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Where is Your Best Friend From? Implications of Intragroup and Intergroup Friendships for Adolescents' Identity and Well-Being

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The authors report there are no competing interests to declare.

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Analyses codes and outputs can be accessed on the Open Science Framework page of the project: https://osf.io/s94wd . The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

Abstract

Nowadays, adolescents have increasing opportunities to interact with peers of their same and other ethnic groups. Yet, little is known about the implications of having an intragroup or intergroup best friend for the development of interpersonal identity processes (i.e., commitment, in-depth exploration, and reconsideration) and its interplay with subjective, psychological, and social well-being. The current study aims to fill this gap. A total of 984 adolescents (M_{age}=14.66; 62.70% females; 24.80% ethnic minority) living in the North-East part of Italy completed questionnaires at three time points reporting on their best friend's ethnic group, interpersonal identity, and well-being. Results of chi-square test comparisons highlighted that ethnic majority youth had more intragroup while their ethnic minority peers had more intergroup best friendship ties. Further, results of latent growth curve analyses showed that ethnic majority and minority adolescents with intragroup and intergroup best friends displayed unique developmental trajectories of interpersonal identity commitment, in-depth exploration, and reconsideration of commitment, as well as their interplay with subjective, psychological, and social well-being. Overall, these findings provide crucial insight into the type and implications of youth friendship patterns highlighting the protective role of a consolidated sense of identity for the well-being of youth in multicultural societies.

Keywords: Intergroup best friendship, interpersonal identity, well-being, adolescence, longitudinal

Introduction

Over the past decades, globalization and socio-political crises (e.g., war, economic crisis) have contributed to an unprecedented increase in migration flows worldwide (Motti-Stefanidi, 2019). The European continent has experienced the highest increase in the number of international migrants, who in 2024 account for 12.6% of the total population (compared to 7.1% in 1990; United Nations, 2025). Some countries, like Italy, have turned from traditional contexts of emigration to main destinations for migrants (United Nations, 2019).

Consequently, adolescents nowadays interact daily with peers from diverse cultural backgrounds and have the opportunity to form and consolidate friendship bonds with both members of their own (i.e., intragroup friendship) and other (i.e., intergroup friendship) ethnic groups (Titzmann & Jugert, 2019). Prior research has highlighted that intergroup friendships, which represent an example of positive and intimate contact among individuals of different ethnic and cultural backgrounds (Pettigrew, 1998), foster the development (e.g., Titzmann et al., 2015; Wölfer et al., 2016) and maintenance (e.g., Davies & Aron, 2016) of more positive intergroup attitudes, and contribute to youth's adjustment (e.g., Bagci et al., 2017; Karataş et al., 2021). However, it is less clear whether having an intragroup or intergroup friendship would influence how adolescents form and consolidate their interpersonal identity (Grotevant et al., 1982; Thorbecke & Grotevant, 1982), which represents a crucial developmental task in adolescence and an important gateway for positive adjustment (Branje, 2022). Relatedly, the current research aimed to examine patterns of adolescents' intragroup and intergroup friendship at the beginning of the study and their implications for the development of interpersonal identity processes (i.e., commitment, in-depth exploration, and reconsideration; Crocetti et al., 2008), and their interplay with subjective, psychological, and social well-being across one year. In doing so, this research adopted an intergroup perspective focusing on both ethnic majority and ethnic minority adolescents in the Italian context. In the Italian multicultural society, ethnic majority adolescents are defined as those born in Italy from two Italian

parents, while ethnic minority adolescents are those either living or born in Italy with at least one parent born abroad (e.g., a youth born in Italy whose parent(s) are from China).

Intergroup Friendships, Identity, and Social Contexts

In line with the contact hypothesis (Allport, 1954), intergroup contact represents an effective strategy to promote positive attitudes among ethnic majority and minority groups (for meta-analyses, see Pettigrew & Tropp, 2006, 2008). Extensive research has highlighted the benefits of different forms of intergroup contact, ranging from direct contact experiences in multiple settings (e.g., Karataş et al., 2023) to forms of indirect contact (e.g., vicarious, extended; e.g., Vezzali et al., 2017). Contrary to more superficial forms of contact, intergroup friendships are long-term, mutual, and intimate relationships characterized by self-disclosure and empathy (Pettigrew, 1998). Thus, they represent an especially powerful gateway to positive intergroup relationships and attitudes (e.g., Chen & Graham, 2015; Turner & Feddes, 2011; for a meta-analysis, see Davies et al., 2011). Relatedly, intergroup friendship was found to more strongly contribute to positive attitudes compared to other forms of intergroup contact (for a meta-analysis, see Pettigrew & Tropp, 2006).

Despite their positive implications, studies with adolescents highlighted that intergroup friendships tend to be less common and stable compared to intragroup friendships (e.g., Kelleghan et al., 2019; Munniksma & Juvonen, 2012; Schneider et al., 2007), and intergroup peers were less likely to be nominated as best friends (Reynolds, 2007). These findings suggest that the ethnic homophily principle, according to which individuals tend to interact and befriend others with similar characteristics (McPherson et al., 2001), guides the formation and maintenance of friendship in multicultural contexts. However, other studies have highlighted that other characteristics, such as classroom ethnic diversity (e.g., Bagci, Kumashiro, et al., 2014), the time spent at each other's home (e.g., Lessard et al., 2019), and societal expectations (e.g., Titzmann et al., 2015), can influence the quantity, quality, and maintenance of intergroup friendship. Notably, most research on intergroup friendship has neglected to examine best friendship ties in multicultural contexts (for an exception, see Silbereisen & Titzmann, 2007), and has been conducted in North America or UK.

This is likely because migration is historically more common in these regions compared to the Italian context. However, given that Italy has rapidly changed from a country of emigration into a country of immigration over the last few decades (Zincone & Caponio, 2006), there is a need to understand adolescents' best friendship ties within this increasingly multicultural context.

In light of this evidence, this research aimed to examine the prevalence of intragroup and intergroup friendship ties among ethnic majority and minority adolescents in the Italian context. In doing so, it focused specifically on the match or mismatch between youth's ethnic group and that of their best friend. Shedding light on these dynamics is crucial because patterns of intra- and intergroup friendship might shape not only how adolescents form their attitudes about others (Davies et al., 2011) but also how they approach the task of defining their own identity, which has important implications for youth positive adjustment (Branje, 2022).

Dual-Cycle Models of Identity Development

Although forming one's identity represents a lifelong challenge (Erikson, 1950), this task becomes particularly relevant in adolescence. Especially at this life stage, youth undergo multiple physical, cognitive, psychological, and social changes that urge them in reflecting on their identity commitments and what contributes to the definition of who they are (Crocetti, 2018; Crocetti et al., 2025). Thus, identity is formed, consolidated, and revised through an iterative and dynamic process that can be effectively captured by dual-cycle identity models (Meeus, 2011). Within this framework, commitment, in-depth exploration, and reconsideration of commitment represent three pivotal processes (Crocetti et al., 2008). *Commitment* includes making enduring choices in identity-relevant areas and deriving a sense of self-confidence from them, while *reconsideration of commitment* involves comparing current commitments to possible alternatives when the former are perceived as no longer satisfactory. Furthermore, *in-depth exploration* refers to actively reflecting on the meaning of, seeking new information on, and talking about current commitments. These three processes inform the cycles of identity formation and maintenance. Identity formation (Cycle 1) results from the interplay between commitment and reconsideration of commitment, while

identity maintenance (Cycle 2) emerges from the interplay between commitment and in-depth exploration (Crocetti, 2017).

Individuals in the identity maintenance cycle reflect on their identity choices and validate them if they are perceived in line with one's goals. Conversely, when individuals perceive a misfit between current commitments and their plans and characteristics, they move back to the cycle of identity formation. These dynamic processes operate in a similar way across multiple domains and sustain youth in forming a coherent and integrated sense of who they are (Crocetti et al., 2023; Goossens, 2001). Especially in adolescence, the interpersonal domain is a salient aspect of youth's identity development.

Interpersonal Identity Processes in Adolescence

Interpersonal identity refers to the task of establishing a set of beliefs about the self in the relationship with significant others, such as (best) friends and romantic partners (Grotevant et al., 1982; Thorbecke & Grotevant, 1982). As peers become increasingly important referents in adolescence (Brown, 2004) and youth strive to build high-quality, meaningful, and supportive relationships with them, interpersonal identity related to friendships is of utmost importance at this life phase. More specifically, the relationship with a best friend tends to be stronger and more exclusive than relationships with other friends (Branje et al., 2007; Meeus, 2019). However, this identity domain can also be considered relatively "open" because adolescents still have the opportunity to explore diverse alternatives by engaging in social interactions with various peer groups and forming intimate relationships with friends (Albarello et al., 2018; Meeus, 2011). This is especially relevant in contexts characterized by increasing levels of ethnic and cultural diversity.

