Vignette experiment on the acculturation of internal migrants in the Kenyan Rift Valley

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Abstract

The acculturation process for internal migrants in ethnically diverse societies has received little academic attention. This is even less in the context of low-income countries where internal migration is often a cause of hostility. We filled this gap by building a more comprehensive picture of the dynamics of acculturation in the Rift Valley. This is particularly, so because Rift Valley has witnessed deep-seated ethnic intolerance between internal migrants and their hosts. We used a survey-based vignette experiment to assess the perceived relative importance of nine migrant characteristics for four acculturation preferences. These include marginalisation, separation, assimilation, and integration. Using a conditional logistic regression model to analyse the vignette experiment's data, we found that levels of education and experience of ethnic discrimination were perceived as substantial contributors to acculturation processes. We concluded by relating the findings to policies aimed at enhancing the experience of acculturation in order to produce more positive outcomes.

Keywords: Internal migration, Acculturation, Vignette experiment, Ethnic discrimination.

Introduction

While the role of internal labour migration in filling labour and skill shortage in the destination is undisputable (Mbaye, 2020), it has increased experiences of acculturation and contributed to the rise of ethnically plural societies. This poses integration challenges to social planners in the global south (Ma & Xia, 2020; McDoom, 2019). The ethnically plural societies are examples of intercultural living, consisting of spatially delineated ethnic enclaves and mixtures of migrants and hosts in other locales (Adams & Van de Vijver, 2017; Tutu, Boateng, Ameyaw, & Busingye, 2018). However, such ethnically plural societies are prone to social problems, such as ethnopolitical competition, ethnic discrimination, and violent conflicts due to cultural distance, language differences and prejudices between migrants and their host (Tutu et al., 2018). Kenya, like most African countries, consists of multiethnic groups. This has made them embrace a preservationist position that allows cultural diversity and plural composition of society (Tutu, Boateng, Ameyaw, & Busingye, 2017; Tutu et al., 2018). However, revealing the richness of ethnic diversity and building inclusive national identities in such settings of cultural plurality remain significantly problematic due to frictions in the acculturation preferences of the members of the diverse ethnic groups (Adams & Van de Vijver, 2017).

Social engagement between migrants of diverse ethnicities and their host communities leads to acculturation. Acculturation is influential not only for local socio-economic development and stability but also for migrant wellbeing (Zhang, Druijven, & Strijker, 2018). Göregenli, Karakus, and Gökten (2016) defined acculturation as the process of cultural and psychological adjustments resulting from continuing contact between migrants and their hosts. With the view that acculturation can occur at both individual and group level, Safdar and Van de Vijver (2019) defines acculturation as a phenomenon that occurs when two or more groups of individuals with dissimilar cultures interact resulting in alterations in the original patterns or behaviour or mindset of individuals from either or all groups.

While most studies focus on the acculturation of international migrants (Ma & Xia, 2020; Mohanty, Choo, & Chokkanathan, 2018), the reality of the acculturation process for internal migrants within ethnically diverse societies have received little attention (Tutu et al., 2018). The limited evidence in the internal migration literature reveals identity integration issues, adjustment patterns, and experiences comparable to international migration (Göregenli et al.,

2016; Ma & Xia, 2020; Tutu et al., 2018; Wang & Fan, 2012; Zhang et al., 2018). Given the paucity of literature on the acculturation of internal migrants in ethnically diverse societies in developing countries, it is helpful to extend studies to under-researched regions of the world. This would contribute to building a more comprehensive picture of the dynamics of acculturation in different contexts.

This study focuses on internal migration from one rural area to another in Kenya. Kenya is a country in East Africa that has witnessed significant movements of internal migrants in the past two decades. The large commercial plantations and the availability of large tracts of land for farming activities and settlement have attracted migrants to the Rift Valley, an area characterised by fast economic development (Odipo, 2018). Some internal migrants in the Rift Valley, despite their long-standing residence, continue to identify with their origin society only, rather than with both the host and origin societies. Such migrants are mainly labelled as outsiders by themselves and by the host indigenous communities. The maladaptive socio-cultural acculturation of migrants and their hosts often triggers ethnic resentment, which causes recurrent animosity and violent conflicts in the region. A series of historical conflicts, culminating in the violence following the December 2007 elections, prompted the Government of Kenya to establish the National Cohesion and Integration Commission (NCIC). The commission's function includes promoting tolerance, understanding, and acceptance of diversity in all aspects of national life and encouraging full participation by all ethnic communities in the social, economic, cultural, and political life of other communities (Government of Kenya, 2008).

This study adopted the two-dimensional model of acculturation and its variants such as the multidimensional individual difference acculturation (MIDA) model, interactive acculturation model (AIM) and concordance acculturation model (CAM) (Safdar & Van de Vijver, 2019). The study explores the relative perceived importance of selected socio-demographics for acculturation preferences of internal migrants in the Kenyan Rift valley. In doing so, it aims to contribute to the infrequent literature on the acculturation of internal migrants and the development of acculturation theory in the context of pluralism.

To achieve the aim of the study, we implemented an experimental vignette that removed respondents' awareness of their behavioural stimuli, thus improving on the previous work on acculturation that relied on self-reports. The innovative methodology used in this study

combines both the high internal validity of experiments and the high external validity of survey research (Auspurg & Hinz, 2015; Dülmer, 2016). The survey-based experimental methodology overcame the limitations of cross-sectional data in earlier studies (Göregenli et al., 2016; Wang & Fan, 2012; Yue, Fong, Li, & Feldman, 2020). First, the vignette experiment overcame the reversed causality problem that usually arises in cross-sectional studies if one asks, "How integrated are you?". Secondly, it overcame the limitation of systematic unobserved individual preferences that determine selection into different modes of acculturation. There was no unobserved heterogeneity within the hypothetical migrant profiles in this study, as the vignette experiment limited the factors of interest to nine. Thirdly, unlike a conservative cross-sectional analysis of migrants and their acculturation habits, the vignette experiment allowed for a quantitative assessment of the relative importance of all selected socio-demographics for acculturation preferences at once. The experimental approach confines our analysis to quantifying the perceived relative effects of different socio-demographic factors and discrimination experiences on the likelihood of a specific acculturation type and not the reality of the acculturation process for internal migrants. The study assumes that respondents accurately perceive the underlying causality given that they are internal migrants; hence, the findings correspond to the actual causal effect. The findings contribute to understanding the perceived relative impact of different socio-demographic factors and discrimination experiences on the likelihood of a specific acculturation behaviour being adopted by internal migrants in the Kenyan Rift Valley. By positioning the findings within the national policies landscape, we contextualised actions in a way designed to enhance the experience of acculturation, which would lead to more positive outcomes and alleviate the deep-seated ethnic intolerance between the internal migrants and their hosts in the Rift Valley.

