

The Individual Development of Cultural Identity and Psychological Well-being among Adolescents with a Migrant Background in Austria: A Longitudinal Study

Silvana Weber¹, Barbara Stiglbauer², Nicole Kronberger², & Markus Appel¹

¹Julius-Maximilians-University Würzburg, Germany

²Johannes Kepler University Linz, Austria

Manuscript accepted for publication in the journal
Cultural Diversity and Ethnic Minority Psychology (2020/11/03)

© 2021, American Psychological Association. This paper is not the copy of record and may not exactly replicate the final, authoritative version of the article. Please do not copy or cite without authors' permission. The final article will be available, upon publication, via its DOI: 10.1037/cdp0000451

Corresponding author:

Silvana Weber, Dr., Institute for Human-Computer-Media, Julius-Maximilians-University Würzburg, Oswald-Külpe-Weg 82, 97074 Würzburg, Germany, Phone: +49-0931-31-88366; Email: silvana.weber@uni-wuerzburg.de

Co-Authors:

Barbara Stiglbauer, Dr., Assis.-Professor (E-mail: barbara.stiglbauer@jku.at)
Department of Education and Psychology, Johannes Kepler University of Linz, Austria

Nicole Kronberger, Dr., Assoc.-Professor (E-mail: nicole.kronberger@jku.at)
Department of Education and Psychology, Johannes Kepler University of Linz, Austria

Markus Appel, Dr., Professor (E-mail: markus.appel@uni-wuerzburg.de)
Institute for Human-Computer-Media, Julius-Maximilians-University Würzburg

Acknowledgements:

This research was supported by the Austrian National Bank (OeNB, Anniversary Fund, project no 14994, awarded to Markus Appel). The authors would like to thank Carina Lackner for her support in conducting the studies. Special thanks to Prof. Dr. Timo Gnamb for his valuable advice concerning the statistical analyses. The study was conducted at the Johannes Kepler University Linz.

Abstract

Objectives: Research has shown that cultural identity and psychological well-being are associated. We suggest that negative stereotypes challenge the psychological well-being of people with a migrant background. This research focused on the dynamics of adolescents' ethnic/racial identity (ERI), national identity, stereotype vulnerability, and psychological well-being on the individual level. The study was conducted in Austria over the course of one school year, providing insights on developmental implications of cultural identity for adolescents with a migrant background in Europe.

Methods: The sample consisted of 317 (T1) adolescents with a migrant background, recruited at Austrian high schools (age: $M = 15.19$, $SD = 1.11$; 233 female; ethnic background: mainly Turkey and Ex-Yugoslavian countries). Longitudinal data from a 3-wave study were analyzed by means of a Random-Intercept Cross-Lagged Panel Model.

Results: Within-person effects provided a better explanation than the between-person approach. Within-person processes suggest that higher levels of ERI commitment and higher national identity predict higher levels of psychological well-being at a later time point, while higher levels of ERI exploration and higher stereotype vulnerability predict lower levels of psychological well-being. At the between-person level, findings indicate a positive correlation between ERI exploration and stereotype vulnerability.

Conclusion: The cultural identity and psychological well-being of adolescents with a migrant background fluctuate over time, influenced by the social context. Stereotype vulnerability contributes to lower levels of psychological well-being among adolescents with a migrant background in Austria. Our findings highlight the necessity to partition the variance of constructs to avoid confounding of between-person and within-person effects.

Keywords: cultural identity; psychological well-being; longitudinal methodology; stereotype vulnerability

Public Significance Statement

Adolescents with a migrant background' can identify with both their racial/ethnic background and the national culture. This research shows that committing to their cultural identities plays a crucial and protective role for adolescents' psychological well-being. In contrast, adolescents who are more vulnerable to negative stereotypes against their ethnic group have lower psychological well-being. Additionally, our research highlights the need to look at the dynamics of identity development within the respective national context over time.

The Individual Development of Cultural Identity and Psychological Well-being among Adolescents with a Migrant Background in Austria: A Longitudinal Study

The psychological well-being of immigrants and members of ethnic minority groups has attracted a substantial amount of public and scientific attention (e.g., World Migration Report, IOM, 2013; Hendriks, 2015; OECD, 2015), particularly in the face of perceived discrimination (e.g., Dimitrova et al., 2016; Guerra et al., 2019). According to *social identity theory*, a main source of psychological well-being is feeling positively about the groups an individual belongs to (Phinney, 1991; Tajfel & Turner, 1986). We observed adolescents with a migrant background in Europe, whose cultural identity is challenged by negative stereotypes against their ethnic group. Based on a three-wave longitudinal design, the associations between cultural identity (i.e., ethnic/racial identity and national identity), stereotype vulnerability, and psychological well-being were examined. To date, there is only little research on the longitudinal relationships of these variables. Most studies have focused on comparisons across individuals (i.e., between-person differences) instead of examining changes that occur within individuals (cf. Cheon & Yip, 2019). We address this research question by examining both between-person and within-person longitudinal associations. Moreover, there is a need for more research on longitudinal relationships between cultural identity and psychological well-being among people with a migrant background in Europe, who may encounter different acculturation experiences than, for example, immigrants in the United States.

Cultural Identity Development

There are varying conceptualizations of cultural identity in the literature. Broadly, this study focused on cultural identity based on *social identity theory*, defining cultural identity as a social identity, derived from the membership and self-identification with a cultural or ethnic group (Tajfel, 1978, 1981; Tajfel & Turner, 1986). Cultural identity is not a status or static

construct, but multidimensional and dynamic, including individuals' beliefs and attitudes about their cultural group memberships, as well as their identity development process over time (e.g., Umaña-Taylor et al., 2014b; see also Van de Vijver et al., 2015). We operationalize cultural identity as bidimensional in the tradition of Berry's conceptual framework (1997), including the identification with the ethnic culture and the national culture. Adolescents' cultural identity develops over time through a process of *exploration* (participation and search) of identity issues and *commitment* to relevant identity domains (Phinney & Ong, 2007), which constitute distinct yet interrelated subcomponents (Roberts et al., 1999; Umaña-Taylor et al., 2014b). *Identity exploration* is defined as the investigation and learning process about ones' cultural group, constituting rather cognitive and behavioral aspects, while *identity commitment* is understood as gaining a sense of belonging and feeling attached to the group, referring to more affective aspects (e.g., Phinney & Ong, 2007; Syed et al., 2013). However, they play different roles in the identity development of adolescents with a migrant background (e.g., Cheon & Yip, 2019; Umaña-Taylor et al., 2009), as outlined in the following.

There is a large heterogeneity in defining the construct of *national identity*. Over the past years, the term has been captured by anti-immigrant movements to promote an 'us against them' mentality (Bauer & Hannover, 2020), confusing it with nationalism and patriotism. In this work, following the social identity tradition of identification (Tajfel & Turner, 1986), we define national identity in rather inclusive terms, as the sense of belonging to the society adolescents grow up in (Verkuyten & Fleischmann, 2017).

Individuals' self-concept is characterized by positive valence, internal consistency, and continuity over space and time. The self-concept of adolescents develops through interactions with their context, with coherence and confusion as the central attributes

(Erikson, 1968).¹ Particularly during transition phases, adolescents face new experiences (e.g., inter-ethnic interactions), which influence their identity development (Huang & Stormshak, 2011). For adolescents with a migrant background, this may include experiences of negative attitudes against their ethnic group, which can trigger further identity exploration processes (Altschul et al., 2006; Rotheram & Phinney, 1987). Thus, cultural identities are not distinct clusters or stable characteristics (Berry et al., 2006), but continuous and malleable, permitting change throughout the process. Both, aspects of stability and variability across time and context are reflected in adolescents' ethnic/racial identity (ERI; Umaña-Taylor et al., 2014b). Huang and Stormshak (2011) found that 47.3% of adolescents with a migrant background showed a growth in ERI over the course of four years, while 34.6% remained stable, and 18.1% showed a decline. This variability over time needs to be considered when doing research on cultural identity, as "identity-in-context is not yet identity development-in-context" (p. 281, Bosma & Kunnen, 2008).

Cultural identities develop within the acculturation process (e.g., Arends-Tóth & Van de Vijver, 2006; Berry, 1997; Schwartz et al., 2006; Schwartz et al., 2007). *Acculturation* is conceptualized as the process of psychological and behavioral changes that result when immigrants are in direct contact with different cultures (Berry, 1997; Sam, 2006).

Characteristics of the receiving country, the society of origin, the immigrant group, their intergroup relations, and personal characteristics, such as socio-economic status, personality, and the individual's social context influence how individuals relate to a certain culture (Arends-Tóth & Van de Vijver, 2006). Thus, there result individual differences in the extent to which people with a migrant background identify with both their ethnic culture and their national culture. There is a broad body of research showing that challenges during the

¹ *Self-concept clarity* (Campbell et al., 2003; Campbell et al., 1996) was also included in the current research as an individual difference variable to assess a structural aspect of adolescents' self. Theoretical considerations as well as additional statistical analyses are provided in the online supplement (S7 and S8).

acculturation process can lead to changes in immigrants' identities and their psychological well-being (e.g., Acevedo-Polakovich et al., 2014; Aydinli-Karakulak & Dimitrova, 2016; Guerra et al., 2019; Safi, 2010; Schwartz et al., 2007; Umaña-Taylor et al., 2002; Umaña-Taylor et al., 2014b; Xu et al., 2015; Zeiders et al., 2017). This research focusses on the role of individual differences in perceived stereotypes against people with a migrant background. A detailed description of the acculturation conditions that people with a migrant background face in Austria can be found in the online supplement (S1).

Cultural Identity, Stereotype Vulnerability, and Psychological Well-being

Both, stable and dynamic facets are mirrored in previous research looking at immigrants' cultural identity over time. However, there are surprisingly few longitudinal studies, which examine implications of identity development (e.g., Fleischmann et al., 2019). In particular, there is a lack of longitudinal research on the association between cultural identity and psychological well-being among people with a migrant background in Europe, as most research in this field stems from the US. Recent results from a European sample (Lee, 2019) suggest that people with a migrant background who identify with both cultures (i.e., *integrated* individuals according to Berry, 1997, or *biculturals* according to Benet-Martínez & Haritatos, 2005) have higher psychological well-being compared to assimilated individuals (who identify with the national culture only). Yet, going beyond between-person differences, the variability of cultural identity (especially looking at both cultural identities separately) and psychological well-being within individuals is less well studied. Therefore, we investigated how – on the individual level – changes in both, ERI and national identity predict changes in psychological well-being over time.

Results concerning the relationship between ERI and psychological well-being are complex (see review by Rivas-Drake et al., 2014). In many studies, higher levels of ERI were related to better psychological well-being, more positive self-evaluations, and more self-

esteem (e.g., Berry et al., 2006; Phinney et al., 2001; Phinney et al., 1997; Rivas-Drake et al., 2014; Umaña-Taylor et al., 2014a; Umaña-Taylor & Updegraff, 2007). It is of particular importance, however, to examine both subcomponents of ERI separately. Research suggests a positive association between identity commitment and psychological well-being (cf. Syed et al., 2013; see also Umaña-Taylor et al., 2009). With respect to identity exploration, the results are more nuanced, as the outcome depends on the definition and operationalization of identity exploration. Some findings suggest a positive association between identity exploration (in this case defined as ‘participation’, assessed with the *Ethnic Identity Scale*, EIS, Umaña-Taylor et al., 2004) and psychological well-being (Syed et al., 2013) or self-esteem (Umaña-Taylor et al., 2009). Yet, if defined as ‘search’, assessed via the *Multigroup Ethnic Identity Measure* (MEIM; Phinney, 1992), a negative relationship with well-being emerges (Syed et al., 2013).

To understand the link between ethnic identity and psychological well-being, other factors within the acculturation process such as perceived negative stereotypes against ones group need to be considered (e.g., Acevedo-Polakovich et al., 2014; Phinney, 1991; Umaña-Taylor et al., 2002; Umaña-Taylor et al., 2014b). Individuals’ self-esteem, and thus, their psychological well-being becomes vulnerable during adolescence, due to an increase in susceptibility of how others perceive oneself (Rosenberg, 1979). This susceptibility may be reflected in individuals’ *stereotype vulnerability*, that is, the “tendency to expect, perceive, and be influenced by negative stereotypes about one’s social category” (Aronson & Inzlicht, 2004, p. 829). Throughout Europe, there is evidence of negative stereotypes against people with a migrant background, especially those who are of Turkish, Balkan, Arab, or North African descent, for example, being incompetent, lazy, criminal, or ignorant (e.g., Chateignier et al., 2009; Froehlich et al., 2016; Froehlich & Schulte, 2019; Igartua et al., 2011; Phalet & Kosic, 2006). Research showed that experiences of discrimination among

adolescents with a migrant background in thirteen Western countries were detrimental for their psychological well-being (Berry et al., 2006). Further, related constructs such as the awareness of racism, perceived discrimination, and the concern of confirming negative stereotypes can have a negative impact on psychological well-being, achievement, cognitive performance, and social adjustment (e.g., Altschul et al., 2006; Appel et al., 2015; French & Chavez, 2010; Guerra et al., 2019; Jasinskaja-Lahti et al., 2009; see also Sabatier, 2008). In this research, we examine how the perception of negative stereotypes against one's in-group may negatively affect the psychological well-being of adolescents with a migrant background in Austria.