Interpersonal Identity and Ethnically and Culturally Diverse Social Contexts

Given that identity development is embedded in and influenced by multiple social contexts and experiences (Crocetti et al., 2023), the type of friendships youth engage with might play a role in shaping how individuals form, maintain, and revise their identity commitments. Relatedly, prior research has highlighted that belonging and exploration of ethnic identity varied significantly based

on the match or mismatch between friends' ethnic background. Specifically, youth reported higher levels of belonging and exploration of their ethnic identity with same-ethnic compared to different-ethnic peers (e.g., Kiang et al., 2007; Kiang & Fuligni, 2009).

However, the implications of intragroup and intergroup friendship patterns for the development of interpersonal identity processes in adolescence remain largely unexplored. Do adolescents with an intragroup best friend form, consolidate, and maintain their identity commitment in this relationship differently compared to those with an intergroup friendship? For instance, because intergroup friendships tend to be less stable (Kelleghan et al., 2019), adolescents might commit less to the relationship with their intergroup best friend and engage in higher reconsideration of their interpersonal identity. These processes might be driven by lower self-disclosure and less frequent interactions (e.g., Lessard et al., 2019) or even by negative peer norms around intergroup friendships (e.g., Jugert et al., 2013). These processes can generate feelings of dissatisfaction with current friendship commitment and lead adolescents with an intergroup best friend to enter the identity formation cycle in search for better alternatives. Alternatively, best friends with different ethnic and cultural backgrounds might engage in active conversations about their shared and unique experiences, discussing and navigating personal and cultural differences. These conversations can support adolescents in thoroughly reflecting about their friendship bond and explore in depth its identity-defining value, ultimately activating the cycle of identity maintenance. However, no prior research has explicitly examined these processes. This research sought to address this gap by examining whether ethnic majority and minority adolescents with intragroup and intergroup friendships at the beginning of the study would display different trajectories of interpersonal identity commitment, in-depth exploration, and reconsideration of commitment over the course of one year. Such knowledge is crucial to shed light on the implications of ethnically diverse friendships for identity development in adolescence and its interplay with well-being (Karaś & Cieciuch, 2018).

The Interplay of Interpersonal Identity and Well-Being

The extent to which adolescents successfully navigate the task of forming a coherent sense of identity bears important implications for their well-being (e.g., Hatano et al., 2020; Karaś & Cieciuch, 2018). Prior research has especially focused on the role of identity for preventing maladjustment (e.g., anxiety, psychosocial problems; for a review, see Crocetti, 2018), highlighting the protective role of commitment (e.g., linked to lower levels of internalizing problems; Crocetti et al., 2009) and the negative implications of in-depth exploration and reconsideration of commitment (e.g., contributing to higher levels of internalizing and externalizing problems; Hatano et al., 2016; Mercer et al., 2017). More recently, however, studies have not only examined positive indicators of well-being (e.g., subjective, psychological, and social well-being) but also adopted a domain-specific approach to unravel the implications of identity processes pertaining to different life domains (e.g., educational/vocational, interpersonal) for positive psychosocial functioning.

Along this line, interpersonal identity commitment was consistently linked to increases in subjective (i.e., the extent to which individuals are satisfied with their lives and experience positive emotions; Diener et al., 1999), psychological (i.e., the extent to which people accept themselves, experience a sense of mastery, autonomy, and purpose in life, and have satisfying relationships with others; Ryff, 1989, 2014), and social (i.e., the extent to which individuals feel accepted and able to actively contribute to their social contexts; Keyes, 1998) well-being among adolescents (De Lise et al., 2024) and young adults (Karaś & Cieciuch, 2018). Similarly, youth in high-commitment identity trajectories displayed higher satisfaction with life and subjective happiness (Hatano et al., 2020). Conversely, mixed findings emerged for the implications of both in-depth exploration and reconsideration of interpersonal identity commitments. Regarding in-depth exploration, ethnic minority (but not ethnic majority) adolescents who explored their interpersonal identity reported significant decreases in their subjective and psychological well-being (De Lise et al., 2024), while interpersonal identity exploration was not associated with well-being of young adults (Karaś & Cieciuch, 2018). Regarding reconsideration of commitment, some studies (De Lise et al., 2024; Karaś & Cieciuch, 2018) have found a lack of significant associations with well-being, while

research on identity statuses has highlighted that adolescents in high-reconsideration identity trajectories (i.e., moratorium and diffusion to moratorium to diffusion) reported lower subjective happiness and life satisfaction (Hatano et al., 2020).

These findings provide important insight into the implications of interpersonal identity processes for youth positive adjustment and functioning. However, no prior research has examined whether the type of friendship adolescents engage with could influence this interplay. For instance, is interpersonal identity commitment conducive to well-being for all youth or are there differences depending on adolescents' and their best friend's ethnic background? The present study addressed this issue by examining whether the interplay between interpersonal identity processes and multiple indicators of well-being unfolds similarly among ethnic majority and minority adolescents with intragroup and intergroup friendships.

Current Study

Relationships with peers and friends are crucial resources supporting youth identity development (e.g., de Moor et al., 2021; for a review, see Branje et al., 2021) and well-being across multiple contexts (Brown, 2004). Adolescents nowadays interact and might form friendship bonds with peers of different ethnic and cultural backgrounds (Titzmann & Jugert, 2019), yet prior research has neglected to examine whether intragroup or intergroup friendship patterns uniquely contribute to adolescents' identity formation and adjustment. The current study was designed to address this gap by exploring: (1) the extent to which ethnic majority and minority adolescents form intragroup and intergroup ties; (2) the moderating role of friendship patterns at the beginning of the study on the developmental trajectories of interpersonal identity commitment, in-depth exploration, and reconsideration of commitment over time; and (3) the moderating role of friendship patterns at the beginning of the study on the associations between developmental trajectories of these three identity processes and subjective, psychological, and social well-being. Hypotheses are proposed for each aim. Based on theoretical assumptions (McPherson et al., 2001) and prior empirical findings (e.g., Kelleghan et al., 2019; Munniksma & Juvonen, 2012), both ethnic majority and

minority youth are expected to report a higher number of intragroup compared to intergroup friendships (H1). Building upon prior research on ethnic identity (Kiang et al., 2007; Kiang & Fuligni, 2009), ethnic majority and minority adolescents with intragroup and intergroup friendships are expected to display different developmental trajectories of interpersonal identity (H2). However, due to the lack of empirical findings, the nature of such differences is examined from an exploratory standpoint. Last, the interplay between identity and well-being is expected to significantly differ among ethnic majority and minority adolescents with intragroup and intergroup friendships (H3), and the quality of these differences is approached from an exploratory perspective.

Method

Participants

Data for this study was drawn from a larger three-wave longitudinal research project "Developing Inclusive Identities in Adolescence" involving adolescents attending several high schools located in the North-East part of Italy and examining their intergroup experiences, acculturation processes, and well-being (see Karataş et al., 2023a, 2023b). A total of 984 adolescents (M_{age} = 14.66, SD_{age} = 0.74, range: 14-17 years; 62.70% females, 37.30% males) who participated in at least two out of three assessments were included in the current study. This inclusion criterion was adopted to allow for reliable estimation of missing data by leveraging the information participants provided in the other waves. Approximately half of adolescents' mothers and fathers had a medium (i.e., up to high school diploma) educational level (see the Supplemental Materials for further details). The sample included two groups of youth based on their ethnic background. Out of the total sample, 740 adolescents (M_{age} = 14.58, SD_{age} = 0.68, range: 14-17 years; 64.73% females, 35.27% males) had an ethnic majority Italian background, while the remaining 244 youth (M_{age} = 14.91, SD_{age} = 0.84, range: 14-17 years; 56.56% females, 43.44% males) had an ethnic minority background (i.e., born or with at least one parent born outside of Italy). Almost three quarters (74.59%) of ethnic minority participants were second-generation immigrants who were born in Italy, while the remaining (25.41%) were first-generation youth who

had been living in Italy for an average of 7.53 years (*SD* = 5.12, range: 0.50-15.50) at the beginning of the study. Participants were recruited from multi-ethnic classrooms, which included on average 26.29% (range: 0% - 80%) of ethnic minority students. The ethnic composition of these classrooms fully reflects the general characteristics of the area of the study (i.e., Emilia-Romagna region), which is the Italian region with the highest prevalence of ethnic minority students (Ministero della Pubblica Istruzione, 2024). Further details about the sample characteristics and cross-group comparisons are reported in the Supplemental Materials.

Most of the participants (72.15%) completed all three waves of assessment, while the remaining (27.85%) completed only two across the study period. Within each assessment, the completion rate of the questionnaires was high (70.73% at T1, 82.72% at T2, and 82.32% at T3). The Little's (1988) Missing Completely at Random (MCAR) test conducted on the study variables yielded a normed χ^2 (χ^2/df = 521.60/391) of 1.33, indicating that the data are most likely missing completely at random (MCAR). Therefore, missing data were handled with the Full Information Maximum Likelihood (FIML) procedure available in M*plus* (Kelloway, 2015), which is recommended in social science research (Enders, 2013).

