Dutch immigrants have been living in the Netherlands for many years, more third-generation research is needed. However, such research needs to take into account marriages between spouses from the Netherlands and the culture of origin, as this may impact acculturation and integration processes (Dagevos & Huijnk, 2014). Likewise, other immigrant groups and refugees should be taken into account to verify the positive results of more intergroup contact and of perceived acceptance as having a positive impact on psychological and sociocultural outcomes. Since we did not research differences between immigrants' real and ideal acculturation strategies, and as previous research has found a gap between real and ideal immigrants' acculturation strategies (e.g., Ward & Kus, 2012), we suggest further research on this topic. In this study we took into account perceived acceptance and intergroup contact as predictors in our acculturation model, but a longitudinal study should examine whether reciprocal relations occur between perceived acceptance and intergroup contact through feedback loops (Berry, 2013). This is important as it will provide an even more in-depth understanding of how acculturation processes affect immigrant groups' sustainable well-being.

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