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## Adjustment of Refugees in Greece as a Social Identity Process: A Longitudinal Study

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## Abstract

Many refugees moving into Greece and other European countries often struggle to adjust to their new life. Over and above other factors, social isolation seems to be a major contributor in their poor adjustment outcomes, yet the underlying psychological mechanisms of their links are not well understood. Based on the Social Identity Model of Identity Change, we conceptualized refugees' adjustment as a major life transition that depends on (i) the maintenance of existing pre-migratory group memberships (social identity continuity pathway), (ii) the development of new post-migratory social identities (social identity gain pathway), and (iii) the perceived compatibility between pre- and post-migratory identities. Belonging to multiple groups before displacement should facilitate both pathways. To test this idea, a longitudinal study with two measurement points over four months was conducted. The sample consisted of 60 asylum seekers in Greece. Using multilevel modeling, we found that social identity continuity and gain were positively related to socio-cultural adjustment, health-related adjustment, and well-being. Adjustment outcomes at Time 2 were predicted by the levels of social identity continuity at Time 1, and by group memberships before displacement through the two pathways at Time 1. Significant interactions also emerged between perceived compatibility and the two pathways. In general, the findings are consistent with SIMIC's theorizing suggesting that to understand refugees' adjustment in host countries, it is important to systematically consider the social identity processes that unfold over time.

*Keywords:* refugees, adjustment, social identity, SIMIC

## **Adjustment of Refugees in Greece as a Social Identity Process: A Longitudinal Study**

Greece has recently evolved from a transit to an end point for many refugees; most of the hundreds of thousands of refugees already in the country, and the many to come, will likely need to settle in Greece (United Nations High Commissioner for Refugees [UNHCR], 2021). Nevertheless, hope for a better future coexists with major difficulties. Indeed, several lines of evidence indicate that refugees' adjustment often suffers in host countries. Across 29 studies and a total of 16,010 long-settled war-affected refugees, the prevalence of depressive and anxiety disorders exceeded 20% (Bogic et al., 2015). Refugees were at considerably higher risk compared to the general population (up to 15 times higher) for developing a serious psychological disorder, even several years after their resettlement. Even when compared to other immigrant groups, refugees exhibit higher levels of mental disorders (Pampati et al., 2018). A similar picture emerges when considering their physical health, with refugees being at high risk for chronic (e.g., Yun et al., 2012) and infectious diseases (e.g., Rossi et al., 2012).

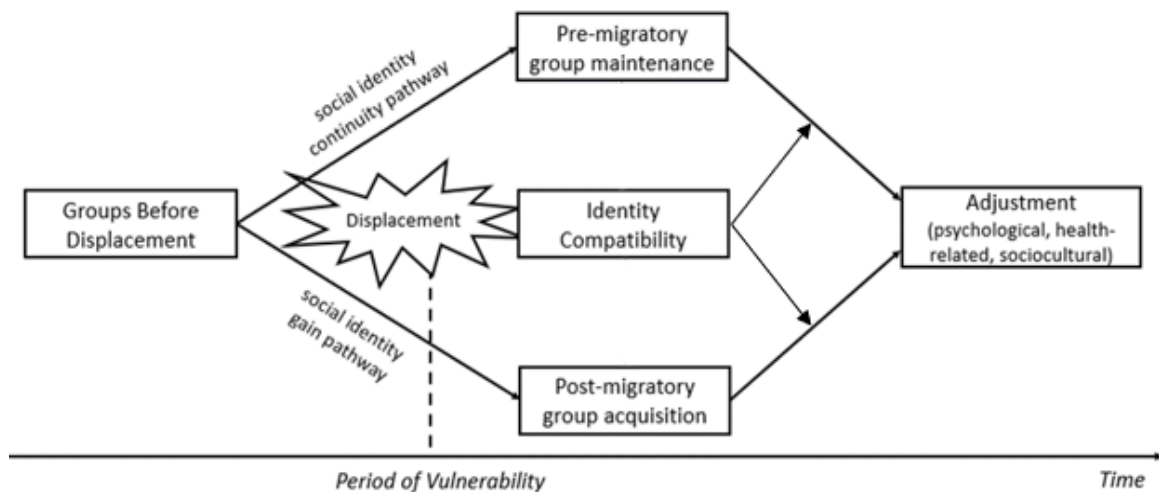
Although multiple determinants such as trauma exposure (Schock et al., 2016) should contribute to these adverse outcomes, there is an increasing realization that social factors associated to social isolation and social identity loss—due to displacement—play a pivotal role (Berthold et al., 2019; Hynie, 2017; Li et al., 2016). Across a wide range of populations, social isolation is linked to poor physical and mental health (Taylor et al., 2018; Teo et al., 2013; Vanhalst et al., 2013), and increased risk for mortality (Pantell et al., 2013), with refugees being especially vulnerable to its impact even if relocated decades ago (Berthold et al., 2019). This is no surprise considering they have often been abruptly separated from their family and social network, arriving in host countries where lack of language skills, discrimination, poverty, and unfavorable asylum policies further exacerbate social disconnection (Hynie, 2017). Conversely, being a member of and identifying with social groups could potentially act as a protective factor for refugees (Jetten et al., 2017). Indeed, among refugees, a sense of belonging to the host culture (Beiser & Hou, 2017), preserved group memberships after migration (Smeekes et al., 2017), and stronger feelings of ethnic group identification (Çelebi et al., 2017) have all been linked to increased well-being and/or better mental and physical health. However, to date, there is a lack of a clear theoretical framework linking social connectedness and social identity processes to refugees' adjustment in the host country.

In this regard, the Social Identity Model of Identity Change (SIMIC; see Figure 1), which unifies themes of social identification to adjustment in the context of major life transitions (Haslam et al., 2021), could provide a more systematic and parsimonious analysis of the social identity processes which promote or impede refugees' adjustment. SIMIC is based on the social identity approach (SIA; Reicher & Haslam, 2006). The fundamental premise of the SIA is that social groups (e.g., family, peers, club)—along with one's individuality—determine one's sense of self, such as the more individuals identify with a group, the more that group shape their beliefs and behavior. Such group identification

serves as a coping resource by satisfying basic psychological needs such as a sense of belonging, meaning, purpose, self-efficacy, self-control, and social support, all of which are central to well-being, health, and adjustment (Jetten et al., 2017).

