

Antecedents of intra/ intergroup friendships and stress levels among
ethnic and religious minority members

Hanna Zagefka, Abdinasir Mohamed, Gehad Mursi, & Siugmin Lay
Royal Holloway University of London

Word count: 5338 (main text)

Keywords:

intergroup friendship, intergroup friendship, cross-group friendship, acculturation,
acculturative stress, identification, ethnic minority, religious minority

Contact:

Dr Hanna Zagefka

Dept of Psychology, Royal Holloway University of London, Egham, TW20 0EX

Email Hanna.Zagefka@rhul.ac.uk

Abstract

Two studies tested a model whereby identification with the minority group was predicted to impact on acculturation preferences, which in turn were proposed to impact involvement in intragroup friendships with other minority members, intergroup friendships with majority members, and stress experienced by minority members. A direct path from minority identification to stress was also included in the model. The model was tested using SEM on survey data collected from Muslim women ($N = 250$) and from Somali minority members ($N = 198$) in Britain. Results supported predictions and revealed that identification was associated with more culture maintenance preference and less culture adoption preference. Culture maintenance preference was associated with involvement in intragroup friendships, and culture adoption preference was associated with involvement in intergroup friendships and increased stress. Practical applications of the findings are discussed.

The coexistence of different ethnic and religious groups within many Western countries brings with it a host of opportunities and challenges. Cultural, ethnic and religious diversity can be enriching as well as unsettling. There is large variability in terms of how much contact ethnic and religious minority members seek with members of the majority and their minority ingroup (Binder et al., 2009). Intergroup contact and especially intergroup friendships have been demonstrated to have, by and large, a positive effect on the intergroup climate, at least when certain conditions are met (Davies, Tropp, Aron, Pettigrew, & Wright, 2011, Liebkind et al., 2014). Facilitating intergroup contact is therefore an important means for improving intergroup relations. Evidence suggests that membership in a minority group can lead to considerable socio-psychological stress (Baysu, Phalet, & Brown, 2011). If minority group members are suffering from psychological strain in great numbers, this will have adverse effects for the individuals in question and for society at large. Minimising stress among minority members is therefore an important goal. Because of the important consequences of intergroup friendships and psychological stress, it is imperative to better understand some of the potential antecedents of these variables, in order to learn how to affect them to elicit change for the better. This is precisely the concern of the present contribution.

There are three important contributions this research aims to make. Firstly, maybe due to the impressive efforts to demonstrate the positive outcomes for contact which were originally proposed, the question of which factors in turn facilitate or inhibit the establishment of intergroup friendships has fallen somewhat by the wayside. Although some antecedents are known (e.g., Binder et al., 2009; West, Pearson, Dovidio, Shelton, & Trail, 2009; Martinovic, van Tubergen, & Maas, 2011), overall the antecedents of intergroup friendships are much less well understood than its consequences. The present research addresses this question.

Secondly, although both the contact literature and the acculturation literature concern themselves with intergroup processes between different ethnic or cultural groups, to date few, if any, efforts have been made to integrate the processes described in these two research areas. In an attempt to address this, we set out to test if acculturation preferences would affect friendship choices. Thirdly, a typical finding in acculturation research is that integrationists, i.e. those who simultaneously have a high culture maintenance and culture adoption preference, enjoy better psychosocial outcomes than supporters of other strategies (Berry, 1997; Sam & Berry, 2006). Most of these findings, however, do not allow for the analyses of the two underlying dimensions, culture maintenance and culture adoption, in isolation. For example, if integrationists are found to suffer from less stress, it is unclear whether this is due mainly to their desire for culture maintenance, or their desire for culture adoption. Our approach aimed to address this issue and evaluate the contribution of the underlying dimensions singly.

In studying antecedents of intergroup/ intragroup friendships and acculturative stress among minority members, we sought to address four broad issues: i) the relationship between ingroup identification and acculturation preferences; ii) the relationship between acculturation preferences and intergroup/ intragroup contact and friendships; iii) the relationship between acculturation preferences and acculturative stress; and iv) the effect of ingroup identification on stress.

Identification and acculturation preferences. The concept of identification describes how much people think of themselves as members of their ingroup, and how strongly they feel about their group membership (Brown, Condor, Matthews, Wade, & Williams, 1986). It is closely related to Phinney's (1992) concept of ethnic identity. Minority members' acculturation preferences describe how strongly they think minority members should endorse

the minority and majority cultures (Berry, 1997, Brown & Zagefka, 2011; Zagefka & Brown, 2002).