Most empirical work on the association between ERI and perceived discrimination or stereotypes has been cross-sectional, limiting the results to between-person differences at one point in time. Recent longitudinal studies have started to include within-person developments (e.g., Cheon & Yip, 2019; Gonzales-Backen et al., 2018; Zeiders et al., 2017). According to the *identification-attribution model*, a strong ERI can increase minority members' sensitivity to signals of prejudice and discrimination (e.g., Gonzales-Backen et al., 2018, Sellers & Shelton, 2003; Umaña-Taylor & Updegraff, 2007). In particular, identity exploration can increase the negative influence of perceived discrimination (Gonzales-Backen et al., 2018; Phinney & Ong, 2007). However, other research does not support the predictive value of ERI in that regard (Zeiders et al., 2017). There is also evidence of bidirectional associations between ERI and perceived discrimination over time, suggesting that they are interrelated (Cheon & Yip, 2019; Yip, 2018). Contrarily, according to the *rejection-identification model*, a strong ERI (particularly a strong identity commitment component) may protect people with a migrant background against prejudice and discrimination (e.g., Armenta & Hunt, 2009; Branscombe et al., 1999; Cheon & Yip, 2019; Umaña-Taylor et al., 2008).

Taken together, there result conflicting predictions. On the one hand, both ERI (in particular the identity commitment subcomponent) and national identity are expected to be positively associated with psychological well-being. On the other hand, a stronger ERI, in particular the identity exploration subcomponent, is expected to increase stereotype vulnerability, which in turn is expected to be negatively associated with psychological well-being.

In that respect, national identity has not received as much attention in the literature as ERI. Some research suggests that a stronger identification with the national culture can increase stereotype resilience (e.g., Owens & Lynch, 2012; Weber et al., 2015). Verkuyten and Martinovic (2012) argue that the identification with the country of residence and the perception of prejudice and discrimination are interdependent of one another and call for longitudinal studies to clarify this relationship. Due to the lack of empirical studies, we refrain from making any specific predictions in that regard.

As theory and research suggest internal psychological processes in the associations between cultural identity, psychological well-being, and the perception of stereotypes, it is important to consider both, between-person differences and within-person developments over time. We expect the within-person effects to provide a better explanation of the predicted associations than the between-person approach.

The Present Research

This research aimed at examining the development and implications of cultural identity on the individual level (i.e., within-person processes) among adolescents with a migrant background in a longitudinal 3-wave study. One benefit of longitudinal data is that it is time ordered; thus, it provides information on temporal precedence of the studied variables. Our statistical approach goes beyond looking at the sole associations between aspects of

cultural identity and psychological well-being. It includes established relationships between the respective variables, but also identifies individual change over time.

Research approach. Cultural identity was operationalized by including *ethnic/racial identity* and *national identity* as two independent predictors. *Stereotype vulnerability* was included as an operationalization of individual perceptions of negative attitudes in the country of residence against people with a migrant background. *Psychological well-being* served as the main outcome variable. Cultural identities, stereotype vulnerability, and psychological well-being were observed over the course of one school year. Students were recruited at four Austrian high schools (9th grade) as part of a larger project (see the online supplement S2 for more information on the study's procedure and recruitment).

During the phase of early (12-14 years) and mid-adolescence (15-17 years), individuals experience a significant amount of change in the physical, social, emotional, and cognitive domain (Umaña-Taylor et al., 2014b). Additionally, students in our sample went through the transfer from secondary to high school, which poses new challenges and opportunities, particularly concerning the question of belonging to different social groups (cf. Tanti et al., 2011). We focus on adolescents with a migrant background, because particularly during adolescence and early adulthood, cultural identity development is a highly salient topic. Adolescents with a migrant background explore both their ethnic background and their national culture. We chose to concentrate on adolescents during this distinct period, as we aimed at observing individual change processes over time. To distinguish time-sensitive within-person processes from between-person relationships, a *Random-Intercept Cross-Lagged Panel Model* was employed (for a detailed description please see the paragraph *Statistical analyses* in the Methods section). Using this methodology, a person's developmental processes can be interpreted separately from more trait-like influences (i.e., between-person relationships), which are being controlled for as latent variables in the model.

Hypotheses. We hypothesized ethnic identity exploration to be negatively and ethnic identity commitment to be positively related to psychological well-being (Hypotheses 1a and 1b). National identity was expected to be positively related to psychological well-being (Hypothesis 1c). Ethnic identity exploration was hypothesized to be positively and ethnic identity commitment to be negatively related to stereotype vulnerability (Hypotheses 2a and 2b). Stereotype vulnerability was expected to be negatively related to psychological well-being (Hypothesis 3).

Method

Participants and Procedure

The final sample at T1 consisted of $n = 317$ adolescents with a migrant background (age: $M = 15.19$, $SD = 1.11$, Range: 13-19 years; female: $n = 233$). Participant retention over the three waves was acceptable (T2: $n = 257$; T3: $n = 211$; see online supplement S3 for dropout analyses). Among the 41 different immigrant backgrounds that were listed, the majority reported stemming from Turkey ($n = 54$) and Ex-Yugoslavian countries, such as Bosnia ($n = 66$), Serbia ($n = 40$), Kosovo ($n = 28$), and Croatia ($n = 23$). Other backgrounds listed by more than ten students were Chechnya ($n = 14$) and Afghanistan ($n = 12$). The majority (79.2%; $n = 251$) were second-generation immigrants (missing data: $n = 9$); a total of $n = 198$ (62.9 %) were born in Austria.² More background information on the sample is provided in the online supplement (S4).

The study took place in classrooms during regular school hours and was implemented by two researchers. We assessed all measures at the beginning, the middle, and the end of a school year, each at a distance of four months. If not available in German, scales were translated using the committee scale translation method (Van de Vijver & Leung, 1997). All

² Definition: 1st Generation: born in another country and immigrated after age 6. 2nd Generation: born in Austria or immigrated before age 6 with at least one parent born in another country.

participants were fluent in German. Data collection and management were in conformity with local ethical guidelines.³ At the end of the school year, participants were compensated (each class received monetary compensation based on the number of students in the class), thanked, and fully debriefed.

Measures

Cultural identity. ERI and national identity were assessed with two separate scales. ERI was measured with the MEIM (Phinney, 1992; Roberts et al., 1999), to assess the underlying processes of identity formation instead of a static immigrant status. The scale is designed as an assessment of the respective cultural identity that a person self-identifies with. The MEIM has been shown to be highly flexible, as it is applicable to various cultural contexts and reliable for adolescents (Roberts et al., 1999). First, self-identification as a group member was inquired, as a necessary prerequisite for assessing the strength of an individual's identification with a cultural group (see supplement S4 for the exact wording), followed by 12 items (e.g., "I feel a strong attachment towards my own ethnic group."), which were rated on a four-point scale (1 = *strongly disagree*; 4 = *strongly agree*). The scale comprises two subscales "identity exploration/search" (5 items) and "commitment/belonging" (7 items).⁴ The *Residence Culture Identity Measure* (RCIM), a parallelized scale of the MEIM, was used to assess national identity (Weber et al., 2015; see also Sabatier, 2008). The factorial structure was inconsistent across the three measurement points (see supplement S5), yet internal

³ APA and national ethical standards were followed in the conduct of the reported study. All students gave their informed consent. The study was approved by government authorities. We consent to the data sharing policy by gladly making the anonymized dataset (or parts of it), materials, and methods available to other research professionals.

⁴ The original suggested factorial structure was not supported in the current study. At all three measurement occasions, item 8 ("In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.") loaded on the commitment subscale instead of the exploration subscale. Based on the wording of the item, in particular the German translation, it indeed fits to the content of the commitment subscale. Therefore, we decided to allow the slightly different factorial structure, leading to 4 items in the exploration subscale and 8 items in the commitment subscale.

consistency of the scale was good (see Table 1); therefore, we utilized a single factor solution.

Stereotype vulnerability. The four-item *Stereotype Vulnerability Scale* (SVS-4; Woodcock et al., 2012), a validated short version of the eight-item long form, measures how susceptible people are to prejudice and perceived judgments of others against their ethnic group within the educational context (e.g., “Some people believe that you have less ability.”). It comes with a five-point scale from *never* (1) to *almost always* (5).

Psychological well-being. Students indicated their overall level of subjective well-being on the *WHO well-being scale* (WHO-5; Bech, 2004). The scale assesses people’s psychological well-being over the past two weeks with five items (e.g., “Over the last two weeks, I have felt cheerful and in good spirits.”), which are rated on a six-point scale from *never* (1) to *always* (6).

Statistical Analyses

Calculations of intra-class-correlation coefficients (ICC) revealed that a substantial proportion of the constructs’ total variance was due to between-person differences. In particular, about two thirds of the variance in cultural identity were attributable to stable differences between individuals, ICC = .63 for ethnic identity exploration and ethnic identity commitment, and ICC = .67 for national identity. The ICC was slightly lower for stereotype vulnerability, ICC = .56, and much lower for psychological well-being, ICC = .38. In sum, substantial proportions of the variance in the constructs could be explained by both stable differences between adolescents (“trait-like component”; between variance ranging from 38% to 67%) and changes within adolescents over time (within variance ranging from 33% to 62%). Therefore, the hypothesized longitudinal relationships were examined using *random-intercepts cross-lagged panel models* (RI-CLPM; Hamaker et al., 2015; see als Keijsers, 2016). The RI-CLPM extends the cross-lagged panel model (CLPM) by the inclusion of

random intercepts that represent the stable between-person differences in the constructs (i.e., “trait-like components”; Hamaker et al., 2015). Thus, the RI-CLPM allows to model autoregressive and cross-lagged effects at the within-person level (i.e., processes operating within a person), without confounding them with processes operating at the between-person level (i.e., correlations between random intercepts reflecting “general” relationships at the population level). This is important, as between-person relationships are not always a good predictor of the processes happening at the within-person level.

All analyses were conducted in AMOS, version 26, using a full information maximum likelihood estimator to account for missing data and controlling for adolescents’ gender, age, and generation of migration, as well as their parents’ unemployment status and educational level.

Model fit was evaluated using the conventional cut-off criteria of the Confirmatory Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). Thus, models with CFI or TLI $< .85$ and RMSEA $> .10$ would be non-acceptable, whereas models with CFI or TLI $> .85/.90/.95$ or RMSEA $< .10/.08/.05$ indicate a mediocre/acceptable/close fit to the data (Little, 2013). A detailed report on the tests for longitudinal measurement invariance is provided in the supplement (S5).

Results

Table 1 presents descriptive information, internal consistencies (Cronbach’s α), autocorrelations, and zero-order correlations for the studied variables.

Autoregressive Effects Model

Prior to testing the hypotheses, we examined whether the autoregressive effects of the constructs were invariant across the time points. Therefore, a RI-CLPM including only autoregressive effects of ERI exploration, ERI commitment, national identity, psychological well-being, and stereotype vulnerability, but no cross-lagged paths, was estimated (Table 2,

Model M0). This model fit the data well (M0a), but model fit decreased significantly when the autoregressive effects were set to be equal across time points (M0b). Having inspected the autoregressive effects in the unconstrained model (M0a), another model was estimated (M0c) in which the autoregressive effects of ERI exploration and stereotype vulnerability were allowed to vary across time points. This model fit the data equally well as the unconstrained model. Therefore, in the subsequent cross-lagged effects models, only the autoregressive effects of ERI commitment, national identity, and psychological well-being were equated over time. Table 3 summarizes the autoregressive effects. The significant positive autoregressive effects indicate that if a person scores above their person-specific mean at one time point, they are expected to also score above their usual level at the next time point.

Cross-Lagged Effects Models

Hypothesis 1 was examined by means of a RI-CLPM including autoregressive effects of ERI exploration, ERI commitment, national identity, and psychological well-being along with cross-lagged effects from ERI exploration, ERI commitment, and national identity at one time point on psychological well-being at the next time point (M1). Hypothesis 2 was tested in a similar vein but included stereotype vulnerability instead of psychological well-being (M2). Finally, the RI-CLPM to test Hypothesis 3 included the autoregressive effects of stereotype vulnerability and psychological well-being along with the cross-lagged effects of stereotype vulnerability at one time point on psychological well-being at the next time point (M3).

Model fit was good for all models (Table 2, unconstrained models M1a, M2a, and M3a). Constraining the cross-lagged paths to be equal across time (Table 2, constrained models M1b, M2b, and M3b) did not result in a significant loss in model fit (see Table 2, comparisons of the constrained with the unconstrained model), indicating that the within-person cross-lagged paths were stable across time (Figure 1).