Literature review

Theoretical framework

Early theorists of migrant adjustment believed that the acculturation process was unilinear or unidirectional towards assimilation. Assimilation theorists expected that immigrants' original ethnic behavioural patterns would weaken as their mainstream cultural patterns strengthened (Y. M. Kim, Newhill, & López, 2013). The unidirectional model projected an eventual unification with the host community, where all migrants adapt to the national or mainstream

culture (Adams & Van de Vijver, 2017). Migrants were expected to be loyal and have substantial compliance with the host community's norms, values, and codes of conduct and a weak relationship with the community of origin (Epstein and Heizler, 2015). Subsequent scholarly works critiqued the unilinear or unidirectional model for ascribing cultural supremacy to the receiving society and for treating identification with host and origin societies as mutually exclusive.

Consequently, there has been a literature shift to bidimensional and multidimensional models of migrant adjustment. The bidimensional models of acculturation refer to the concurrent spiralling associations with both origin and host societies (Zhang et al., 2018). The prominent bidimensional model is Berry's quadruplicate acculturation strategies: assimilation, integration, separation, and marginalisation (Berry et al., 2006). Integration in this context means the incorporation and exhibition of equally strong allegiance to the community of origin and the host society (Epstein & Heizler 2015). In contrast, marginalisation means an insubstantial commitment to or profound disconnection from both the primary culture and the culture of origin. Separation occurs when a migrant maintains allegiance to the community of origin, combined with insubstantial participation in the host community, whereas assimilation occurs when migrants commit to the host culture and suppress their own (Epstein & Heizler 2015). Berry's two-dimensional model persists in studies concerning migrants' adaptation to the settlement destination. Supplementary acculturation models such as the multidimensional individual difference acculturation (MIDA) model, interactive acculturation model (AIM) and concordance acculturation model (CAM) (Safdar & Van de Vijver, 2019) have also been developed from Berry's model. The MIDA model refines individual-level factors that predict new arrivals' adjustment to a receiving society while the AIM introduces individualism as a fifth acculturation strategy. The CAM focuses on the consequences when the attitudes on maintenance of heritage culture and or participation in the larger society between the two groups match or clash (Safdar & Van de Vijver, 2019)

This study also relies on Berry's bidimensional model of acculturation (Berry, Phinney, Sam, & Vedder, 2006) and variants such as MIDA and Arends-Tóth and van de Vijver's acculturation models reviewed in Safdar and Van de Vijver (2019). As advanced in Berry's acculturation framework and other variant acculturation models, the study asserts that variables at the individual level predict the adaptation of new arrivals in various milieus.

Acculturation studies and validation of most acculturation models are common in the international migration context. However, research on the acculturation of internal migrants especially in developing countries where ethnically plural societies are widespread remains scarce. A few studies, mostly limited to the Chinese context, have validated the viability of Berry's two-dimensional model with internal migrants and have produced results like those on international migration (Ma & Xia, 2020; Wang & Fan, 2012; Yue et al., 2020). The two-dimensional model of acculturation could also apply to the Kenyan context, given that both Kenya and China are culturally very diverse. Unlike China, the site of most acculturation studies on internal migration, Kenya supports ethnic pluralism policies, and migrants face no internal visa system (such as China's *hukou* system) that limits assimilation or integration into the host society. On the premise that migrants adopt acculturation strategies based on their perception or interpretation of the host culture (Mohanty et al., 2018), we examined factors influencing acculturation from the migrants' perception, which may be contrary to the viewpoint of the host society.

Empirical review of the acculturation of internal migrants

Pyakuryal, Tausig, Subedi, and Subedi (2011) suggested that internal migration in the rural-urban stream is as daunting as international migration. In their view, internal migrants may become strangers in a familiar land, depending on their acculturation preferences (Tutu et al., 2018). At the personal level, factors such as age at migration, length of stay, level of education, and economic status are significant for acculturation (Epstein & Heizler 2015; Garcia, DiNardo, Nuñez, Emmanuel, & Chan, 2020). The findings of numerous empirical studies (Fox, Merz, Solórzano, & Roesch, 2013; Göregenli et al., 2016; Ma & Xia, 2020; Wang & Fan, 2012) suggest that a long time spent in the host community not only surmounts the initial difficulties of adaptation (Wang & Fan, 2012) but also augments the acquisition of knowledge of customs and language essential for work (Tutu et al., 2018). The passage of time allows attitudinal changes in migrants and their hosts, thus accelerating the processes of assimilation and integration (Tutu et al., 2017, 2018; Yue et al., 2020). Using acculturation preference constructs in Ghana, Tutu et al. (2018) found that a more extended stay in the host community weakens migrants' contact with their extended family, thus reorienting them to accept the host culture.

Similarly, Yue et al. (2020), in their study of rural-urban migrants' acculturation in China, pointed out that migrants tend to gradually discard their original culture as a consequence of a more extended stay in cities away from their hometown. In line with previous literature, Göregenli et al. (2016) found that the length of time spent in cities significantly predicts integration preference among rural-urban migrants in Turkey. Contrary to most findings of acculturation studies, however, Wang and Fan (2012) found that the duration of stay did not influence identity integration. However, the finding of Wang and Fan (2012) might have been influenced by the household registration in mainland China (Hukou) which pose many problems to building an integrated society. Due to the lack of access to basic public services by most of the migrant labour force in urban areas of China, migrant households are organised into split families where most children are left behind in their origin localities to be able to access the public services (Zhou & Cheung, 2017).

Previous scholarly works also suggest that education affects acculturation. Evidence in the literature suggests that education liberalises one's social, political, and cultural values and expands one's opportunities in life (Kalmijn & Kraaykamp, 2018; Wang & Fan, 2012; Yue et al., 2020). According to Tutu et al. (2018), highly educated migrants are more likely to accept host culture orientation because they know better how to handle cultural diversity and have better market participation, which exposes them to more multi-ethnic contacts in public and private spheres (Kalmijn & Kraaykamp, 2018). Exposure to multi-ethnic contacts may facilitate learning about the outgroup. This new knowledge sequentially moderates prejudice (Pettigrew & Tropp, 2008) and reduces internal division between loyalties, aspirations, and fears connected with origin and host societies (Gaines Jr & Reed, 1995). The literature in cross-cultural psychology suggests a positive association between education and ethnic identity, implying a probability of separation or integration with higher education; however, economic literature suggests a negative correlation between ethnic identity and education, implying a probability of assimilation or marginalisation with higher education (Nekby, Rödin, & Özcan, 2009). The inconsistency in the economic and psychology literature offers a potential explanation for the findings of Nekby et al. (2009) that showed that the probability of assimilation or separation compared to integration is uncorrelated to measures of educational achievement (Huijnk, Verkuyten, & Coenders, 2012; Nekby et al., 2009). In view of the literature, we hypothesise that higher education can either foster or hinder both in-group and outgroup orientation strategies.

