

Scoping Review on psychological adaptation and sociocultural adaptation of adolescent migrants

Revisión de alcance sobre la adaptación psicológica y la adaptación sociocultural de adolescentes migrantes.

Astrid Vanessa Sarmiento-Quiñones¹✉^{id}, Benjamín Campos Puentes²^{id}, Marcial Paolo Pastor Baquerizo²^{id}, José Saavedra Ramírez², Claudio Bustos-Navarrete³^{id}

Abstract

Adaptation to a new society is especially complex during adolescence, a stage marked by heightened vulnerability and developmental transitions. This scoping review analyzes the conceptualization and measurement of psychological and sociocultural adaptation in migrant adolescents, considering quantitative or mixed-method empirical studies published in English or Spanish between 2019 and 2024, identified through searches in Scopus, Web of Science, EBSCOhost, SciELO, Redalyc, and BASE. Information on variables, instruments used, and their psychometric characteristics was extracted. Nine studies were included. Findings indicate that psychological adaptation is conceptualized as healthy functioning, positive self-esteem, and meaningful relationships with the environment, influenced by sociodemographic, psychological, and relational factors. Among 13 instruments measuring psychological adaptation, only one explicitly assesses the construct. Sociocultural adaptation was directly measured in only one study, defined as the ability to function effectively in daily life within the host culture, influenced by cultural identity and perceived cultural distance. These findings highlight the need for clearer conceptual distinctions and improved measurement tools in research on adolescent migrants' adaptation.

Keywords: *adolescent migrants, psychological adaptation, sociocultural adaptation, instruments, scoping review.*

Resumen

La adaptación a una nueva sociedad es especialmente compleja durante la adolescencia, una etapa marcada por una mayor vulnerabilidad y transiciones del desarrollo. Esta revisión de alcance analiza la conceptualización y medición de la adaptación psicológica y sociocultural en adolescentes migrantes, considerando estudios empíricos cuantitativos o mixtos publicados en español o inglés entre 2019 y 2024, identificados mediante búsquedas en Scopus, Web of Science, EBSCOhost, SciELO, Redalyc y BASE. Se extrajo información sobre las variables, los instrumentos utilizados y sus características psicométricas. Se incluyeron nueve estudios. Los hallazgos indican que la adaptación psicológica se conceptualiza como un funcionamiento saludable, autoestima positiva y relaciones significativas con el entorno, influida por factores sociodemográficos, psicológicos y relacionales. De los 13 instrumentos que miden la adaptación psicológica, solo uno evalúa explícitamente el constructo. La adaptación sociocultural fue medida directamente en un solo estudio, y se define como la capacidad para desenvolverse eficazmente en la vida diaria dentro de la cultura de acogida, influida por la identidad cultural y la distancia cultural percibida. Estos hallazgos destacan la necesidad de distinciones conceptuales más claras y de mejores herramientas de medición en la investigación sobre la adaptación de adolescentes migrantes.

Palabras clave: *adolescentes migrantes, adaptación psicológica, adaptación sociocultural, instrumentos, revisión de alcance.*

1 Departamento de Ciencias Sociales, Facultad de Comunicación, Historia y Ciencias Sociales, Universidad Católica de la Santísima Concepción, Concepción

Chile, 2 Departamento de Psicología y Humanidades, Facultad de Psicología y Humanidades, Universidad San Sebastián, Concepción, Chile

3 Departamento de Psicología, Facultad de Ciencias Sociales, Universidad de Concepción, Concepción, Chile ✉ e-mail: asarmiento@ucsc.cl

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INTRODUCTION

The experience of being a migrant is a longstanding phenomenon studied in the social sciences through the lenses of psychological adaptation (PA) and sociocultural adaptation (SA). PA is defined as the individual's affective response to a new environment (Searle & Ward, 1990) and can involve both positive (e.g., well-being) and negative (e.g., depression) outcomes (Ward & Kennedy, 1993). SA has been defined as the individual's ability to fit in, acquire culturally appropriate skills, and negotiate situations within the host environment (Searle & Ward, 1990; Ward & Kennedy, 1999).

Distinguishing between PA and SA is theoretically crucial for understanding migrants' adaptation processes (Şafak-Ayvazoglu et al., 2021). According to Bierwiczek and Waldzus (2016), the emphasis placed on PA and SA varies depending on the migrant population under study. As they note, research on expatriates has tended to emphasize SA in relation to occupational functioning. In contrast, studies on voluntary migration have focused more strongly on PA due to its psychological outcomes, often overlooking migrants' overall effectiveness in functioning within the host society.

Regarding the characteristics inherent to the migratory process in adolescents, studies in this population (Obach et al., 2021) have highlighted the complexity of adapting to a new society and confronting cultural diversity as a result of the migratory encounter. Migration does not stem from an adolescent's autonomous decision but rather from decisions made by responsible adults. This has an impact on their mental health, with socioemotional needs being identified in relation to unfamiliarity with the local territory, experiences of discrimination, language barriers, and emotional effects associated with being far from their loved ones (Carreño et al., 2024). Migrant and refugee adolescents often show elevated internalizing symptoms, such as PTSD, anxiety, and depression, while discrimination and acculturative stress are consistently linked to externalizing problems (Aalto et al., 2025).

Adolescence is a period marked by intense physical, psychological, and social changes that transform the child into an adult (Hidalgo & González-Fierro, 2014). Adolescence is a critical stage whose experiences have long-term psychological and social consequences. Therefore, whether outcomes are predominantly positive or negative depends on the interaction of multiple protective and risk factors (Darmanaki & Bradley, 2018). Adolescence does not constitute a homogeneous stage, but rather a continuous developmental process involving emotional, social, and relational changes (Güemes-Hidalgo et al., 2017). Thus, it is not surprising that the experience of migrant adolescents depends on their age (Jain et al., 2026).

Another aspect associated with the experience of migrant adolescents is the type of migration. Research on forced displacement has emphasized the impact of trauma and psychopathology. Studies on internal migration and voluntary international migration have more frequently focused on mental health indicators in relation to psychosocial factors such as discrimination and experiences within educational and community contexts (Blackmore et al., 2020; Devos et al., 2024; Fazel et al., 2012; Thomson et al., 2024).

Previous systematic and scoping reviews relevant to migrant adolescents have addressed several recurring areas, including mental health and psychosocial well-being, acculturation-related processes, and risk behaviors. Reviews focused on migrant or forced-migrant children and adolescents have examined emotional and behavioral problems (Belhadj Kouider et al., 2015), school-based mental health and psychosocial support (Bennouna et al., 2019), the association between cultural and linguistic maintenance and mental health (Hasnain et al., 2024), and substance use (van Dorp et al., 2021). Broader reviews of ethnoracially minoritized youth have examined depression and suicide risk (Wyatt et al., 2015) and acculturation-related suicide risk (Polanco-Ro-

man et al., 2023), while a review of immigrant populations more generally examined acculturation and ethnic identity in relation to mental health (Balidemaj & Small, 2019).

According to systematic reviews, adolescent migrant mental health is influenced by factors such as acculturation stress and language competence (Belhadj Kouider et al., 2015), as well as discrimination, gender, and self-esteem (Wyatt et al., 2015). In contrast, gender plays a role in suicidal risk due to conflicting cultural norms (Polanco-Roman et al., 2023). By comparison, second-generation migrants often show greater mental health issues and alcohol use patterns similar to natives, though results on other substances vary by context (van Dorp et al., 2021).