The model to test Hypothesis 1 (M1b) revealed (marginally) significant positive within-person cross-lagged effects of ERI commitment and national identity on psychological well-being and marginally significant negative within-person effects of ERI exploration on psychological well-being (Table 3). These results indicate that if adolescents score above their usual level on ERI commitment and national identity, they also (tend to) score above their person-specific mean in psychological well-being at a later time point. If an adolescent's ERI exploration score is above their average level, then they tend to score below their usual level in psychological well-being at the later time point. However, adolescents with a *generally* higher cultural identity than other adolescents do not show significantly better or worse psychological well-being in general (as indicated by the non-significant correlations between the random intercepts, $r_s \leq |.20|$ and $p_s \geq .215$).

Model M2b (Hypothesis 2) revealed non-significant within-person cross-lagged effects of ERI exploration and national identity on stereotype vulnerability. However, the significant positive effects of ERI commitment on stereotype vulnerability demonstrate that if individuals score above their average in ERI commitment, they will score above their average in stereotype vulnerability at a later time point (Table 3). At the between-person "trait-like" level, there was a significant correlation of ERI exploration and stereotype vulnerability, $r = .37, p < .001$, indicating that adolescents with higher ERI exploration than other adolescents also experience higher stereotype vulnerability in general.

The hypothesized negative within-person cross-lagged effects of stereotype vulnerability on psychological well-being (Hypothesis 3; Model M3b in Table 3) were marginally significant, which means that adolescents who score above their average level in stereotype vulnerability at one time point tend to score below their average level in psychological well-being at a later time point. Stereotype vulnerability and psychological well-being did not correlate significantly at the between-person level, $r = -.13, p = .348$.

Discussion

Regarding within-person effects, the results show that ERI commitment and national identity were positively related to psychological well-being, while ERI exploration tended to be negatively related to psychological well-being, confirming Hypothesis 1. Further, neither ERI exploration nor national identity predicted stereotype vulnerability; yet ERI commitment was positively related to stereotype vulnerability. This partially supports Hypothesis 2. Last, stereotype vulnerability tended to be negatively related to psychological well-being, providing partial support for Hypothesis 3. Regarding between-person relationships, only ERI exploration and stereotype vulnerability were positively correlated. As expected, within-person rather than between-person effects explained the current data better. As outlined above, some relationships that were found on the between-person level were different from the processes that took place on the within-person level (i.e., the Simpson's Paradox; see online supplement S6 for details). This highlights the necessity to partition the variance of constructs to avoid confounding of between-person and within-person effects.

Strengths and Contributions to the Literature

There are four major contributions of this study to the existing research on the dynamics between cultural identity and psychological well-being. First, between-person and within-person associations were examined and compared. By disentangling the between-person and within-person effects, the picture becomes more differentiated. Second, we considered multiple facets of cultural identity (i.e., ERI exploration and commitment as well as national identity). This extends previous research on the potential benefits of having multiple cultural identities (e.g., Shih et al., 2007). Third, stereotype vulnerability was included as an important factor within the acculturation experience of adolescents with a migrant background, allowing us to examine implications of cultural identity development in context. And fourth, the study was located in Austria, and thus, provides insights on

developmental implications of cultural identity for adolescents with a migrant background in Europe.

Implications of Individual Change Processes Regarding Cultural Identity

Higher levels in ERI commitment as well as a stronger identification with the national culture led to an increase in individuals' psychological well-being on the within-person level, while higher levels in ERI exploration tended to predict lower levels of psychological well-being. This is in line with previous research suggesting that integrated individuals, that is, those who identify highly with both cultures, report higher psychological well-being (Lee, 2019). Our results underline the importance of considering both subcomponents of ERI, as particularly identity commitment of adolescents with a migrant background contributed positively to their psychological well-being (cf. Syed et al., 2013). In contrast, higher levels of ERI exploration may indicate higher levels of uncertainty of belonging to the respective group. This identity uncertainty may contribute to lower levels of psychological well-being (see online supplement S7 and S8 for additional analyses including *self-concept clarity*). Identity exploration/search can be understood as a rather cognitive component of ERI, while identity commitment is considered a rather affective component (Phinney & Ong, 2007). Seeking information and experiences relevant to one's ethnic background is essential for adolescents' cultural identity development – without this process there may be no secure commitment (Phinney & Ong, 2007). Interestingly, there were no associations on the between-person level between any facets of cultural identity and psychological well-being, which stands to some extent in contrast with previous findings. This speaks to recent developments in research practices to include within-person developments based on longitudinal designs (e.g., Cheon & Yip, 2019; Gonzales-Backen et al., 2018).

The Role of Stereotype Vulnerability

Our findings regarding stereotype vulnerability also underline the importance of distinguishing the two subcomponents of ERI. The positive within-person association between ERI commitment and stereotype vulnerability) speaks against ideas of the *rejection-identification model*, which suggests that a strong commitment to the ethnic group may buffer people against prejudice and discrimination. However, the positive between-person association between ERI exploration and stereotype vulnerability is consistent with the *identification-attribution model* and previous research, which suggest stronger ERI exploration to be associated with a higher sensitivity to signals of prejudice (e.g., Gonzales-Backen et al., 2018; Umaña-Taylor & Updegraff, 2007).

It appears that the factor of exploring one's ethnic background, and thus, the identity uncertainty that comes with higher levels of exploration, contribute to a higher susceptibility of how others perceive oneself. This may be particularly true for adolescents with a migrant background whose social identity as a member of a different ethnic group than the majority is often highly salient (cf. Verkuyten & Fleischmann, 2017). Previous research showed that identity confusion negatively predicted adolescents' psychological well-being (Syed et al., 2013). Similarly, it was shown that among Latino immigrants in the US, more identity confusion predicted lower self-esteem longitudinally (Meca et al., 2017). Interestingly, we found no association between national identity and stereotype vulnerability, which stands in contrast to previous considerations on the role of national identity and the perception of discrimination and stereotypes (cf. Verkuyten & Martinovic, 2012).

Additionally, our data suggest that higher levels of stereotype vulnerability at one time point tend to predict lower levels of psychological well-being at a later time point. This stresses the importance of considering aspects of the acculturation context when conducting research on the dynamics of cultural identity and psychological well-being. People (with and

without a migrant background) do not live inside a bell jar; thus, social identity research means observing people in contexts and exploring the meaning of a group membership in interaction with the surrounding society (cf. Ellemers et al., 2002). By definition, migration implies leaving one environment for another. This change of context leads to a change of the contingencies tied to one's social identity. Accordingly, identities are resituated and redefined, which may result in changes in individuals' psychological and behavioral adaptation, often even for the generations after those who actually migrated. In the current research, it was shown that changes in adolescents' cultural identity and susceptibility to negative stereotypes lead to changes in their psychological well-being.

Limitations and Future Research Directions

Despite the strengths of our methodological approach and its contribution to the literature, there are some limitations to be noted. First, the great majority of our sample had backgrounds for which negative stereotypes exist in the Central European region (e.g., Turkey, Ex-Yugoslavia, see for example Froehlich & Schulte, 2019, for competence ratings). That said, the sample included 41 different countries/regions of origin (Supplement S4), different religious affiliations, and socioeconomic status, reflecting the typical heterogeneity of a population of people with a migrant background in a Central European country. It is possible that differences exist between the subgroups, which were not acknowledged by the current statistical analyses. Therefore, we cannot draw conclusions on differences in change processes between specific ethnic or religious groups. Further, we cannot conclude anything about the influence of class composition, and thus, the immediate ethnic and social context that students experienced at school. Future research is encouraged to examine influences of class composition and group effects in ethnically diverse classes on students' psychological well-being.

Second, on a methodological note of measurement, the MEIM (Phinney, 1992) does not distinguish between aspects of public (i.e., judgements on how others perceive my group) versus private (i.e., how I view and feel about my group) regard. There might be substantial differences, which also go beyond experiences of stereotype vulnerability, as previous research has shown that ethnic minorities who are high in both public and private regard are more susceptible to the negative influence of stereotype threat (Ho & Sidanius, 2010). Also, using the MEIM instead of the EIS (Umaña-Taylor et al., 2004) may have led to different results due to a different operationalization of ERI exploration. We must acknowledge that research is always limited; due to methodological constraints, we can only examine a limited number of factors at a time. The multiple facets of adolescents' cultural identities and the various aspects of the need to preserve a positive identity need to be explored further.

Third, our research relied on self-reports only, which are always just a snapshot of a person's thoughts and feelings at one point in time. Assessing individuals' identity and psychological well-being only at three occasions over the period of one school year bears the danger of missing important changes between the measurement occasions. Diary studies or experience sampling methods could provide more detailed assessments of individual changes of cultural identities and psychological well-being, and thus, shed light on sensitive periods of time.

Last remains the question of causality. Many of the variables in the current research are interrelated, as shown by previous research. Therefore, we cannot claim unidirectional influences of one factor onto another, even if our statistical model suggested that some (cross-lagged) paths are stronger than others. As described above, we tested alternative models. Nevertheless, caution is warranted with overgeneralizations and causal interpretations of the findings, as our results are based on temporal precedence of the studied variables in a longitudinal design.

Finally, this research was part of a larger project which included more variables than the ones included in the current publication (see Supplement S2 for details). The project also involved an intervention (see Weber et al., 2018). Analyses of potential effects of the intervention on the variables examined in this research are reported in the supplement (S9). Most notably, these analyses suggest that the effect of stereotype vulnerability on psychological well-being (H3) was weakened (and therefore marginally significant only) by lumping intervention and control group together.

Conclusion

In sum, the findings of this research emphasize the importance of looking at the relationship between cultural identity and psychological well-being under the lens of identity development within the respective social context. The within-person processes show that neither adolescents' cultural identities nor stereotype vulnerability or psychological well-being are static. They fluctuate and influence each other over time. By recognizing and unpacking between-person relationships and within-person processes over time, we can enhance our understanding of how the development of cultural identities influence changes in psychological well-being over time. Regarding the social context, we need to acknowledge that negative attitudes against ethnic minority groups and corresponding stereotypes are part of the daily public discourse. People with a migrant background may experience discrimination and the expression of negative stereotypes in day-to-day personal interactions as well as through the media (e.g., Appel & Weber, 2017; Arendt, 2013; Baysu et al., 2011), which creates situational distress for one thing, but may also lead to an ongoing negative climate that people with a migrant background live in. This contributes to lower levels of psychological well-being (cf. Safi, 2010), as shown in the current research.

References

- Acevedo-Polakovich, I. D., Chavez-Korell, S., & Umaña-Taylor, A. J. (2014). US Latinas/os' ethnic identity: Context, methodological approaches, and considerations across the life span. *The Counseling Psychologist, 42*, 154-169.
<https://doi.org/10.1177/0011000013476959>
- Altschul, I., Oyserman, D., & Bybee, D. (2006). Racial-ethnic identity in mid-adolescence: Content and change as predictors of academic achievement. *Child Development, 77*, 1155-1169. <https://doi.org/10.1111/j.1467-8624.2006.00926.x>
- Altzinger, W., & Schneebaum, A. (2018). Austria: Intergenerational mobility among children of immigrants. In OECD: *Catching up? Country studies on intergenerational mobility and children of immigrants* (pp. 13-38). OECD Publishing.
- Appel, M., & Weber, S. (2017). Do mass mediated stereotypes harm members of negatively stereotyped groups? A meta-analytical review on media-generated stereotype threat and stereotype lift. *Communication Research*. Ahead-of-Print.
<https://doi.org/10.1177/0093650217715543>
- Appel, M., Weber, S., & Kronberger, N. (2015). The influence of stereotype threat on immigrants: Review and meta-analysis. *Frontiers in Psychology, 6*:900. <https://doi.org/10.3389/fpsyg.2015.00900>
- Arbuckle, J. L. (2008). *AMOS 17.0 user's guide*. SPSS.
- Arends-Tóth, J. V., & Van de Vijver, F. J. R. (2006). Assessment of psychological acculturation: Choices in designing an instrument. In D.L. Sam & J.W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 142-160). Cambridge University Press.
- Arendt, F. (2013). News stereotypes, time, and fading priming effects. *Journalism & Mass Communication Quarterly, 90*, 347-362. <https://doi.org/10.1177/1077699013482907>