**Figure 1**

*Schematic Representation of SIMIC (adapted from Jetten et al., 2018)*



For refugees, such basic psychological resources are of vital importance to effectively face the challenge of leaving behind old pre-migratory groups—and thus the social identities attached to them—while gaining new social identities by acquiring new post-migratory group memberships. This is the challenge of reconstructing and changing their social identity. Nevertheless, it is exactly because social identities provide the necessary psychological resources to cope with transition phases (Greenaway et al., 2016) that, when these identities are threatened (or even abandoned) due to migration, one's ability to adapt to the host country is undermined.

Thus, settling as a refugee in a new country is related to a sense of social identity loss. If refugees are to cope with such a loss and successfully adjust to the new life, they need to reconstruct their social identity. Specifically, according to SIMIC, refugees' adjustment in the host country represents a major life transition that depends on four key aspects:

(a) The maintenance of existing pre-migratory group memberships that provides a sense of social identity continuity (social identity continuity pathway). Undoubtedly, refugees are vulnerable to feelings of social identity discontinuity after fleeing their homeland, which in turn might decrease social connectedness and hence their coping resources (Cruwys et al., 2021; Iyer et al., 2008). Indeed, a recent study with Syrian refugees found that a sense of social identity continuity after migration had a positive effect on life satisfaction and predicted lower levels of depression (Smeeke et al., 2017).

(b) The acquisition of new post-migratory group memberships and the development of new social identities (social identity gain pathway). Being a member of and identifying with new groups should also be helpful for refugees' adjustment in the new environment since it can expand their support base, create feelings of belonging to the new environment, and help them cultivate skills that are beneficial for their adjustment (Ward & Geeraert, 2016). Moreover, relating with other refugees in the new land can invoke a sense that other people share common struggles (the sense that "I am not going through this alone"; Haslam et al., 2008).

(c) The perceived compatibility between pre- and post-migratory identities, which can either catalyze or obstruct the two pathways in case of high or low perceived compatibility, respectively (Iyer et al., 2009; Jetten et al., 2008). That is, refugees would be less likely to benefit from gaining new and maintaining old identities if they perceive their post-migratory identities (e.g., host culture identity) as incompatible with their pre-migratory identities (e.g., heritage culture identity). Evidence from the acculturation literature demonstrates that bicultural (or multicultural) individuals with high bicultural (or multicultural) identity integration are better adjusted (Benet-Martínez & Haritatos, 2005; Chen et al., 2008; Yampolsky et al., 2016). This is a subjective perception of dual (or multiple) identities as compatible and integrated within their self-concept instead of being conflictual and compartmentalized. Perhaps because they can effectively alternate their behaviours depending on the social context (LaFromboise et al., 1993), they have a wider network of friendships from both cultures (Mok et al., 2007), as well as higher cognitive complexity and flexibility (Benet-Martínez et al., 2006).

(d) Belonging to multiple groups before displacement is considered to facilitate both pathways. This is because if refugees lose one source of identification during times of change, still, they will likely be able to rely on their other established group memberships for support. Further, multiple group memberships could serve as an experiential platform and as sociopsychological capital upon which refugees can build new identities (Iyer et al., 2009; Jones & Jetten, 2011).

Several studies support SIMIC in the context of various life transitions, such as giving birth, entering university, moving overseas to study, overcoming addiction, and suffering a stroke (for a review see Haslam et al., 2021). Nevertheless, except for a cross-sectional study which focused on the importance of multiple group memberships and social identity continuity among Syrian refugees in Turkey (Smeeke et al., 2017), the relevance of SIMIC theorizing to the experiences of refugees has not been empirically tested. This is important because there are reasonable grounds to believe that basic tenets of SIMIC might not generalize to refugee populations. First, most refugees come from non-Western cultures, while most research on the social identity approach to health has been conducted with Western samples (Henrich et al., 2010). In fact, recent evidence suggests that belonging to multiple groups might be of little benefit for the well-being of individuals from Asian cultures compared to Westerners (Chang et al., 2016). Second, stigmatized and devalued group identities that are unfavorably evaluated by others or by ingroup members themselves (as is often the case for refugees) can potentially act as a "social curse" undermining well-being (DeMarco & Newheiser, 2019; Kellezi et al., 2019).

## The Present Study

The aim of the present study was to test for the existence of preliminary evidence on the relevance of SIMIC for refugees' adjustment. Following previous work which explored the acculturation-adjustment link (Nguyen & Benet-Martinez, 2013), we studied three domains of adjustment: sociocultural, health-related, and psychological. We planned a two-wave longitudinal panel study with an interval of four months to investigate whether social identity (i) continuity, (ii) gain, and (iii) compatibility processes, as well as (iv) the number of group memberships before displacement account for refugees' sociocultural, health-related, and psychological adjustment in Greece over the 4-month period.

Accordingly, we hypothesized that better sociocultural, health-related, and psychological adjustment will be predicted by maintenance of pre-migratory group memberships (H1a) and acquisition of new post-migratory group memberships (H1b) over time. We also expected an interaction between baseline continuity and time, as well as between baseline gain and time, in predicting the adjustment outcomes four months later. That is, we expected that a higher score in pre-migratory group maintenance and post-migratory group acquisition at Time 1 (T1) would predict an increment of adjustment at Time 2 (T2; H2a, H2b). Further, we hypothesized that group memberships prior displacement would predict increased adjustment at T2 through the continuity and gain pathways as measured at T1 (mediation effects; H3a, H3b). Our fourth hypothesis was that the effects of the above two pathways on adjustment at T2 would be moderated by the perceived compatibility between the pre- (H4a) and post-migratory (H4b) social identities as measured at T1. Specifically, a higher (or lower) sense of compatibility would strengthen (or weaken) the relationship between the two pathways and adjustment.