An additional personal characteristic associated with acculturation in the literature is the age of migration (Çaro, 2013; Ma & Xia, 2020). According to Ma and Xia (2020), older migrants have difficulty mastering new languages, social norms, and developing relationships with the local people, because knowledge acquisition and learning capabilities are inversely related to age. Çaro (2013) related a younger age of migration to more flexibility concerning keeping or challenging traditions and older age of migration to more conservativeness in upholding traditions. As a result, older migrants retain stronger connections with the origin community, while younger ones develop a greater willingness to interact with the host society (Çaro, 2013). Furthermore, clear memories of life before migration may be non-existent for younger migrants owing to their more prolonged exposure to the destination culture and limited experience in the original culture (Ma & Xia, 2020).

At the community level, social capital and the context of reception influence acculturation (Epstein & Heizler 2015). A harsh reception experience, such as discrimination, poor and unsafe neighbourhoods, and a lack of access to jobs and other social resources, may increase stress and difficulties associated with acculturation. Discrimination, for instance, increases the risk of maladaptive behaviours (Du & Li, 2015; H.-J. Kim, Choi, Lee, & Li, 2018; Sudhinaraset, Mmari, Go, & Blum, 2012). In an unfavourable context of reception, migrants may buffer themselves by clinging tightly to their ethnic traditions, resulting in separation (Kalmijn & Kraaykamp, 2018).

Given the literature review insights into the personal level and community context factors for acculturation, we hypothesise that there would be relationships between migrant characteristics validated in the Kenyan context and migrant preferences for each of the four acculturation strategies: separation, assimilation, marginalisation, and integration. We anticipate that the factors incorporated as attributes of the experimental research design will have effects shown in Table 1 below.

Table 1: Expected relationships between the attributes and acculturation preferences

	Expected relationship to acculturation preferences			
Attributes	Marginalization	Separation	Assimilation	Integration
Length of residence in Rift Valley	-	-	+	+
Lower age at first migration	-	-	+	+
Level of education	- / +	- / +	- / +	- / +

Higher level of income	-	-	+	+
Experience of ethnic discrimination	+	+	-	-
Mother of the same ethnicity	-	+	-	+
Spouse of the same ethnicity	-	+	-	+
Membership in migrant associations	-	+	-	+
The family resides in the community of origin	-	+	-	+

Note: Negative (-), Positive (+)

In the next section, we outline the study area and discuss the elements of the innovative experimental design we used to explore the contributions of individual migrant characteristics to the acculturation process of internal migrants in Kenya.

Study area, materials and methods

Study area

The Kenyan Rift Valley, where we carried out the study, is a cultural mosaic consisting of diverse languages, religions, cultures, values, and socio-economic backgrounds. Although predominantly rural, the Rift Valley is an interesting study location for exploring the acculturation of internal migrants; it is a hive of agri-based economic activities with a unique ethnic mix due to stable in-migration since 1963 (Oyvat & wa Gĩthĩnji, 2020). Two counties, Kericho and Nakuru, out of the 14 counties of the Rift Valley were purposively sampled as per the guidelines in the ethical clearance obtained from the University of Reading and the National Commission for Science Technology and Innovation (NACOSTI) in Kenya before data collection. This is because they house many labour migrants from established sources in Nyanza and the western regions of Kenya on account of work opportunities in the labour-intensive commercial farms of tea and flowers (Lang & Sakdapolrak, 2014). Internal labour migrants, at the onset of migration, consider employment on commercial farms as an additional source of family income and as a temporary livelihood. Consequently, many circulate between the Rift Valley and countryside origins, where they have a social base and farmland. Some of the initially temporary migrants ultimately settle permanently in the vibrant ethnic enclaves at the destination due to increased attachment to those localities.

Until recently, Kenya lacked an inclusive national migration policy, and its pockets of migration policy strategies only targeted rural-to-urban migration streams to decelerate urban population growth rates (International Organization for Migration, 2015). Rural-to-rural migration to the Rift Valley, unlike rural-to-urban migration, proceeded unchecked. Historically, different acts of parliament informally promoted integration up to 2008. To suppress the recurrent ethnic conflicts in the in-migration areas like the Rift Valley, the government of Kenya has since institutionalised the management of ethnic diversity by the establishment of the 2008 National Cohesion and Integration Act and ultimately the NCIC to nurture a national identity in its citizens and promote unity in diversity (Owino, 2013).

Preliminary data collection

We obtained insights into the determinants of acculturation through a literature review of Lang and Sakdapolrak (2014), Timotijevic and Breakwell (2000) and Epstein and Heizler (2015). In the literary works, factors such as age, length of residence, language, age at arrival, mobility, origin, profession, education level, economic status, religion and friendship cycles determine migrants' adjustment. Also, the characteristics of the communities inhabiting the place, such as the community's preference for ingroup or outgroup culture, size of the community, economic development, social composition and bonds determine acculturation in the destination locality (Epstein & Heizler 2015; Lang & Sakdapolrak, 2014; Timotijevic & Breakwell, 2000)

The fieldwork entailed three components, namely in-depth interviews, two focus group discussions, and an experimental vignette survey. We identified the in-depth interview participants through initial face-to-face contact with a female leader in a migrants' association. The initial contact sent out text messages to the association members, asking them to contact us if they were willing to participate in the study. The first phase of data collection involved in-depth interviews with the first sixteen people who expressed their willingness and consented to participate in the study as per the guidelines in the ethical clearance. The 16 interviewees gave accounts of their lives before and after migration during the interviews. Focusing on why they chose a certain extent of participation in the host and origin cultures, the in-depth interview data narrowed down the numerous factors influencing acculturation in the literature and offered insights that enabled us to generate the vignette's potential attributes and attribute levels.

Subsequently, we carried out two focus group discussions with the initial 16 participants to interrogate the relevance of the many factors from the literature and the in-depth interviews to the Kenyan Rift valley context. In the two focus group discussions, the participants ranked the nine factors that mostly influence migrant adjustment in the Rift Valley context by way of consensus. Coincidentally, the emergent lists drawn from the two independent focus group discussions contained similar factors summarised in Table 2.