- Armenta, B. E., & Hunt, J. S. (2009). Responding to societal devaluation: Effects of perceived personal and group discrimination on the ethnic group identification and personal self-esteem of Latino/Latina adolescents. *Group Processes & Intergroup Relations*, *12*, 23–39. <https://doi.org/10.1177/1368430208098775>
- Aronson, J., & Inzlicht, M. (2004). The ups and downs of attributional ambiguity: Stereotype vulnerability and the academic self-knowledge of African American college students. *Psychological Science*, *15*, 829-836. <https://doi.org/10.1111/j.0956-7976.2004.00763.x>
- Aydinli-Karakulak, A., & Dimitrova, R. (2016). Brief report: When does identity lead to negative affective experiences? A comparison of Turkish–Bulgarian and Turkish–German adolescents. *Journal of Adolescence*, *47*, 125-130. <https://doi.org/10.1016/j.adolescence.2015.09.010>
- Bauer, C. A., & Hannover, B. (2020). Changing “us” and hostility towards “them”—Implicit theories of national identity determine prejudice and participation rates in an anti-immigrant petition. *European Journal of Social Psychology*, *50*(4), 810-826. <https://doi.org/10.1002/ejsp.2666>
- 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. <https://doi.org/10.1177/0190272511407619>
- Bech, P. (2004). Measuring the dimensions of psychological general well-being by the WHO-5. *Quality of Life Newsletter*, *32*, 15–16.
- Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, *73*, 1015-1050. <https://doi.org/10.1111/j.1467-6494.2005.00337.x>

- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology, 46*, 5-34. <https://doi.org/10.1111/j.1464-0597.1997.tb01087.x>
- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). *Immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts*. Lawrence Erlbaum Associates Publishers.
- Bosma, H. A., & Kunnen, E. S. (2008). Identity-in-context is not yet identity development-in-context. *Journal of Adolescence, 31*, 281-289. <https://doi.org/10.1016/j.adolescence.2008.03.001>
- 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. <https://doi.org/10.1037/0022-3514.77.1.135>
- Campbell, J. D., Assanand, S., & Paula, A. D. (2003). The structure of the self-concept and its relation to psychological adjustment. *Journal of Personality, 71*, 115-140. <https://doi.org/10.1111/1467-6494.t01-1-00002>
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*, 141-156. <https://doi.org/10.1037//0022-3514.70.1.141>
- Chateignier, C., Dutrévis, M., Nugier, A., & Chekroun, P. (2009). French-Arab students and verbal intellectual performance: Do they really suffer from a negative intellectual stereotype? *European Journal of Psychology of Education, 24*, 219-234. <https://doi.org/10.1007/BF03173013>

- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling, 14*, 464–504.
<https://doi.org/10.1080/10705510701301834>
- Cheon, Y. M., & Yip, T. (2019). Longitudinal Associations between Ethnic/Racial Identity and Discrimination among Asian and Latinx Adolescents. *Journal of Youth and Adolescence, 48*, 1736–1753. <https://doi.org/10.1007/s10964-019-01055-6>
- Christ, O., Asbrock, F., Dhont, K., Pettigrew, T. F., & Wagner, U. (2013). The effects of intergroup climate on immigrants' acculturation preferences. *Journal of Psychology, 221*, 252-257. <https://doi.org/10.1027/2151-2604/a000155>
- Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model. *Journal of Adolescence, 31*, 207–222.
<https://doi.org/10.1016/j.adolescence.2007.09.002>
- Dimitrova, R., Chasiotis, A., & Van de Vijver, F. (2016). Adjustment outcomes of immigrant children and youth in Europe: A meta-analysis. *European Psychologist, 21*, 150-162.
<https://doi.org/10.1027/1016-9040/a000246>
- Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of Psychology, 53*, 161-86. <https://doi.org/10.1146/annurev.psych.53.100901.135228>
- Erikson, E. H. (1968). *Identity: Youth and crisis*. W. W. Norton & Company.
- Fleischmann, F., Leszczensky, L., & Pink, S. (2019). Identity threat and identity multiplicity among minority youth: Longitudinal relations of perceived discrimination with ethnic, religious, and national identification in Germany. *British Journal of Social Psychology, 58*(4), 971-990. <https://doi.org/10.1111/bjso.12324>

- French, S. E., & Chavez, N. R. (2010). The relationship of ethnicity-related stressors and Latino ethnic identity to well-being. *Hispanic Journal of Behavioral Sciences*, 32, 410-428. <https://doi.org/10.1177/0739986310374716>
- Froehlich, L., Martiny, S.E., Deaux, K., & Mok, S. Y. (2016) “It’s their responsibility, not ours”: Stereotypes about competence and causal attributions for immigrants’ academic underperformance. *Social Psychology*, 47(2), 74-86. <https://doi.org/10.1027/1864-9335/a000260>
- Froehlich, L., & Schulte, I. (2019). Warmth and competence stereotypes about immigrant groups in Germany. *Plos One*, 14(9), e0223103. <https://doi.org/10.1371/journal.pone.0223103>
- Gonzales-Backen, M. A., Meca, A., Lorenzo-Blanco, E. I., Des Rosiers, S. E., Córdova, D., Soto, D. W., ... & Schwartz, S. J. (2018). Examining the temporal order of ethnic identity and perceived discrimination among Hispanic immigrant adolescents. *Developmental Psychology*, 54(5), 929-937. <https://doi.org/10.1037/dev0000465>
- Guerra, R., Rodrigues, R. B., Aguiar, C., Carmona, M., Alexandre, J., & Lopes, R. C. (2019). School achievement and well-being of immigrant children: The role of acculturation orientations and perceived discrimination. *Journal of School Psychology*, 75, 104-118. <https://doi.org/10.1016/j.jsp.2019.07.004>
- Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. P. P. (2015). A critique of the cross-lagged panel model. *Psychological Methods*, 20, 102-116. <https://doi.org/10.1037/a0038889>
- Hendriks, M. (2015). The happiness of international migrants: A review of research findings. *Migration Studies*, 3, 343-369. <https://doi.org/10.1093/migration/mnu053>

- Ho, A. K., & Sidanius, J. (2010). Preserving positive identities: Public and private regard for one's ingroup and susceptibility to stereotype threat. *Group Processes & Intergroup Relations*, 13, 55-67. <https://doi.org/10.1177/1368430209340910>
- Huang, C. Y., & Stormshak, E. A. (2011). A longitudinal examination of early adolescence ethnic identity trajectories. *Cultural Diversity and Ethnic Minority Psychology*, 17(3), 261-270. <https://doi.org/10.1037/a0023882>
- Igartua, J. J., Moral-Toranzo, F., & Fernández, I. (2011). Cognitive, attitudinal, and emotional effects of news frame and group cues, on processing news about immigration. *Journal of Media Psychology*, 23, 174-185. <https://doi.org/10.1027/1864-1105/a000050>
- International Organisation for Migration (2013). *World Migration Report 2013: Migrant Well-being and Development*. International Organisation for Migration. <https://doi.org/10.18356/a981b1e5-en>
- Jasinskaja-Lahti, I., Liebkind, K., & Solheim, E. (2009). To identify or not to identify? National disidentification as an alternative reaction to perceived ethnic discrimination. *Applied Psychology*, 58, 105-128. <https://doi.org/10.1111/j.1464-0597.2008.00384.x>
- Keijsers, L. (2016). Parental monitoring and adolescent problem behaviors: How much do we really know? *International Journal of Behavioral Development*, 40, 271-281. <https://doi.org/10.1177/0165025415592515>
- Kievit, R. A., Frankenhuis, W. E., Waldorp, L. J., & Borsboom, D. (2013). Simpson's paradox in psychological science: A practical guide. *Frontiers in Psychology*, 4, 513. <https://doi.org/10.3389/fpsyg.2013.00513>
- Langenbacher, N., & Schellenberg, B. (2011). *Is Europe on the "right" path ?* Friedrich-Ebert-Stiftung.

- Lee, S. (2019). Does identity matter for adaptation? The influence of acculturation identity on the well-being and delinquency of adolescent students in Europe. *Journal of Youth Studies*. <https://doi.org/10.1080/13676261.2019.1636950>
- Little, T. D. (2013). *Longitudinal structural equation modeling*. Guilford Press.
- Little, T. D., Preacher, K. J., Selig, J. P., & Card, N. A. (2007). New developments in latent variable panel analyses of longitudinal data. *International Journal of Behavioral Development*, 31, 357-365. <https://doi.org/10.1177/0165025407077757>
- McGlone, M. S., & Aronson, J. (2006). Stereotype threat, identity salience, and spatial reasoning. *Journal of Applied Developmental Psychology*, 27, 486–493. <https://doi.org/10.1016/j.appdev.2006.06.003>
- Meca, A., Sabet, R. F., Farrelly, C. M., Benitez, C. G., Schwartz, S. J., Gonzales-Backen, M., ... & Picariello, S. (2017). Personal and cultural identity development in recently immigrated Hispanic adolescents: Links with psychosocial functioning. *Cultural Diversity and Ethnic Minority Psychology*, 23(3), 348-361. <https://doi.org/10.1037/cdp0000129>
- OECD/European Union (2015). *Indicators of immigrant integration 2015: Settling in*. OECD Publishing.
- Owens, J., & Lynch, S. M. (2012). Black and Hispanic immigrants' resilience against negative-ability racial stereotypes at selective colleges and universities in the United States. *Sociology of Education*, 85, 303-325. <https://doi.org/10.1177/0038040711435856>
- Phalet, K., & Kosic, A. (2006). Acculturation in European societies. In D. L. Sam & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 331-348). Cambridge University Press. <https://doi.org/10.1017/CBO9780511489891.025>

- Phinney, J. S. (1991). Ethnic identity and self-esteem: A review and integration. *Hispanic Journal of Behavioral Sciences*, *13*, 193-208.
<https://doi.org/10.1177/07399863910132005>
- Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, *7*, 156–176.
<https://doi.org/10.1177/074355489272003>
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, *54*, 271-281.
<https://doi.org/10.1037/0022-0167.54.3.271>
- Phinney, J. S., Cantu, C. L., & Kurtz, D. A. (1997). Ethnic and American identity as predictors of self-esteem among African American, Latino, and White adolescents. *Journal of Youth and Adolescence*, *26*, 165-185.
<https://doi.org/10.1023/A:1024500514834>
- Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, *57*, 493-510. <https://doi.org/10.1111/0022-4537.00225>
- Rivas-Drake, D., Seaton, E. K., Markstrom, C., Quintana, S., Syed, M., Lee, R. M., ... & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child Development*, *85*, 40-57. <https://doi.org/10.1111/cdev.12200>
- Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *The Journal of Early Adolescence*, *19*, 301-322.
<https://doi.org/10.1177/0272431699019003001>
- Rosenberg, M. (1979). *Conceiving the self*. Basic Books.

- Rotheram, M. J., & Phinney, J. S. (1987). Introduction: Definitions and perspectives in the study of children's ethnic socialization. In J. S. Phinney, & M. J. Rotheram (Eds.), *Children's ethnic socialization: Pluralism and development* (pp. 156–179). Sage.
- Sabatier, C. (2008). Ethnic and national identity among second-generation immigrant adolescents in France: The role of social context and family. *Journal of Adolescence, 31*, 185-205. <https://doi.org/10.1016/j.adolescence.2007.08.001>
- Safi, M. (2010). Immigrants' life satisfaction in Europe: Between assimilation and discrimination. *European Sociological Review, 26*, 159-176. <https://doi.org/10.1093/esr/jcp013>
- Sam, D. L. (2006). Acculturation: Conceptual background and core components. In D. L. Sam & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 11- 26). Cambridge University Press. <https://doi.org/10.1017/CBO9780511489891.005>
- Schwartz, S. J., Klimstra, T. A., Luyckx, K., Hale, W. W., III, & Meeus, W. H. J. (2012). Characterizing the self-system over time in adolescence: Internal structure and associations with internalizing symptoms. *Journal of Youth and Adolescence, 41*, 1226–1239. <https://doi.org/10.1007/s10964-012-9751-1>
- Schwartz, S. J., Meca, A., & Petrova, M. (2017). Who am I and why does it matter? Linking personal identity and self-concept clarity. In J. Lodi-Smith & K. DeMarree (Eds.), *Self-concept clarity* (pp. 145-164). Springer. https://doi.org/10.1007/978-3-319-71547-6_8
- Schwartz, S. J., Zamboanga, B. L., Rodriguez, L., & Wang, S. C. (2007). The structure of cultural identity in an ethnically diverse sample of emerging adults. *Basic and Applied Social Psychology, 29*, 159-173. <https://doi.org/10.1080/01973530701332229>

- Schwartz, S. J., Montgomery, M. J., & Briones, E. (2006). The role of identity in acculturation among immigrant people: Theoretical propositions, empirical questions, and applied recommendations. *Human Development*, 49, 1-30. <https://doi.org/10.1159/000090300>
- Sellers, R. M., & Shelton, J. N. (2003). The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology*, 84, 1079-1092. <https://doi.org/10.1037/0022-3514.84.5.1079>
- Shih, M., Bonam, C., Sanchez, D., & Peck, C. (2007). The social construction of race: Biracial identity and vulnerability to stereotypes. *Cultural Diversity and Ethnic Minority Psychology*, 13, 125-133. <https://doi.org/10.1037/1099-9809.13.2.125>
- Stucke, T. S. (2002). Überprüfung einer deutschen Version der Selbstkonzeptklarheits-Skala von Campbell [Investigation of a German version of Campbell's self-concept clarity scale]. *Zeitschrift für Differentielle und Diagnostische Psychologie*, 23, 475-484. <https://doi.org/10.1024//0170-1789.23.4.475>
- Syed, M., Walker, L. H. M., Lee, R. M., Umaña-Taylor, A. J., Zamboanga, B. L., Schwartz, S. J., ... Huynh, Q.-L. (2013). A two-factor model of ethnic identity exploration: Implications for identity coherence and well-being. *Cultural Diversity and Ethnic Minority Psychology*, 19, 143–154. <https://doi.org/10.1037/a0030564>
- Tajfel, H. (1978). *The social psychology of minorities*. Minority Rights Group.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge University Press.
- Tajfel, H., & Turner, J. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7-24). Nelson-Hall.