Both the concepts of identification and acculturation, then, capture the degree to which a group or its culture is positively valued. However, identification measures typically assess cognitions and emotions about group membership, while acculturation measures, although not measuring actual behaviour, are more closely linked to behaviours (e.g. what food should be eaten, what religion should be practiced, etc. We conceptualise identification as an antecedent to the more behavioural culture maintenance and adoption preferences, in line with previous research which has also conceptualised identification as an antecedent of acculturation (e.g. Badea, Jetten, Iyer, & Er-Rafiy, 2011).

It was hypothesised that identification (i.e. cognitive and affective importance of minority identity) would be positively associated with culture maintenance preference. After all, if a group is seen as positively valued, its culture will be seen as worth preserving. Further, it was expected that minority identification would be negatively associated with culture adoption preference. Prior research has repeatedly found that - amongst minority members (but not majority members) - culture maintenance and culture adoption are modestly negatively related; they seem to be seen as somewhat incompatible (Brown & Zagefka, 2011). Due to this apparently perceived incompatibility, we expected a positive orientation towards the minority group (expressed in high identification) to be negatively related to culture adoption desire (which would imply a positive orientation toward the majority group).

Acculturation preferences and intergroup/ intragroup friendships. The dual identity approach developed by scholars studying intergroup contact and friendships (González & Brown, 2006) emphasises that endorsement of one identity does not imply rejection of another. Following this notion, it was hypothesised that a preference for culture maintenance

would increase intragroup friendships, i.e. would make it more likely that friendships with other minority group members would be sought. A preference for culture adoption, in contrast, would lead to increased intergroup friendships with majority members (Martinovic, van Tubergen, & Maas, 2011). After all, strong intragroup ties might be one means through which culture maintenance can be achieved, which implies that a positive effect of culture maintenance desire on intragroup friendships should be expected. Similarly, intergroup ties might be one means through which culture adoption can be achieved, and this implies a positive effect of culture adoption desire on intergroup friendships. In line with the notion in dual identity research, we did not expect that culture maintenance desire would decrease intergroup friendship endorsement, or that culture adoption desire would decrease intragroup friendship endorsement (although we tested for their possible existence).

Acculturation preferences and stress. It has recently been pointed out that the consequences of different acculturation preferences depend on the societal context and climate: For example, a choice of integration amongst minority members might produce favourable results only if majority members also back this choice (Baysu et al., 2011). It is plausible that a desire for culture adoption might particularly lead to stress when cultural differences between the groups are big, and when prejudice against the minority group is rife. After all, a desire for adoption will be more unsettling if the coveted cultural change is large, and if anxiety about whether majority members will trust and accept the cultural mutation is strong. As will be elaborated below, such concerns can be assumed to be relevant for the participants of the present studies, who bear non-concealable markers of difference and are frequent targets of discrimination. It was therefore hypothesised that a desire that minority members pursue culture adoption would lead to elevated stress levels for our participants.

While culture adoption implies change which is inherently unsettling and potentially stressful, in contrast there are no theoretical grounds on which to anticipate an effect of

culture maintenance desire on stress levels. Although culture maintenance might make it more likely that minority members become targets of prejudice (implying a stress-inducing effect), research in the identification-rejection tradition (Branscombe, Schmitt, & Harvey, 1999) has also shown that strong minority identity can be a stress buffer (implying a stress-reducing effect). Taken together, these effects might cancel each other out, resulting in a null-effect of culture maintenance preference on stress. Indeed, Güngör (2007) did not find any bivariate associations between maintenance and somatisation/depression (although, see Kopic, 2004). *Ingroup identification on stress.* As previously mentioned, research in the rejection-identification tradition (Branscombe et al., 1999) has generated evidence that ingroup identification has an attenuating effect on stress, because of its self-protective properties. The support and feeling of belonging generated by a secure attachment to an ingroup is supposed to fortify the self against outside stressors (e.g., Schmitt, Spears, & Branscombe, 2003). However, the rejection-identification model was developed in the context of Black minority members in the US, and it is an interesting question if it will prove universally applicable to other minority groups. Are there boundary conditions for the effect?