Procedure

The ethics committee of the Alma Mater Studiorum University of Bologna (Italy) approved this study. Before starting this research, the school principals had granted permission to administer a questionnaire during class hours. Then, adolescents and their parents were provided with detailed oral and written information about the study and were invited to participate. Active parental consent and adolescents' assent were obtained for all youth.

This longitudinal research project (see Karataş et al., 2023a, 2023b) included three assessments with a six-month interval between them. Data at T1 (May 2019) and T2 (November 2019) were collected through paper-and-pencil questionnaires during class hours. Due to the COVID-19 pandemic, data at T3 (May 2020) was collected by an online version of the questionnaire, which was completed during class hours in the remote teaching format. At each

assessment, researchers were present to assist participants and respond to any questions they might have. Participants were asked to create a unique code to pair their responses over time while ensuring confidentiality. Participation was voluntary and without compensation, and youth could choose to withdraw anytime.

Measures

Demographics. Adolescents' socio-demographic information, including age (exact age at T1 based on participants' date of birth) and sex (male = 0, female = 1) were collected at the beginning of the study. Further, adolescents indicated their own, their mother's, and their father's place of birth (Italy = 0, elsewhere = 1). Based on this information, adolescents were categorized as either having an ethnic majority (if they and both their parents were born in Italy) or an ethnic minority background (if at least one of their parents was born outside Italy).

Adolescents' patterns of best friendship. At T1, after answering questions about their interpersonal identity processes (see below), adolescents were asked to report on their best friend's nationality using the following question: "Does your best friend have the same nationality as you?", with adolescents responding either 0 (*yes*), thus indicating an intragroup friendship, or 1 (*no*), thus indicating an intergroup friendship. This dichotomous variable was used in the analyses of the first aim. Additionally, it was later combined with adolescents' ethnic background to create a categorical variable distinguishing four groups of participants: ethnic majority adolescents with an intragroup best friend (0), ethnic majority adolescents with an intergroup best friend (1), ethnic minority adolescents with an intragroup best friend (2), and ethnic minority adolescents with an intergroup best friend (3). This variable with four categories was used in the analyses for the second and third aims (see Strategy of Analysis).

Interpersonal identity processes. Commitment, in-depth exploration, and reconsideration of commitment in the interpersonal domain were measured at each time point using the Utrecht-Management of Identity Commitment Scale (U-MICS; Crocetti et al., 2008; Italian validation by Crocetti et al., 2010). This scale can be used to assess identity processes in multiple domains, and,

for the current study, the focus was on the interpersonal domain with a specific reference to best friendship. The U-MICS comprises three subscales, each tapping into one of the three identity processes. The scale was introduced by the following specification: "The following statements concern the relationship you have with your best friend. Note that by best friend we do not refer to a sibling nor to someone you have a romantic relationship with". Next, adolescents were presented with 13 items which they had to rate on a 5-point Likert scale ranging from 1 (*completely untrue*) to 5 (*completely true*). Sample items include "My best friend gives me certainty in life" (commitment; 5 items), "I think a lot about my best friend" (in-depth exploration; 5 items), and "I often think it would be better to try to find a different best friend" (reconsideration of commitment; 3 items). Scores of interpersonal identity commitment, in-depth exploration, and reconsideration of commitment at each time point were obtained by averaging adolescents' answers on the items comprising each subscale. Cronbach's Alphas for commitment were .86, .85, and .89, for in-depth exploration were .71, .72, and .77, and for reconsideration of commitment were .86, .87, and .88 at T1, T2, and T3, respectively.

Well-being. Subjective, psychological, and social well-being were assessed at each time point via the Mental Health Continuum Short Form (MHC-SF; Keyes, 2005; Italian validation by Petrillo et al., 2015). It consists of 14 items relating to the last 6 months. Adolescents answered on a 6-point Likert scale from 0 (*never*) to 5 (*every day*). Sample items are: "How often did you feel happy?" (subjective well-being; 3 items); "How often did you feel good at managing the responsibilities of your daily life?" (psychological well-being; 6 items), and "How often did you feel that you had something important to contribute to society?" (social well-being; 5 items). Cronbach's Alphas at T1, T2, and T3 were for subjective well-being .73, .75, and .73, for psychological well-being .81, .82, and .85, and for social well-being .79, .80, and .82.

Strategy of Analysis

Descriptive analyses and chi-square tests (see below) were conducted using IBM SPSS Version 29.0 for Windows. All the remaining analyses were conducted in M*plus* 8.10 (Muthén &

Muthén, 2017), using the Maximum Likelihood Robust (MLR) estimator which provides estimates that are robust to non-normality of observations (Satorra & Bentler, 2001). Analyses codes can be accessed at https://osf.io/s94wd. As a preliminary step, longitudinal measurement invariance across the three time points was examined for interpersonal identity processes and well-being, separately. This preliminary test ensures that each scale measures the same construct with an identical factorial structure across time points (van de Schoot et al., 2012), thus allowing for further tests on developmental trends. Further details on this analytic procedure are detailed in the Supplemental Materials.

To address the first aim of the study (i.e., to examine patterns of intragroup and intergroup best friendship among ethnic majority and minority adolescents), participants' ethnic background and their type of best friendship were cross-tabulated and the Pearson Chi-square test used to ascertain the independence of the two distributions. This analytic procedure allows to estimate the extent to which ethnic majority and minority participants engage in each friendship type. The expected frequencies in the Chi-square test are calculated under the assumption of independence (i.e., the assumption that the distribution of friendship type is not associated with ethnic background). By comparing observed frequencies with these expected values, it is possible to determine whether certain combinations (e.g., ethnic majority adolescents with intragroup friendships) occur more or less often than would be expected by chance. Specifically, standardized residuals are examined to identify which cells deviate significantly from expectations: values below -2 and above 2 indicate that the observed frequency is significantly lower or higher, respectively, than the expected frequency under the null hypothesis of independence.

Moving to the second aim of this study (i.e., to understand whether the developmental trajectories of interpersonal identity processes would differ for ethnic majority and minority adolescents with intragroup and intergroup friendship), four groups of participants were identified based on the combination of youth and their best friend's ethnic backgrounds: ethnic majority with an intragroup best friend, ethnic majority with an intergroup best friend, ethnic minority with an

intragroup best friend, and ethnic minority with an intergroup best friend. Next, Latent Growth Curve (LGC) models were used to examine developmental trajectories of commitment, in-depth exploration, and reconsideration of commitment in the interpersonal identity domain. This analytic strategy allows to estimate development by means of two intertwined parameters (and their respective variability). The intercept represents initial (i.e., at T1) mean levels of a given construct, while the slope provides information on the rate of change throughout the study occasions (i.e., between T1 and T3). First, univariate LGC models were tested separately for each identity process to identify the one that best represents change (see Table S4 of the Supplemental Materials for the results). The fit of each model (as well as those that follow) was evaluated based on a combination of indices (Byrne, 2012): the Comparative Fit Index (CFI) with values higher than .90 and .95 indicating acceptable and excellent fit, respectively; and the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Residual (SRMR) with values below .08 and .05 indicating acceptable and very good fit, respectively. Additionally, the RMSEA 90% confidence interval's upper bound lower than .10 indicates an acceptable fit of the model (Chen et al., 2008). Once the best fitting solution was identified, a multivariate LGC model was tested on the entire sample of participants by including the developmental trajectories of commitment, in-depth exploration, and reconsideration of commitment simultaneously. Last, to examine the moderating role of adolescents' background and friendship type, the multivariate LGC model was tested again in a multigroup format to compare means of intercepts and slopes across the four groups of participants by means of the Wald test (with values significant at $p < .05$ indicating a significant difference)[1]. This multigroup approach is preferable when the moderation effect of a categorical variable is to be tested on multiple parameters included in the model (Memon et al., 2019).

[1] The multigroup LGC model with freely estimated parameters was initially compared with a model in which parameters were constrained to be equal across groups (i.e., assuming homogeneity). The freely estimated model would provide a better fit to the data if at least two of the following criteria were satisfied: a significant $\Delta\chi_{SB}^2$ (Satorra & Bentler, 2001), and ΔCFI $\geqslant$ -.010 supplemented by ΔRMSEA $\geqslant$ .015 (Chen, 2007), thus warranting subsequent pairwise comparisons by means of the Wald test.

To address the third goal of the study (i.e., to understand whether the interplay between interpersonal identity processes and well-being would differ across the four groups of adolescents), multiple steps were taken. First, following the same procedure as for interpersonal identity processes, LGC models were tested separately for subjective, psychological, and social well-being to identify the one that best represents change in each indicator (see Table S5 of the Supplemental Materials). Second, the best LGC model solution for each well-being indicator was combined with that of interpersonal identity processes in a multivariate LGC model. This resulted in testing three multivariate LGC models: Model 1a included interpersonal identity processes and subjective well-being, Model 2a included interpersonal identity processes and psychological well-being, and Model 3a included interpersonal identity processes and social well-being. In these models, intercepts and slopes of interpersonal identity processes and those of well-being were allowed to correlate to examine the interplay between initial levels and rates of change across constructs in the total sample. Third, these three multivariate LGC models were tested again in a multigroup format to compare whether associations between intercepts and slopes of identity processes and well-being would differ among the four groups of adolescents (Models 1b, 2b, 3b)[1]. Again, a Wald test significant at $p < .05$ would indicate a significant difference in the correlations between growth parameters.