- Tanti, C., Stukas, A. A., Halloran, M. J., & Foddy, M. (2011). Social identity change: Shifts in social identity during adolescence. *Journal of Adolescence*, *34*, 555-567.
<https://doi.org/10.1016/j.adolescence.2010.05.012>
- Umaña-Taylor, A. J., & Updegraff, K. A. (2007). Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of Adolescence*, *30*, 549-567.
<https://doi.org/10.1016/j.adolescence.2006.08.002>
- Umaña-Taylor, A. J., Diversi, M., & Fine, M. A. (2002). Ethnic identity and self-esteem of Latino adolescents: Distinctions among the Latino populations. *Journal of Adolescent Research*, *17*, 303-327. <https://doi.org/10.1177/0743558402173005>
- Umaña-Taylor, A. J., Gonzales-Backen, M. A., & Guimond, A. B. (2009). Latino adolescents' ethnic identity: is there a developmental progression and does growth in ethnic identity predict growth in self-esteem? *Child Development*, *80*, 391-405.
<https://doi.org/10.1111/j.1467-8624.2009.01267.x>
- Umaña-Taylor, A. J., O'Donnell, M., Knight, G. P., Roosa, M. W., Berkel, C., & Nair, R. (2014a). Mexican-origin early adolescents' ethnic socialization, ethnic identity, and psychosocial functioning. *The Counseling Psychologist*, *42*, 170-200.
<https://doi.org/10.1177/0011000013477903>
- Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Rivas-Drake, D., Schwartz, S. J., . . . Seaton, E. (2014b). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child Development*, *85*, 21-39.
<https://doi.org/10.1111/cdev.12196>
- Umaña-Taylor, A. J., Vargas-Chanes, D., Garcia, C. D., & Gonzales-Backen, M. (2008). A longitudinal examination of Latino adolescents' ethnic identity, coping with

- discrimination, and self-esteem. *The Journal of Early Adolescence*, 28, 16-50.
<https://doi.org/10.1177/0272431607308666>
- Umaña-Taylor, A. J., Yazedjian, A., & Bámaca-Gómez, M. (2004). Developing the ethnic identity scale using Eriksonian and social identity perspectives. *Identity*, 4, 9–38.
https://doi.org/10.1207/S1532706XID0401_2
- Usborne, E., & Taylor, D. M. (2010). The role of cultural identity clarity for self-concept clarity, self-esteem, and subjective well-being. *Personality and Social Psychology Bulletin*, 36, 883-897. <https://doi.org/10.1177/0146167210372215>
- Van de Vijver, F. J., & Leung, K. (1997). *Methods and data analysis for cross-cultural research*. Sage Publications.
- Van de Vijver, F. J., Blommaert, J., Gkoumasi, G., & Stogianni, M. (2015). On the need to broaden the concept of ethnic identity. *International Journal of Intercultural Relations*, 46, 36-46. <https://doi.org/10.1016/j.ijintrel.2015.03.021>
- Van Dijk, M.P.A., Branje, S., Keijsers, L., Hawk, S.T., Hale, W.W. III, & Meeus, W. (2014). Self-concept clarity across adolescence: longitudinal associations with open communication with parents and internalizing symptoms. *Journal of Youth and Adolescence*, 43, 1861–1876. <https://doi.org/10.1007/s10964-013-0055-x>
- Verkuyten, M., & Fleischmann, F. (2017). Ethnic identity among immigrant and minority youth. In A. Rutland, D. Nesdale, & B. C. Spears (Eds.), *The Wiley Handbook of Group Processes in Children and Adolescents* (pp. 23-46). Wiley Blackwell.
- Verkuyten, M., & Martinovic, B. (2012). Immigrants' national identification: Meanings, determinants, and consequences. *Social Issues and Policy Review*, 6, 82-112.
<https://doi.org/10.1111/j.1751-2409.2011.01036.x>

- Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92, 82-96.
<https://doi.org/10.1037/0022-3514.92.1.82>
- Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331, 1447-1451.
<https://doi.org/10.1126/science.1198364>
- Weber, S., Appel, M., & Kronberger, N. (2015). Stereotype threat and the cognitive performance of adolescent immigrants: The role of cultural identity strength. *Contemporary Educational Psychology*, 42, 71-81.
<https://doi.org/10.1016/j.cedpsych.2015.05.001>
- Weber, S., Kronberger, N., & Appel, M. (2018). Immigrant students' educational trajectories: The influence of cultural identity and stereotype threat. *Self & Identity*, 17, 211-235. <https://doi.org/10.1080/15298868.2017.1380696>
- Woodcock, A., Hernandez, P. R., Estrada, M., & Schultz, P. (2012). The consequences of chronic stereotype threat: Domain disidentification and abandonment. *Journal of Personality and Social Psychology*, 103, 635-646. <https://doi.org/10.1037/a0029120>
- Xu, Y., Farver, J. A. M., & Pauker, K. (2015). Ethnic identity and self-esteem among Asian and European Americans: When a minority is the majority and the majority is a minority. *European Journal of Social Psychology*, 45, 62-76.
<https://doi.org/10.1002/ejsp.2061>
- Yip, T. (2018). Ethnic/racial identity—a double-edged sword? Associations with discrimination and psychological outcomes. *Current Directions in Psychological Science*, 27, 1–6. <https://doi.org/10.1177/0963721417739348>
- Zeiders, K. H., Bayless, S. D., Chelsea, L. D., Umana-Taylor, A. J., Updergraff, K. A., & Jahromi, L. B. (2017). Discrimination and ethnic-racial identity: understanding

direction of effects using within- and between-person analyses. *Child*

Development, 90, 1–13. <https://doi.org/10.1111/cdev.12978>

Zick, A., Pettigrew, T. F., & Wagner, U. (2008). Ethnic prejudice and discrimination in

Europe. *Journal of Social Issues*, 64, 233-251. <https://doi.org/10.1111/j.1540->

[4560.2008.00559.x](https://doi.org/10.1111/j.1540-4560.2008.00559.x)

Tables

Table 1.

Means, Standard Deviations, Internal Consistencies, Autocorrelations (Correlation of T1 with T2 after 4 months and with T3 after 8 months), and Zero-Order Correlations (within Time) for the Studied Variables.

| | | <i>N</i> | <i>M(SD)</i> | α | <i>r (T1)</i> | ERI-Com | NI | SV | WB |
|---------------------------------------|----|----------|--------------|----------|---------------|---------|--------|--------|------|
| Ethnic identity exploration (ERI-Exp) | T1 | 316 | 2.76 (0.67) | .60 | - | .49*** | .18** | .26*** | .04 |
| | T2 | 257 | 2.79 (0.75) | .68 | .58*** | .60*** | .16* | .30*** | .02 |
| | T3 | 210 | 2.95 (0.73) | .68 | .65*** | .60*** | .31*** | .31*** | .02 |
| Ethnic identity commitment (ERI-Com) | T1 | 316 | 3.49 (0.55) | .88 | - | - | .02 | .09 | .03 |
| | T2 | 257 | 3.54 (0.56) | .91 | .45*** | - | .05 | .09 | .09 |
| | T3 | 210 | 3.58 (0.51) | .90 | .51*** | - | .16* | .08 | -.07 |
| National identity (NI) | T1 | 308 | 2.81 (0.56) | .87 | - | - | - | .04 | .13* |
| | T2 | 244 | 2.86 (0.56) | .87 | .70*** | - | - | .12 | .10 |
| | T3 | 194 | 2.90 (0.58) | .88 | .60*** | - | - | .13 | .10 |
| Stereotype vulnerability (SV) | T1 | 317 | 2.30 (1.01) | .79 | - | - | - | - | -.07 |
| | T2 | 256 | 2.13 (0.95) | .81 | .54*** | - | - | - | -.09 |
| | T3 | 209 | 2.20 (1.03) | .84 | .51*** | - | - | - | -.05 |
| Psychological well-being (WB) | T1 | 312 | 3.51 (0.96) | .74 | - | - | - | - | - |
| | T2 | 255 | 3.47 (1.13) | .83 | .43*** | - | - | - | - |
| | T3 | 209 | 3.56 (1.25) | .88 | .27*** | - | - | - | - |

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

Table 2.

Fit Statistics for the RI-CLPMs and Results from Nested Model Comparisons.

| Model | Model Fit | | | | | | Model Comparison | | |
|--|-----------|-----------|----------|-------|-------|-------|------------------|-------------|----------|
| | χ^2 | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | $\Delta\chi^2$ | Δdf | <i>p</i> |
| M0: Autoregressive effects | | | | | | | | | |
| M0a: Unconstrained model | 78.60 | 50 | .006 | .981 | .922 | .043 | | | |
| M0b: Constrained model | 97.64 | 55 | <.001 | .972 | .894 | .050 | 19.03 | 5 | .002 |
| M0c: Partially constrained | 84.42 | 53 | .004 | .980 | .919 | .043 | 5.82 | 3 | .121 |
| M1: Cross-lagged effects of cultural identity on well-being (Hypothesis 1) | | | | | | | | | |
| M1a Unconstrained model | 36.77 | 27 | .099 | .992 | .957 | .034 | | | |
| M1b Constrained model | 39.39 | 30 | .117 | .993 | .963 | .031 | 2.62 | 3 | .455 |
| M2: Cross-lagged effects of cultural identity on stereotype vulnerability (Hypothesis 2) | | | | | | | | | |
| M2a Unconstrained model | 35.31 | 27 | .131 | .994 | .967 | .031 | | | |
| M2b Constrained model | 42.39 | 30 | .066 | .991 | .955 | .036 | 7.08 | 3 | .070 |
| M3: Cross-lagged effects of stereotype vulnerability on well-being (Hypothesis 3) | | | | | | | | | |
| M3a Unconstrained model | 2.76 | 4 | .599 | 1.000 | 1.000 | .000 | | | |
| M3b Constrained model | 3.42 | 5 | .635 | 1.000 | 1.000 | .000 | 0.66 | 1 | .415 |

Notes. CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA= Root Mean Square Error of Approximation.

Table 3.

Within-Person Effects.

| Predictors | <i>B</i> | <i>SE</i> | <i>p</i> |
|--|----------|-----------|----------|
| Model 0c (Autoregressive effects) | | | |
| ERI-exp _{T1} on ERI-exp _{T2} | 0.04 | 0.15 | .784 |
| ERI-exp _{T2} on ERI-exp _{T3} | 0.43 | 0.08 | <.001 |
| ERI-com _{Tx} on ERI-com _{Tx+1} | 0.11 | 0.09 | .264 |
| NI _{Tx} on NI _{Tx+1} | 0.39 | 0.13 | .002 |
| WB _{Tx} on WB _{Tx+1} | 0.49 | 0.10 | <.001 |
| SVSp _{T1} on SVS _{T2} | 0.52 | 0.06 | <.001 |
| SVS _{T2} on SVS _{T3} | 0.69 | 0.06 | <.001 |
| Model 1b (Hypothesis 1) | | | |
| ERI-exp _{Tx} on WB _{Tx+1} | -0.29 | 0.16 | .067 |
| ERI-com _{Tx} on WB _{Tx+1} | 0.36 | 0.19 | .052 |
| NI _{Tx} on WB _{Tx+1} | 0.47 | 0.19 | .014 |
| Model 2b (Hypothesis 2) | | | |
| ERI-exp _{Tx} on SV _{Tx+1} | -0.02 | 0.12 | .901 |
| ERI-com _{Tx} on SV _{Tx+1} | 0.28 | 0.14 | .044 |
| NI _{Tx} on SV _{Tx+1} | -0.11 | 0.15 | .454 |
| Model 3b (Hypothesis 3) | | | |
| SV _{Tx} on WB _{Tx+1} | -0.21 | 0.11 | .061 |

Notes. ERI-exp/-com = Ethnic and Racial Identity exploration/commitment; NI = National Identity; WB = Well-Being; SV = Stereotype Vulnerability.

Figures

Figure 1.

Within-Person Cross-Lagged Effects (Standardized Path Coefficients) of a) Cultural Identity on Well-Being (Hypothesis 1), b) Cultural Identity on Stereotype Vulnerability (Hypothesis 2), and c) Stereotype Vulnerability on Well-being (Hypothesis 3).

Figure 1a.