## Method

### Participants

We used a convenience sample of refugees living independently in the greater Athens city area, who arrived at the social service department of a humanitarian non-governmental organization in Athens. The sample consisted of 60 sub-Saharan African refugees (54 men and 6 women). Their age ranged from 18 to 42 with a mean of 27.4 ( $SD = 6.4$  years). Twenty-one participants originated from the Democratic Republic of the Congo, eight from Nigeria, seven from Cameroon, six from Guinea, five from Togo, four from Sierra Leone, and nine from other countries (South Sudan, Mali, Ivory Coast, Comoros, Benin, Ghana, Gambia). In total, 22% of the sample had arrived in Greece 6 to 12 months ago, 55% 12 to 24 months and 23% were in Greece for more than 2 years. Regarding their educational level, 25% had received less than 9 years of education, 37% 9 to 12 years and 33% over 12 years.

## **Procedure**

Subjects were approached by the first author at the premises of the non-governmental organization, who then screened them for the following inclusion criteria: (i) at least 18 years of age, (ii) application for international protection in Greece, and (iii) ability to read and write in English and/or French. The language criterion was set because both languages were fluently spoken by the researcher. Participation was voluntary without any compensation.

After obtaining informed consent, the researcher explained in simple non-technical language the definition of a social group. Participants had to then answer in a true-or-false format whether four items were exemplars of social groups (e.g., parents and their children, people at a shopping center). In case of a wrong answer, the term was re-explained to ensure comprehensibility. In turn, guided by the researcher, participants familiarized themselves with the response scale (i.e., visual analogue scale; see Materials) by indicating their agreement or competence to some neutral statements (e.g., 'I like listening to music', 'playing football'). They were then given a 6-page battery of questionnaires which they completed individually at a quiet space at the organization's premises. All participants who completed the baseline measure (T1) were invited by phone at the same premises four months later (T2) to complete the same battery. The retention rate at T2 was 75%. Data collection took place from July 2020 to February 2021.

## **Materials**

The study employed five questionnaires to measure the social identity variables as outlined by SIMIC and three adjustment outcomes: sociocultural, health-related, and psychological adjustment. For all questionnaires we used the same horizontal 8 cm visual analogue response scale (VAS) orientated from left to right. The left and right extremes were labelled differently in each questionnaire (see below). Participants had to put a cross along the horizontal line to indicate their answer. To compute the score on each item, we measured the distance between the starting point of the line and participants' mark with a ruler. The resulting distance was rounded to the closest multiple of 0.5. The final scores ranged from 1 to 9. In addition, sociodemographic and background information was collected, including age, gender, nationality, country of birth, native and other languages spoken, level of education, arrival date in Greece, and intention to stay in Greece. All materials were available both in English and French.

### ***Social Identity Measures***

A questionnaire with 15 statements and four subscales was employed as an index of SIMIC's four social identity variables: groups before displacement, pre-migratory group maintenance, post-migratory group acquisition, and identity compatibility. For all social identity variables, the VAS was anchored at each end by the descriptors 'disagree' (left) and 'agree' (right). The English version was translated into French by two bilingual translators (forward-backward method), after explaining to them the purpose of the study and that the goal was not to attain literal translation but linguistic and cultural equivalence.

*Groups Before Displacement* was assessed with four items adapted from the Exeter Identity Transition Scale (EXITS; Haslam et al., 2008). The items measured the degree to which participants saw themselves as being members of multiple social groups before fleeing their country of origin (e.g., 'Before leaving my country of origin, I belonged to lots of different groups'). The measure displayed good internal consistency at T1 ( $\alpha_{T1} = .86$ ) and T2 ( $\alpha_{T2} = .83$ ). *Pre-migratory group maintenance* was evaluated by a 4-item subscale adapted from EXITS (Haslam et al., 2008), measuring the extent to which respondents maintained their social groups at their country of origin (e.g., 'After coming to Greece, I continue to have strong ties with the same groups as before leaving my country of origin'). The measure was found to have good reliability at T1 ( $\alpha_{T1} = .90$ ) and T2 ( $\alpha_{T2} = .89$ ). *Post-Migratory Group Acquisition* was assessed with four items adapted from EXITS, reflecting whether participants had been able to join and create ties with new social groups in Greece (e.g., 'After coming to Greece, I have joined the activities of new groups'). Its internal consistency was  $\alpha_{T1} = .90$  and  $\alpha_{T2} = .93$ . *Identity Compatibility* was assessed using three items adapted from Iyer et al. (2009): 'The groups I belonged to at my country of origin share similar characteristics with my new groups in Greece', 'The groups I belonged to at my country of origin do not have much in common with my new groups in Greece' (reversed), and 'The groups I belonged to at my country of origin could socialize or integrate with my new groups in Greece'. Reliability was acceptable at T1 ( $\alpha_{T1} = .69$ ) but very poor at T2 ( $\alpha_{T2} = .24$ ). In both cases, the reversed item was problematic; when it was dropped, the Spearman-Brown coefficient (the most appropriate reliability statistic for a 2-item scale; Eisinga et al., 2012) indicated good reliability ( $\rho_{T1} = .88$ ;  $\rho_{T2} = .76$ ).

### ***Sociocultural Adjustment***

Sociocultural adjustment was measured with the Revised Sociocultural Adaptation Scale (SCAS-R; Wilson et al., 2017), which indicates the degree to which respondents have developed the necessary skills and cultural competences to function effectively in Greece (e.g., 'Understanding and speaking Greek', 'Obtaining community services I require'). The scale includes 11 items and three domains: social interaction, community engagement, and ecological adaptability. Participants had to self-assess their competency in each item along the horizontal line of the VAS from 'Not at all competent' to 'Extremely competent'. The SCAS-R was translated into French by following the exact same procedure that was used for the translation of the social identity measures. Internal consistency was high ( $\alpha_{T1} = .89$ ;  $\alpha_{T2} = .91$ ).