Indeed, Redersdorff, Martinot, and Branscombe (2004) found support for the stress buffering effects of identification only for women in gender counter-stereotypic occupations, but not in gender stereotypic occupations. Moreover, Giamo, Schmitt, and Outten (2012) found that only certain facets of identification (but not others) enhance well-being. In one of our own studies, we failed to confirm the protective properties of identification for a sample of Naga (Zagefka & Jamir, 2015). We speculated that this might have been the case because Naga identity is imbued with even more negativity, disadvantage and stigma than African American identity which the rejection-identification model originally focussed on. In the light of this, we sought to explore in the current investigation if identification would have the

buffering effects predicted by the rejection-identification model for two groups not previously studied with regard to this question: Muslim women and Somalis in the UK.

Summary of proposed processes & research setting. In sum, then, it was proposed that ingroup identification would simultaneously increase culture maintenance preference, and decrease culture adoption preference. Culture maintenance preference was hypothesised to facilitate the establishment of intragroup friendships, and culture adoption preference was predicted to facilitate the establishment of intergroup friendships. Culture adoption preference (but not culture maintenance preference) was expected to increase stress experienced by minority members. Moreover, it was explored whether a direct effect of ingroup identification on stress would also be observed. The hypothesised processes were tested in two studies conducted in the UK, among Muslim women, and among Somalis.

There are around 2.7 million Muslims in England and Wales today (ca 5% of the total population), according to the Office for National Statistics (<http://www.ons.gov.uk>). The presence of Muslims in the UK is a consequence of migration to the country from various other regions, notably Asia and Africa. Moreover, there are over 100,000 Somalis resident in the UK according to the 2011 census (<http://www.ons.gov.uk>). The UK is home to the largest Somali community in Europe due to a long tradition of Somali migration to the UK, especially since the British establishment of the Somaliland protectorate but exacerbated during the civil war in Somalia during the 1980s and 1990s.

Racial discrimination is a common problem for many ethnic groups (UK Department for Communities and Local Government, 2011). Most Muslim women and Somalis of both genders are easily distinguished from white British majority members through facial features, clothing, or both. The visibility of these markers of difference mean members of both groups can easily be targeted as victims of discrimination in the current islamophobic climate (Jasperse, et al, 2012). This situation is compounded by a status of general deprivation,

particularly for Somalis, with a high teenage prison population and very high unemployment rates (Harris, 2004; Rasmussen, 2009). The proportion of Muslim people of working age without a qualifications is significantly higher than for Christians and most other minority groups, and Muslims are also less likely to have degrees or equivalent qualifications (www.ons.gov.uk). It was in this context that the proposed processes were tested using survey methodology and structural equation modelling.

Study 1

Method

Participants

Two hundred fifty participants from the greater London area who self-reported to be both female and Muslim took part in the study (mean age 30). 171 reported to have the British nationality; the two biggest non-British national groups were Pakistanis and Bengalis. 50% of the sample reported to have been born in Britain, and 80% had been living in the UK for over 10 years.

Procedure and Measures

Participants were recruited in public places (e.g., mosques, cafes) and asked to fill out a questionnaire containing the measures described below (1 = strongly disagree to 5 = strongly agree, for all scales). Data for this and the second study were collected by a researcher who shared the participants' group membership, and no monetary compensation for participation was offered.

Ingroup *identification* was measured with six items assessing the cognitive and affective components of identity (Brown et al., 1986): 'I think of myself as being a Muslim'; 'I feel good about being Muslim'; 'Being a Muslim plays an important part in my life'; 'I feel that I am part of the Muslim community'; 'I have a strong sense of being Muslim'; 'I am proud of being Muslim', $\alpha = .91$.

Culture maintenance preference was measured by asking participants if they would like Muslims in Britain to maintain their own culture, religion, language, and clothing, $\alpha = .75$. *Culture adoption* preference was measured by asking if participants wanted Muslims in Britain to take on the British culture, (Christian) religion, language, and clothing, $\alpha = .61$.

Intragroup friendships were measured by participants indicating their agreement with the items ‘In school, most of my friends are/were Muslims’; ‘Now, most of my friends are Muslims’; and ‘My closest friends are Muslims’, $\alpha = .65$. *Intergroup friendships* were measured with the same items and by substituting ‘Muslims’ with ‘White British’, $\alpha = .70$. Because British identity incorporates different ethnic and national groups, both with (e.g. British Indian) and without (e.g. Welsh) migration background, we chose the label ‘white British’, to ensure that participants really reported contact with people they thought of as majority members.