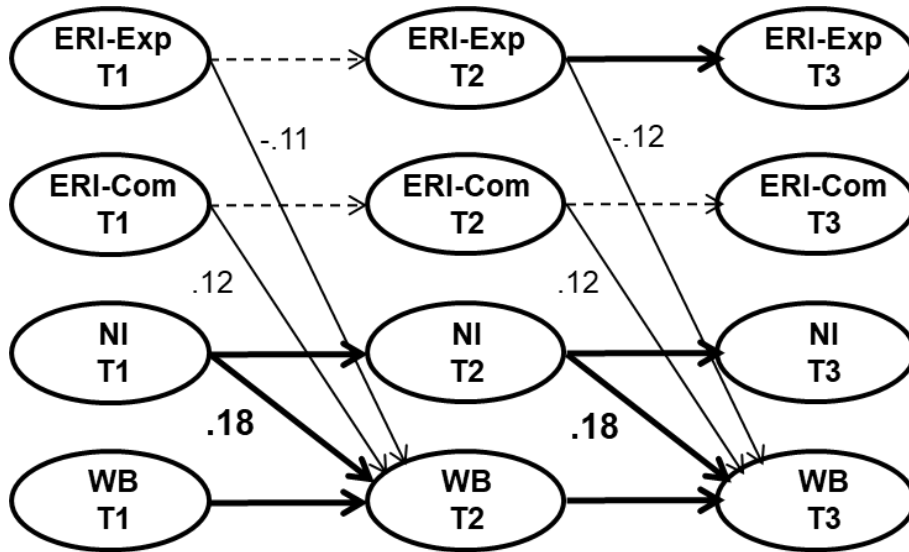


Figure 1b.

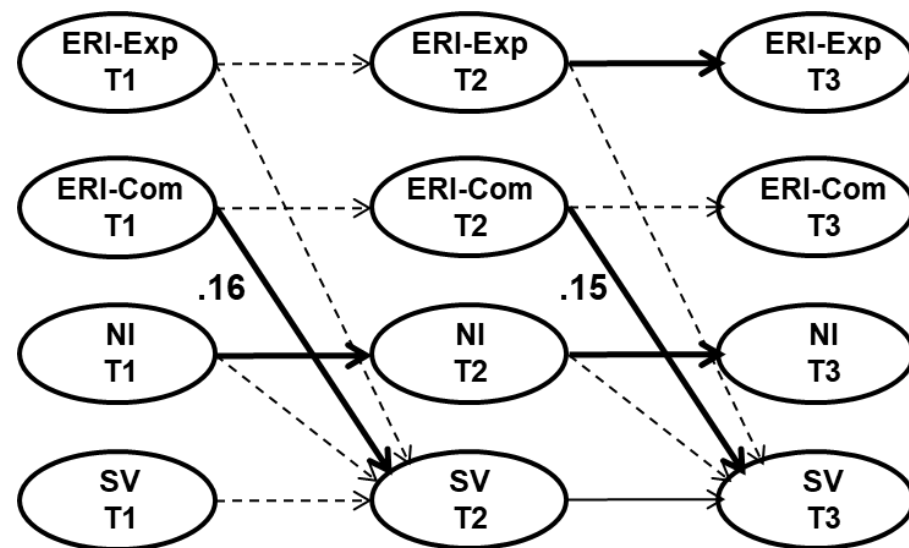
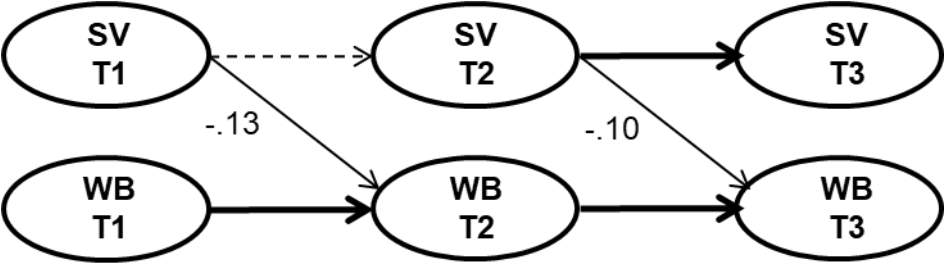


Figure 1c.



Notes. ERI-exp/-com = Ethnic and Racial Identity exploration/commitment; NI = National Identity; WB = Well-Being; SV = Stereotype Vulnerability. Bold solid and solid lines indicate significant effects at $p < .05$ and $p < .10$, respectively; dashed lines indicate non-significant effects, $p > .10$.

----- **Online Supplement** -----

Supplementary Material**“The Individual Development of Cultural Identity and Psychological Well-being among
Adolescents with a Migrant Background in Austria: A Longitudinal Study”**

| | |
|---|----|
| Supplement 1: The Situation of Young People with a Migrant Background in Austria..... | 3 |
| Supplement 2: Recruitment and Parent Project..... | 5 |
| Supplement 3: Dropout Analyses..... | 6 |
| Supplement 4: Participants..... | 7 |
| Supplement 5: Longitudinal Measurement Models | 9 |
| Supplement 6: Simpson’s Paradox..... | 11 |
| Supplement 7: Young Immigrants’ Self-Concept Clarity and Well-being | 12 |
| Supplement 8: RI-CLPM for Self-Concept Clarity..... | 14 |
| Supplement 9: Multi-Group Analyses..... | 16 |
| References | 19 |

Tables

Table S1: Tests of Longitudinal Measurement Invariance

Table S2: Self-Concept Clarity: Means, Standard Deviations, Internal Consistencies, and Autocorrelations

Table S3.1: Random-Intercept Cross-Lagged Panel Models

Table S3.2: Within-Person Cross-Lagged Effects

Table S4.1: Multi-Group Analyses for the Tested Models (Experimental Group $n = 151$; Control Group $n = 166$)

Table S4.2: Within-Person Cross-Lagged Effects in the Multi-Group RI-CLPMs

Table S5: Mediation Analysis with the Emotional Reactions Anger, Disgust, Hostility, Surprise, and Amusement as Mediators, Experimental Condition as the Predictor, and Cognitive Performance as the Criterion (Experiment 4)

Figures

Figure S1. . Illustration of the Simpson's Paradox with five individuals (indicated with different marks, e.g., dots, triangles), each assessed three times. In this hypothetical example, national identity correlates positively with stereotype vulnerability at the between-person level (i.e., assessing different individuals), but negatively at the within-person level (i.e., assessing one individual several times)

Supplement 1: The Situation of Young People with a Migrant Background in Austria

A recent report sheds light on immigrant experiences of adolescents in Austria (Altzinger & Schneebaum, 2018). People with a migrant background in Austria consist of a rather heterogeneous group of people in terms of their country of origin, the reason, and the time that they arrived in the country. During the 1960s and 1970s, Austria experienced a booming economy and due to a severe labor shortage, centers in Turkey and the former Yugoslavia were established to recruit so-called “guest workers”. While early on, only men came to Austria to work there, later on their families followed. Another important wave of immigration occurred during the early 1990s, caused by the civil war in former Yugoslavia. Following the enlargement process of the European Union in 2004 and 2007, the pattern of immigration changed again, when immigrants arrived from new EU member states such as Romania, Hungary, Poland, and others. Finally, in recent years, refugees from countries such as Syria or Afghanistan found their way to Austria. Notably, this study was conducted before the so-called “European refugee crisis” in 2015.

The level of educational attainment of people with a migrant background living in Austria varies considerably depending on their country of origin. On average, however, the report shows that children of migrants do not reach the educational level of resident children. While over the years, the patterns of immigration changed considerably and today there are children with a migrant background from a broad range of countries (see Supplement 4), children of Yugoslav and Turkish descent still constitute the largest groups of children with a migrant background in Austria. In 2015, 32% of children with a migrant background (i.e., immigrant or both parents born abroad) came from former Yugoslavia and 25% from Turkey. Of particular concern is that children of Turkish and Yugoslav immigrants achieve lower levels of education than children without a migrant background. Compared to students holding the Austrian citizenship, they have higher enrolment rates at less prestigious secondary schools and much lower enrolment rates at academically-oriented colleges.

Unfortunately, the educational disadvantages of these major immigrant groups in Austria persist.

Further, based on data from three rounds of the European Social Survey and comparing first- and second-generation immigrants with natives from 13 European countries, including Austria, Safi (2010) reports a reduced level of immigrants' psychological well-being, even when controlling for sociodemographic variables as well as education, income or employment, among other covariates. Importantly, the relative dissatisfaction of people with a migrant background does not seem to be a transient phenomenon but tends to persist over time and across generations. The data suggest that even after more than 20 years spent in the European host countries analyzed, people with a migrant background still report significantly lower levels of well-being than natives. Across generations, improvement in life satisfaction is more likely to occur for second-generation immigrants if one of the parents is native. If both parents are immigrants, second-generation immigrants – like first generation immigrants – report lower levels of well-being than natives.

Comparable to other European countries, many people in Germany and Austria still take the perspective that immigrants should assimilate to the majority culture; simultaneously, ethnic prejudice and discrimination are still widespread (Christ et al., 2013; Phalet & Kosic, 2006). Especially the popularity of radical right-wing parties and their anti-immigrant propaganda continues to increase in Europe (Langenbacher & Schellenberg, 2011; Zick et al., 2008). These political developments affect migration research in Europe, as it creates a socio-cultural climate in which people with a migrant background face prejudice and discrimination. Especially second-generation immigrant adolescents in the EU report high levels of experienced discrimination (OECD, 2015).

Supplement 2: Recruitment and Parent Project

The participating schools were pre-selected by the local education authority (Austrian: “*Landesschulrat*”) based on the criteria of (1) a substantial percentage of students with a migrant background, and (2) the willingness of the headmaster to cooperate and participate in this research. Two different types of educational tracks at the high schools were included: *Berufsbildende Mittlere Schule* (BMS), which qualifies students over the duration of 4 years to pursue a recognized occupation requiring formal training, and *Berufsbildende Höhere Schule* (BHS), which prepares students over the duration of 5 years for future college and university education.

The larger project included students with and without a migrant background. For the purpose of the current research questions, we only included students with a migrant background in our analyses. In addition to the scales reported in the current work, all participants reported their grades and completed measures on academic belonging, domain identification, self-esteem, learning and achievement motivation, motivation at school, and classroom climate. These variables were not analyzed in the following but are reported here for transparency reasons. Detailed results on the educational trajectories of all students (i.e., grades, academic belonging, and domain identification) under the perspective of stereotype threat theory are reported by Weber and colleagues (2018).

Supplement 3: Dropout Analyses

Participants who were present at all three measurement occasions ($n = 189$) differed from participants who dropped out at some point in time ($n = 128$) only regarding their demographic characteristics. Adolescents who retained in the study ($M = 14.96$, $SD = 1.00$) were significantly younger than those who dropped out ($M = 15.53$, $SD = 1.18$), $t(239.81) = 4.42$, $p < .001$. Results obtained from a logistic regression analysis indicate that age significantly predicted whether participants drop out at some point, $\text{Exp}(B) = 0.62$, 95% CI [0.50, 0.77], $p < .001$. Further, male participants tended to be more likely to drop out, $\text{Exp}(B) = .64$, 95% CI [0.39, 1.06], $p = .08$, yet there were no differences regarding educational background or employment status of the parents, or immigrant generation. None of the variables involved (ERI, NI, SV, SCC, WB) predicted dropout.

Supplement 4: Participants

As part of the assessment of participants' self-identification with an ethnic group, we provided an introduction and definition of the German term "ethnische Gruppe". The introduction to the MEIM was a German-language adaptation of the original English-language introduction (Phinney, 1992).

English original:

"In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, Caucasian or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it. **Please fill in:** In terms of ethnic group, I consider myself to be _____"

Our translation:

"In Österreich leben Kinder, Jugendliche und Erwachsene aus vielen Ländern und Kulturen. Es gibt verschiedene Begriffe, um die unterschiedliche Herkunft einer Person zu beschreiben. Meistens wird einfach das Land oder die Gegend genannt, aus dem die eigene Familie ursprünglich herkommt. So spricht man dann z.B. von Türken, Kroaten, Nigerianern, Kosovaren, Deutschen, Serben oder Österreichern (und vielen anderen!). Diese verschiedenen Gruppen heißen auch ethnische Gruppen. In den folgenden Fragen geht es um Dich und Deine ethnische Gruppe, und wie Du darüber denkst und fühlst. **Bitte ausfüllen:** Was meine ethnische Gruppe betrifft, würde ich mich als _____ bezeichnen."