Table 2: Attributes and attribute levels

Factor	Level 1	Level 2	Level 3	Level 4
Length of residence in Rift Valley	1 year	6 years	11 years	16 years
Age at first migration	2nd Generation migrant	7 years old	14 years old	21 years old
Level of education	Primary level	Secondary level	Tertiary college level	University level
Household income status	Low income	Middle income	High income	
Experience of ethnic discrimination in the labour market and residential environments	No	Yes		
Mother's origin	Different ethnic group	Same ethnic group		
Spouse's origin	Different ethnic group	Same ethnic group		
Membership in a migrant association	No	Yes		
Family residence	Siblings & parents live in the community of origin	Siblings & parents live outside the community of origin		

Vignette experiment design and questionnaire

Vignettes are short descriptions of hypothetical characters in specified circumstances to whose situation the respondent is invited to respond (Finch, 1987). Although we are not aware of the application of vignette experiments to acculturation studies, the technique has a long history of exploring attitudes, beliefs, and causal relationships on sensitive issues (Kootstra, 2016; K. J. Lee & Scott, 2017). Recurrent ethnic conflicts in the Kenyan Rift Valley have made the acculturation of migrants a sensitive social process: the use of conservative cross-sectional survey instruments to discuss and measure it has become problematic. Consequently, we employed a vignette experiment because of its suitability for investigating human judgments by representing the lives of others instead of that of the respondent, thus reducing emotional tension (Stoebenau, Kyegombe, Bingenheimer, Ddumba-Nyanzi, & Mulindwa, 2019). The use of experimental manipulations additionally conceals the identity of the subject tested, allowing examination of the perceived role of the multiple factors on acculturation in respondents' views. The absence of the respondents' cognisance of the study objective and treatments also reduces social desirability bias (Kootstra, 2016; K. J. Lee & Scott, 2017; Stoebenau et al., 2019).

Combining the nine emergent attributes and various attribute levels in Table 2 would have resulted in 6,144 possible vignette scenarios. A questionnaire with a complete factorial design consisting of all the vignette scenarios is extensive and impractical to evaluate (Walker, Wang, Thorhauge, & Ben-Akiva, 2018). Quota designs, namely fractional factorial designs and D-efficient designs are alternative approaches for reducing a full factorial design (Auspurg & Hinz, 2015). Evidence in the literature suggests that a D-efficient design requires a smaller sample size than a random orthogonal design to estimate all parameters at statistical significance, this is better than fractional factorial designs (Rose & Bliemer, 2013). Bliemer and Rose (2011), in a comparative study of orthogonal designs and efficient designs, showed that efficient designs produced lower standard errors in the estimated parameters compared to the orthogonal design, thus outperforming the orthogonal design. The fractional factorial designs are always orthogonal, but they are not necessarily balanced (Dülmer, 2016). In the experiment, we opted for a D-efficient design that relaxes the orthogonality requirement and allows the balance of a design to be improved, an aspect often sacrificed by fractional factorial designs to preserve orthogonality (Dülmer, 2016).

Using the information in Table 2, we developed a D-efficient vignette design consisting of two blocks of 16 pairs of vignette scenarios in NGENE using Fedorov's algorithm, thus maximising balance and orthogonality. Two vignette attributes namely length of residence and age at first migration were quantitative metric variables. The remaining attributes specified as the level of education, income status, the experience of discrimination, mother's origin, spouse's origin, membership of migrant associations, and family residence were categorical variables. With the number of rows specified in our design, all the attributes did have a level balance except household income status. The vignette design had a D-error = 0.06, A-error =0.15, and S-estimate =78.31. With a sample of 32 vignette scenarios out of the possible 6,144, we estimated all scenario-specific main effects (i.e., to determine the influence of migrant attributes on acculturation preference for marginalisation, separation, assimilation, and integration).

Each vignette set described two hypothetical migrants presenting variable plexuses of information on each migrant's length of residence in the Rift Valley, age at first migration, level of education, income status, the experience of discrimination, mother's origin, spouse's origin, membership of migrant associations, and family residence. We presented each participant with 16 vignette sets (see *Figure 1: Example of a vignette set*). At the end of each vignette set, we asked the respondents to indicate which of the two migrants, based on the attribute levels, is likely to be separated, marginalised, assimilated, or integrated.

CE_ChoiceTask1. Which of the following migrants is likely to be:

	Migrant 1	Migrant 2
Length of residence in the Rift valley	11 yrs.	1 yr.
Age at first migration	2nd generation migrant	14 years old
Level of education	Primary school	Tertiary college
Household income status	High income	Middle income
Experience ethnic discrimination in the labour market and residential environments	No	No
Mother's origin	Same ethnic group	Different ethnic group
Spouse's origin	Same ethnic group	Different ethnic group
Membership to migrant association	No	Yes
Family residence	Siblings & parents are living outside community of origin	Siblings & parents are living in community of origin

	Migrant 1	Migrant 2
Separated:	○	○
Assimilated:	○	○
Marginalised:	○	○
Integrated:	○	○

Figure 1: Example of a vignette set.

Each questionnaire started with a detailed description of two migrants (see Supporting Material 1). We randomly assigned respondents to a block and randomised the order of the vignette pairs in qualtrics. In each vignette scenario, we asked the respondents to consider the specific migrant descriptions as realistic and to choose the migrant who was most likely to adopt marginalisation, separation, assimilation, and integration. We explained to the respondents the meaning of marginalisation, separation, assimilation, and integration in Swahili as follows: marginalisation as identification with neither host nor origin cultures (*kutokujitambulisha na tamaduni za asili au tamaduni za kigeni*), separation as identification with origin culture only (*kujitambulisha au utamaduni wa asili pekee*), assimilation as identification with the host culture only (*kujitambulisha na utamaduni wa ugenini pekee*), and integration as identification with both the host and origin cultures *(kujitambulisha na tamaduni zote za kikabila na za kigeni).* An interpretation problem that may have arisen because of translating the four acculturation profiles from English to Swahili may have had negligible effects on the assignment of hypothetical migrants to a particular acculturation

preference. The questionnaire further contained a question on the gender of the respondent. To derive reliable inferences based on an S-estimate of 78.31, we required sample size of at least 79 migrants to participate in the vignette experiment.

Households in Kenya are organised into clusters based on proximity commonly referred to as '*nyumba kumi*' meaning 'ten households'. Preferably, each nyumba kumi cluster should contain ten households as the name suggest but the lists of migrant clusters obtained from the chiefs of the locations contained a range of 8 to 15 households. We randomly sampled twenty-eight nyumba kumi clusters in the two counties of the Rift Valley (Kericho and Nakuru) and surveyed all the members of the sampled clusters who consented. We administered the vignette experiment questionnaire face-to-face, using tablets.