Systematic reviews also highlight the role of family dynamics. Belhadj Kouider et al. (2015) identified family-based risk factors including acculturation stress, language brokering, discrepancies between children's and parents' cultural orientation, and harsh parenting. Multilevel school-based interventions that involve families, train educators, and link to community services have proven effective in supporting migrant adolescent mental health (Bennouna et al., 2019).

Only one literature review has examined the adaptation of migrant children and adolescents, focusing on third culture kids (TCKs)—those raised in a culture different from their own or their parents' (Jones et al., 2022). It identified four key factors: younger age (demographic), personal traits and emotional stability (psychological), family cohesion (family), and supportive peer/teacher relationships and bilingual fluency (sociocultural).

Psychological adaptation (PA) and sociocultural adaptation (SA) are usually considered outcomes of processes related to cultural and identity dynamics arising from intercultural contact (Kosic, 2025; Ward & Rana-Deuba, 1999). A widely used concept related to these processes is psychological acculturation, which refers to behavioral and psychological changes resulting from acculturative stress (Berry et al., 1989). Four acculturation strategies are described, differing in the degree to which individuals maintain their original cultural identity and establish relationships with groups in the host society: integration, marginalization, separation, and assimilation (Berry, 2006). Another relevant concept is biculturalism, proposed by LaFromboise et al. (1993), which highlights migrants' capacity to develop competence and integrate identities across two distinct cultural contexts by alternating behaviors according to situational demands. Finally, other notions of hybrid identities have emphasized the dynamic and non-linear nature of identity configurations in migratory contexts (Bhabha, 2002; Bhandari, 2022).

From a health sciences perspective, the current framework proposed by the World Health Organization to understand the influence of context on migrants' well-being is the social determinants of health equity approach (World Health Organization [WHO], 2024, 2025). This model posits that a range of social factors shape individuals' social position and, consequently, their access to power, money, resources, and health. In turn, intermediate determinants of health (e.g., living conditions and access to services) are distributed by structural determinants (e.g., health policies, economic inequality, and racism), which influence multiple social groups and ultimately shape equitable access to health. In the study of adolescent migration, this framework highlights the importance of monitoring migrant, refugee, and internally displaced populations, disaggregated by age group, geographic location, place of residence, and sex.

An additional theoretical approach that has proven effective for studying health inequalities is intersectionality. Originating in women's studies, this framework posits that individuals hold multiple social identities that intersect with structures of power to produce specific forms of disadvantage that cannot be captured by analyses focused on individual factors or single social determinants in isolation. Although this approach has

been developed predominantly through qualitative research, its quantitative application remains relatively limited, particularly in migration studies (Harari & Lee, 2021). A relevant antecedent on the impact of macrosocial factors on migrant adolescents' well-being from an intersectional perspective is the study by Kern et al. (2020), which examined the intersectional effects of migrant status, gender, and socioeconomic status among adolescents aged 11–15 across 47 European countries. While migrant adolescents, girls, and those from lower socioeconomic backgrounds showed poorer outcomes overall, these disparities were amplified in countries with more restrictive migration policies.

Rationale and research question

Given the outlined gaps, there appears to be a need for an evidence synthesis centered on adolescent migrants. This need is based on several identified gaps: 1) low specificity of information on PA and SA; 2) low specificity of information on the adolescent migrant population; and 3) scarce information on PA and SA measurement instruments.

In the only systematic review focused on migrant children's adaptation, Jones et al. (2022) considered outcomes such as well-being, adjustment, psychological adjustment, social adjustment, and adaptation as they were defined in the original studies. Although the relationship between factors and types of adaptation (psychological, social, and identity) is noted in each article, no overall analysis or conceptual distinction among these types is provided. As discussed previously, it is necessary to distinguish the role of cultural and structural factors, as well as the type of migrant population under study, when establishing future research directions.

Second, prior reviews have grouped migrant children and adolescents, limiting conclusions specific to adolescents, whose psychosocial development poses unique challenges. Understanding PA and SA in this group can inform long-term interventions.

Third, although Jones et al. (2022) listed the instruments used to assess adaptation, they reported only the names and item counts. Greater detail on psychometric properties and instrument dimensions is needed to evaluate the validity and reliability of these measures. This, in turn, would clarify which aspects of PA and SA are being assessed and how these constructs are currently conceptualized in research. Given the conceptual and methodological heterogeneity identified in this field, a scoping review was considered appropriate to map how PA and SA have been conceptualized and measured in migrant adolescents.

Systematic reviews on other migrant populations, such as international university students, show significant progress in understanding psychological (PA) and sociocultural adaptation (SA) through defined frameworks, predictors, and outcomes (Brunsting et al., 2018; Sarmiento et al., 2019). These reviews define PA as well-being or distress, and SA as functional adjustment. Conversely, reviews on adolescent migrants focus on mental health without clarifying whether symptoms like depression or anxiety are outcomes or predictors of adaptation. This conceptual and measurement ambiguity continues to hinder a clear understanding of the adaptation process in this group.

In sum, it is essential to examine how PA and SA are defined and measured, while distinguishing them conceptually and methodologically. This review aims to analyze the conceptualization and measurement of PA and SA in migrant adolescents based on studies from 2019–2024. Specifically, the objectives are to 1) characterize the instruments used to measure PA and SA and other variables considered in the empirical studies; 2) establish how PA and SA are conceptualized in empirical studies based on the instruments used and variables identified; and 3) identify factors associated with the study of PA and SA in adolescent migrants.

METHOD

The present study constitutes a scoping review. This type of review is a structured method for reviewing the literature to map the evidence published on a specific topic and identify its main characteristics (Peters et al., 2020). This type of review provides rigorous information from empirical studies to inform future research directions (Lopez-Cortes et al., 2022). No protocol was developed or registered for this scoping review.

Research question

Based on the SPIDER strategy, the research question guiding this review was: How are psychological and sociocultural adaptation conceptualized and measured in adolescent migrants, according to empirical studies published between 2019 and 2024? In this framework, the SPIDER components are defined as follows: The Sample includes adolescent migrants; the Phenomenon of Interest refers to both psychological adaptation (PA) and sociocultural adaptation (SA); the Design includes empirical studies employing observational or quasi-experimental methodologies; the Evaluation focuses on the variables assessed and the instruments used to measure PA and SA; and the Research type comprises both quantitative and mixed-methods studies.

Article selection and review process

This scoping review was conducted in three phases: article search, data extraction, and synthesis. Reporting was guided by the PRISMA Extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018).

The search phase followed four steps: identification, screening, eligibility, and inclusion, and was conducted in Scopus, SciELO, Web of Science, EBSCOhost, Redalyc, and Bielefeld Academic Search Engine (BASE). The EBSCOhost search was conducted simultaneously across the databases selected by default through the institutional subscription. Searches in Web of Science, SciELO, EBSCOhost, and Scopus were conducted on January 3, 2025; the Redalyc search was conducted on January 31, 2026, and the BASE search on February 6, 2026. Studies published between 2019 and 2024 in English or Spanish were eligible. Search strategies were adapted to the syntax and functionalities of each source, using database-specific combinations of relevant terms in English and/or Spanish, as applicable. The search yielded 332 references; after removing 87 duplicates, 245 records remained.

Screening was based on reviewing titles, abstracts, and keywords. Inclusion criteria were: 1) studies on adolescent migrants; 2) published in Spanish or English; 3) empirical studies with quantitative or mixed methods; 4) focused on psychological and/or sociocultural adaptation; and 5) published between 2019 and 2024.