Immigrant backgrounds ($k = 41$ countries/regions), as reported by the adolescents in our final sample ($n = 317$), included Afghanistan ($n = 12$), Albania ($n = 7$), Arab ($n = 1$), Armenia ($n = 1$), Bosnia ($n = 66$), Brazil ($n = 1$), Bulgaria ($n = 1$), Czech Republic ($n = 3$), Chechnya ($n = 14$), Congo ($n = 4$), Croatia ($n = 23$), Dominican Republic ($n = 1$), Egypt ($n = 6$), France ($n = 1$), Georgia ($n = 2$), Germany ($n = 3$), Ghana ($n = 1$), India ($n = 1$), Iraq ($n = 2$), Iran ($n = 5$), Italy ($n = 4$), Kosovo ($n = 28$), Kurdistan ($n = 3$), Lebanon ($n = 1$), Macedonia ($n = 3$), Mauritius ($n = 1$), Mexico ($n = 1$), Moldavia ($n = 1$), Nigeria ($n = 2$), Pakistan ($n = 1$), Philippines ($n = 1$), Poland ($n = 1$), Portugal ($n = 1$), Romania ($n = 10$), Russia ($n = 1$), Serbia

($n = 40$), Switzerland ($n = 1$), Thailand ($n = 1$), Tunisia ($n = 2$), Turkey ($n = 54$), Vietnam ($n = 5$).

A total of $n = 197$ (62.1%) reported to have the Austrian citizenship (missing data: $n = 5$). Regarding languages spoken at home, $n = 15$ (4.7%) reported to speak only German, $n = 251$ (44.8%) German and another language, while $n = 159$ (50.2%) only speak another language at home (missing data: $n = 1$). Parents' educational backgrounds varied (university: $n = 55$, high school: $n = 55$, vocational school: $n = 98$, secondary school: $n = 82$, missing data: $n = 26$); 19.2% ($n = 62$) reported that at least one of their parents was unemployed (both employed: $n = 129$, missing data: $n = 126$). More than half of the sample (58.7%, $n = 186$) indicated to be Muslim, while 22.4% ($n = 71$) was Christian.

Supplement 5: Longitudinal Measurement Models

Measures need to be invariant over time to allow for unambiguous interpretations of effects over time. Thus, we first conducted confirmatory factor analyses to test the fit of the longitudinal measurement models as well as measurement invariance over time (Little et al., 2007). The longitudinal measurement models were built with the items (SV: 4 items; WB: 5 items) or item parcels (ERI: 3 parcels for ERI-exp and 4 parcels for ERI-com; NI: 4 parcels) serving as indicators. In line with common recommendations (Little et al., 2007), the autocorrelations among the residuals of a given indicator were allowed to co-vary. To test for longitudinal invariance, these unrestricted (configural) models were compared to restricted models in which the factor loadings (weak invariance) and intercepts (strong invariance) of a given indicator were equated over time.

The fit indices of all models and results of model comparisons are summarized in Table S1. Relying on the χ^2 difference test, model fit for ERI (including the latent factors ERI-exp and ERI-com) decreased significantly after imposing restrictions on intercepts (M1c), but remained similar to the fit of the unconstrained model (M1a), if two out of the 24 intercepts were freed. Similarly, regarding NI, all factor loadings and all but one intercept were invariant across measurement waves. For WB, the χ^2 difference test revealed partial invariance only, whereas SVS and SCC both held the level of strong factorial invariance. Employing the criteria for invariance testing proposed by Chen (2007), however, we can conclude that all constructs were time invariant (proposed thresholds for accepting non-invariance: $\Delta\text{CFI} \leq .010$ supplemented by $\Delta\text{RMSEA} \geq .015$).

Table S1. *Tests of Longitudinal Measurement Invariance.*

| Model | Model fit | | | | | | Model comparisons | | | | |
|--|-----------|-----------|----------|------|------|-------|-------------------|-------------|----------|--------------|----------------|
| | χ^2 | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | $\Delta\chi^2$ | Δdf | <i>p</i> | ΔCFI | $\Delta RMSEA$ |
| M1: ERI-exp and ERI-com | | | | | | | | | | | |
| M1a: Configural | 326.67 | 213 | <.001 | .968 | .955 | .041 | | | | | |
| M1b: Weak (equal factor loadings) | 335.39 | 225 | <.001 | .969 | .958 | .039 | 8.72 | 12 | .727 | .001 | -.002 |
| M1c: Strong (equal factor loadings and intercepts) | 389.70 | 241 | <.001 | .958 | .947 | .044 | 63.02 | 28 | <.001 | -.010 | .003 |
| M1d: Partial invariance (2 intercepts freed) | 357.99 | 239 | <.001 | .966 | .958 | .040 | 31.31 | 26 | .217 | -.002 | -.001 |
| M2: NI | | | | | | | | | | | |
| M2a: Configural | 64.15 | 39 | .007 | .985 | .970 | .049 | | | | | |
| M2b: Weak (equal factor loadings) | 75.80 | 47 | .005 | .983 | .972 | .048 | 11.65 | 8 | .167 | -.002 | -.001 |
| M2c: Strong (equal factor loadings and intercepts) | 90.17 | 55 | .002 | .979 | .971 | .049 | 26.03 | 16 | .015 | -.006 | .000 |
| M2d: Partial invariance (1 intercept freed) | 86.84 | 54 | .003 | .981 | .972 | .048 | 22.69 | 15 | .091 | -.004 | -.001 |
| M3: WB | | | | | | | | | | | |
| M3a: Configural | 143.10 | 72 | <.001 | .948 | .914 | .061 | | | | | |
| M3b: Weak (equal factor loadings) | 171.49 | 82 | <.001 | .935 | .905 | .064 | 28.39 | 10 | .002 | -.013 | .003 |
| M3c: Strong (equal factor loadings and intercepts) | 203.06 | 92 | <.001 | .919 | .895 | .067 | 59.96 | 20 | <.001 | -.029 | .006 |
| M3d: Partial invariance (3 factor loadings and intercepts freed) | 162.50 | 86 | <.001 | .944 | .922 | .058 | 19.41 | 14 | .150 | .004 | -.003 |
| M4: SV | | | | | | | | | | | |
| M4a: Configural | 88.87 | 36 | <.001 | .960 | .913 | .074 | | | | | |
| M4b: Weak (equal factor loadings) | 93.91 | 44 | <.001 | .962 | .933 | .065 | 5.05 | 8 | .753 | .002 | -.009 |
| M4c: Strong (equal factor loadings and intercepts) | 107.40 | 52 | <.001 | .958 | .937 | .063 | 18.53 | 16 | .294 | -.002 | -.011 |
| M5: SCC | | | | | | | | | | | |
| M5a: Configural | 62.63 | 39 | .010 | .980 | .960 | .048 | | | | | |
| M5b: Weak (equal factor loadings) | 70.99 | 47 | .013 | .980 | .966 | .044 | 8.36 | 8 | .399 | .000 | -.004 |
| M5c: Strong (equal factor loadings and intercepts) | 75.97 | 55 | .032 | .982 | .975 | .038 | 13.34 | 16 | .648 | .002 | -.010 |

Notes. Reference model for model comparisons was the configural invariance model. ERI-exp/-com = Ethnic and Racial Identity exploration/commitment; NI = National Identity; WB = Well-being; SV = Stereotype Vulnerability; SCC = Self-Concept Clarity. CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation.

Supplement 6: Simpson's Paradox

Figure S1 illustrates a fictitious example of a so-called Simpson's Paradox, where the relationship between two constructs at the population-level (e.g., between-person level) is opposite to the relationships for subgroups (e.g., within-person level; Kievit et al., 2013). As illustrated in the hypothetical example, on a general between-person level, national identity correlates positively with stereotype vulnerability, indicating that adolescents with higher national identity generally experience higher stereotype vulnerability. An implication of this finding might be to reduce young immigrants' national identity in order to make them less vulnerable to negative stereotypes. However, this would do even more harm for the individual adolescent, as the within-person relationship over time appears to be negative rather than positive. Thus, within an adolescent, an increase in his or her national identity counteracts stereotype vulnerability.

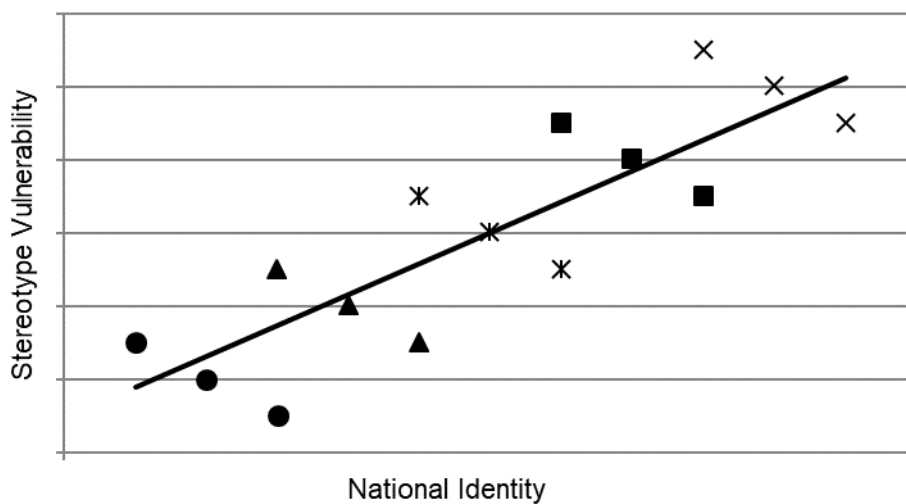


Figure S1. Illustration of the Simpson's Paradox with five individuals (indicated with different marks, e.g., dots, triangles), each assessed three times. In this hypothetical example, national identity correlates positively with stereotype vulnerability at the between-person level (i.e., assessing different individuals), but negatively at the within-person level (i.e., assessing one individual several times).

Supplement 7: Young Immigrants' Self-Concept Clarity and Well-being

A number of studies have examined implications of young immigrants' cultural identity, yet only few included structural components of the self (Schwartz et al., 2007). However, as cultural identity can change, recognizing its structure is important to gain a better understanding of the process. While cultural identity describes a developmental-contentual aspect of the self (the "I"), *self-concept clarity* constitutes a structural aspect (the "me"; cf. Schwartz et al., 2017; see also Cheon & Yip, 2019). It is defined as the extent to which individuals describe themselves clearly and in consistent ways and have a stable and secure sense of self over time (Campbell et al., 1996).

The process of exploring ones' identities can either lead to more clarity concerning culture-related values and commitment, or it can leave adolescents with a migrant background with feelings of incompatibility, insecurity, and confusion (Benet-Martinez & Haritatos, 2005; Verkuyten & Martinovic, 2012). Some research suggests a bidirectional relationship between identity coherence/confusion and immigrants' cultural identity (Meca et al., 2017). Higher levels of identity commitment have been shown to be positively related to self-concept clarity (e.g., Campbell et al., 1996; Crocetti et al., 2008; Schwartz et al., 2012), while identity exploration and self-concept clarity can be negatively associated (Crocetti et al., 2008). Studies including adolescents with and without a migrant background showed that higher self-concept clarity was positively associated with indicators of well-being (Campbell et al., 1996; Osborne & Taylor, 2010), increased psychological adjustment (Campbell et al., 2003), and fewer depressive symptoms (Schwartz et al., 2012; Van Dijk et al., 2014).

In sum, these findings stress the importance of considering self-concept clarity in addition to cultural identity as a predictor for well-being. We expected ERI, particularly the identity commitment subcomponent, to be positively related to self-concept clarity. Self-concept clarity was expected to be positively associated with well-being. Again, to account for internal psychological processes in these associations over time, we considered both,

between-person and within-person effects. So far, most research on immigrants' identity and self-concept clarity has focused on ERI. There is not much literature on the identification with the national culture in that respect (Meca et al., 2017). Therefore, we refrained from making any specific predictions regarding national identity and self-concept clarity.

To assess how sure participants were about themselves and their sense of identity, we included the 12-item *Self-Concept Clarity Scale* (SCC; Campbell et al., 1996; e.g., "I spend a lot of time wondering what kind of person I really am.") in its German translation (Stucke, 2002). A five-point scale was provided from *not true at all* (1) to *completely true* (5).

Descriptive statistics are provided in Table S2.

Table S2

Self-Concept Clarity: Means, Standard Deviations, Internal Consistencies, and Autocorrelations (Correlation of T1 with T2 after 4 months and with T3 after 8 months).

| | <i>N</i> | <i>M</i> (<i>SD</i>) | <i>α</i> | <i>r</i> (<i>T1</i>) |
|----|----------|------------------------|----------|------------------------|
| T1 | 317 | 3.27 (0.74) | .83 | - |
| T2 | 256 | 3.27 (0.79) | .85 | .65*** |
| T3 | 209 | 3.25 (0.80) | .84 | .60*** |

Supplement 8: RI-CLPM for Self-Concept Clarity

In addition to the hypotheses and models reported in the main text, we explored at the within-person level, whether adolescents' cultural identity predicted SCC (Model M4) and whether SCC predicted WB (Model M5). The analyses followed the procedure for testing Hypotheses 1 or 2 and Hypothesis 3, respectively. As shown in the tables below, all models fit the data well, and the within-person cross-lagged paths were stable across time (Table S3.1). However, none of the within-person cross-lagged effects were significant (Table S3.2).