Participants' profile

The participant profile shown in Table 3 and Table 4 only describe the nature and kind of migrants who participated in the vignette survey but are not included in the conceptual analysis part, because the study aimed at generating information on the relative importance of the selected attributes on acculturation preferences instead of addressing the issue of individual heterogeneity in the perception of migrant preferences. A design of a vignette experiment different from the specific one used in the study is needed to be able to assess how the participants' specific motivations and characteristics are related to acculturation preferences.

A total of 280 migrants (54% male and 46% female) participated in the vignette survey between June and September 2020.

Table 3: Participants' descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Age at first migration	280	20	9.37	0	45
Age of the respondents	280	37	10.36	18	72
Household size	280	5	2.71	0	15
Length of residence in the Rift Valley	280	15	11.39	0	59
Life satisfaction after migration	280	4	1.05	1	5
Life satisfaction before migration	280	2	1.10	1	5
Monthly income	280	28568	29246.21	1000	200000

Years of schooling	280	13	3.45	3	22

Table 4: Participants' frequency information

Variable	Category	Obs.	Frequency	Per cent
Marital status	Married	280	201	72%
	Widowed		7	3%
	Divorced		13	5%
	Single		59	21%
Employment status	Employed	280	164	58%
	Unemployed		55	20%
	Self-employed		61	22%
Level of education	Primary school	280	44	16%
	Secondary school		77	28%
	Tertiary college		105	38%
	University		54	19%
Membership in a migrant association	Yes	280	145	52%
	No		135	48%
Intention to return and settle in origin	Yes	280	186	66%
	No		94	34%
Reasons for migration	Job opportunity	280	202	72%
	Education		47	17%
	Accompanied family		87	31%
	Family conflicts		10	4%
	Second-generation migrants		14	5%

The average monthly income of the participants was 28,568, implying the majority belonged to the middle-income group comprising households with a monthly income ranging between Kenya shillings 23,671 and 119,999 (Kenya National Bureau of Statistics, 2017). The mean age group was thirty-seven years, and the mean age at first migration was twenty years, suggesting that migration peaks at the end of the teenage years which also coincides with the age at which compulsory basic education culminates. Concerning education, the mean years of schooling are 13 years, implying that most of the respondents (about 85%) had more than secondary school education, which is usually 12 years. Most participants were categorised as lifetime migrants given the average length of residence in the Rift Valley of 15 years. The participants moved to the Rift Valley for a combination of reasons, but the leading motives were job searches and job opportunities reported by slightly less than three-quarters of the respondents (72%) respectively, while the least common cause, migration due to family problems, was reported by four per cent of the respondents.

Statistical analysis

Our vignette experiment had 16 vignette pair evaluations per respondent, which resembles a one-to-one case-control study where the one option that is selected matches the one case, and the other option that is not selected matches the control (Menard, 2010). Given the interdependence of separate observations clustered within individual respondents (matched vignette pairs and multiple observations per respondent), a conditional logistic regression was the most appropriate estimation procedure (Menard, 2010). Using the software Stata 16, we analysed the data estimating a conditional (fixed effects) logistic regression. The vignette experiment contained four dependent variables (marginalisation, separation, assimilation, and integration) for each pair of vignette scenarios. We coded the dependent variables as 0 if a respondent did not select a migrant for a particular acculturation preference and 1 if a respondent selected a migrant for a particular acculturation preference, that is, marginalisation, separation, assimilation, and integration. The equation for the conditional logistic regression model is $Logit(Y) = \beta_i X_i + \gamma_k Z_k$, where X represents the characteristics of the individual making the choice, and Z represents the characteristics of the choices. We specified the conditional logistic regression model as follows: $Logit(Y) = \sum_{k=1}^{n} \gamma Z$. The predictors $Z_1, Z_2, \ldots Z_k$ typically represent the attributes of the hypothetical migrants as set out in Table 1. The attributes potentially influence whether an individual adopts an acculturation behaviour or not. $\gamma_1, \gamma_2 \ldots \gamma_k$ represent the coefficients of the attributes.

Results

We estimated a conditional logistic regression model for each dependent variable, as shown in Table 5 (see Appendix 1- 4 for more details).

Table 5: Odds ratios for the conditional (fixed effects) logistic regressions for the acculturation strategies

	(1) Marginalization	(2) Separation	(3) Assimilation	(4) Integration
Acculturation				
Length of residence in Rift Valley	0.933***	0.848***	1.146***	1.149***
	(-4.10)	(-8.53)	(7.48)	(8.68)
Age at first migration	1.078***	1.166***	0.887***	0.845***
	(3.75)	(6.87)	(-5.69)	(-9.05)
Secondary school	0.645***	0.602***	1.516***	1.557***
	(-4.31)	(-5.11)	(4.08)	(4.94)
Tertiary education	0.885	0.711**	1.701***	1.254
	(-1.01)	(-2.81)	(4.33)	(1.89)
University education	0.506***	0.199***	3.770***	3.706***
	(-3.46)	(-7.53)	(6.31)	(7.64)
Middle income	0.723***	0.973	0.787***	1.087
	(-5.32)	(-0.52)	(-4.46)	(1.29)
High income	0.864**	1.109	0.871**	1.042
	(-3.07)	(1.91)	(-2.67)	(0.87)
Experience of ethnic discrimination	1.650***	3.126***	0.366***	0.379***
	(7.50)	(15.75)	(-14.69)	(-12.59)
Mother with same ethnicity	0.846***	1.504***	0.616***	1.099*
	(-4.33)	(8.49)	(-11.69)	(2.37)
Spouse with same ethnicity	0.676***	1.985***	0.381***	0.791***
	(-6.43)	(14.73)	(-17.68)	(-7.48)
Membership of migrant association	0.669***	1.219***	0.644***	1.396***
	(-9.28)	(4.09)	(-9.06)	(7.48)
Family resides in the community of origin	0.883***	1.053	0.858***	1.180***
	(-4.03)	(1.28)	(-3.36)	(4.58)
Observations	8942	8942	8942	8942
Log lik.	-2818.3	-2427.6	-2430.6	-2565.1
Chi-squared	450.1	472.3	853.1	380.5

Notes: Exponentiated coefficients; t statistics in parentheses.

*Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

To compare the coefficients of the four conditional regressions models, we used the Wald test for seemingly unrelated estimation (SUEST). Table 6 summarises the results of the Wald test of coefficients.