For the purposes of this review, migration was considered a change of residence involving the crossing of a defined geographical boundary, including both international migration, when movement occurs between countries, and internal migration, when it occurs within the same country (Pinto-Cortez et al., 2024). The population of interest comprised adolescents who had experienced these forms of migration in different contexts, whether voluntary or involuntary. International student mobility was also included, characterized by temporary residence in another country and adaptation to a new sociocultural context.

Studies were eligible when the original study defined its focal population as adolescents and the sample included migrant adolescents. Studies including broader age groups were excluded when adolescent-specific data could not be identified or extracted separately.

Studies with samples that included non-migrant participants or participants with a migration background were eligible, provided that their samples also included migrant adolescents. Because the aim of the review was to identify the variables measured and the instruments used, statistical and/or qualitative results were not required to be disaggregated by migration status. In these studies, data extraction focused on PA and SA variables measured in migrant adolescents, other associated variables, and the instruments used to measure them.

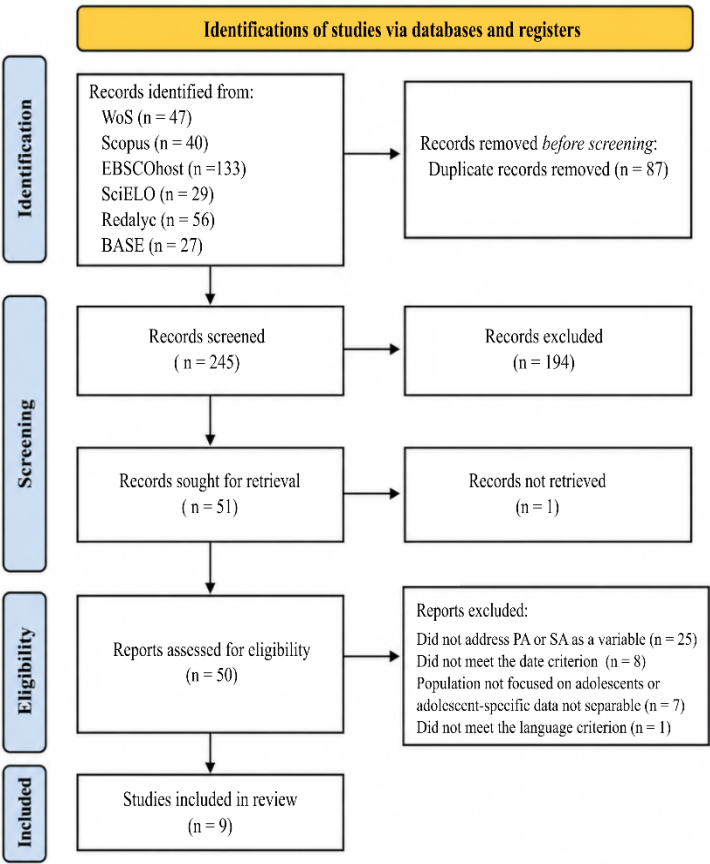
Inclusion and exclusion criteria aligned with the methodological objectives: the population criterion was established to maintain the review's specific focus on migrant adolescents, and only quantitative or mixed-method studies were included to identify standardized instruments for PA and SA. Articles in Spanish and English were selected for accurate understanding. The review was restricted to studies published between 2019 and 2024.

Screening was conducted using the BUHOS platform (Bustos et al., 2018) by four analysts—three authors (B.C., J.S., M.P.) and one collaborator (E.V.). Each article was independently reviewed by two analysts using three options: include, do not include, or undecided. Disagreements, particularly when one reviewer chose "include" and the other did not, were resolved through discussion with A.S. and the full team. This process yielded 51 articles for the next phase.

In the eligibility phase, 51 reports were sought for retrieval. One report could not be retrieved, leaving 50 reports for full-text assessment. Of these, 41 were excluded: 25 did not address PA or SA, 8 fell outside the date range, 7 did not meet the population criterion, and 1 did not meet the language criterion. As a result, 9 studies were included in the review (see Figure 1).

The data extraction phase began with extracting metadata for each article, such as study country, design, and sample, indicating mean age, age range when available, and gender distribution. In addition, the type of migration was recorded as internal, international, forced, or voluntary (Table 1), followed by methodological details, studied variables, and the instruments used to assess psychological adaptation (PA) and sociocultural adaptation (SA) (Table 2). For each instrument, the dimensions and psychometric properties reported in the included studies were also extracted. Data extraction was initially conducted by three researchers (B.C., M.P., and J.S.) and one collaborator, who divided the nine included studies among them. In parallel, one researcher (A.S.) independently extracted data from all nine studies. The resulting extractions were subsequently reviewed, and discrepancies were resolved by consensus.

Figure 1
PRISMA flowchart of article review process



Psychometric properties were organized by instrument type: those assessing PA (Table 3), those assessing predictors and consequences of PA (Table 4), and those measuring variables related to SA (Table 5). Instrument citations were included for reference purposes only.

The synthesis of the information involved categorizing the data following Susanto et al. (2024), by grouping data with similar characteristics. The initial categorization was conducted by three researchers (B.C., M.P., and J.S.). PA and SA were defined a priori as the constructs of interest in the review; however, the categories and dimensions used to organize and synthesize the information were not predefined but emerged from the data. The preliminary categorization was subsequently reviewed and modified jointly by A.S. and C.B. Information with shared characteristics was grouped together, and these groupings were used to identify and define the categories and dimensions presented in the results.

Table 1

Matrix of results of the included articles: data, method and sample.

ID	Name	Country	Design	Participants	Age characteristics	Migration type
1	Cultural Identity and the Academic, Social, and Psychological Adjustment of Adolescents with Immigration Background (Baumert et al., 2024)	Germany	Cross-sectional–explanatory	n = 1992, 44.5% women	15–17 years; M = 15.4 years	International; non-forced
2	Self-Construals, adjustment problems and coping styles of internal migrant and non-migrant adolescents (Bozdağ & Bilge, 2021)	Turkey	Cross-sectional–correlational	n = 979 (410 migrants, 569 non-migrants), 46% women, 58% men	14–18 years; mean age not reported	Internal; non-forced
3	Trajectories of perceived discrimination among Chinese rural-to-urban migrant early adolescents: predictors and outcomes (Cao et al., 2022)	China	Longitudinal	n = 385, 38% women, 62% men	Age range not reported; M = 10.49 years, SD = 0.69. 4th–5th grade students (approximately 9–11 years)	Internal; non-forced
4	Finding Myself Abroad: Adolescent Identity Processes and Sociocultural Adaptation During Intercultural Transitions (Greischel et al., 2019)	Germany	Longitudinal	n = 457, 72% women, 28% men	14–17 years; M = 15.49 years	International; non-forced (approx. 10-month school exchange)
5	Familism Values and Psychological Adjustment of Latinx Adolescents in an Emerging Immigrant Community: A Five Wave Longitudinal Study (Kho et al., 2023)	United States	Longitudinal	n = 547, 55.4% women, 44.6% men	Age range not reported; M = 12.8 years, SD = 1.03. 6th–8th grade students (approximately 11–14 years)	International; non-forced
6	Development and effects of a psychosocial adaptation program for North Korean adolescent defectors (Lee & Jeon, 2021)	South Korea	Quasi-experimental	n = 28, gender not specified	12–20 years; Experimental group: M = 17.1, SD = 2.1; control group: M = 18.5, SD = 3.7	International; forced