### ***Health-Related Adjustment***

Health-related adjustment was indexed by the physical domain subscale of the World Health Organization Quality of Life Assessment (WHOQOL Group, 1998; adapted in French by Lefrançois, 2014). The instrument includes seven items, each evaluating one facet of physical health over the course of the last two weeks (i.e., activities of daily living, dependence on medicinal substances and aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, work capacity). To remain consistent with the original response scale proposed by the WHOQOL Group, we used four different descriptors for the VAS (from



left to right): 'not at all' - 'extremely' (e.g., 'How much do you need any medical treatment to function in your daily life?' [reversed]), 'not at all' - 'completely' (e.g., 'Do you have enough energy for everyday life?'), 'very poor' - 'very good' (e.g., 'How well are you able to get around?'), and 'very dissatisfied' - 'very satisfied' (e.g., 'How satisfied are you with your capacity for work?'). Reliability coefficients were relatively low, especially at T2, albeit acceptable ( $\alpha_{T1} = .70$ ;  $\alpha_{T2} = .63$ ).

### ***Psychological Adjustment***

Two dimensions were used to operationalize psychological adjustment: well-being and psychological distress. *Well-being* was measured with the 5-item Satisfaction with Life Scale (SWLS; Pavot & Diener, 2008;  $\alpha_{T1} = .78$ ;  $\alpha_{T2} = .83$ ; e.g., 'I am satisfied with my life'). *Psychological distress* was assessed using the Hopkins Symptom Checklist-10 (HSCL-10; Schmalbach et al., 2019;  $\alpha_{T1} = .85$ ;  $\alpha_{T2} = .84$ ), a 10-item scale that measures depression and anxiety. Participants rated the extent to which they experienced certain symptoms in the last two weeks (e.g., 'Feeling fearful', 'Blaming yourself for things', 'Difficulty falling asleep, staying asleep'). The labels at the VAS (from left to right) were 'disagree' and 'agree' for the SWLS and 'not at all' and 'extremely' for the HSCL-10. Both questionnaires had been translated and adapted in French in previous studies (Blais et al., 1989; Le Bris et al., 2017).

## **Results**

Missing data were estimated through Expectation-Maximization algorithm (Little & Rubin, 2019) using Missing Value Analysis in IBM SPSS Statistics v. 25. The rest of the analyses were conducted in Jamovi 1.6.23 (The Jamovi Project, 2021). The results of statistical tests with  $p$  values  $\leq 0.05$  were considered significant.

The overall effect of group maintenance and group acquisition on adjustment (H1a, H1b), and their interaction with time in predicting adjustment (H2a, H2b) were analyzed with linear mixed models using GAMLj Jamovi module (Gallucci, 2019a). The restricted maximum likelihood approach (REML) was used as an estimation method. Each of the four dependent variables of interest (i.e., sociocultural adjustment, health-related adjustment, anxiety/depression, well-being) were analyzed in separate models with Time (T1, T2) as an independent factor, and Groups Before, Group Maintenance and Group Acquisition as covariates. Participant ID was set as a random intercept effect; Groups Before, Group Maintenance, Group Acquisition, Time $\times$ Group Maintenance, and Time $\times$ Group Acquisition were Fixed Effects. The proportions of reduced error (pseudo  $R^2$ ) are reported in  $R^2$  marginal ( $R^2_M$ : the variance explained by the fixed effects over the total variance of the dependent variable) and  $R^2$  conditional ( $R^2_C$ : the variance explained by the fixed and the random effects together over the total variance of the dependent variable). Effect estimates are stated with 95% confidence intervals.

**Table 1**  
*Summary of Fixed Effects Parameter Estimates for each Adjustment Outcome Model*

|                    | Effect                 | $\beta$ | SE    | 95% CI (LL, UL) |        | df    | t     | p                |
|--------------------|------------------------|---------|-------|-----------------|--------|-------|-------|------------------|
| Sociocultural      | Intercept              | 5.249   | 0.119 | 5.033           | 5.477  | 56.0  | 43.98 | <b>&lt; .001</b> |
|                    | Groups Before          | 0.190   | 0.076 | 0.032           | 0.362  | 112.3 | 2.49  | <b>.014</b>      |
|                    | Group Maintenance      | 0.249   | 0.065 | 0.110           | 0.381  | 112.2 | 3.79  | <b>&lt; .001</b> |
|                    | Group Acquisition      | 0.198   | 0.062 | 0.068           | 0.330  | 109.1 | 3.20  | <b>.002</b>      |
|                    | TimexGroup Maintenance | -0.148  | 0.087 | -0.319          | 0.022  | 61.6  | -1.70 | .095             |
|                    | TimexGroup Acquisition | 0.144   | 0.082 | -0.021          | 0.303  | 65.1  | 1.76  | .084             |
| Health-Related     | Intercept              | 5.331   | 0.122 | 5.082           | 5.569  | 58.0  | 43.73 | <b>&lt; .001</b> |
|                    | Groups Before          | -0.093  | 0.077 | -0.259          | 0.058  | 112.1 | -1.21 | .230             |
|                    | Group Maintenance      | 0.279   | 0.066 | 0.157           | 0.406  | 112.5 | 4.21  | <b>&lt; .001</b> |
|                    | Group Acquisition      | 0.196   | 0.063 | 0.072           | 0.318  | 108.8 | 3.12  | <b>.002</b>      |
|                    | TimexGroup Maintenance | 0.251   | 0.088 | 0.084           | 0.422  | 63.3  | 2.86  | <b>.006</b>      |
|                    | TimexGroup Acquisition | -0.133  | 0.083 | -0.286          | 0.043  | 66.7  | -1.61 | .112             |
| Anxiety/Depression | Intercept              | 4.816   | 0.162 | 4.511           | 5.153  | 51.3  | 29.81 | <b>&lt; .001</b> |
|                    | Groups Before          | 0.080   | 0.112 | -0.158          | 0.311  | 111.9 | 0.72  | .474             |
|                    | Group Maintenance      | -0.027  | 0.095 | -0.210          | 0.172  | 106.5 | -0.29 | .776             |
|                    | Group Acquisition      | -0.119  | 0.092 | -0.308          | 0.051  | 112.9 | -1.30 | .195             |
|                    | TimexGroup Maintenance | 0.241   | 0.137 | -0.032          | 0.502  | 60.1  | 1.76  | .084             |
|                    | TimexGroup Acquisition | -0.266  | 0.128 | -0.507          | -0.003 | 64.8  | -2.07 | <b>.042</b>      |
| Well-Being         | Intercept              | 4.102   | 0.134 | 3.837           | 4.392  | 53.0  | 29.34 | <b>&lt; .001</b> |
|                    | Groups Before          | 0.032   | 0.092 | -0.163          | 0.215  | 113.0 | 0.35  | .727             |
|                    | Group Maintenance      | 0.420   | 0.079 | 0.269           | 0.578  | 110.7 | 5.34  | <b>&lt; .001</b> |
|                    | Group Acquisition      | 0.174   | 0.075 | 0.028           | 0.310  | 110.9 | 2.32  | <b>.022</b>      |
|                    | TimexGroup Maintenance | 0.305   | 0.108 | 0.080           | 0.512  | 59.7  | 2.83  | <b>.006</b>      |
|                    | TimexGroup Acquisition | -0.044  | 0.101 | -0.230          | 0.179  | 63.6  | -0.44 | .664             |