Results

Preliminary Analyses

Descriptive statistics and correlations are reported in Tables S1 and S2 of the Supplemental Materials. Regarding longitudinal measurement invariance, full and partial scalar invariance were reached for interpersonal identity processes and well-being, respectively (see Table S3 of the Supplemental Materials). Thus, it was possible to proceed with the main analyses.

Adolescents' Patterns of Best Friendship

The first aim of this study was to understand what type of best friendship adolescents form in intergroup contexts and whether significant differences existed between ethnic majority and

minority youth. Ethnic majority and minority adolescents were found to significantly differ in their type of friendship (χ^2 = 129.15(1, 816), p < .001; φ = .40). Specifically, the former, in line with H1, reported a higher number of intragroup best friends at the beginning of the study compared to the latter, who, contrary to H1, displayed a significantly higher prevalence of intergroup best friendship (Table 1).

The Development of Interpersonal Identity Processes

The second aim of the current research was to understand whether adolescents with different combinations of best friendship type and ethnic background would display different developmental trajectories of their interpersonal identity. The multivariate LGC model (Table 2) including commitment, in-depth exploration, and reconsideration in the whole sample displayed a good fit (χ^2=166.680(18), p < .001; CFI=.912; SRMR=.032; RMSEA[90% CI] = .092[.079, .105]). Overall, adolescents reported high initial levels of both commitment and in-depth exploration, which significantly decreased over time. Conversely, they displayed lower initial levels of reconsideration which slightly increased across the three time points.

When tested in a multigroup format, the multivariate LGC model (Table 2, Figure 1) displayed a good fit, although the RMSEA was slightly above the cutoff point (χ^2=234.548(72), p < .001; CFI=.905; SRMR=.046; RMSEA=.105[.090, .120])[2]. In line with expectations (H2), the combination of adolescents' ethnic background and their best friendship type significantly moderated initial T1 levels (i.e., intercept) and rates of change throughout the study occasions (i.e., slope) of interpersonal identity processes. For the sake of clarity, only results for groups that are significantly different from each other in intercept and/or slope levels are reported in this section, separately for each identity process. Regarding *commitment*, ethnic minority adolescents with an intragroup best friend reported significantly lower initial levels of commitment compared to ethnic

[2] Compared to a fully constrained multigroup model assuming homogeneity across groups (χ^2 = 334.937(135), p < .001; CFI = .883; SRMR = .123; RMSEA = .085[.074, .097]) the multigroup model with freely estimated group-specific parameters fitted the data significantly better ($\Delta\chi_{SB}^2$ = 99.918(63), p = .002; ΔCFI = -.022; ΔRMSEA = -.020).

majority youth with an intergroup (Wald=4.27, p = .039) and those with an intragroup (Wald=10.41, p = .001) best friend. However, ethnic majority adolescents with an intragroup best friend significantly decreased in their interpersonal commitment (Wald=4.59, p = .032) compared to ethnic minority youth with an intragroup friendship. For *in-depth exploration*, ethnic majority adolescents with an intragroup best friend reported significantly higher levels of exploration compared to all their ethnic minority peers regardless of their type of best friendship (Intragroup: Wald=9.40, p = .002; Intergroup: Wald=7.63, p = .006). Interestingly, ethnic minority adolescents with an intragroup best friend reported an increase in interpersonal identity exploration compared to their ethnic majority peers with an intragroup friendship (Wald=11.27, p < .001). Last, the initial levels of *reconsideration of commitment* were significantly higher for ethnic minority youth with an intragroup best friend compared to ethnic majority adolescents with an intergroup best friend (Wald=4.07, p = .044).

The Interplay Between Interpersonal Identity and Well-Being

The third and last aim of this study was to understand whether interpersonal identity trajectories were intertwined with subjective, psychological, and social well-being trajectories and whether these associations would be different depending on adolescents' ethnic background and type of best friendship. The three multivariate LGC models conducted on the total sample displayed a good fit (Table 3). Full results are reported in Table 4. Regarding subjective well-being, adolescents with higher initial levels of interpersonal identity commitment also displayed higher levels of well-being at the beginning of the study, while no other significant associations emerged. For what concerns psychological well-being, higher levels of commitment and in-depth exploration were associated with higher well-being at the beginning of the study. Additionally, higher initial levels of exploration and reconsideration were associated respectively with significant decreases and increases of well-being over time. Last, increases in youth's psychological well-being co-occurred with significant increases in commitment and decreases in reconsideration. Regarding social well-being, higher initial levels in commitment, exploration, and reconsideration were

associated with higher well-being at the beginning of the study. Additionally, changes in interpersonal identity commitment and social well-being were positively associated over time. The multigroup models with group-specific parameters displayed a good and significantly better fit compared to the multigroup model with parameters constrained to equality across groups (Table 3). In line with H3, results (Table 4, Figures 2a-c) highlighted several moderation effects of adolescents' background and type of friendship on the interplay between identity and subjective, psychological, and social well-being.

Interpersonal Identity and Subjective Well-Being

Results of the multigroup model (Table 4, Figure 2a) focusing on the interplay between interpersonal identity processes and subjective well-being highlighted that the positive association between initial levels of *commitment* and well-being was significant for ethnic majority youth with an intragroup best friend (Wald=6.56, p = .010) but not for their ethnic minority peers with an intragroup best friend. Conversely, higher initial levels of *reconsideration* were associated with higher subjective well-being among ethnic minority adolescents with an intragroup best friend, but not among their ethnic majority peers with an intragroup best friend (Wald=7.06, p = .008). Last, increases in *in-depth exploration* were linked to significant over-time decreases in subjective well-being for ethnic majority youth with an intragroup best friend but not for ethnic minority youth with an intergroup friendship (Wald=4.67, p = .031).

Interpersonal Identity and Psychological Well-Being

Regarding the interplay of identity processes and psychological well-being (Table 4, Figure 2b), the positive association between initial levels of *commitment* and well-being was significant for ethnic minority youth with an intergroup best friend (Wald=5.03, p = .025), but not for ethnic minority youth with an intragroup best friend. Similarly, ethnic minority adolescents with an intergroup best friend, but not their ethnic minority peers with an intragroup best friend (Wald=5.75, p = .016), who reported higher initial levels of *in-depth exploration* also displayed a significant decrease in well-being over time. Conversely, increases in *reconsideration* of commitment were

linked to decreases in well-being for ethnic minority adolescents with an intragroup best friend, but not for ethnic minority youth with an intergroup best friend (Wald=3.86, p = .049) nor for ethnic majority youth with an intragroup (Wald=5.28, p = .021) or intergroup (Wald=4.34, p = .037) friendship.

Interpersonal Identity and Social Well-Being

The model examining the interplay between interpersonal identity processes and social well-being in a multigroup format (Table 4, Figure 2c) showed that higher initial levels of *commitment* were associated with higher initial levels of well-being for ethnic majority youth with an intragroup but not ethnic majority adolescents with an intergroup best friend (Wald=7.10, p = .005), and for ethnic minority youth with an intergroup but not ethnic minority ones with an intragroup best friend (Wald=5.02, p = .022). Additionally, higher levels of *exploration* were linked to higher levels of social well-being for ethnic majority adolescents with intragroup friendship but not for their ethnic majority peers with an intergroup best friend (Wald=7.58, p = .006). Conversely, for the latter but not for the former (Wald=5.49, p = .019) increases in exploration over time were linked to higher initial levels of well-being.

Discussion

Forming positive relationships with peers of different ethnic and cultural backgrounds is an important developmental task of adolescents growing up in multicultural societies (Titzmann & Jugert, 2019) and might represent a gateway for fostering harmonious intergroup relationships and attitudes (Allport, 1954; Davies et al., 2011). Despite this, only limited research (e.g., Bagci et al., 2014; Kelleghan et al., 2019) has focused on the prevalence of intragroup and intergroup friendships in adolescence and their implications for supporting the consolidation of identity and positive adjustment of youth. The current study filled this gap by examining friendship patterns (i.e., intragroup or intergroup) of ethnic majority and minority adolescents and whether they shaped the development of interpersonal identity processes (i.e., commitment, in-depth exploration, and reconsideration; Crocetti et al., 2008) and their interplay with subjective (Diener et al., 1999),

psychological (Ryff, 1989), and social (Keyes, 1998) well-being. Overall, findings highlighted that ethnic majority and minority adolescents engage in different types of friendships at the beginning of the study and, in turn, display unique trajectories of identity development and well-being across the following year.

Where is Your Best Friend From? Intragroup and Intergroup Friendship in Adolescence

This study sought to shed light on the type of friendship adolescents engage with in current multicultural societies by examining the frequency of intragroup and intergroup best friends among ethnic majority and minority youth. Findings, which only partially aligned with our expectations, highlighted different rates of intragroup and intergroup friendships among ethnic majority and minority adolescents. Thus, they suggest that the formation of friendship ties in increasingly multicultural contexts is driven by different mechanisms among youth of diverse backgrounds, supporting both the homophily (McPherson et al., 2001) and the propinquity (Quillian & Campbell, 2003) principles, as outlined below.