ID	Name	Country	Design	Participants	Age characteristics	Migration type
7	Developmental trajectories of Korean and heritage language proficiencies and their association with maladjustment among Korean multicultural adolescents (Park & Han, 2023)	South Korea	Longitudinal	n = 1441, 51.21% women, 48.79% men	Age range not reported; M = 9.97 at baseline. 4th-grade students followed longitudinally until 8th grade	International; non-forced
8	Impact of acculturation and psychological adjustment on mental health among migrant adolescents in Guangzhou, China: a cross-sectional questionnaire study (Shi et al., 2019)	China	Cross-sectional–correlational	n = 1122, 45% women, 55% men	11–17 years; mean age not reported	Internal; non-forced
9	Minority and Majority Adolescents' Attitudes toward Mutual Acculturation and its Association with Psychological Adjustment (Sidler et al., 2022)	Germany, Greece and Switzerland	Cross-sectional–correlational	n = 1160 (346 Germany, 439 Greece, 375 Switzerland), ~50% women, ~50% men	Germany: 11–16 years; M = 12.78. Greece: 11–20 years; M = 12.29. Switzerland: 11–15 years; M = 12.67	International; non-forced

Table 2

Matrix of results of the included articles: name of variables

ID	Variable Name PA/SA	Other variables	Type of variables
1	PA: Psychological adjustment. Includes: a) Self-esteem; b) Life satisfaction	Academic adjustment. Includes: academic performance Social adjustment Cultural Identification Individual Characteristics and Family Background. Includes: a) gender; b) age; c) Proficiency in German; d) Socioeconomic Status (SES); e) Immigration Background; f) Immigrant Generation; g) Region of Origin School Characteristics. Includes: a) School track; b) Proportion of Immigrant Students; c) Ethnic Heterogeneity; d) Multiculturalism Climate	Predictor/independent variables: Individual Characteristics and Family Background; and School Characteristics Outcome/dependent variables: Academic adjustment; Social adjustment; Psychological adjustment
2	PA: Adjustment problems	Self-construals Coping styles	Predictor/independent variables: adjustment problems; Coping styles Dependent variable/primary outcome: Self-construals
3	PA: Psychological adjustment. Includes: a) depressive symptoms; b) social anxiety; c) loneliness; and d) self-esteem	Protective factors. Includes: a) resilience; b) family and peer support Perceived discrimination Problem behaviors Sociodemographic variables. Includes: a) gender; b) type of school	Predictor/independent variables: Protective factors; sociodemographic variables Dependent variable/main outcome: Perceived discrimination considering its trajectory measured in four time periods (T1, T2, T3, and T4) Distal outcome variables: Psychological adjustment and problem behaviors
4	SA: Sociocultural adaptation	Identity Subjective sociocultural distance (sSCD) Objective sociocultural distance (oSCD); Age and gender	Predictor/independent variables: Identity Outcome/dependent variables: Sociocultural adaptation Moderating variables: Subjective sociocultural distance; Objective sociocultural distance Control variables: age and gender

ID	Variable Name PA/SA	Other variables	Type of variables
5	PA: Psychological adjustment. Includes: internalizing and externalizing behaviors	Familism Values Social position. Includes gender, ethnic origin, nativity	Predictor/independent variables: Familism Values, measured at four time points (T1, T2, T3, and T4) Outcome/dependent variables: Psychological adjustment, measured at T1 and T5 Moderating variables: social position (gender, ethnic origin) Covariates: age, nativity, psychological adjustment
6	PA: Psychosocial adaptation	Stress; Self-efficacy Creative-cognitive-cooperative-adaptation promotion program	Predictor/independent variables : creative-cognitive-cooperative adaptation promotion program Outcome/dependent variables: psychosocial adaptation, stress, and self-efficacy
7	PA: Psychological adjustment. Includes: a) depressive symptoms; and b) life satisfaction	Acculturation. Includes: (a) Korean proficiency; (b) Heritage language proficiency. Behavioral adjustment School adjustment. Includes: (a) Bullying victimization; (b) academic achievement; (c) educational interest.	Predictor/independent variables: Acculturation Outcome/dependent variables: Psychological adjustment; Behavioral adjustment; School adjustment
8	PA: Psychological adjustment	Mental health. Includes: a) anxiety; and b) depression; Acculturation Demographic variables. Includes: a) age; b) gender; c) place of origin; and d) length of residence in Guangzhou	Predictor/independent variables: Acculturation; Psychological adjustment Outcome/dependent variables: Mental health Covariates: demographic variables (including age, gender, place of origin, length of residence in Guangzhou)
9	PA: Psychological adjustment. Includes: a) self-esteem; and b) self-determination.	Attitudes toward mutual acculturation profile Sociodemographic variables include: a) migration background (with or without); b) country (Germany, Greece, Switzerland); c) gender; and d) age.	Predictor/independent variables: Attitudes toward mutual acculturation profile; Migration background (with or without); Country Outcome/dependent variable: Psychological adjustment Covariate: gender

RESULTS

Overview of the analyzed studies

The nine analyzed studies were conducted in three regions: Asia ($n = 4$), with two in China and two in South Korea; Europe ($n = 4$), including a multicenter study in Germany, Greece, and Switzerland, two in Germany, and one in Turkey; and North America ($n = 1$), in the United States. The most common design was longitudinal ($n = 4$), followed by cross-sectional–correlational ($n = 3$), while cross-sectional–explanatory ($n = 1$) and quasi-experimental ($n = 1$) were less frequent.

The studies had a mean sample size of $M = 901.2$ participants, ranging from 28 to 1992 adolescents. Among the eight studies that reported gender distribution, male participants ranged from 28% to 62% and female participants from 38% to 72%. One study (Bozdağ & Bilge, 2021) reported 46% female and 58% male, totaling 104%, which suggests a possible reporting error in the original publication.

Participants' ages ranged approximately from 9 to 20 years, although age reporting varied across studies. Regarding migration type, most studies focused on international migration (66.7%; $n = 6$), including one involving migration for educational exchange purposes, while three studies (33.3%; $n = 3$) examined internal migration. Only one study addressed forced migration (11.1%; $n = 1$).

A total of 14 instruments were identified to measure PA and SA. Most (92.9%, $n = 13$) were designed to assess PA, and only one (7.1%, $n = 1$) measured SA. Among the 26 instruments used to assess variables associated with PA and SA, the majority (92.3%, $n = 24$) were related to PA, while only two (7.7%, $n = 2$) focused on variables associated with SA.

Most studies focused on PA (88.9%, $n = 8$), mainly as a dependent variable (77.8%, $n = 7$), with only one study (11.1%, $n = 1$) treating it as an independent variable. SA was examined in just one study (11.1%, $n = 1$) as a dependent variable. No study simultaneously analyzed both psychological and sociocultural adaptation.

Instruments for measuring psychological adaptation

The 13 instruments used to measure PA were classified into four categories based on their primary focus. Some instruments explicitly measured adaptation as a construct, whether psychological or general (23.1%, n = 3), whereas others assessed cognitive-motivational variables (30.8%, n = 4), mental health (23.1%, n = 3), and well-being (23.1%, n = 3).

Regarding the instruments measuring adaptation as a construct, one directly assessed PA (ID 8), another included PA as a sub-dimension of psychosocial adaptation (ID 6), and a third evaluated adaptation in general terms (ID 2). Four instruments focused on cognitive-motivational variables such as self-esteem (ID 1; 3; 9) and self-determination (ID 9). Three assessed mental health, including depressive symptoms (ID 3; 7) and social anxiety (ID 3), while three focused on well-being, measuring loneliness (ID 3) and life satisfaction (ID 1; 7). The Rosenberg Self-Esteem Scale (ID 3; 9) was the most frequently used, in both original and adapted versions.