Stress levels were measured with three items: ‘I often feel stressed’; ‘I often have difficulties in coping with things I have to do’; and ‘I often feel overwhelmed by my life in general’, $\alpha = .81$.

Mean levels per construct were then used in the path analysis for this and the next study. The questionnaire also included some questions about demographic information and some items which are not of relevance in the present context. All aspects of this and the following study adhered to APA ethical guidelines.

Results

Bivariate correlations, means, and factor analysis. Bivariate correlations and means for all constructs are displayed in Table 1. To demonstrate that Muslim identification, culture maintenance and culture adoption are indeed independent concepts, an exploratory factor analysis (varimax rotation, extraction criterion of eigenvalue > 1) was performed including all items. As expected this yielded three factors, with all identification items loading on one

factor, the culture maintenance items loading on a second factor, and the culture adoption items loading on a third factor. Factor loadings were substantial (ranging from .77 to .93), and no substantial cross-loadings were observed (the biggest by far was a cross-loading of -.28).

Testing the hypothesised model. A path model was specified (using Amos 19) with ingroup identification as an exogenous variable predicting culture maintenance and culture adoption preference. Culture maintenance preference, in turn, was specified to influence the amount of intragroup friendships. Culture adoption preference, in contrast, was specified to influence both intergroup friendships and stress levels. A direct path from identification to stress levels was also included. Three error terms were allowed to covary, on the basis that measurement accuracy for all constructs will depend on the non-native speaker's aptitude for reading English (all questionnaires were administered in English). Although it was assured that only participants with reasonable language skills completed the questionnaire, and indeed although more than 90% of participants scored above the mid-point of a 5-point scale assessing their self-perceived ability to speak English, language ability nonetheless inevitably varied among minority participants.

The model fitted the data well, $\chi^2(6) = 10.21$, ns; CFI = .96; RMSEA = .05. Path coefficients are displayed in Figure 1. As expected, identification was positively associated with culture maintenance preference (.29, SE = .10) but negatively with culture adoption preference (-.20, SE = .12). Culture maintenance preference enhanced the amount of intragroup friendships (.13, SE = .07), while culture adoption preference increased the amount of intergroup friendships (.22, SE = .05) but also stress (.16, SE = .06). Identification also had a direct ameliorating effect on stress levels (-.14, SE = .12). An analysis with 5000 bootstraps revealed that the indirect effects of identification on the outcome variables were

significant, as the 95% confidence interval did not contain zero ($CI_{\text{stress}} = -.072$ to $-.008$; $CI_{\text{inter}} = -.107$ to $-.009$; $CI_{\text{intra}} = .001$ to $.118$).

Contrast with alternative models. To further confirm that culture maintenance preference only affects intragroup but not intergroup friendships and stress, and that culture adoption preference only affects intergroup friendships and stress but not intragroup friendships, a model was specified where these three missing paths were included (culture maintenance – intergroup friendships; culture maintenance – stress; culture adoption – intragroup friendships). The fit of this model (now $\chi^2(3) = 8.44$) was not substantially better than the fit of the hypothesised model, which had already been satisfactory. Moreover, all three path coefficients were non-significant, further confirming that the paths are negligible. What is more, an inspection of the modification indices (a few missing values were replaced with the scale mean to enable Amos to calculate these indices) confirmed that including the three paths would not lead to a substantial improvement in model fit.

To yield better evidence for the causal direction of hypothesised effects, another model was specified where all the paths between variables were reversed, so that intragroup/intergroup friendships and stress were now the exogenous variables impacting on acculturation preferences, which in turn impacted on identification. This model is plausible, as it might be the case that effects between variables are mutually reinforcing (see e.g. Verkuyten, 2005, who conceptualises identification as an outcome). As expected, however, this alternative model fitted the data considerably less well than the hypothesised model, $\chi^2(8) = 51.80$, ns; CFI = .60; RMSEA = .15, with fit indices falling short of accepted benchmarks. This was the case even when the three exogenous variables were allowed to covary, $\chi^2(5) = 17.86$, $p < .01$; CFI = .88; RMSEA = .10.

Discussion

There was clear evidence in study 1 that identification with the Muslim minority ingroup was associated with increased desire to maintain the Muslim culture, and that it was associated with decreased desire to adopt the mainstream British culture. Culture maintenance desire, in turn, was associated with more self-reported minority ingroup friendships, while culture adoption desire was associated with more self-reported intergroup friendships. Culture adoption desire was also associated with higher stress levels among our female Muslim participants. Finally, in line with Branscombe et al.'s (1999) model, identification with the Muslim minority ingroup did act as a buffer against stress – higher identification was associated with lower stress levels.