Note. Significant effects at  $p < .05$  in bold.

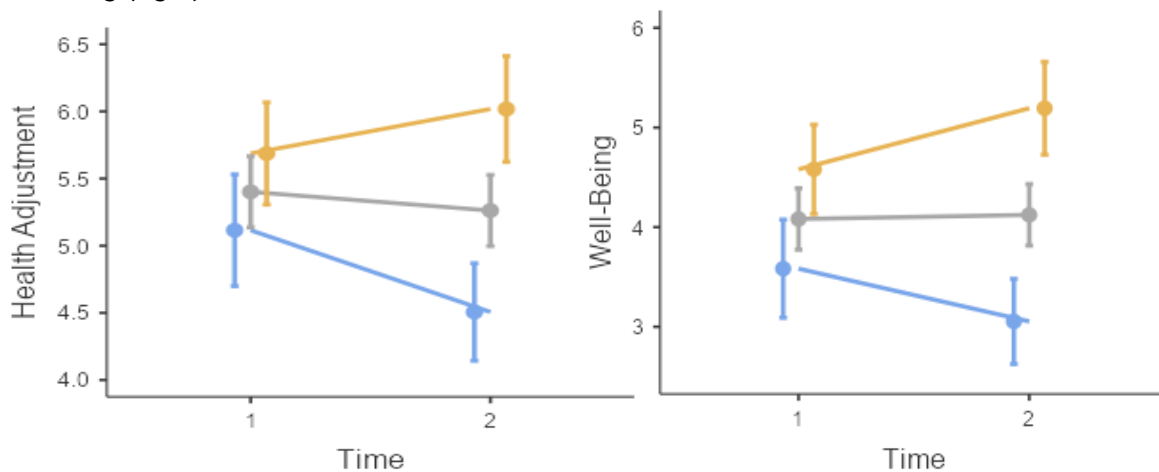
Both the fixed effects and the fixed and random effects together explained large proportions of the total variance of sociocultural adjustment ( $R^2_M = .488$ ,  $R^2_C = .794$ ), health-related adjustment ( $R^2_M = .355$ ,  $R^2_C = .747$ ) and well-being ( $R^2_M = .456$ ,  $R^2_C = .761$ ).

A different picture emerged regarding anxiety/depression where the fixed effects explained a very small part of the total variance, in contrast to the fixed and random effects combined ( $R^2_M = .0486$ ,  $R^2_C = .5080$ ). Random effects showed large variation between participants in sociocultural adjustment (variance = 0.636,  $SD = 0.798$ ,  $ICC = .598$ ), health-related adjustment (variance = 0.670,  $SD = 0.819$ ,  $ICC = .607$ ), anxiety/depression (variance = 1.01,  $SD = 1.01$ ,  $ICC = .483$ ) and well-being (variance = 0.837,  $SD = 0.915$ ,  $ICC = .560$ ).

Fixed effect parameter estimates for each adjustment outcome are reported in Table 1. Overall, both pre-migratory group maintenance and post-migratory group acquisition were significant predictors of socio-cultural adjustment, health-related adjustment, and well-being, but not of anxiety/depression. We also found significant interactions between time and pre-migratory group maintenance (see Table 1). Higher levels of pre-migratory group maintenance at T1 predicted an increment of health-related adjustment and well-being at T2, while lower levels predicted a decrement (Fig. 2). For sociocultural adjustment and anxiety/depression the interactions were non-significant. Regarding post-migratory group acquisition, there was a significant interaction by time only for anxiety/depression (Fig. 3). Higher levels of post-migratory group acquisition at T1 led to less psychological distress at T2 and vice versa.

**Figure 2**

*Interaction of Time by Pre-Migratory Group Maintenance on Health Adjustment (left) and Well-being (right)*

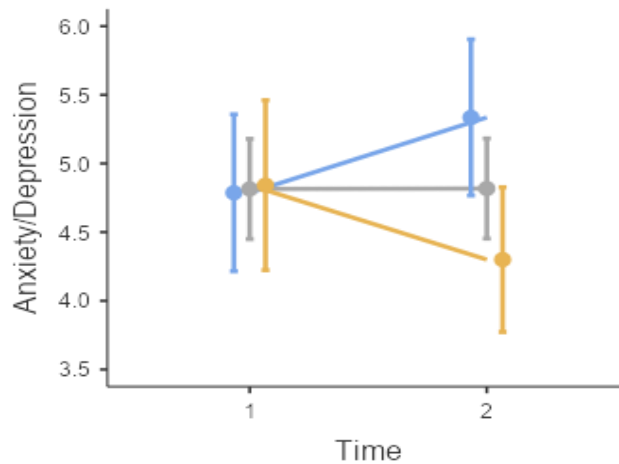


*Note.* Blue: low group maintenance (Mean-1SD); orange: high group maintenance (Mean+1SD); grey: average group maintenance. Vertical lines depict 95% CI.