First, as expected, ethnic majority adolescents reported a higher prevalence of intragroup friendships as they indicated more often that their best friend had their same ethnic background. This finding aligns with the principle of homophily (McPherson et al., 2001) and with prior research highlighting the lower prevalence and stability of intergroup friendships in adolescence (e.g., Kelleghan et al., 2019; Schneider et al., 2007). Second, contrary to H1, ethnic minority youth displayed a higher prevalence of intergroup friendships, reporting more often having an ethnic majority best friend. This finding contrasts prior research indicating a higher prevalence of intragroup over intergroup friendships (e.g., Kelleghan et al., 2019) and the tendency to nominate more same-ethnic peers as best friends (Reynolds, 2007). However, it might be explained in light of the propinquity principle according to which ethnic diversity in social contexts can influence friendship ties (Quillian & Campbell, 2003). Along this line, prior research has found a higher prevalence of cross-ethnic friendships in classrooms characterized by higher ethnic diversity (e.g., Lessard et al., 2019; Titzmann et al., 2015). In the Italian context, despite the increasing

diversification of the school ethnic composition over the past decades (Ministero della Pubblica Istruzione, 2024), ethnic majority youth still represent the largest group of students in the classroom. This is evident also from the smaller number of ethnic minority adolescents participating in the current study, a prevalence that fully aligns with national- (ISTAT, 2023) and school-level (Ministero della Pubblica Istruzione, 2024) data on the distribution of ethnic majority and minority in the Italian context. Thus, ethnic minority adolescents have more chances to interact with and befriend ethnic majority peers and, as a result, they can engage in more intergroup friendships.

Furthermore, many of the participants in the current study were second generation immigrants, which might have shaped findings related to patterns of intragroup and intergroup friendships. Prior research (e.g., Hamm et al., 2005) has highlighted that later generation minorities and those who have lived longer in a given national contexts report more intergroup friendships. However, it should be noted that other factors (e.g., ethnic identity; Bagci et al., 2014) might play a role in shaping how adolescents select their best friend and maintain the relationship with them. Future research could build upon this by examining how ethnic diversity in multiple contexts (e.g., classroom, neighborhood; Bronfenbrenner, 1992; Bronfenbrenner & Morris, 2007) as well other individual characteristics might influence friendship patterns' formation and maintenance in multicultural societies.

Interpersonal Identity: Unique Developmental Trajectories Across Friendship Patterns

Identity development occurs as the result of experiences, interactions, and relationships that adolescents have in multiple social contexts (for reviews, see Branje, 2022; Crocetti et al., 2023). The current research aimed to unravel whether adolescents display unique developmental trajectories of interpersonal identity processes (i.e., commitment, in-depth exploration, and reconsideration of commitment; Crocetti et al., 2008) depending on their ethnic background and friendship type at the beginning of the study. As expected (H2), several differences emerged in initial levels and rates of change in interpersonal identity processes among ethnic majority and minority adolescents with intragroup and intergroup best friends.

Interestingly, most differences emerged between ethnic majority youth who began the study with an intragroup best friend and their ethnic minority peers with an intragroup friendship. The former displayed higher initial levels of commitment and in-depth exploration which significantly decreased over time. Conversely, the latter reported lower initial levels of commitment and exploration which remained stable (for commitment) or even increased (for in-depth exploration) over time. This finding suggests different ways and timings of the consolidation of interpersonal identity commitments across the two groups of adolescents. While ethnic majority youth reported a clear pattern of identity maintenance at the beginning of the study, their ethnic minority peers might have entered the consolidation cycle later, as indicated by the increasing levels of exploration throughout the study period. Such differential timing might be a consequence of the unique challenges faced by ethnic minority adolescents for whom answering identity-relevant questions is intertwined with acculturative processes and demands (e.g., Berry et al., 2006; Mastrotheodoros et al., 2021). Relatedly, prior research has found that ethnic minority adolescents encounter more difficulties when attempting to define and consolidate their commitments in multiple domains, including the interpersonal one (e.g., Crocetti et al., 2011). Thus, ethnic minority participants in the current study might have entered the identity maintenance cycle later compared to their majority peers.

This tentative explanation is corroborated by differences in reconsideration of commitment between ethnic minority adolescents with intragroup best friends and their ethnic majority peers with an intergroup friendship. Specifically, ethnic minority youth with an intragroup friendship reported higher initial levels of reconsideration of interpersonal identity. Thus, at the beginning of the study this group of participants might have been still in the process of weighing alternatives and reconsidering their commitment to the relationship with their best friend, and only later started consolidating the chosen commitment. This pattern of findings suggests an uncertainty-certainty dynamic (Becht et al., 2017) in the consolidation of interpersonal identity among ethnic minority youth with same-ethnic best friends. Contrary to this group, ethnic majority adolescents with cross-

ethnic best friends displayed significantly lower levels of interpersonal identity reconsideration. Thus, they might have already formed a meaningful and satisfactory commitment to the relationships with their (cross-ethnic) best friend, indicating an achieved interpersonal identity (Crocetti, 2017).

The Protective Role of Identity for Well-Being: Findings Across Friendship Patterns

Identity development, especially in the interpersonal domain, bears important implications for well-being (for a review, see Crocetti, 2018). Thus, the present research aimed to unravel whether the interplay between identity processes and multiple adjustment indicators (i.e., subjective, psychological, and social well-being) play out differently depending on adolescents' ethnic background and friendship patterns at the beginning of the study. In line with expectations (H3), a few significant differences emerged among ethnic majority and minority youth who started the study with intragroup and intergroup best friends.

Regarding subjective well-being, initial levels of identity commitment had a protective role, while increases in in-depth exploration had a detrimental effect on the adjustment of ethnic majority youth with an intragroup best friend. Conversely, ethnic minority adolescents with an intragroup best friend who reconsidered their interpersonal commitments displayed higher levels of subjective well-being. On the one hand, having a firm commitment in the relationship with their intragroup best friend might give ethnic majority youth a sense of directionality and stability promoting their well-being (e.g., De Lise et al., 2024; Dimitrova et al., 2018; Karaś et al., 2015). Conversely, increased exploration of such commitment might trigger a certainty-uncertainty dynamic that is perceived as threatening the sense of security derived from the relationship with the (intragroup) best friend, which represents a primary source of support at this life stage (De Goede et al., 2009; Deci et al., 2006). On the other hand, ethnic minority youth were found to benefit from reconsidering their interpersonal commitment and weighing more satisfactory alternatives. This finding, although in contrast with prior research highlighting the negative interplay between reconsideration and well-being (e.g., De Lise et al., 2024), might be explained in relation to the

relatively “open” nature of the identity domain considered. That is, given that adolescents have more alternatives among which to choose new friends (Albarello et al., 2018), reconsidering a friendship that is not deemed satisfactory anymore might be a healthy process promoting their satisfaction with life (Crocetti et al., 2010; Dimitrova et al., 2018).

However, reconsideration of interpersonal commitment had a detrimental effect on the psychological well-being of ethnic minority youth with an intragroup best friend. This suggests that, despite its positive interplay with subjective well-being, reconsideration of commitment might come at a cost for youth’s sense of mastery and control over their life and the relationships they engage with. Interestingly, these effects were found only for ethnic minority adolescents with an intragroup best friend and might be explained in light of their acculturation orientations. For instance, prior research has highlighted that maintaining heritage culture practices in the friendship domain led adolescents to progressively consolidate (i.e., increases in commitment and in-depth exploration) their interpersonal identity (Crocetti et al., 2024). Conversely, when adolescents deem their intragroup friendship no longer satisfactory and thus reconsider their commitment to it, this might leave them struggling to find alternative relationships in which their cultural heritage can be positively expressed, valued, and understood (e.g., Kiang et al., 2007; Kiang & Fuligni, 2009).

Along this line, high interpersonal identity commitment and exploration were intertwined with respectively high levels of and decreases in psychological well-being of ethnic minority youth with an intergroup best friend. This pattern of findings can be linked to the crucial role of intergroup friendships, which represent an important gateway to the host country, transmitting its culture and promoting acculturative processes (Motti-Stefanidi et al., 2012). Relatedly, prior research highlighted that intergroup friendships contributed to greater sense of school safety (e.g., Chen & Graham, 2017; Munniksma & Juvonen, 2012), lower peer victimization (Graham et al., 2014), and psychological well-being and resilience (Bagci, Rutland, et al., 2014). Thus, having a firm commitment to the relationship with their intergroup best friend might signal ethnic minority youth’s sense of autonomy and mastery over their life situation and positive relationships.

Conversely, as indicated above, exploring in depth this commitment might threaten this sense of security and mastery derived from intergroup friendship ties, thus leading to decreases in psychological well-being.