The dimensional structure and reliability of the instruments varied across studies. Nine instruments were unidimensional and reported a general alpha. Among the remaining four, one reported multiple dimensions with both specific and overall alphas (ID 2); two reported only an overall alpha despite having multiple dimensions (ID 6; 9); and one reported specific alphas for each dimension without an overall alpha (ID 5). These variations reflect differences in how internal consistency was addressed. See [Table 3](#).

Table 3
Characteristics of instruments used to measure Psychological Adaptation

Instrument	Variable measured	Reported dimensions	Overall reliability	Dimension-specific Reliability	ID
KINDL-R questionnaire, originally developed by Bullinger et al. (1997, as cited in Bullinger et al., 2008), revised by Ravens-Sieberer and Bullinger (1998) ^a	Self-esteem	1	α = .85		1
Satisfaction with Life Scale (SWLS; Diener et al., 1985) adapted by Baumert et al. (2024)	Satisfaction with Life	1	α=.91		1
Adolescent Adjustment Screening Inventory (RAASI; Reynolds, 1998), adapted to Turkish by Meriç (2007)	Adjustment problems	4	α=.91	Emotional Distress: α=.87 Positive self: α=.54 Antisocial behavior: α=.79 Anger control problems: α=.79	2
Center for Epidemiologic Studies Depression Scale for Children (Fendrich et al., 1990). Chinese version by Zhang et al. (2010)	Depressive symptoms	1	α=.86	-	3
Children's Loneliness scale (Asher et al., 1984). Chinese version by Li et al. (2014)	Loneliness	1	α= .81	-	3
Social Anxiety Scale for Children (La Greca et al., 1988). Chinese version by Ma (1993, as cited in Yuan et al., 2012)	Social anxiety	1	α= .90	-	3
The Rosenberg Self-Esteem Scale (Rosenberg, 1965). Study 3 used a Chinese version by Wang et al. (1999). Study 9 used study-specific translations in German, Greek, Arabic, English, Farsi, French, and Turkish (Sidler et al., 2022)	Self-esteem	1	Germany: α=.78; Greece: α=.73; Switzerland: α=.82	-	3; 9
Youth Self-Report (YSR; Achenbach, 1991). Study-specific translation into Spanish (Kho et al., 2023) and original English version ^b	Internalizing and externalizing behaviors	2	-	Internalizing behaviors: α = .92 (T1) and α = .93 (T5). Externalizing behaviors: α = .88 (T1) and α = .90 (T5).	5

Instrument	Variable measured	Reported dimensions	Overall reliability	Dimension-specific Reliability	ID
The Korean Youth Self Report (K-YSR; Oh et al., 1997). Korean version of the Youth Self Report (Achenbach, 1991) ^c	Psychosocial adaptation	2	$\alpha=.95$	-	6
Shortened adaptation of the Korean version of the Symptom Checklist SCL-90-R (Kim et al., 1984), developed for the Korean Child and Youth Panel Study (Lee et al., 2011). The original version is by Derogatis (1977/2002)	Depressive symptoms	1	$\alpha=.90$	-	7
Unnamed measure. Items assessing life satisfaction, designed by researchers from the Multicultural Adolescents Panel Study (MAPS; National Youth Policy Institute, 2020), based on Kim et al. (2010)	Life satisfaction	1	$\alpha=.82$	-	7
Psychological adjustment, original measure developed by Shi et al. (2019)	Psychological adjustment	1	$\alpha=.665$	-	8
General self-determination (Deci & Ryan, 2010). Study-specific translations in German, Greek, Arabic, English, Farsi, French, and Turkish (Sidler et al., 2022) ^d	Self-determination	3	Germany: $\alpha=.65$; Greece: $\alpha=.70$; Switzerland: $\alpha=.78$	-	9

Note: a The authors did not report the format or scoring of the scores, so the information was taken from Bullinger et al. (2008). b Internalizing behaviors include three subdimensions: 1) withdrawn; 2) somatic complaints; 3) anxious/depressed moods, and externalizing behaviors include two subdimensions: 1) aggression; and 2) rule-breaking. The statistical analyses involved only the two main dimensions. c The authors reported two dimensions: psychological adaptation and social adaptation. Psychological adaptation includes two subdimensions: 1) withdrawal and 2) depression/anxiety. Social adaptation includes two subdimensions: 1) delinquency and 2) aggression. The authors performed statistical analyses by subdimension but provided only the overall Cronbach's alpha for psychosocial adaptation. d The authors reported three dimensions: 1) Autonomy, 2) Competence, and 3) Relatedness and performed statistical analyses by dimension but provided only the overall Cronbach's alpha for self-determination.

Instruments for measuring other variables associated with psychological adaptation

Among the 24 instruments measuring other variables associated with PA, the following aspects are emphasized: mental health ($n = 4$, 16.7%), psychological resources ($n = 6$, 25%), family and interpersonal resources ($n = 1$, 4.2%), social/cultural adaptation ($n = 6$, 25%), academic adaptation ($n = 4$, 16.7%), and psychosocial risk ($n = 3$, 12.5%).

Mental health measurement includes measures of anxiety (ID 8), depression (ID 8), post-traumatic stress (ID 6), and behavioral maladjustment associated with delinquent behavior (ID 7). Psychological resources include self-construal (ID 2), self-efficacy (ID 6), resilience (ID 3), coping styles with stress (ID 2), cultural identification (ID 1), and familism values (ID 5). Family and interpersonal resources correspond to family and peer support (ID 3). Social/cultural adaptation includes acculturation (ID 8), attitudes toward mutual acculturation (ID 9), social adjustment (ID 1), native language proficiency (ID 7), and language proficiency of the receiving society (ID 1; 7). Academic adjustment includes school attachment (ID 1), multiculturalism climate (ID 1), academic achievement (ID 7), and educational interest (ID 7). Psychosocial risk includes stress, within the context of cultural adaptation (ID 6), perceived discrimination (ID 3), and bullying victimization (ID 7).

Regarding the dimensional structure and reliability reporting of instruments related to other variables associated with PA, 12 single-dimension instruments were identified. Of these, ten reported a general Cronbach's alpha, one reported Weighted Likelihood Estimation (WLE) scores from IRT-scaled tests (ID 1), and one reported alpha coefficient by study wave for heritage language proficiency (ID 7). Among the 12 multi-dimensional instruments, seven reported alphas for each dimension without providing an

overall alpha, while five reported only an overall alpha. One instrument (MACVS; ID 5) presented multiple dimensions but was analyzed using the total score. Additionally, one study (ID 8) reported an alpha from previous research for the BCFPI (See Table 4).