Table 6: Comparison of conditional logit coefficients using Wald test for seemingly unrelated estimation (SUEST)

	S-A	S-I	A-I	M-S	M-A	M-I
Length of residence in Rift Valley	78.39***	144.86***	0.01	13.84***	57.82***	66.73***
Age at first migration	48.35***	125.22***	2.82	6.86**	38.84***	69.35***
Secondary school	25.57***	49.56***	0.04	0.21	34.00***	31.85***
Tertiary education	16.27***	11.99***	2.95	1.53	12.84***	3.63
University education	58.10***	123.31***	0.00	9.91**	43.01***	53.27***
Middle income	5.42*	1.83	15.05***	14.52***	1.16	15.65***
High income	6.47*	0.73	6.12*	11.22***	0.01	6.03*
Experience of ethnic discrimination	268.63***	239.51***	0.25	72.06***	163.21***	133.26***
Mother with same ethnicity	126.23***	26.70***	91.80***	80.61***	33.38***	18.06***
Spouse with same ethnicity	333.82***	229.73***	146.89***	214.90***	82.27***	4.62*
Membership to migrant association	58.96***	3.76	145.75***	79.81***	0.37	97.78***
Family resides in the community of origin	7.19**	4.60*	27.00***	10.87***	0.28	30.73***

Notes: Separation (S), Assimilation (A), Marginalization (M), Integration (I). Significance levels: $^{*}\ p < 0.05$, $^{**}\ p < 0.01$, $^{***}\ p < 0.001$

The results point to differences between the four acculturation preferences and their association with the factors theorised to encourage or constrain each of them. Consistent with the study's hypothesis, we find variable relationships between migrant characteristics and migrant preferences for each of the four acculturation strategies: separation, assimilation, marginalisation and integration. Most variables operate in the direction that was hypothesised given the evidence in the literature. For example, variables such as the length of residence, age at migration, level of education, and experience of ethnic discrimination in Table 5 have comparable association trends with integration and assimilation profiles, both of which entail host society engagement. Correspondingly, the association of acculturation profiles that entail host society non-engagement, such as marginalisation and separation, and variables including length of residence, age at migration, level of education, and experience of ethnic discrimination imply a similar direction.

The results in Table 5 also show that all family context variables, such as mother's ethnicity, membership of a migrant association, and family residence, are positively related to strategies favouring origin culture maintenance, i.e., separation and integration. The family context variables all work to protect the original ethnic identity as. The results suggest similarity in the direction for acculturation profiles that entail ethnic society immersion, such as separation and integration, and a similarity in the direction for acculturation profiles that entail ethnic society non-engagement, such as assimilation and marginalisation. Together with the findings of other studies, this study shows that family context stimulates in-group orientation and immersion.

In general, the migrants attach substantial importance to university-level education and experience of ethnic discrimination, as shown in Table 5. In all the four acculturation preferences, university education is more significant than the effect of the experience of ethnic discrimination. Both university education and the experience of discrimination have the most substantial effect on separation, followed by integration, then marginalisation and the weakest effect on assimilation. For both university education and experience of discrimination, the Wald test of coefficients in Table 6 confirmed a significantly more substantial effect on separation than on marginalisation. In contrast, the Wald test of coefficients revealed that the perceived effects of university-level education and

discrimination on the assimilated preference were not significantly different from the perceived effects on the integrated preference.

The analysis revealed that outgroup orientation increased with education. Our results indicate that a university-level education increases the probability of assimilation and integration more than threefold. The finding of a weak endorsement of origin culture maintenance in migrants with higher education and weak endorsement of host culture adoption in migrants with lower levels of education suggests that higher education is beneficial to host society identity. We argue that a further increase in the average level of education would imply a narrowing of the social distance between migrants and their hosts, making separation and marginalisation more improbable. The view that people with higher education tend to have fewer conservative values, enabling assimilation and integration, explains this finding (Kalmijn & Kraaykamp, 2018).

Results in Table 5 show that the likelihood of separation from their hosts more than triples, whereas discrimination reduces the possibility of either assimilation or integration by more than 60%. The result aligns with the evidence in the literature suggesting a detrimental influence of discrimination on the successful acculturation of internal migrants (Sudhinaraset et al., 2012) as well as international migrants (Abu-Rayya, 2009; H.-J. Kim et al., 2018; S. Lee, 2019; Mohanty et al., 2018; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Kalmijn and Kraaykamp (2018) contend that perceived or actual discrimination introduces the reality of minority status, unfair stereotyping, and ethnic conflicts thereby intensifying ethnic identities and causing resistance to the host society's identifications, practices, and values. These trigger a negative response, where migrants become more oriented to their ethnic groups to protect themselves: a phenomenon known as reactive ethnicity or oppositional culture (Kalmijn & Kraaykamp, 2018; Schwartz et al., 2010).

Age at migration was perceived as the weakest factor for assimilation, followed by the length of residence in the Rift Valley. For marginalisation, the perceived weakest factor is the length of residence in the Rift Valley, followed by age at migration. The length of residence and age at migration had moderate effects on separation and integration, respectively, compared to other factors. Length of residence comes in the ninth position and tenth position for separation and integration, respectively. On the other hand, age at migration is in the tenth position for separation and the eighth for integration. The Wald test of coefficients in Table 6

revealed a significantly stronger effect of length of residence and age at the migration on separation than marginalisation. The Wald test of coefficients, in contrast, showed that the perceived effect of length of residence and age at migration on the perceived assimilated preference was not significantly different from the perceived effect on the integrated preference. In comparing the four acculturation strategies, length of residence had the most potent effect on separation, followed by assimilation and integration in joint second place, and the weakest effect on marginalisation. Also, age at migration had the most substantial effect on assimilation, followed by integration, then separation and lastly marginalisation.

A shorter length of residence in the Rift Valley is associated with a higher likelihood of separation and marginalisation preferences. In contrast, a lengthy residence in the Rift Valley improves the likelihood of assimilation and integration. Our finding on the perceived effect of length of residence in the host community contradicts the results of Wang and Fan (2012), which establish no relationship between duration in the settlement destination and host society identification for internal migrants in China. Nonetheless, it is consistent with the bulk of the migration literature, which claims that extended duration of stay and sustained exposure to the host culture reflect a desire for attachment to the host society once the initial adaptation difficulty is overcome (Huijnk et al., 2012; Ma & Xia, 2020). The literature has recognised that those who have had a long residence in the host community are better integrated or assimilated (Mohanty et al., 2018).