Furthermore, having high levels of commitment to the relationship with an ethnic majority best friend was associated with higher levels of social well-being among ethnic minority adolescents. This finding aligns with prior research highlighting that having cross-ethnic friendships was linked to higher levels of psychological and social well-being among refugees (Karataş et al., 2021). Given that social well-being represents an important indicator of youth's sense of adjustment and contribution to their social (i.e., national) context, maintaining a strong commitment to an intergroup best friend might support ethnic minority adolescents' acculturation to the destination culture (Motti-Stefanidi et al., 2012) and promote their integration in the larger societal context.

Last, initial levels of and increases in interpersonal identity in-depth exploration were linked to higher social well-being for ethnic majority adolescents with intragroup and intergroup friendships, respectively. In other words, regardless of their friendship type, ethnic majority adolescents who engage in exploration of their commitments display better social adjustment and involvement in society. This finding aligns with prior research highlighting the positive intergroup (i.e., lower ethnic prejudice; Bobba et al., 2023) and civic (e.g., higher social responsibility; Crocetti et al., 2012) implications of identity exploration.

Implications of the Current Study

The findings of the current study provide important implications for researchers and practitioners. From a theoretical perspective, this study advances research on intragroup and intergroup friendship by highlighting their implications for youth's development and well-being. Prior studies have found that intergroup friendships are conducive of better intergroup (i.e., more positive attitudes; e.g., Wölfer et al., 2016) and individual (i.e., higher well-being and academic adjustment; e.g., Bagci et al., 2017; Karataş et al., 2021) outcomes. To the extent of our knowledge, this is the first longitudinal research examining implications of intragroup and intergroup friendship

patterns for the development of interpersonal identity and its interplay with well-being among diverse youth. In doing so, it sheds light on the crucial role of best friendships for ethnic majority and minority adolescents to successfully navigate their developmental (Crone & Fuligni, 2020) and acculturative (Motti-Stefanidi, 2019) tasks in current multicultural societies.

From a practical standpoint, this research sheds light on the interplay between individual (i.e., homophily principle; McPherson et al., 2001) and contextual (i.e., propinquity principle; Quillian & Campbell, 2003) conditions that contribute to forming intragroup and intergroup friendships. Specifically, the choice of best friend is not only guided by similarity (e.g., having the same ethnic background or the same interests), but also profoundly influenced by the opportunities provided in the proximal (e.g., school) and distal (e.g., larger national context) contexts of development. In other words, interventions aimed at fostering positive and intimate intergroup relationships, such as in the case of friendship, should account for both factors. Thus, practitioners could support youth in recognizing similarities beyond ethnic-based differences by fostering a sense of shared membership to relevant social groups (e.g., national, European; Gaertner & Dovidio, 2000). Furthermore, they could promote policies at the local and national level aimed at strengthening opportunities for contact with diverse others (Kauff et al., 2021).

Limitations and Suggestions for Future Research

These findings should be read in light of some limitations. First, this research relied on a single question to assess whether participants had an intragroup or intergroup best friend at the beginning of the study. This means that we were not able to assess the strength or quality of this relationship, nor whether the best friendship tie was reciprocated. These characteristics might bear important implications for adolescents' development and adjustment in multicultural contexts. Additionally, the current study did not account for possible over-time changes in the best friend nor in the type (i.e., intragroup or intergroup) of friendship. For instance, prior research has highlighted that intergroup friendships tend to be less stable compared to same-ethnic friendships (e.g., Jugert et al., 2013; Schneider et al., 2007). As such, patterns of friendship maintenance and change might

explain the differential trajectories observed across ethnic groups and friendship types. Further, given the single-time assessment of best friendship patterns, it was not possible to shed light on potential reciprocal associations between friendship preferences and interpersonal identity. For instance, adolescents characterized by a certain interpersonal identity profile preferentially form certain types of friendships via a selection process. Future studies could apply sociometric approaches (i.e., peer nomination; see Leszczensky et al., 2022) across multiple time points to evaluate the extent to which adolescents select the same intragroup or intergroup best friend, the strength of their relationship, and whether they are chosen by them in return. Combining this information with longitudinal data on adolescents' identity processes would provide further insight on how friendship characteristics and formation are intertwined with relevant developmental dynamics.

Second, this study did not examine individual characteristics (e.g., immigrant generation; e.g., Hamm et al., 2005) or conditions in the family (e.g., parents' friendships; e.g., Karataş et al., 2021) and school (e.g., percentage of classroom ethnic diversity; e.g., Lessard et al., 2019) contexts that might influence adolescents' friendship choices. Thus, more research is needed to delve into the individual and socio-contextual determinants of friendship patterns. Such knowledge is crucial to promote cross-ethnic friendships, which represent a fundamental resource for building inclusive societies and supporting youth's adjustment.

Third, the last assessment of the current study was conducted after the onset of the COVID-19 pandemic. Prior research has highlighted that this socio-historical event might influence identity (e.g., Bobba, Lynch, et al., 2023) and adjustment (e.g., Green et al., 2021) of youth (for a review, see Branje & Morris, 2021). Thus, it might have influenced the development of both interpersonal identity processes and well-being, as well as their interplay, beyond the effects of adolescents' background and best friendship type. Future studies could unravel how the changes brought about by the COVID-19 pandemic might shape youth's intergroup and interpersonal relationships, and adjustment.

Last, the current study was conducted in the Emilia-Romagna region which is characterized by the highest prevalence of ethnic minority students in the Italian school system (Ministero della Pubblica Istruzione, 2024). These contextual characteristics might limit the generalizability of the present findings. Thus, their replication across different regional and national contexts is warranted.

Conclusion

In current multicultural societies, adolescents have increasing opportunities to form friendship ties with peers of their same or other ethnic groups. The current study examined adolescents' patterns of best friendship (i.e., intra- and intergroup) and their implications for the development of interpersonal identity processes (i.e., commitment, in-depth exploration, and reconsideration of commitment) and their interplay with subjective, psychological, and social well-being. Ethnic majority youth had more intragroup, while their ethnic minority peers reported more intergroup best friends. Additionally, ethnic majority and minority youth with intragroup and intergroup friendship patterns displayed unique developmental trajectories of interpersonal identity processes which, in turn, were linked to multiple indicators of well-being. Overall, the current findings provide insight into the individual (i.e., homophily) and contextual (i.e., propinquity) conditions that shape ethnic majority and minority adolescents' choice of best friend and, in turn, their development and adjustment. Such knowledge is crucial to orient future research and interventions aimed at promoting harmonious relationships in current multicultural societies.

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Table 1

Patterns of adolescents' best friendship at T1

	Ethnic majority adolescents (n = 630)	Ethnic minority adolescents (n = 186)
Intragroup best friend (%)	90.79% (+)	54.84% (-)
Intergroup best friend (%)	9.21% (-)	45.16% (+)

Note. All observed values are significantly different from expected values: with (+) the observed value is higher than expected; with (-) the observed value is lower than the expected value.

Table 2
Developmental trajectories of interpersonal identity

	Total sample	Best friendship (bf)			
		Ethnic majority with intragroup bf	Ethnic majority with intergroup bf	Ethnic minority with intragroup bf	Ethnic minority with intergroup bf
Commitment					
Intercept $M(\sigma^2)$	3.88^{***} (0.34^{***})	$3.94_{b}{}^{***}$ (0.28^{***})	$3.91_{b}{}^{***}$ (0.09)	$3.70_{a}{}^{***}$ (0.38^{***})	$3.82_{a,b}{}^{***}$ (0.71^{***})
Slope $M(\sigma^2)$	-0.07^{***} (0.07^{***})	$-0.08_{a}{}^{***}$ (0.05^{*})	$-0.06_{a,b}$ (0.00)	0.03_{b} (0.15^{**})	$-0.02_{a,b}$ (0.16^{*})
In-Depth Exploration					
Intercept $M(\sigma^2)$	3.60^{***} (0.36)	$3.66_{b}{}^{***}$ (0.36^{***})	$3.61_{a,b}{}^{***}$ (0.32^{*})	$3.43_{a}{}^{***}$ (0.29^{**})	$3.42_{a}{}^{***}$ (0.36^{*})
Slope $M(\sigma^2)$	-0.03^{*} (0.06^{**})	$-0.05_{a}{}^{**}$ (0.08^{***})	$0.00_{a,b}$ (0.06)	$0.09_{b}{}^{*}$ (0.00)	$0.01_{a,b}$ (-0.05)
Reconsideration of Commitment					
Intercept $M(\sigma^2)$	1.78^{***} (0.47^{***})	$1.74_{a,b}{}^{***}$ (0.37^{***})	$1.63_{a}{}^{***}$ (0.45)	$1.92_{b}{}^{***}$ (0.60^{**})	$1.76_{a,b}{}^{***}$ (0.46^{*})
Slope $M(\sigma^2)$	0.04^{*} (0.06)	0.03 (-0.01)	0.02 (0.13)	0.04 (0.20^{*})	0.10 (0.07)

Note. Within the same line, different subscript letters indicate significant differences, based on pairwise comparisons conducted with the Wald tests, between adolescents in the four groups. The subscript letters start from *a* to indicate the lowest value(s) and continue in alphabetical order to indicate increasingly higher score(s).
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Table 3