To investigate H3a and H3b, we tested four mediation models using the jAMM module (Gallucci, 2019b), in which T1 group maintenance and group acquisition were the mediators, Groups Before was the covariate and each of the four adjustment outcomes at T2 were the dependent variables. As shown in Table 2, pre-migratory group maintenance and post-migratory group acquisition at T1 fully mediated the relationship between Groups Before and well-being at T2. Group maintenance also fully explained the relationship of Groups Before with sociocultural and health-related adjustment. All other mediations were non-significant.

**Figure 3**

*Interaction of Time by Post-Migratory Group Acquisition on Anxiety/Depression*



Note. Blue: low group acquisition (Mean-1SD); orange: high group acquisition (Mean+1SD); grey: average group acquisition. Vertical lines depict 95% CI.

**Table 2**

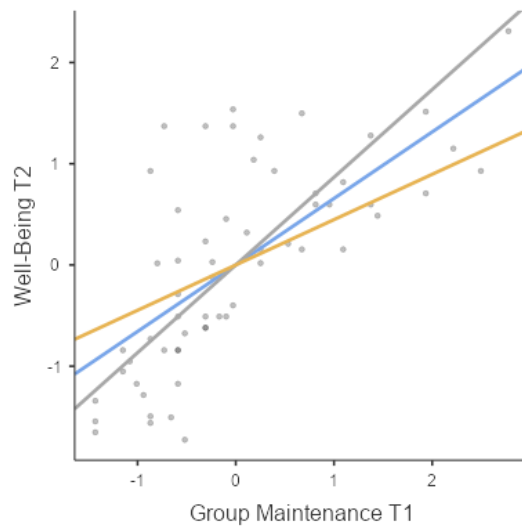
*Total, Direct, and Indirect Effects of Groups Before on each Adjustment Outcome Through Group Maintenance and Group Acquisition*

| Criterion variable<br>Predictors | Total effect | Direct effect | Indirect effects  |                   |
|----------------------------------|--------------|---------------|-------------------|-------------------|
|                                  |              |               | Group Maintenance | Group Acquisition |
| Sociocultural Adjustment         |              |               |                   |                   |
| Groups Before                    | .423***      | .149          | .191*             | .083              |
| Health-related Adjustment        |              |               |                   |                   |
| Groups Before                    | .330**       | -.031         | .301***           | .06               |
| Anxiety/Depression               |              |               |                   |                   |
| Groups Before                    | .005         | .229          | -.150             | -.073             |
| Well-being                       |              |               |                   |                   |
| Groups Before                    | .512***      | .077          | .269***           | .166*             |

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

**Figure 4**

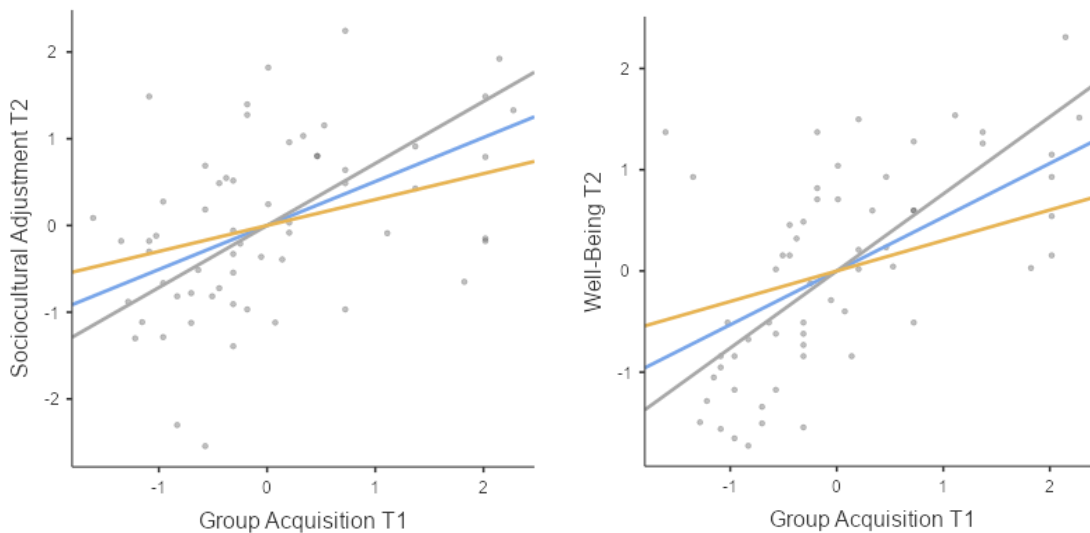
*Interaction of T1 Group Maintenance by Identity Compatibility on T2 Well-Being*



*Note.* Grey: low identity compatibility (Mean-1SD); orange: high identity compatibility (Mean+1SD); blue: average identity compatibility.

**Figure 5**

*Interaction of T1 Group Acquisition by Identity Compatibility on T2 Sociocultural Adjustment (left) and Well-Being (right)*



*Note.* Grey: low identity compatibility (Mean-1SD); orange: high identity compatibility (Mean+1SD); blue: average identity compatibility.

Finally, H4a and H4b were tested through a series of eight moderation models (jAMM module; Gallucci, 2019b), in which the predictor variable was either T1 pre-migratory group maintenance or T1 post-migratory group acquisition, T1 identity compatibility was set as the moderator, and each of the four adjustment outcomes at T2 as the dependent variable. We found a significant moderation of identity compatibility in the relationship between pre-migratory group maintenance and T2 well-being ( $\beta = -.211$ ,  $p = .011$ ). Similarly, there was a significant moderation of identity compatibility in the relationship of post-migratory group acquisition with T2 sociocultural adjustment ( $\beta = -.209$ ,  $p = .047$ ) and well-being ( $\beta = -.232$ ,  $p = .005$ ). As depicted in Figures 4 and 5, in all three cases, group maintenance and group acquisition at T1 predicted higher levels of adjustment at T2 but these associations were stronger for participants with low levels of identity compatibility at T1. All other moderation effects were non-significant.