In psychological research, mechanisms uncovered for very specific samples are often assumed to generalise to a larger population. Of course, such assumption should be regarded with caution, especially when the processes under study involve vulnerable groups and have potential policy implications. Therefore, in a next step we were motivated to test whether the processes discovered for Muslim women in Britain would generalise to another minority group. While in study 1 minority status was based on religious affiliation, in study 2 we aimed to see if results would generalise to an ethnic minority group also. Therefore, study 2 focussed on a sample of Somali minority members in Britain.

Study 2

Method

Participants

One hundred ninety eight participants who self-reported to be ethnic Somalis and who lived in the greater London area participated in the study (mean age 21 years, 99 females, 91 males, 8 did not report their gender). About half of the participants held the British citizenship. Roughly 50% were born in Somalia, 30% in the UK, and 20% elsewhere. 50% had lived in the UK for less than 12 years and 50% for longer. As for study 1, more than 90%

of participants scored above the midpoint of a 5 point scale asking them to indicate their English language aptitude. The sample for study 2 was independent from that of study 1; no participant took part in both studies.

Procedure and Measures

Participants were again approached in public places (e.g., mosques, cafes) and asked to fill out a questionnaire containing the measures described below (1 = strongly disagree to 5 = strongly agree, for all scales).

Ingroup *identification* was measured with three items: ‘It is important to me to be Somali’, ‘I see myself as Somali’, and ‘I identify with being Somali’, $\alpha = .88$. *Culture maintenance* and *culture adoption* preferences were assessed with the same items as before, asking about attitudes towards Somali culture and British culture, $\alpha = .80$ for culture maintenance and $.60$ for culture adoption. *Intergroup and intragroup friendships* were measured vis-à-vis white British people and Somalis, using the same items as before, plus one additional item: ‘I am more comfortable with Somali (white British) friends than white British (Somali) friends’, $\alpha = .82$ for intergroup friendships and $.75$ for intragroup friendships. *Stress levels* were measured with the same three items as before, $\alpha = .79$. The questionnaire also included some questions about demographic information and some items which are not of relevance in the present context.

Results

Bivariate correlations, means, and factor analysis. Bivariate correlations and means are displayed in Table 1.

Testing the hypothesised model. When specifying the hypothesised model, in which ingroup identification was predictive of culture maintenance and culture adoption preferences, culture maintenance affected intragroup friendships, culture adoption affected intergroup friendships and stress, and identification also had a direct effect on stress, the

model again fit the data well (as before, three error terms were allowed to covary). Although the chi square was significant, the more important fit indices (Hoyle, 1995) confirmed a good model fit, $\chi^2(6) = 15.20, p < .05$; CFI = .92; RMSEA = .08.

Path coefficients (see Figure 2) were very similar to those obtained in study 1, with the notable exception that the direct path from ingroup identification to stress which had been negative for Muslim women was now non-significant for this sample of Somali minority members. The effect were as follows: identification on maintenance .26 (SE = .06); identification on adoption -.18 (SE = .07); maintenance on intragroup friends .17 (SE = .08); adoption on intergroup friends .28 (SE = .06); adoption on stress .16 (SE = .07); and identifications on stress .03 (SE = .07). An analysis with 5000 bootstraps revealed that the indirect effects of identification on the outcome variables were significant, as the 95% confidence interval did not contain zero (CI_{stress} = -.078 to -.004; CI_{inter} = -.114 to -.015; CI_{intra} = .013 to .103).

2-group analysis. To obtain quantitative evidence that all paths were identical in the two samples, except the path from identification to stress, a 2-group comparison was conducted. Allowing the path from identification to stress to vary resulted in significantly better fit ($\Delta\chi^2(1)=4.123, p<.05$) compared to a scenario where all paths were constrained to be equal in the two samples.

Contrast with alternative models. As for study 1, it was next tested if the inclusion of a ‘culture maintenance – intergroup friendships’ path, of a ‘culture maintenance – stress’ path, and of a ‘culture adoption – intragroup friendships’ path could significantly improve the fit of the model. When including these three paths, the overall model fit did not change substantially (now $\chi^2(3) = 13.93, p < .05$). More importantly, all three path coefficients were non-significant. Moreover, an inspection of the modification indices again suggested that the model fit would not be substantially improved by including these three paths.