Multivariate LGC models of identity processes and well-being

	Model fit					Model comparisons			
	χ^2	df	CFI	SRMR	RMSEA [90% CI]	Models	$\Delta\chi^2$(df)	ΔCFI	ΔRMSEA
M1: Identity and Subjective Well-Being									
M1a: Full sample	186.914	34	.930	.028	.068 [.058, .077]				
M1a2: Multigroup (constrained)	467.016	244	.897	.108	.067 [.058, .076]				
M1b: Multigroup (freely estimated)	306.319	136	.922	.046	.078 [.067, .090]	M1a2-M1b	160.382** (108)	-.025	-.011
M2: Identity and Psychological Well-Being									
M2a: Full sample	204.244	34	.929	.031	.071 [.062, .081]				
M2a2: Multigroup (constrained)	479.246	244	.903	.111	.069 [.060, .078]				
M2b: Multigroup (freely estimated)	323.081	136	.923	.047	.082 [.071, .094]	M2a2-M2b	156.682** (108)	-.020	-.013
M3: Identity and Social Well-Being									
M3a: Full sample	204.800	34	.928	.031	.071 [.062, .081]				
M3a2: Multigroup (constrained)	495.947	244	.892	.111	.071 [.062, .080]				
M3b: Multigroup (freely estimated)	323.553	136	.920	.048	.082 [.071, .094]	M3a2-M3b	170.607*** (108)	-.028	-.011

Note. In the multigroup constrained models (a2), parameters were fixed to be equal across the four groups of adolescents, while the multigroup freely estimated models (b) allowed group-specific parameters. M = model; χ^2 = chi-square; df = degree of freedom; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; CI = confidence interval; Δ = change in the parameter.

Table 4
Results of multivariate LGC

	Total sample	Best friendship (bf)			
		Ethnic majority intragroup bf	Ethnic majority intergroup bf	Ethnic minority intragroup bf	Ethnic minority intergroup bf
M1: Identity and Subjective Well-Being					
Commitment(I)↔Well-being(I)	.132***	.141$_{b}$***	.061$_{a,b}$	-.054$_{a,c}$	.263$_{b}$
Commitment(I)↔Well-being(S)	-.018	-.030$_{a}$	.022$_{a,b}$	.083$_{b}$	-.047$_{a.b}$
Commitment(S)↔Well-being(I)	.011	.026	.118	.021	-.064
Commitment(S)↔Well-being(S)	.012	-.003	.004	.047	.057
Exploration(I)↔Well-being(I)	.024	.022$_{a,b}$	-.123$_{a}$	.016$_{a,b}$	.183$_{b}$
Exploration(I)↔Well-being(S)	.002	.006	.085	.066	-.074
Exploration(S)↔Well-being(I)	.010	.019	.102	-.034	-.047
Exploration(S)↔Well-being(S)	-.007	-.022$_{a}$*	.014$_{a,b}$	.011$_{a,b}$	.045$_{b}$
Reconsideration(I)↔Well-being(I)	-.001	-.038$_{a}$	-.026$_{a,b}$	.271$_{b}$*	.020$_{a,b}$
Reconsideration(I)↔Well-being(S)	.017	.022	-.037	.010	-.019
Reconsideration(S)↔Well-being(I)	-.030	-.022	-.076	-.125	-.055
Reconsideration(S)↔Well-being(S)	-.013	-.010	.039	-.044	.012
M2: Identity and Psychological Well-Being					
Commitment(I)↔Well-being(I)	.180***	.177$_{a,b}$***	.115$_{a,b}$	.056$_{a}$	.368$_{b}$**
Commitment(I)↔Well-being(S)	-.017	-.018	-.005	.053	-.067
Commitment(S)↔Well-being(I)	-.001	.009$_{a,b}$	.094$_{b}$	-.036$_{a,b}$	-.072$_{a}$
Commitment(S)↔Well-being(S)	.021*	.008	.011	.097*	.025
Exploration(I)↔Well-being(I)	.075**	.071*	-.004	.010	.239*
Exploration(I)↔Well-being(S)	-.033*	-.030$_{a,b}$	-.031$_{a,b}$	.047$_{b}$	-.116$_{a}$*
Exploration(S)↔Well-being(I)	003	.006	.062	-.006	-.045
Exploration(S)↔Well-being(S)	.015	.005	.056	.022	.046*
Reconsideration(I)↔Well-being(I)	-.059	-.066	-.180	.054	-.023
Reconsideration(I)↔Well-being(S)	.044*	.031	.060	.125	.010
Reconsideration(S)↔Well-being(I)	-.010	-.013	-.020	.015	-.069
Reconsideration(S)↔Well-being(S)	-.029*	.013$_{b}$	-.006$_{b}$	-.142$_{a}$**	-.016$_{b}$
M3: Identity and Social Well-Being					
Commitment(I)↔Well-being(I)	.194***	.192$_{b,c}$***	-.076$_{a}$	.085$_{a,b}$	.485$_{c}$**
Commitment(I)↔Well-being(S)	-.027	-.032$_{a}$	.070$_{b}$	.009$_{a,b}$	-.135$_{a}$
Commitment(S)↔Well-being(I)	.001	.003	.076	.000	-.054
Commitment(S)↔Well-being(S)	.023*	.013	.031	.061	.034
Exploration(I)↔Well-being(I)	.089**	.109$_{b}$**	-.151$_{a}$	.057$_{a,b}$	.248$_{b}$
Exploration(I)↔Well-being(S)	-.031	-.044*	.030	.031	-.108
Exploration(S)↔Well-being(I)	-.011	-.030$_{a}$	.123$_{b}$*	.004$_{a,b}$	-.037$_{a,b}$
Exploration(S)↔Well-being(S)	.020	.015	.046	.003	.036
Reconsideration(I)↔Well-being(I)	.105**	.079	.116	.233	.022
Reconsideration(I)↔Well-being(S)	-.001	-.005	-.010	.053	-.027
Reconsideration(S)↔Well-being(I)	-.045	-.050*	-.028	-.061	-.115
Reconsideration(S)↔Well-being(S)	.016	.027	.006	-.049	.042

Note. (I) = Intercept, (S) = Slope. Within the same line, different subscript letters indicate significant differences, based on pairwise comparisons conducted with the Wald tests, between adolescents in the four groups. The subscript letters start from *a* to indicate the lowest value(s) and continue in alphabetical order to indicate increasingly higher score(s). *$p < .05$; **$p < .01$; ***$p < .001$