Table 4

Characteristics of the instruments used to measure predictors and consequences of Psychological Adaptation

Instrument	Variables measured	Reported dimensions	Overall reliability	Dimension-specific Reliability	ID
Multiculturalism scale by Hahn et al. (2015) . German version by Baumert et al. (2023)	Multiculturalism Climate	1	$\alpha = .84$	-	1
Literacy test from the OECD's Program for International Student Assessment, PISA (OECD, 2019) ^a	Proficiency in German	1	rwle = .88	-	1
Commitment Scale of the Multigroup Ethnic Identity Measure-Revised (MEIM-R; Phinney & Ong, 2007), shortened version of the original MEIM questionnaire (Phinney, 1992). Version adapted and used in the German National Educational Panel Study	Cultural Identification	2	-	Identification with the heritage culture: $\alpha = .93$ Identification with the host culture: $\alpha = .90$	1
Combination of items from School Work Engagement Inventory (Salmela-Aro & Upadaya, 2012) and Progress in International Reading Literacy Study (PIRLS; Martin et al., 2003)	Social Adjustment	1	$\alpha = .87$	-	1
Familial Autonomous-Related Self Scale, (FARSS; Kağıtçıbaşı, 2007), adapted for Turkish adolescents by Özdemir and Ç ok (2011)	Self-Construals	3	-	Familial autonomous self-construal: $\alpha = .66$ Familial related self-construal: $\alpha = .55$ Familial autonomous-related self-construal: $\alpha = .54$	2
Styles of Coping with Stress Scale (SCSS), a shortened version developed by Ş ahin and Durak (1995) based on Silva (1988, as cited in Ş ahin & Durak, 1995). Turkish adaptation of the Ways of Coping Inventory (Folkman & Lazarus, 1980)	Coping Styles with stress	5	-	Self-confident style: $\alpha = .73$ Optimistic style: $\alpha = .60$ Helpless style: $\alpha = .71$ Submissive style: $\alpha = .58$ Seeking of social support: $\alpha = .50$	2
Resilience Scale for Chinese Adolescents (Hu & Gan, 2008)	Resilience	1	$\alpha = .86$	-	3
Chinese version of the Multidimensional Scale of Perceived Social Support (MSPSS-C; Chou, 2000), adapted from the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988)	Family and Peer Support	2	-	- Family support = $\alpha .82$ - Peer support = $\alpha .80$	3
Perceived Personal Discrimination Scale (Liu, 2008, as cited in Cao et al., 2022)	Perceived Discrimination	1	$\alpha = .86$ (T1); $\alpha = .87$ (T2); $\alpha = .88$ (T3); $\alpha = .89$ (T4)	-	3
Revised version of Problem Behaviors Scale (Fang et al., 2004)	Problem Behaviors	1	$\alpha = .82$	-	3
Mexican American Cultural Values Scale, MACVS (Knight et al., 2010) ^b	Familism Values	3	T1: $\alpha = .91$; T2: $\alpha = .91$; T3: $\alpha = .94$; T4: $\alpha = .93$.	-	5
Posttraumatic Stress Syndrome (PTSS; Kim et al., 2009, as cited in Lee & Jeon, 2021) ^c	Stress	4	$\alpha = .96$	-	6
Cultural Adaptation Stress (Kim et al., 2009, as cited in Lee & Jeon, 2021) ^d	Stress	5	$\alpha = .87$	-	6
General self-efficacy scale (Cha, 1997)	Self-Efficacy	3	-	Self-confidence: $\alpha = .69$ Self-regulatory efficacy: $\alpha = .74$ Task difficulty preference: $\alpha = .64$	6

Instrument	Variables measured	Reported dimensions	Overall reliability	Dimension-specific Reliability	ID
Unnamed measure. Items assessing delinquency from Lee et al. (2011), adapted and used by the Multicultural Adolescents Panel Study (MAPS; National Youth Policy Institute, 2020)	Behavioral adjustment	1	$\alpha = .60$		7
Unnamed measure. Items assessing bullying victimization used by MAPS (National Youth Policy Institute, 2020)	Bullying victimization	1	$\alpha = .92$		7
Unnamed measure. Items assessing academic achievement from a subjective perspective, used by MAPS (National Youth Policy Institute, 2020)	Academic achievement	1	$\alpha = .79$		7
Modified version of School Life Adjustment Scale developed by Min (1991, as cited in Park & Han, 2023), adapted by Kim et al. (2010) ^e	Educational interest	3	$\alpha = .78$	The authors do not report the names of the subscales.	7
Unnamed measure. Items assessing Korean proficiency used by MAPS (National Youth Policy Institute, 2020), from the Children of Immigrants Longitudinal Study by Portes and Rumbaut (2018)	Korean proficiency	1	$\alpha = .91, .94, .95, .94, \text{ and } .96$ (T1 to T5)		7
Unnamed measure. Items assessing heritage language proficiency used by MAPS (National Youth Policy Institute, 2020), based on Children of Immigrants Longitudinal Study by Portes and Rumbaut (2018) ^f	Heritage language proficiency	1	-	Mother's heritage: $\alpha = .96, .96, .94, .95, \text{ and } .95$ (T1 to T5) Father's heritage: $\alpha = .96, .98, .96, .95, \text{ and } .91$ (T1 to T5)	7
Social Anxiety Scale for Children (SASC; La Greca et al., 1988) ^{g; h}	Anxiety	2	$\alpha = .79$	-	8
The Brief Child and Family Phone Interview (BCFPI; Cunningham et al., 2009) ⁱ	Depression	1	$\alpha = .86$	-	8
Acculturation, original measure developed by Shi et al. (2019)	Acculturation	3	-	Lifestyle: $\alpha = .524$ Social interaction: $\alpha = .553$ Language: $\alpha = .811$ Migration background students' heritage culture maintenance: Germany: $\alpha = .85$; Greece: $\alpha = .85$; Switzerland: $\alpha = .84$ Migration background students' dominant culture adoption: Germany: $\alpha = .88$; Greece: $\alpha = .88$; Switzerland: $\alpha = .91$ Majority students' acquisition of cultural knowledge: Germany: $\alpha = .91$; Greece: $\alpha = .91$; Switzerland: $\alpha = .92$ Schools' endorsement of intercultural contact: Germany: $\alpha = .90$; Greece: $\alpha = .90$; Switzerland: $\alpha = .92$	8
Four-dimensional mutual acculturation attitudes scale (Sidler et al., 2021)	Attitudes Toward Mutual Acculturation Profile	4	-		9

Note: a Reliability was calculated for the WLE scores of the IRT-scaled tests. b The authors reported three dimensions: (1) Obligation, (2) Referent, and (3) Respect. However, the statistical analyses involved only the overall Familism Values score. c The authors report four dimensions: 1) Re-experiencing of the traumatic event; 2) Avoidance; 3) Hyperarousal; and 4) Complex PTSD, performing analyses by dimensions, but providing only the overall Cronbach's alpha. d The authors report five dimensions: 1) Discrimination; 2) Alienation; 3) Homesickness; 4) Cultural shock, and 5) Marginalization, performing analyses by dimensions, but providing only the overall Cronbach's alpha. e The authors indicate that three subscales were considered, but do not report their names and provided only an overall Cronbach's alpha. f The authors reported separate alphas because they assessed linguistic competence for both the mother's and the foreign father's language and if both parents were foreigners, it was calculated using the heritage language scores of both parents. g The authors report two dimensions: 1) Fear of negative evaluation; and 2) Social avoidance and distress, performing analysis by dimensions, but providing only the overall Cronbach's alpha. h Overall Cronbach's alpha reported corresponds to previous studies. i The authors used only one subscale of five, the major depression subscale (MDD).

Instruments for measuring sociocultural adaptation

The Sociocultural Adaptation Scale, SCAS (Ward & Kennedy, 1999), a unidimensional instrument, was the only scale found to measure Sociocultural Adaptation (SA). The authors (ID 4) reported an overall alpha for two measurement times ($\alpha = .63$ at T1 and $\alpha = .60$ at T2). The instrument consists of 5 items with a 5-point Likert response format and captures migrants' daily life struggles, including routines, school, social life, food, and weather.