As for study 1, we next reversed all the hypothesised paths between variables in our model, to get a better handle on the causal direction of effects. Again, this resulted in a substantial deterioration of model fit, $\chi^2(8) = 75.67, p < .001$; CFI = .40; RMSEA = .21, yielding additional support for the hypothesised model.

Last but not least, rather than simply reversing hypothesised paths, a last model was specified to test if the modelling of some different processes would result in a better model fit. In this model, intragroup contact predicted identification and culture maintenance, to test if actual intragroup contact and behaviour might actually affect attitudes, rather than vice versa. Likewise, intergroup contact was specified to predict both culture adoption preference and stress, to test the idea that again behaviour might inform intergroup attitudes, and that stress is a direct consequence of intergroup contact. This model, again, yielded a poor fit with the data, $\chi^2(10) = 61.25, p < .001$; CFI = .55; RMSEA = .16.

Discussion

The hypothesised model fitted well for the sample of Somali minority members in study 2. Processes were remarkably similar to those unearthed for the Muslim women of study 1, suggesting that they do indeed generalise to other minority groups.

The only noteworthy difference between the results for study 1 and 2 was the path from minority identification to stress – this was negative for Muslim women, but non-significant for Somalis. As we have speculated elsewhere (Zagefka & Jamir, 2015), whether a minority identity is fit to buffer against stress might depend on the extent to which the identity is imbued with negativity. Of course, African Americans are undoubtedly potential victims of discrimination (Branscombe et al., 1999). However, it is possible that this is the case to a lesser extent than for groups who have to fear random and unpredictable threats to their lives in the context of civil war (like the Naga; Zagefka & Jamir, 2015), and it is possible that Somali identity, too, is imbued with more negativity than African American or

Muslim identity. As outlined above, Somalis in the UK are extremely deprived. While African Americans are set apart from the majority mainly through their ethnicity, and while Muslims in the UK are differentiated from the majority mainly through their religion, Somalis in the UK have markers of difference on a whole host of dimensions, including their religion, culture, and recent migratory status. We would like to speculate that for identities imbued with such a high degree of difference and disadvantage ingroup identification might fail to have the same self-protective properties as is the case for slightly less disadvantaged groups. It is also possible that Muslim religious identity will have a buffering effect on stress because salience of this identity will enhance a sense of belonging and being member of a positively valued community, while ethnic Somali identity might be experienced as less stress-alleviating because of a potentially lower sense of coherence for this ethnic ingroup. Of course, the current data are not in themselves sufficient to substantiate this speculation. An important avenue for future research is to directly test the conditions under which ingroup identity will or will not have self-protective properties. Clearly, it appears that some groups, in the face of historical discrimination, are able to still derive value from their identity, while others do not. The question of how such groups might differ in terms of the social creativity strategies they employ would be an important topic for future study. At the same time, although the effect of identification on stress was negative for Muslims and non-significant for Somalis in the present contribution, the difference in magnitude between the two associations for the two groups was actually not that great. Future research could ascertain whether this observed difference can be replicated, to avoid unduly over-emphasising the difference.

General discussion

Overall, it was shown that in two separate minority groups in Britain minority ingroup identification were associated with acculturation preferences. These preferences, in turn, were

related to the choice of intragroup or intergroup friendships, as well as stress experienced by minority members. It should also be mentioned that, across both samples, ingroup identification and culture maintenance preference tended to be quite high, and culture adoption preference tended to be rather lower (see Table 1).

An undisputable strength of this work is that very little data exists to date on the acculturation processes of these two minority groups in Britain. One issue which could be improved in future research is that some of our measures were quite short, and future research could aim to improve on this. Another issue is that although the aspiration of this work was to nail down causal processes, the data is only cross-sectional. This is, of course, less preferable than the attainment of experimental data. However, practical issues forbade experimentation. There are ethical issues with experimentally manipulating concepts and beliefs which have a demonstrable (as evinced in our data) effect on stress levels. We would not have been comfortable to induce more stress in our already quite vulnerable population by manipulating the exogenous variables.