In agreement with previous empirical studies, age at migration has an inverse relationship with assimilation and integration but a positive association with marginalisation and separation (Petreñas, Ianos, Lapresta, & Sansó, 2019; Schwartz et al., 2010). Scholarly works link migration at a younger age to little resistance to host culture values, practices, and identification (Petreñas et al., 2019; Schwartz et al., 2010). On the other hand, older age limits knowledge of the host environment, as well as the ability to learn additional languages and social norms, and makes starting relationships with the host community challenging (Ma & Xia, 2020). Unlike older migrants, younger migrants experience longer exposure to the destination culture than to the society of origin, which enhances their orientation to the host group and their adaptation to the host context.

The limited possibility of marginalisation preference among migrant groups is a possible reason for the significantly stronger perceived effects of university education, the experience

of discrimination, length of residence and age at migration on separation and marginalisation, respectively. It is also a potential explanation for why the length of residence and age at migration has the weakest effect on marginalisation compared to other acculturation strategies. The chances of an individual developing a cultural sense of identity exclusive of either the origin or receiving cultural contexts are often very low (Schwartz et al., 2010).

The Wald test of coefficients, in contrast, showed that the perceived effect of secondary school education and tertiary education on the assimilated preference was not significantly different from the perceived effect on the integrated preference. The Wald test of coefficients reveals that the effects of middle-income status, high-income status, family residence in the community of origin, and membership in a migrant association on assimilation are not significantly different from their effects on marginalisation. Family residence in the community of origin does not influence integration, while the effect of membership in a migrant association on integration is not significantly different from its effect on separation. On the contrary, the Wald test of coefficients reveals a more substantial negative effect of the mother's ethnicity on assimilation than on marginalisation and a stronger positive effect on separation than on integration. Also, the Wald tests for the coefficient for spouse's ethnicity show a more negative effect on assimilation than on marginalisation and a more negative effect on marginalisation than on integration.

It is noteworthy that the influence of income status is inconsequential for integration and separation preferences contrary to the study's expectation. Nevertheless, it is consistent with literature which claims marginal influences of economic factors on acculturation (Fox et al., 2013; Kalmijn & Kraaykamp, 2018; Wang & Fan, 2012). High-income relative to low-income status was negatively correlated with marginalisation and assimilation, as shown in Table 5. Similarly, middle-income status was inversely related to marginalisation and assimilation. According to Kalmijn and Kraaykamp (2018), assimilation is not likely when migrants achieve economic success. This result indicates the limited role of the economic positions of individual migrants in acculturation (Fox et al., 2013; Kalmijn & Kraaykamp, 2018). Our finding implies that economic accomplishment may be extraneous to migrants' socio-cultural integration.

It is also important to note that family contextual factors are pertinent, particularly when examining their role in perpetuating separation preference. For instance, having a spouse of

the same ethnicity nearly doubles the chances of separation, whereas having a mother from the same ethnic origin increases the likelihood of separation by 50%. The spouse's ethnicity and the mother's ethnicity are the second and fourth most prominent contributors to the probability of being in the separated profile. However, the contribution of these contextual factors to integration, assimilation, and marginalisation is modest. This finding suggests that family context matters for both ethnic-cultural maintenance and host-cultural adaptation attitudes, but not to the same extent. The family context is more strongly related to socio-cultural maintenance than socio-cultural adaptation (Huijnk et al., 2012). Apart from a family residence outside the community of origin, all other family context variables embed migrants into their ethnic community and reduce the opportunities for ethnic assimilation. Unexpectedly, our study showed that family residence outside the community of origin does not influence separation and lowers the likelihood of integration but raises the probability of assimilation and marginalisation. As expected, membership in a migrant association as opposed to non-membership lowers the odds of absolute involvement with the host society and lowers the odds of complete disconnection with both host and origin societies. Thus, it is correlated negatively with marginalisation and assimilation. Similarly, membership in a migrant association relative to non-membership raises the probability of partial or absolute engagements with the origin society and is thus positively associated with separation and integration. Membership in migrant associations, just like any social group membership, furthers a sense of belonging and a sense of emotional attachment (Adams & Van de Vijver, 2017).

Discussion

The migrants' characteristics and family context variables all proved to influence the perception of acculturation behaviour, but not to the same degree. Experience of discrimination and a university-level education contribute immensely to acculturation, as evidenced by the magnitude of the odds ratios. Experience of discrimination had the most substantial influence on the separation and marginalisation of acculturation preferences. If a migrant experienced ethnic discrimination in the Rift Valley, their chances of adopting a separation acculturation strategy increased threefold, and the chances of marginalisation increased by 65%. This study shows that the critical hindrance to achieving integration in the Kenyan Rift Valley is ethnic discrimination. This finding emphasises the need for the Kenyan

government to tackle the issue of continuing discrimination on the grounds of ethnicity, in addition to the protections offered under the National Cohesion and Integration Act. It is relevant to the Kenyan public debate on creating the non-discriminatory society to which many citizens aspire. Although the country has made substantial progress in increasing the protection of rights to non-discrimination in its legal and policy framework, this hardly translates into tangible changes on the ground. There is still a clear need to improve the implementation and enforcement of existing laws tackling ethnic discrimination at all levels. One line of action that might mitigate the problem of ethnic discrimination would be to give prosecutorial powers to independent bodies such as the NCIC, which has the mandate to eliminate ethnic discrimination and promote tolerance among Kenyans. The NCIC has remained dormant because it lacks the prosecutorial powers to enforce laws against people who incite others to ethnic violence (Nyaura, 2018).

A university-level education had the most substantial influence on assimilation and integration; it more than tripled the likelihood of these two acculturation strategies. The relationship between education and integration or assimilation suggests that migrants' accumulation of human capital through education is conducive to their identification with host residents. This finding aligns with the belief that better-educated people can acquire and apply positive values in society (Maende, 2016). The role of education in the lives of migrants and their hosts is vital, as it helps people to develop their abilities to understand and connect with others in their environment. Our findings justify the government policy position that education is not only free but also compulsory. Although Kenya acknowledges the perceived advantages of education for integration and guarantees free and universal access to basic education (primary and secondary) for all citizens in the Basic Education Act 2013 and in the Constitution of Kenya (2010), factors related to poverty and economic choice may impede access to education. The policy framework does not guarantee the achievement of education, and hence, integration. Stakeholders in public education need a more inclusive approach to address all the institutional and economic obstacles hindering integration mechanisms that lead toward national cohesion.

Practical implications and conclusion

Unlike previous studies (Göregenli et al., 2016; Wang & Fan, 2012; Yue et al., 2020) that rely on conservative surveys (revealed preference approach) observing or asking respondents

directly about their acculturation behaviour to capture actual causal effects, this study gained insights on respondents' general belief about the relative importance of different determinants of acculturation behaviour using a stated preference approach. The results from the vignette experiment were comparable to past studies on acculturation that employed non-experimental research techniques. The statistically significant results of most variables operating in the hypothesised directions and conceptually comparable to the findings of different studies by researchers in diverse fields using non-experimental methodologies and instruments have two major implications.