Table S3.1. *Random-Intercept Cross-Lagged Panel Models.*

| Model | Model Fit | | | | | | Model Comparison | | |
|---|-----------|-----------|----------|------|------|-------|------------------|-------------|----------|
| | χ^2 | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | $\Delta\chi^2$ | Δdf | <i>p</i> |
| M4: Cross-lagged effects of cultural identity on self-concept clarity | | | | | | | | | |
| M2a Unconstrained model | 44.48 | 27 | .018 | .988 | .933 | .045 | | | |
| M2b Constrained model | 45.72 | 30 | .033 | .989 | .946 | .041 | 1.24 | 3 | .744 |
| M5: Cross-lagged effects of self-concept clarity on well-being | | | | | | | | | |
| M5a Unconstrained model | 8.34 | 5 | .120 | .992 | .896 | .049 | | | |
| M5b Constrained model | 9.66 | 6 | .140 | .992 | .916 | .044 | 0.92 | 1 | .337 |

Notes. In the constraint models, the cross-lagged paths were set equal across time points. CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation.

Table S3.2. *Within-Person Cross-Lagged Effects.*

| Predictors | <i>B</i> | <i>SE</i> | <i>p</i> |
|--|----------|-----------|----------|
| Model 4b | | | |
| ERI-exp _{Tx} on SCC _{Tx+1} | -0.05 | 0.08 | .571 |
| ERI-com _{Tx} on SCC _{Tx+1} | 0.03 | 0.10 | .783 |
| NI _{Tx} on SCC _{Tx+1} | 0.11 | 0.09 | .245 |
| Model 5b | | | |
| SCC _{Tx} on WB _{Tx+1} | 0.20 | 0.13 | .131 |

Notes. ERI-exp/-com = Ethnic and Racial Identity exploration/commitment; NI = National Identity; WB = Well-being; SCC = Self-Concept Clarity.

Supplement 9: Multi-Group Analyses

The parent study included an intervention based on previous stereotype threat interventions (e.g., McGlone & Aronson, 2006; Walton & Cohen, 2007, 2011; Weber et al., 2015). The short intervention aimed at increasing the sense of belonging of students with a migrant background. It was delivered at T1 and T2 after students had filled out the questionnaires in order to avoid short-term effects. A more detailed description of the intervention and its effects based on the stereotype threat framework can be found in the publication by Weber and colleagues (2018).

To examine whether the obtained results remained stable across the experimental and control group, multi-group analyses were conducted for all models. First, unconstrained multi-group RI-CLPMs were conducted (Models M1b.a, M2b.a, and M3b.a in Table S4.1), which were then compared with models in which the autoregressive and cross-lagged effects were set equal for the two groups (Models M1b.b, M2b.b, and M3.b.b in Table S4.1). For Hypotheses 1 and 2, the constrained models did not fit the data worse as compared with the unconstrained model (see Table S4.1, model comparisons). Concerning Hypothesis 3, however, only the autoregressive effects turned out to be invariant across groups (Table S4.1, Model M3b.c). As shown in Table S4.2, the significant negative cross-lagged effect of SV on WB was present in the control group, but not in the experimental group. This suggests that the intervention acted as a buffer on the negative effect of SV on WB at the within-person level. This is in line with stereotype threat theory, as the intervention aimed at reducing the negative influence of (chronic experiences of) stereotype threat. This effect may spillover from performance variables (as in classic stereotype threat studies) to well-being.

Table S4.1. *Multi-Group Analyses for the Tested Models (Experimental Group n = 151; Control Group n = 166).*

| Model | Model Fit | | | | | | Model Comparison | | |
|--|-----------|-----------|----------|------|------|-------|------------------|-------------|----------|
| | χ^2 | <i>df</i> | <i>p</i> | CFI | TLI | RMSEA | $\Delta\chi^2$ | Δdf | <i>p</i> |
| M1b: Hypothesis 1 | | | | | | | | | |
| M1b.a Unconstrained | 81.15 | 60 | .36 | .984 | .917 | .033 | | | |
| M1b.b Constrained | 89.14 | 68 | .044 | .984 | .927 | .031 | 7.99 | 8 | .435 |
| M2b: Hypothesis 2 | | | | | | | | | |
| M2b.a Unconstrained | 68.59 | 58 | .161 | .993 | .961 | .024 | | | |
| M2b.b Constrained | 81.91 | 67 | .104 | .989 | .952 | .027 | 13.32 | 9 | .149 |
| M3b: Hypothesis 3 | | | | | | | | | |
| M3b.a Unconstrained | 8.89 | 10 | .543 | 1.00 | 1.00 | .000 | | | |
| M3b.b Constrained | 21.55 | 14 | .088 | .979 | .806 | .041 | 12.66 | 4 | .013 |
| M3b.c Only autoregressive effects constrained | 11.26 | 13 | .589 | 1.00 | 1.00 | .000 | 2.37 | 3 | .499 |

Notes. CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation. In the constrained models, the autoregressive and cross-lagged paths were constrained to be equal across groups.

Table S4.2. *Within-Person Cross-Lagged Effects in the Multi-Group RI-CLPMs.*

| Cross-lagged effects | <i>B</i> | <i>SE</i> | <i>p</i> |
|---|----------|-----------|----------|
| Model 1b.b (Hypothesis 1) | | | |
| ERI-exp _{Tx} on WB _{Tx+1} | -0.39 | 0.15 | .012 |
| ERI-com _{Tx} on WB _{Tx+1} | 0.46 | 0.18 | .012 |
| NI _{Tx} on WB _{Tx+1} | 0.40 | 0.18 | .025 |
| Model 2b.b (Hypothesis 2) | | | |
| ERI-exp _{Tx} on SV _{Tx+1} | -0.13 | 0.12 | .287 |
| ERI-com _{Tx} on SV _{Tx+1} | 0.31 | 0.13 | .019 |
| NI _{Tx} on SV _{Tx+1} | 0.02 | 0.15 | .905 |
| Model 3b.c (Hypothesis 3) | | | |
| SV _{Tx} on WB _{Tx+1} : Experimental group | 0.07 | 0.15 | .645 |
| SV _{Tx} on WB _{Tx+1} : Control group | -0.64 | 0.16 | <.001 |

Notes. ERI-exp/-com = Ethnic and Racial Identity exploration/commitment; NI = National Identity; WB = Well-being; SV = Stereotype Vulnerability.

References

- Altzinger, W., & Schneebaum, A. (2018). Austria: Intergenerational mobility among children of immigrants. In OECD: *Catching up? Country studies on intergenerational mobility and children of immigrants* (pp. 13-38). OECD Publishing.
- Benet-Martínez, V., & Haritatos, J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. *Journal of Personality*, *73*, 1015-1050.
<https://doi.org/10.1111/j.1467-6494.2005.00337.x>
- Campbell, J. D., Assanand, S., & Paula, A. D. (2003). The structure of the self-concept and its relation to psychological adjustment. *Journal of Personality*, *71*, 115-140.
<https://doi.org/10.1111/1467-6494.t01-1-00002>
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*, 141-156.
<https://doi.org/10.1037//0022-3514.70.1.141>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, *14*, 464–504.
<https://doi.org/10.1080/10705510701301834>
- Cheon, Y. M., & Yip, T. (2019). Longitudinal Associations between Ethnic/Racial Identity and Discrimination among Asian and Latinx Adolescents. *Journal of Youth and Adolescence*, *48*, 1736–1753. <https://doi.org/10.1007/s10964-019-01055-6>
- Christ, O., Asbrock, F., Dhont, K., Pettigrew, T. F., & Wagner, U. (2013). The effects of intergroup climate on immigrants' acculturation preferences. *Journal of Psychology*, *221*, 252-257. <https://doi.org/10.1027/2151-2604/a000155>
- Crocetti, E., Rubini, M., & Meeus, W. (2008). Capturing the dynamics of identity formation in various ethnic groups: Development and validation of a three-dimensional model.

Journal of Adolescence, 31, 207–222.

<https://doi.org/10.1016/j.adolescence.2007.09.002>

Kievit, R. A., Frankenhuis, W. E., Waldorp, L. J., & Borsboom, D. (2013). Simpson's paradox in psychological science: A practical guide. *Frontiers in Psychology*, 4, 513.

<https://doi.org/10.3389/fpsyg.2013.00513>

Langenbacher, N., & Schellenberg, B. (2011). *Is Europe on the "right" path ?* Friedrich-Ebert-Stiftung.

Little, T. D., Preacher, K. J., Selig, J. P., & Card, N. A. (2007). New developments in latent variable panel analyses of longitudinal data. *International Journal of Behavioral Development*, 31, 357-365.

<https://doi.org/10.1177/0165025407077757>

McGlone, M. S., & Aronson, J. (2006). Stereotype threat, identity salience, and spatial reasoning. *Journal of Applied Developmental Psychology*, 27, 486–493.

<https://doi.org/10.1016/j.appdev.2006.06.003>

Meca, A., Sabet, R. F., Farrelly, C. M., Benitez, C. G., Schwartz, S. J., Gonzales-Backen, M., ... & Picariello, S. (2017). Personal and cultural identity development in recently immigrated Hispanic adolescents: Links with psychosocial functioning. *Cultural Diversity and Ethnic Minority Psychology*, 23(3), 348-361.

<https://doi.org/10.1037/cdp0000129>

OECD/European Union (2015). *Indicators of immigrant integration 2015: Settling in*. OECD Publishing.

Phalet, K., & Kopic, A. (2006). Acculturation in European societies. In D. L. Sam & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 331-348).

Cambridge University Press. <https://doi.org/10.1017/CBO9780511489891.025>

- Safi, M. (2010). Immigrants' Life Satisfaction in Europe: Between Assimilation and Discrimination. *European Sociological Review*, 26(2), 159-176.
<https://doi.org/10.1093/esr/jcp013>
- Schwartz, S. J., Klimstra, T. A., Luyckx, K., Hale, W. W., III, & Meeus, W. H. J. (2012). Characterizing the self-system over time in adolescence: Internal structure and associations with internalizing symptoms. *Journal of Youth and Adolescence*, 41, 1226–1239. <https://doi.org/10.1007/s10964-012-9751-1>
- Schwartz, S. J., Meca, A., & Petrova, M. (2017). Who am I and why does it matter? Linking personal identity and self-concept clarity. In J. Lodi-Smith & K. DeMarree (Eds.), *Self-concept clarity* (pp. 145-164). Springer. https://doi.org/10.1007/978-3-319-71547-6_8
- Schwartz, S. J., Zamboanga, B. L., Rodriguez, L., & Wang, S. C. (2007). The structure of cultural identity in an ethnically diverse sample of emerging adults. *Basic and Applied Social Psychology*, 29, 159-173. <https://doi.org/10.1080/01973530701332229>
- Stucke, T. S. (2002). Überprüfung einer deutschen Version der Selbstkonzeptklarheits-Skala von Campbell [Investigation of a German version of Campbell's self-concept clarity scale]. *Zeitschrift für Differentielle und Diagnostische Psychologie*, 23, 475-484.
<https://doi.org/10.1024//0170-1789.23.4.475>
- Usborne, E., & Taylor, D. M. (2010). The role of cultural identity clarity for self-concept clarity, self-esteem, and subjective well-being. *Personality and Social Psychology Bulletin*, 36, 883-897. <https://doi.org/10.1177/0146167210372215>
- Van Dijk, M.P.A., Branje, S., Keijsers, L., Hawk, S.T., Hale, W.W. III, & Meeus, W. (2014). Self-concept clarity across adolescence: longitudinal associations with open communication with parents and internalizing symptoms. *Journal of Youth and Adolescence*, 43, 1861–1876. <https://doi.org/10.1007/s10964-013-0055-x>

- Verkuyten, M., & Martinovic, B. (2012). Immigrants' national identification: Meanings, determinants, and consequences. *Social Issues and Policy Review*, 6, 82-112.
<https://doi.org/10.1111/j.1751-2409.2011.01036.x>
- Walton, G. M., & Cohen, G. L. (2007). A question of belonging: race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92, 82-96.
<https://doi.org/10.1037/0022-3514.92.1.82>
- Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331, 1447-1451.
<https://doi.org/10.1126/science.1198364>
- Weber, S., Appel, M., & Kronberger, N. (2015). Stereotype threat and the cognitive performance of adolescent immigrants: The role of cultural identity strength. *Contemporary Educational Psychology*, 42, 71-81.
<https://doi.org/10.1016/j.cedpsych.2015.05.001>
- Weber, S., Kronberger, N., & Appel, M. (2018). Immigrant students' educational trajectories: The influence of cultural identity and stereotype threat. *Self & Identity*, 17, 211-235. <https://doi.org/10.1080/15298868.2017.1380696>
- Zick, A., Pettigrew, T. F., & Wagner, U. (2008). Ethnic prejudice and discrimination in Europe. *Journal of Social Issues*, 64, 233-251. <https://doi.org/10.1111/j.1540-4560.2008.00559.x>