Still, testing reversed causal order in SEM can give an (inconclusive) indication of causality in instances where experimentation is not practical. Our alternative model suggests that intragroup/ intergroup friendships and stress are a consequence of acculturation preferences, not antecedents. Our data suggest that what might happen is that those who favour culture maintenance as a consequence have more intragroup friendships, and those who favour culture adoption as a consequence have more intergroup friendships, but also experience more distress. Moreover, our data also suggest that identification is an antecedent rather than consequence of acculturation preferences. However, until experimental confirmation of this has been obtained, we must remain open for the possibility that the causal direction of the association is in fact the other way around.

The findings may have important practical implications, although the reader should keep in mind that more definite data about the causal direction of effects would be needed before making strong inferences. Firstly, if the goal is to encourage intergroup friendships due to their demonstrable positive effect on intergroup relations, it might be beneficial to encourage minority members to endorse culture adoption. Secondly, practitioners should also take note of the fact that culture adoption preferences seem to be inherently stressful for minority members. Any efforts to encourage culture adoption are therefore somewhat of a double edged sword and pros and cons need to be carefully evaluated. Thirdly, the data support the idea that encouraging culture maintenance will not adversely affect intergroup friendships and relations, while culture adoption will positively affect these outcome variables. Hence, to achieve more positive intergroup relations, the data suggest that minority members should be encouraged to engage in integration (high on both culture maintenance and adoption).

It is worth pondering issues that should be illuminated further by future research. In the discussion to study 1, we reflected on the fact that SEM cannot give definitive answers about the causal direction of observed correlations. For this reason, experimentation on the proposed mechanisms would be a very worthwhile endeavour, if a way can be found to carry this out in a feasible and ethical manner. Another approach to strengthening the potential for causal inference would be to utilise longitudinal designs going forward. A second avenue for further study would be to get a better handle on the idea that the extent to which identification with a minority group can be stress-buffering might depend on the extent to which that minority identity is imbued with negativity. Better data in this regard would be very useful. Future endeavours could also incorporate a measure of national identification – it would be interesting to investigate the combined effects of ethnic, religious, and national identifications on the outcome variables.

In sum, we see the take-home messages of this research as being a) that acculturation preferences shape intragroup/intergroup friendship preferences, b) that encouraging culture adoption among minority members is a double edged sword, where potential benefits for the intergroup climate are achieved at the expense of minority members' mental health, c) that encouraging culture maintenance will *not* have an adverse effect on the establishment of intergroup friendships and that it should therefore not be regarded with suspicion, and d) that minority identification, whilst precluding to a certain extent a desire for culture adoption, does seem to have some stress-buffering properties. However, more research is needed to get a better handle on the exact effects of minority identification on well-being.

References

- Badea, C., Jetten, J., Iyer, A., & Er-Rafiy, A. (2011). Negotiating dual identities: The impact of group-based rejection on identification and acculturation. *European Journal of Social Psychology, 41*, 586-595.
- Baysu, G., Phalet, K., & Brown, R. (2011). Dual identity as a two-edged sword: Identity threat and minority school performance. *Social Psychology Quarterly, 74*, 121-143.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review, 46*, 5-68.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., Maquil, A., Demoulin, S., & Leyens, J.-P. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology, 96*, 843-856.
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: implications for group identification and well-being. *Journal of Personality and Social Psychology, 77*, 135-149.
- Brown, R., Condor, S., Matthews, A., Wade, G., & Williams, J. A. (1986). Explaining intergroup differentiation in an industrial organisation. *Journal of Occupational Psychology, 59*, 273-286.
- Brown, R., & Zagefka, H. (2011). The dynamics of acculturation: an intergroup perspective. *Advances in Experimental Social Psychology, 44*, 129-184.
- Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332-351.

- Dimitrova, R., Bender, M., Chasiotis, A., & van de Vijver, F. J. R. (2013). Ethnic identity and acculturation of Turkish-Bulgarian adolescents. *International Journal of Intercultural Relations, 37*, 1-10.
- Giamo, L. S., Schmitt, M. T., & Outten, H. R. (2012). Perceived discrimination, group identification, and life satisfaction among multiracial people: A test of the rejection-identification model. *Cultural Diversity and Ethnic Minority Psychology, 18*, 319-328.
- González, R., & Brown, R. (2006). Dual identities in intergroup contact: Group status and size moderate the generalization of positive attitude change. *Journal of Experimental Social Psychology, 42*, 753-767.
- Güngör, D. (2007). The interplay between values, acculturation and adaptation: A study on Turkish-Belgian adolescents. *International Journal of Psychology 42*, 380-392.
- Harris, H. (2004). *The Somali Community in the UK: What We Know and How We Know It*. London: The Information Centre about Asylum and Refugees in the UK (ICAR), International Policy Institute, King's College London. Retrieved 01 22, 2012, from <http://www.icar.org.uk/somalicomunityreport.pdf>.
- Hoyle, R. H. (Ed.). (1995). *Structural Equation Modeling. Concepts, Issues, and Applications*. London: Sage Publications.
- Jasperse, M., Ward, C., & Jose, P. (2012). Identity, Perceived Religious Discrimination, and Psychological Well-Being in Muslim Immigrant Women. *Applied Psychology: An International Review, 61*, 250–271.
- Kosic, A. (2004). Acculturation strategies, coping process and acculturative stress. *Scandinavian Journal of Psychology, 45*, 269-278.
- Liebkind, K., et al. (2014). "Prejudice-reduction in culturally mixed classrooms: The development and assessment of a theory-driven intervention among majority and