## Discussion

The present study allows to appreciate part of refugees' experience in the host cultural context, by providing evidence for key aspects of SIMIC in a refugee sample in Greece. Measuring four adjustment outcomes over a four-month period, we found that refugees' socio-cultural adjustment, health-related adjustment, and well-being were dependent to some extent on whether they maintained pre-migratory groups and acquired post-migratory groups after their arrival. Longitudinally, higher levels of pre-migratory group maintenance at T1 were predictive of gains in health-related adjustment and well-being four months later. Likewise, higher levels of post-migratory group acquisition at baseline led to diminished anxious and depressive symptomatology at T2. Further, T1 pre-migratory group maintenance fully mediated the relationship of multiple group membership before displacement with sociocultural and health-related adjustment at T2. This was also the case for well-being but through both pathways. Finally, identity compatibility moderated some of these relationships in a consistent way; the two pathways at T1 were more strongly associated to adjustment at T2 for participants who reported a lower level of compatibility.

In accordance with previous studies, stressing the significance of the social identity continuity pathway (Cruwys et al, 2021; Iyer et al., 2008) and of the social identity gain pathway (Cruwys et al., 2014) in adjusting to major life changes, both pre-migratory group maintenance and post-migratory group acquisition predicted sociocultural adjustment, health-related adjustment, and well-being (but not psychological distress) over time, largely confirming H1. Importantly, we found some evidence that a higher sense of social identity continuity and gain at baseline was related to better adjustment outcomes four months later (H2). This is remarkable given the short time interval and provides preliminary support for the proposed causal mechanisms of SIMIC, although strong statements about causality cannot be made based on our design. Probably due to the instability of refugees' life circumstances, even four months are sufficient to capture changes in their social groups and adjustment. This stresses the importance of considering how variables of interest change with time as cross-sectional designs might mask these changes. In our study,

anxiety/depression was not predicted by either pathway across time, yet it significantly decreased four months later for refugees who had reported higher post-migratory group acquisition at T1.

The importance of social identity continuity for refugees' adjustment was further highlighted by the finding that pre-migratory group maintenance at T1 fully mediated the positive effect of multiple group memberships prior displacement on sociocultural adjustment, health-related adjustment, and well-being at T2 (H3a). It was not group belonging before fleeing that supported adjustment, but whether participants managed to maintain pre-migratory social connections and networks—and thus preserve a sense of cohesion between their old and new life. Possibly, multiple group membership before displacement makes it more likely that some of these group ties will be sustained after coming to Greece. For instance, a refugee might lose their old friendships but still be able to rely on their family ties as a source of identification. Notably, in the context of investigating the relevance of SIMIC in refugees, we failed to find the same mediational effect through the social identity gain pathway (H3b), apart from a weak total indirect effect on well-being. Considering that post-migratory group acquisition supported adjustment (H1b), perhaps gaining new group memberships for refugees might depend on contextual factors in the host country over and above multiple group memberships before fleeing. For example, a refugee who was a member of a university group in their country of origin might not be able to capitalize these past experiences and ties to join a new university in Greece, if access to the educational system is limited. Alternatively, it might be the case that joining post-migratory groups does not necessarily translate in joining new distinct groups (and most importantly internalizing new social identities). Refugees might be members of post-migratory groups, which however overlap and converge to few social identities (e.g., refugee identity and ethnic identity) and thus, provide less psychological resources. In any case, we cannot draw firm conclusions since we did not measure the characteristics of post-migratory groups. This may be an interesting avenue for future research.

Regarding the role of perceived compatibility between pre- and post-migratory groups, our data partly supported our hypotheses (H4a, H4b). We found evidence for the moderating role of compatibility at T1 on the relationship of group maintenance and group acquisition at T1 with well-being at T2. Compatibility also moderated the relationship between group acquisition and sociocultural adjustment. In all cases the moderation did not reverse the association (i.e., maintaining pre-migratory groups and joining post-migratory groups were beneficial irrespectively of perceived compatibility). Yet, the interaction was not in the expected direction. Refugees who perceived their pre-migratory and post-migratory groups as incompatible were not less likely to benefit from the two pathways. Instead, preserving old groups or joining new groups was more important for their adjustment, compared to refugees who perceived them as compatible. Why this might be the case? Low perceived compatibility might pose a threat to refugees' sense of self because holding conflicting social identities creates dissonance and low identity fit (Kulich et al., 2017). To resolve this conflict, refugees might rely on (and possibly identify more strongly with) pre- or post-migratory groups, while discarding post- or pre-migratory groups respectively. In other words, in case of low perceived compatibility it is as if one pathway becomes more potent to compensate

for the other. Nevertheless, based on our findings each pathway has different implications for the adjustment of refugees who perceive old and new groups as incompatible; gain seems to be beneficial for their sociocultural adjustment and well-being, whereas continuity only for the latter. This seems reasonable since being connected with groups (old or new) is crucial for their well-being, yet refugees cannot behaviorally adapt in the host country if they only rely on their pre-migratory groups. The above suggestion resonates well with the proposition of Huynh et al. (2011) that subjective cultural distance (perceptual-behavioral component of bicultural identity integration) might be a resolution strategy to counter a high sense of cultural conflict (affective component of bicultural identity integration) that creates psychological distress. From this perspective, refugees in our study might resolve this conflict by either merging their old and new identities or by keeping them separate (Amiot et al., 2007), with the conflict resolution strategy employed and its effectiveness depending on dispositional and contextual factors. Accordingly, even high perceived distance between old and new groups (i.e., low compatibility) might be beneficial for their well-being (as suggested by our findings) because it leads to low identity conflict. Future research should examine the different outcomes between refugees who are more inclined to orient themselves towards pre-migratory groups and refugees who prefer to join post-migratory groups, but also consider the factors that make refugees more likely to do so.