Instruments for measuring other variables associated with sociocultural adaptation

Of the two instruments used to measure variables associated with SA, one assessed identity and the other subjective sociocultural distance (ID 4). The U-MICS instrument (20 items) evaluated commitment and reconsideration toward both the culture of origin and the host culture, with Cronbach's alpha reported at two time points for each. The subjective sociocultural distance (sSCD) measure, adapted from the SCAS developed by Ward and Kennedy (1999), assessed perceived differences between the country of origin and the host country, with $\alpha = .72$ at both measurement points (see Table 5).

Table 5
Characteristics of instruments used to measure predictors and consequences of SA

Instrument	Variable measured	Reported dimensions	Overall reliability	Dimension-specific reliability	ID
Utrecht–Management of Identity Commitments Scale (U-MICS; Crocetti et al., 2010). Adapted and translated for this study (Greischel et al., 2019)	Identity	2	-	Commitment (includes Host and Home domain: T1: $\alpha_{\text{Host}} = .60$, $\alpha_{\text{Home}} = .69$; T2: $\alpha_{\text{Host}} = .62$, $\alpha_{\text{Home}} = .70$) Reconsideration (includes Host and Home domains): T1: $\alpha_{\text{Host}} = .79$, $\alpha_{\text{Home}} = .76$; T2: $\alpha_{\text{Host}} = .81$, $\alpha_{\text{Home}} = .77$	4
Subjective sociocultural distance (sSCD) measure, adapted by Greischel et al. (2019) from the Sociocultural Adaptation Scale (SCAS; Ward & Kennedy, 1999)	Subjective sociocultural distance	1	$\alpha = .72$ at T1 and $\alpha = .72$ at T2	-	4

Conceptualization of psychological adaptation

In the present review, it is proposed that PA constitutes the migrant's capacity to maintain healthy functioning through positive self-esteem, as well as the ability to maintain a positive relationship with the environment autonomously. According to the variables and instruments used, the PA of adolescent migrants is considered a process comprising multiple dimensions. These are: 1) an integrated self; 2) mental health; and 3) positive relationships with the environment.

PA involves the regulation of negative emotional states such as depression, depressive symptoms, anxiety, somatic complaints, and the regulation of disruptive behaviors, as well as the development and maintenance of meaningful social connections that counteract isolation and loneliness. PA is manifested in a favorable evaluation of life circumstances, which allows the migrant to balance their internal resources with the demands of the environment, developing flexible responses to challenges to build a satisfactory life experience, reflected in their overall well-being.

Conceptualization of sociocultural adaptation

It is proposed to define SA as the degree to which a migrant manages to function effectively in the different areas of daily life within the host culture. This encompasses managing specific aspects of the environment, such as food, climate, and daily routines, as well as integration into other contexts of participation, including the school environment. It is important to note that this definition is based on a single study (ID 4) and a single instrument.

Taxonomy of factors associated with PA and SA

The taxonomy of factors is based on variables identified as predictors, consequences, or covariates of PA and SA. Since eight studies focus on PA and only one on SA, most factors relate to PA. Thus, unless explicitly indicated as linked to SA, factors should be understood as associated with PA by default.

Some studies treated behavioral and psychological problems as variables related to PA, while others treated them as PA indicators. In studies ID 3 and 7, behavioral problems were associated outcomes in longitudinal designs, whereas in ID 2 and 5, they were PA indicators. Study ID 6 examined both PA and post-traumatic stress as outcomes. Studies ID 3, 6, and 7 also used depressive symptoms, depression, and anxiety as PA indicators.

Sociodemographic and contextual factors. These refer to characteristics that describe migrant adolescents and the contexts in which they are embedded. The studies examined variables such as gender (ID 1; 3; 4; 5; 7; 8; 9), age (ID 1; 4; 8), ethnicity or region of origin (ID 1; 5; 7; 9), length of residence (ID 8), immigration background (ID 1; 7; 9), immigrant generation (ID 1), and contact with the society of origin or parents (ID 7). Other factors included socioeconomic status or household income (ID 1; 7), parental education (ID 7), school type (ID 3), proportion of immigrant students (ID 1), and ethnic heterogeneity (ID 1).

Psychological factors. These refer to the set of internal resources that influence how individuals perceive themselves and cope with the adaptation process. They include: 1) identity; 2) self-efficacy; 3) coping capacity; and 4) perceived cultural distance.

Identity refers to the construction of the self. Studies included variables such as self-construals, which describe how individuals define themselves in relation to others and are shaped by family and cultural context, especially parental values (ID 2). Cultural identification with the origin or host culture reflects conscious exploration of cultural belonging (ID 1). Familism values, emphasizing loyalty, family obligations, and respect over individual needs, also shape identity (ID 5). Additionally, identity is considered a factor associated with SA (ID 4).

Self-efficacy is an individual's belief in their ability to successfully execute an action and achieve a desired outcome, directly influencing their behavior. As a psychological resource, it can help adolescent migrants overcome PA challenges in a new society (ID 6).

Coping capacity refers to migrants' individual resources for managing internal and external demands. It includes two types: problem-oriented coping, which seeks to change the situation to reduce stress, and emotion-oriented coping, which focuses on managing emotional discomfort (ID 2). Resilience refers to adolescents' ability to face stress and adversity, marked by positive thinking and greater emotional regulation (ID 3).

Perceived cultural distance refers to the migrant's perception of how different the culture of their country of origin is from that of the host country. This factor is associated with SA (ID 4).

Relational Factors. Relational factors refer to social interactions, particularly the challenges and support they entail. These factors include: 1) psychosocial risk; 2) social support; 3) social/cultural adaptation; and 4) academic adaptation.

Psychosocial risk corresponds to variables that could increase vulnerability in PA. It includes cultural stress, caused by alienation, homesickness, culture shock, and marginalization (ID 4), and perceived discrimination, or the subjective recognition of receiving negative differential treatment in daily interactions, due to personal characteristics and origin (ID 2; 3). Within the educational context, there is bullying victimization (ID 7), including being bullied, ridiculed, or insulted.

Social support refers to the relationships and resources available through family and social networks that facilitate migrants' adaptation, providing emotional and practical resources (ID 3).

Social/cultural adaptation refers to how individuals adjust and integrate into a new social and cultural environment. It includes acculturation, adopting local customs and interacting with natives, and attitudes toward mutual acculturation, which reflect openness to reciprocal adaptation between migrants and locals, as well as language proficiency (ID 1; 7).

Academic adaptation refers to students' ability to adjust to the demands of the educational system as a social context. It includes two dimensions: 1) individual performance and involvement, reflected in self-assessed performance, motivation, enjoyment, and responsibility (ID 7); and 2) school social integration, which encompasses multicultural climate or appreciation of cultural diversity, and school attachment through the development of social bonds within the institution (ID 1).

DISCUSSION

The overall objective of this review is to analyze the conceptualization and measurement of psychological and sociocultural adaptation among migrant adolescents, through a review of studies published between 2019–2024. For this purpose, Web of Science, Scopus, EBSCOhost, SciELO, Redalyc, and BASE were searched, and a total of nine studies were analyzed.

Studies were mainly concentrated in Europe and Asia, with limited presence in North America and none in Latin America, Africa, or Oceania. Germany led the field (Baumert et al., 2024; Greischel et al., 2019; Sidler et al., 2022), aligning with Curtis et al. (2018), who noted high levels of child migration in Europe, particularly in Germany. These findings highlight the need for research in underrepresented regions such as Latin America, where significant migration flows constitute relevant areas for study (Sirlopú et al., 2018).