minority youth in Finland." *Journal of Community & Applied Social Psychology* 24(4): 325-339.

Martinovic, B., van Tubergen, F., & Maas, I. (2011). Acquisition of Cross-Ethnic Friends by Recent Immigrants in Canada: A Longitudinal Approach. *International Migration Review*, 45, 460–488.

Office for National Statistics - <http://www.ons.gov.uk>.

Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with adolescents and young adults from diverse groups. *Journal of Adolescent Research*, 7, 156–176.

Rasmussen, J. (2009). *Education of Somali Students in London: Challenges and Strategies*. London: Foundation for International Education.

Redersdorff, S., Martinot, D., & Branscombe, N. (2004). The impact of thinking about group-based disadvantages or advantages on women's well-being: An experimental test of the rejection-identification model. *Cahiers de Psychologie Cognitive/Current Psychology of Cognition*, 22, 203-222.

Sam, D. L., & Berry, J. W. (2006). *The Cambridge handbook of acculturation psychology*. New York, NY US: Cambridge University Press.

Schmitt, M. T., Spears, R., & Branscombe, N. R. (2003). Constructing a minority group identity out of shared rejection: The case of international students. *European Journal of Social Psychology*, 33, 1-12.

UK Department for Communities and Local Government (2011).

Verkuyten, M. (2005). Ethnic group identification and group evaluation among minority and majority groups: testing the multiculturalism hypothesis. *Journal of Personality and Social Psychology*, 88, 121-138.

West, T. V., Pearson, A. R., Dovidio, J. F., Shelton, J. N., & Trail, T. E. (2009).

Superordinate identity and intergroup roommate friendship development. *Journal of Experimental Social Psychology, 45*, 1266-1272.

www.ons.gov.uk, accessed 18.3.2015.

Zagefka, H., & Brown, R. (2002). The relationship between acculturation strategies, relative

fit and intergroup relations: immigrant-majority relations in Germany. *European Journal of Social Psychology, 32*, 171-188.

Zagefka, H., & Jamir, L. (2015). Conflict, fear, and social identity in Nagaland. *Asian*

Journal of Social Psychology, 18, 43-51.

Table 1

Bivariate correlations and means.

	Ingroup identification	Culture maintenance preference	Culture adoption preference	Intragroup friendships	Intergroup friendships	Stress levels
Ingroup identification		.28***	-.19**	.21***	-.13*	-.16*
Culture maintenance preference	.26***		-.28***	.13*	.04	-.08
Culture adoption preference	-.18*	-.24***		.03	.21***	.21***
Intragroup friendships	.26***	.20**	-.04		-.37***	-.02
Intergroup friendships	-.26***	-.14●	.28***	-.41***		.07
Stress levels	-.04	-.03	.15*	.01	.29***	
Muslim women Mean	4.82 (.54)	4.44 (.90)	1.89 (.99)	3.90 (.98)	1.99 (.88)	2.60 (.97)
Somali Mean	4.48 (.96)	4.47 (.84)	1.89 (.96)	3.47 (1.04)	2.17 (.99)	2.21 (1.02)

Note. Correlations above the diagonal pertain to the Muslim women sample. Correlations below the diagonal pertain to the Somali sample. ● $p < .09$, * $p < .05$, ** $p < .01$, *** $p < .001$. *SDs* in parentheses.

Figure Captions

Figure 1

Antecedents of intra/ intergroup friendships and stress among Muslim women

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 2

Antecedents of intra/ intergroup friendships and stress among Somalis

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.