Taken together, our findings are broadly consistent with SIMIC, providing evidence for its major social identity processes postulated and enlarging its sphere of applicability to novel contexts. Although SIMIC has been tested against a wide range of populations (for a review see Haslam et al., 2021), to our knowledge there is only one study that has examined it among refugees. Smeekes et al. (2017) cross-sectionally investigated the relationships between multiple group memberships before displacement, social identity continuity, and depression, anxiety, and well-being, in a sample of Syrian refugees in Turkey. Our study largely confirms their findings, while extending their work by employing a longitudinal design with sub-Saharan African refugees, measuring additional adjustment outcomes, and more importantly testing SIMIC in its entirety. Here we make a preliminary attempt to provide a process-based psychological framework for interpreting and uniting existing evidence that links refugees' adjustment in the host country to various post-migratory social factors related to social identity loss and social identity threat (e.g., loneliness, stigma, discrimination, poverty; Hynie et al., 2017). The role of these social determinants in hindering their adjustment is undisputed but the underlying psychological mechanisms are yet to be uncovered. Adopting a social identity analysis permits to demonstrate (i) why this is the case from a psychological perspective, and thus (ii) make more specific predictions, and (iii) interfere successfully to achieve favorable individual and societal outcomes (Jetten et al., 2017).

Taking it a step further, a validated process-based psychological framework based on social identity theorizing that captures refugees' experience has the potential of being translated into innovative evidence-based interventions. For instance, insight into the processes postulated by SIMIC has recently supported the development of a group-based, social-identity intervention, known as Groups 4 Health (G4H) – a five module, manualized program, targeting mental health, physical health, and social connectedness (Haslam et al.,



2019). Thus, it might be that targeting these social processes would contribute to the improvement of refugees' well-being and mental health over and above dominant psychological interventions that seek to alleviate symptoms of anxiety, depression, and trauma, and that in essence embed individualistic assumptions about the self.

Moreover, our findings also speak to the acculturation literature. Specifically, the bidimensional models of acculturation propose two independent dimensions (Berry, 2001): (i) one's desire to retain and be in contact with their heritage culture (heritage cultural or ethnic orientation), and (ii) a desire to be involved with and participate to the culture of settlement (host cultural or national orientation). When these dimensions are crossed, they form four acculturation strategies: integration (orientation to both cultures), assimilation (orientation to the host culture), separation (orientation to the heritage culture only), and marginalization (rejection of both the heritage and host cultures). It has been demonstrated that integration, relative to other acculturation strategies, is generally associated with the more favorable adjustment outcomes (Nguyen & Benet-Martínez, 2013). On the other hand, marginalization is considered as the least adaptive strategy, with the other two strategies lying in between.

The above parallels our findings whereby both SIMIC pathways were associated to positive adjustment outcomes. That is, individuals with an orientation to both cultures might be better adjusted because they are more likely to benefit from both identity maintenance and gain, and thus have more psychological resources at their disposal to cope with life adversity inherent in migration (especially, forced migration). On the other extreme, marginalized individuals who reject both cultures lack these very same resources brought by the two pathways, as they would be less likely to preserve groups from their heritage culture and join new groups in the host culture. Interestingly, the beneficial effects of integration have been partly attributed to increased feelings of social connectedness and richer support networks (Mok et al., 2007; Ajrouch, 2008; Jetten et al., 2018). Noteworthy, our finding that identity compatibility moderates the positive effects of identity gain on adjustment also mirrors empirical evidence from the acculturation literature. Indeed, bicultural individuals (i.e., oriented to both cultures) who perceive their heritage and host cultures as harmonious are better adjusted, reporting higher self-esteem and less depressive symptomatology, compared to bicultural individuals who perceive them as conflicting (Chen et al., 2008; Nguyen & Benet-Martínez, 2007).

These conceptual analogies between SIMIC and bilinear acculturation models are rather intriguing as they indicate that social identity change processes and acculturation are closely intertwined, reflecting the same phenomenon viewed from a different angle (see also Jetten et al., 2018). As other researchers have already noted, adopting a social identity perspective is a promising avenue towards better understanding the sociopsychological processes underlying acculturation (Schwartz et al., 2014). Future research should directly investigate these conceptual links.

While our data point to positive developments in theory and research on social identity theorizing and refugees' adjustment, there are notable limitations in this study and our results should be interpreted with caution and be regarded as preliminary. First and foremost is the small number of participants, which might have rendered our study underpowered and

thus led to inflated false discovery rates and effect sizes (Button et al., 2013). Second, although inclusion of English and French-speaking refugees and convenience sampling were chosen for feasibility reasons (i.e., easier access to the population, no need for cultural mediators), they came at the expense of generalizability and selection biases. By definition, our sample was not representative of the refugee population in Greece as many ethnic groups such as Syrians and Afghans, were excluded. Similarly, the sample mostly consisted of men due to the under-representation of women in the social service department of the humanitarian organization. There are apparent gender differences in refugees that could affect the results. For instance, consistent with traditional culture-based gender norms, refugee women carry childrearing and family responsibilities and are less likely to actively seek employment or training in the host country (Abdelkerim & Grace, 2012; Khawaja & Hebbani, 2017). By extension, these additional barriers to community participation might render the social identity gain pathway much less accessible for them. Alternatively, gaining new social identities in the host country might create much more conflict in women because of the greater deviation from their traditional cultural roles. Further, there may also be a level of self-selection bias in the sample as to the reasons why some refugees decided to participate while some did not (e.g., perhaps those who participated were already better adjusted in Greece). That is, the conclusions of this study are not by any means generalizable to the population of refugees as a whole. Third, the instruments used in our survey were not culturally adapted and validated. Hence, cultural, linguistic, idiomatic, and contextual discrepancies might have decreased their validity and increased measurement error. Finally, although we used a longitudinal design, its observational nature does not allow strong claims about causality. This is further exacerbated by the fact that most refugees in our sample had been in Greece for a good period of time, thus we cannot assume a temporal order between social identity change and adjustment outcomes.

Despite the above limitations, given the very limited data on social identity and refugees' adjustment, the present paper makes some unique contributions in shedding light to some of the social identity mechanisms in play. Clearly, maintaining and building group memberships through the social identity continuity and the social identity gain pathways have an important role to play in protecting refugees from the harmful effects of fleeing their country of origin to secure safety in a foreign country. Further, belonging to multiple groups before fleeing supports refugees' adjustment because it is a basis for them to retain a sense of social identity continuity despite the tremendous changes in their life. Yet, in case refugees perceive their pre-migratory and post-migratory groups as incompatible, one of the two pathways (and possibly the respective identities) becomes much more important for their adjustment.

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