It is noteworthy that studies conducted in China (Cao et al., 2022; Shi et al., 2019) and Turkey (Bozdağ & Bilge, 2021) focused on internal migration. China is a particularly notable case, with more than 168 million rural residents migrating to cities in search of employment (Lu et al., 2019). In Turkey, internal migration is high due to regional economic inequalities and the concentration of employment and educational opportunities in large urban areas (Gürsoy & Badur, 2022).

The findings expand upon prior definitions of psychological adaptation (PA). While Soheili and Lanz (2025) defined it as well-being and satisfaction, and Sarmiento et al. (2019) described it as a continuum that includes possible mental disorders, the current results suggest a broader definition of PA, centered on agency. PA is understood as an active process in which adolescents develop capacities for healthy functioning by integrating both internal aspects (e.g., self-worth) and relational aspects (e.g., environmental connections), moving beyond definitions that are limited to emotional states.

Thirteen instruments were identified for measuring PA, but only one explicitly addressed PA as a construct (Shi et al., 2019). The remaining instruments assessed mental health (e.g., depressive symptoms, social anxiety), socio-cognitive variables (e.g., self-esteem, self-determination), and well-being (e.g., life satisfaction) (Baumert et al., 2024; Cao et al., 2022; Park & Han, 2023; Sidler et al., 2022). This diversity reflects PA's complexity and the need to define its core aspects. Focusing on self-concept may have oversimplified PA, highlighting the need for more comprehensive instruments.

Another finding was the overlap between PA and its associated variables. For example, Cao et al. (2022) treated behavioral problems as related variables, while Bozdağ and Bilge (2021) used them as indicators of PA. A similar inconsistency appears with depression and anxiety: Cao et al. (2022) used them to measure PA, whereas Shi et al. (2019) treated them as associated variables. This conceptual ambiguity complicates the understanding of PA and risks redundancy and circular reasoning. Given that PA includes mental health, such disorders should be part of its conceptualization rather than merely correlates.

Authors varied in how they reported internal consistency: some presented Cronbach's alpha by dimension, others only an overall alpha, and only one study reported both. Analyzing consistency by dimension is important when each reflects different aspects of adaptation. One study incorrectly cited reliability from previous research, overlooking that reliability is not an inherent property of a test but of its application in a specific context and population. Therefore, users of psychological instruments should compute and report their own reliability coefficients (López-Ibáñez et al., 2024).

The findings on factors associated with PA confirm and expand prior research. While Jones et al. (2022) highlighted self-efficacy among Third Culture Kids, this review identified additional factors, including self-concept and autonomy. Few studies addressed adolescent migrants' agency, including coping strategies and resilience (Cao et al., 2022; Lee & Jeon, 2021). The review also confirmed psychosocial risk factors like perceived discrimination (Cao et al., 2022) and cultural stress (Lee & Jeon, 2021). Findings on acculturation (Shi et al., 2019; Sidler et al., 2022) support the emphasis on proximity to host culture made by Sirlopú et al. (2018).

Family conflict and substance use are underexplored in relation to PA. Belhadj Kouider et al. (2015) identified discrepancies between children's and parents' cultural orientation as a relevant family-based factor in migrant youth mental health, yet only one of the included studies (Kho et al., 2023) addressed this issue. Overlooking such conflict may miss a key aspect of adaptation. Similarly, although van Dorp et al. (2021) identified substance use as relevant, none of the reviewed studies measured it. This gap is concerning, particularly for second-generation adolescents. Substance abuse may indicate poor PA, while general use may function as a potential risk factor.

Findings on academic adjustment contrast with previous studies. While Bennouna et al. (2019) emphasized multilevel school programs involving students, families, and teachers, recent research has centered on individual academic performance, engagement, and school integration (Baumert et al., 2024; Park & Han, 2023). Jones et al. (2022) highlighted teacher and peer relationships as key predictors. Recent studies also examine broader school-context variables, such as multicultural climate and bullying (Baumert et al., 2024; Park & Han, 2023), expanding the focus toward institutional and systemic factors, including cultural diversity.

The included studies covered a broad and heterogeneously reported age range. Although the variables used to characterize PA differed across studies, the small number of studies and differences in age reporting do not support robust comparisons across developmental periods.

Only one study specifically addressed SA. Recent research emphasizes PA, limiting understanding of how adolescent migrants acquire practical skills needed to function in a new cultural context. Bierwiazzonek and Waldzus (2016) had already highlighted the limited attention given to SA in non-forced migration. This is critical, as theory conceptualizes PA and SA as complementary yet distinct processes (Gebregergis & Csukonyi, 2025). The predominance of PA may therefore create a blind spot regarding how adolescents navigate everyday cultural challenges, social interactions, and adaptation to new norms and practices.

The findings suggest that peer socialization dynamics are particularly salient in the domain of PA during adolescence. Relational factors such as social adjustment and school integration, peer victimization, peer support, and the multicultural school climate are consistently associated with indicators of psychological well-being and distress among migrant adolescents (Baumert et al., 2024; Cao et al., 2022; Park & Han, 2023). In contrast, SA, defined in this review as effective functioning in everyday life within the host culture, remains weakly connected to these relational dynamics, despite adolescence being a developmental stage in which peers play a normatively central role.

Finally, the reviewed studies did not directly include structural factors such as migration policies, legal frameworks, institutional racism, or access to services within analyses of PA and SA. From a quantitative methodological perspective, this omission may be explained by the temporal and spatial constraints of most studies, which focus on specific populations in specific locations, thereby limiting the variability in structural variables necessary to examine their effects. From a theoretical standpoint, although the reviewed studies reflect elements of an ecological perspective, acknowledging multiple contextual levels from proximal to more distal factors, none systematically employ theoretical models capable of explaining the relationship between structural factors and PA and SA, such as the social determinants of health model (World Health Organization, 2025) or intersectionality (Harari & Lee, 2021), both widely used in the field of health sciences.

Limitations.

This study is limited by its restriction to studies published between 2019 and 2024, which may have excluded relevant studies published outside this period. The exclusion of qualitative research narrowed the perspective on PA and SA, while the focus on studies centered on adolescent populations limited comparisons with studies focused on children. Heterogeneous age reporting across studies limited comparisons across developmental periods. Additionally, the lack of distinction between first- and second-generation migrants limits the specificity of findings.

Future lines of research.

Future studies in PA and SA should: (1) include underrepresented regions such as Latin America; (2) develop specific instruments to assess PA in migrant adolescents; (3) explore the role of digital technologies in adaptation processes; (4) examine intergenerational conflicts in culturally diverse families; (5) analyze how different school contexts influence PA and SA; (6) consider structural factors that reflect societal conditions shaping adaptation, such as migration policies, institutional racism, and access to services and resources in host contexts—an approach that would require comparative cross-national or meta-analytic studies; and (7) adopt an interdisciplinary approach that integrates contributions from the social sciences and health disciplines to understand the complex interaction among structural social determinants, proximal contextual factors, and individual factors that influence PA and SA processes.

CONCLUSION

The findings highlight four key aspects: (1) a strong geographic concentration of research in Europe and Asia, with limited representation from North America and no studies identified in Latin America, Africa, or Oceania; (2) limited research on SA; (3) PA is conceptualized as a process involving an integrated sense of self, mental health, and positive relationships with the environment; and (4) most identified factors associated with PA focus on individual-level aspects, often neglecting support from the host context and the influence of social determinants on the adaptive process.

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