Firstly, the results demonstrate the methodological feasibility of vignette experiments in eliciting the contribution of migrants' characteristics to the perception of acculturation of internal migrants in the Kenyan Rift Valley. This is a powerful validation of the vignette experimental as an alternative approach whose application can be expanded to the exploration of attitudes, beliefs, and causal relationships in the broader process of acculturation involving the receiving society and all kinds of migrants including those who are forcibly displaced by environmental and humanitarian crises. The innovative vignette experiment approach can also be transferred to studying emergent consequences of the many cross-cultural interactions, for example, multiculturalism and super-diversity in many world cities in developing and developed regions due to globalisation, which are beyond traditional unidimensional and bidimensional acculturation. The methodology can also be applied in studying other identities, for instance, religious and linguistic identities.

Secondly, the results indicate that an individual's stated acculturation behaviour is consistent with the actual acculturation behaviour. This justifies the study's assumption that the respondents who were domestic migrants accurately perceived the underlying causality opening room for the application of the stated preference approaches. In doing so, the study opens the floor for a proper discussion of the reasons for the correspondence between the results from this vignette survey and evidence from traditional surveys.

To advance the discussion on the comparison of the two approaches, we recommend a comparative study using both conservative and vignette surveys on the same population sample is needed. Also, given the existing literature that participants' specific motivations and characteristics may be related to the acculturation preferences, it is necessary to conduct

further research on the effect of participants' heterogeneity on the allocation of the hypothetical migrants to a particular acculturation preference.

One of the study's limitations is the potential attentive bypass bias of the data caused by the greater cognitive burden of completing a vignette experiment survey encouraging the participants to allocate the hypothetical migrants to acculturation preferences by applying a simple decision rule that relies just on a single or subgroup of attributes (Kootstra, 2016; K. J. Lee & Scott, 2017). Administering the vignette experiment on a face-to-face basis was a deliberate attempt to lessen the inattentiveness of the respondents thereby reducing the likely bypass bias.

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Appendix

Appendix 1: Marginalisation

	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
Length of residence in Rift Valley	0.933	0.016	-4.1	0	0.903	0.964
Age at first migration	1.078	0.021	3.75	0	1.036	1.121
Level of education						
Secondary school	0.645	0.066	-4.31	0	0.529	0.787
Tertiary education	0.885	0.107	-1.01	0.311	0.698	1.121
University education	0.506	0.1	-3.46	0.001	0.344	0.745
Income status						
Middle income	0.723	0.044	-5.32	0	0.641	0.815
High income	0.864	0.041	-3.07	0.002	0.788	0.949
Experience of ethnic discrimination						
Yes	1.65	0.11	7.5	0	1.448	1.881
Mother's ethnicity						
Mother with same ethnicity	0.846	0.033	-4.33	0	0.785	0.913
Spouse's ethnicity						
Spouse with same ethnicity	0.676	0.041	-6.43	0	0.6	0.762
Membership in migrant associations						
Yes	0.669	0.029	-9.28	0	0.615	0.728
Family residence						
Family resides outside origin	1.132	0.035	4.03	0	1.066	1.203

Appendix 2: Separation

	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
Length of residence in Rift Valley	0.848	0.016	-8.53	0	0.817	0.881
Age at first migration	1.166	0.026	6.87	0	1.116	1.218
Level of education						
Secondary school	0.602	0.06	-5.11	0	0.495	0.731
Tertiary education	0.711	0.086	-2.81	0.005	0.56	0.902
University education	0.199	0.043	-7.53	0	0.13	0.302
Income status						
Middle income	0.973	0.052	-0.52	0.605	0.877	1.08
High income	1.109	0.06	1.91	0.056	0.998	1.232
Experience of ethnic discrimination						
Yes	3.126	0.226	15.75	0	2.712	3.602
Mother's ethnicity						
Mother with same ethnicity	1.504	0.072	8.49	0	1.368	1.652
Spouse's ethnicity						
Spouse with same ethnicity	1.985	0.092	14.73	0	1.812	2.174
Membership in the migrant association						
Yes	1.219	0.059	4.09	0	1.109	1.341
Family residence						
Family resides outside origin	0.95	0.038	-1.28	0.199	0.878	1.027

Appendix 3: Assimilation

	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
Length of residence in Rift Valley	1.146	0.021	7.48	0	1.106	1.187
Age at first migration	0.887	0.019	-5.69	0	0.851	0.924
Level of education						
Secondary school	1.516	0.155	4.08	0	1.241	1.852
Tertiary education	1.701	0.209	4.33	0	1.337	2.163
University education	3.77	0.792	6.31	0	2.497	5.692
Income status						
Middle income	0.787	0.042	-4.46	0	0.708	0.874
High income	0.871	0.045	-2.67	0.008	0.787	0.964
Experience of ethnic discrimination						
Yes	0.366	0.025	-14.69	0	0.32	0.418
Mother's ethnicity						
Mother with same ethnicity	0.616	0.026	-11.69	0	0.568	0.668
Spouse's ethnicity						
Spouse with same ethnicity	0.381	0.021	-17.68	0	0.342	0.424
Membership in migrant associations						
Yes	0.644	0.031	-9.06	0	0.585	0.708
Family residence						
Family resides outside origin	1.165	0.053	3.36	0.001	1.066	1.273

Appendix 4: Integration

	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
Length of residence in Rift Valley	1.149	0.018	8.68	0	1.114	1.186
Age at first migration	0.845	0.016	-9.05	0	0.815	0.876
Level of education						
Secondary school	1.557	0.14	4.94	0	1.306	1.855
Tertiary education	1.254	0.15	1.89	0.058	0.992	1.585
University education	3.706	0.636	7.64	0	2.648	5.186
Income status						
Middle income	1.087	0.07	1.29	0.198	0.957	1.234
High income	1.042	0.05	0.87	0.386	0.949	1.144
Experience of ethnic discrimination						
Yes	0.379	0.029	-12.59	0	0.326	0.441
Mother's ethnicity						
Mother with same ethnicity	1.099	0.044	2.37	0.018	1.017	1.189
Spouse's ethnicity						
Spouse with same ethnicity	0.791	0.025	-7.48	0	0.744	0.841
Membership in migrant associations						
Yes	1.396	0.062	7.48	0	1.279	1.523
Family residence						
Family resides outside origin	0.847	0.031	-4.58	0	0.789	0.909