Figure 1
Developmental trajectories of interpersonal identity

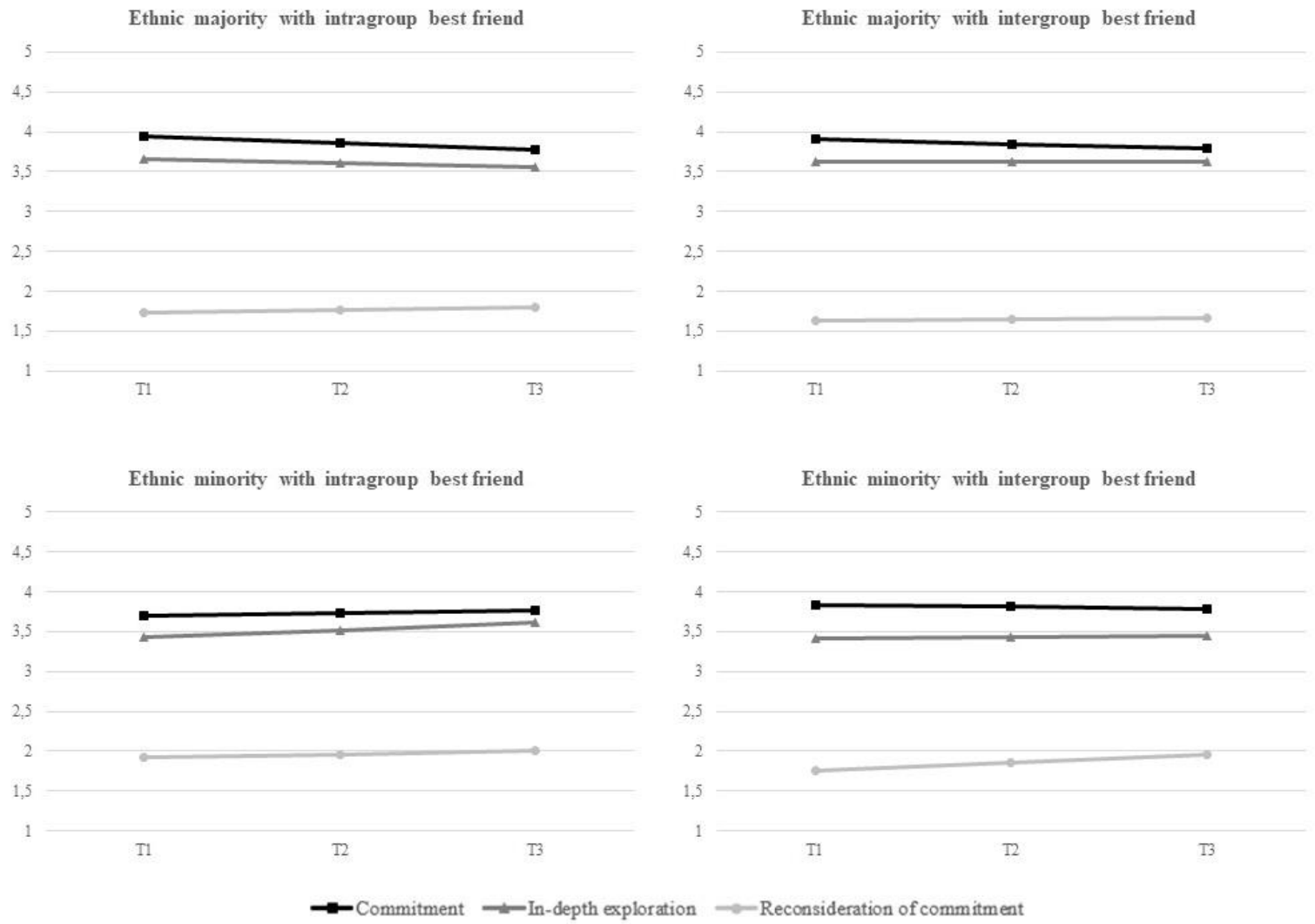


Figure 2

Interplay between interpersonal identity and well-being

Figure 2a

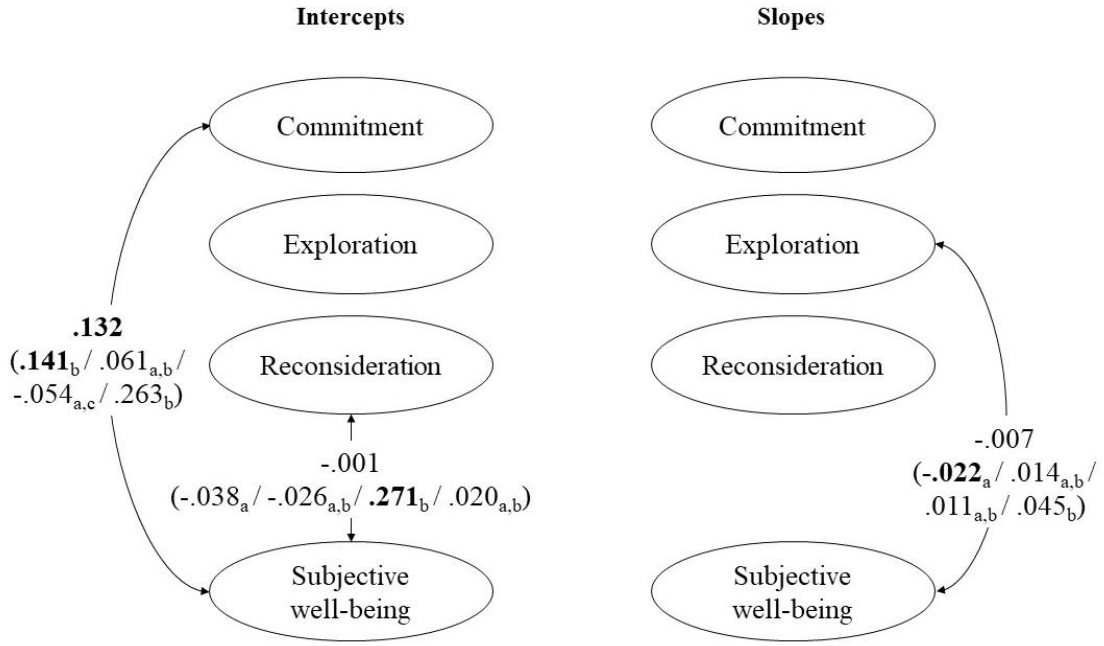


Figure 2b

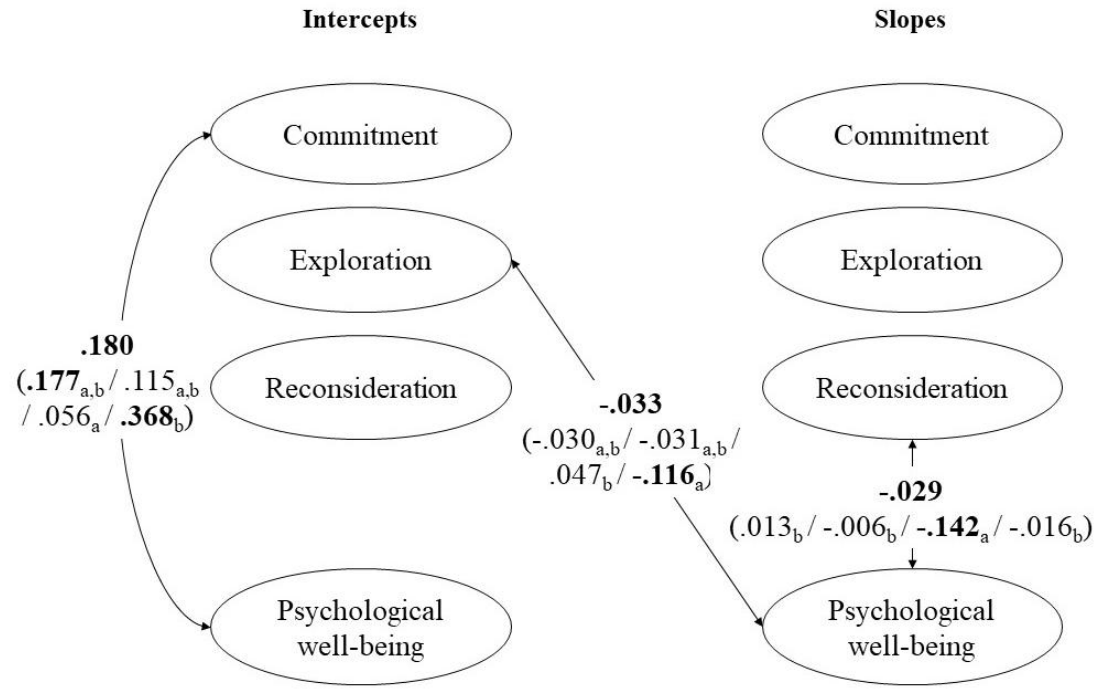
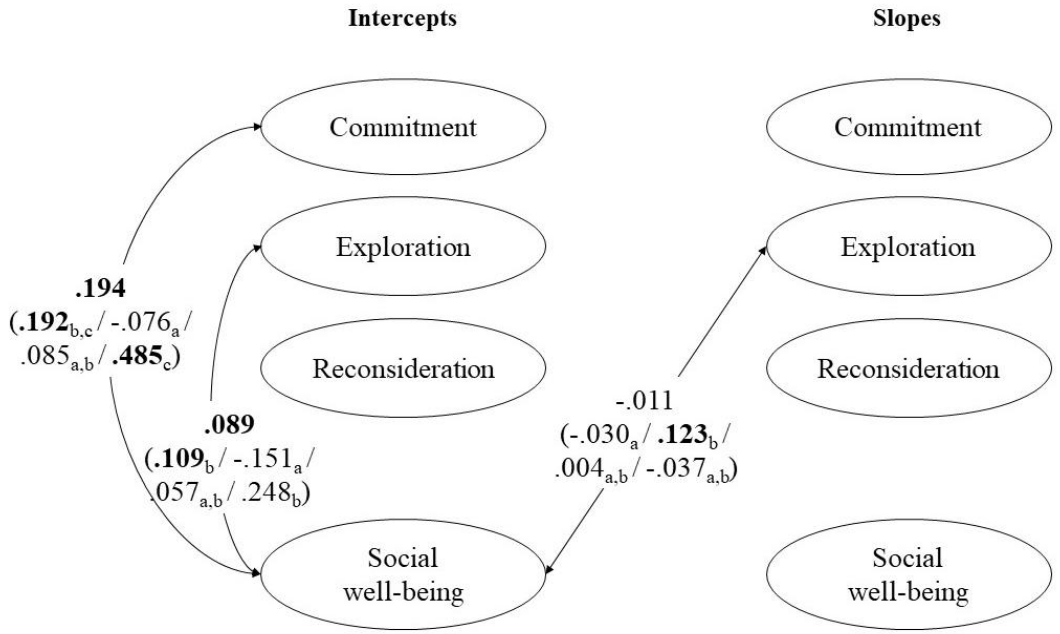


Figure 2c



Note. For the sake of clarity, only significant moderation effects are reported. Values outside the parentheses indicate standardized results in the total sample. Values within parentheses indicate standardized results of group-specific effects, reported in the following order: ethnic majority with intragroup best friend / ethnic majority with intergroup best friend / ethnic minority with intragroup best friend / ethnic minority with intergroup best friend. Subscript letters indicate significant group differences in the same associations based on pairwise Wald test comparisons, with letters starting from (a) to indicate the lowest value(s) and continue in alphabetical order to indicate increasingly higher scores. Bolded values indicate significant effects.