

2024

KU LEUVEN

Faculty of Psychology and Educational Sciences
Center for Social and Cultural Psychology



Emotional Fit with Two Cultures

Belgian Immigrant-Origin Adolescents'
Navigation of Sociocultural Contexts

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Yeasle Lee

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Doctoral thesis offered to obtain
the degree of Doctor of Psychology (PhD)

Supervisor: Prof. Dr. Batja Mesquita

Co-supervisors: Prof. Dr. Katie Hoemann & Dr. Alba Jasini

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Cover design by Nathalie Ribbers
Printed by Duplico

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Summary

Our emotional lives continuously shape and are shaped by the social and cultural environments we engage with. This dissertation examines this dynamic in immigrant-origin minority adolescents, focusing on their *emotional fit* – the degree of similarity in an individual's experienced emotions – with both majority and minority cultures. Prior research shows that immigrant-origin minorities with more contact with the majority culture tend to achieve higher emotional fit, indicating emotional acculturation towards the majority culture. However, acculturation can be bidimensional, allowing for multiple cultural ways of being. While those with more heritage culture friends show higher fit with their heritage culture, the question of whether and how they fit emotionally with both cultures, depending on their context, has not been explicitly tested. Additionally, the benefits of emotional fit with the majority culture, heritage culture, or both are not fully explored, despite the known positive association between emotional fit with one's culture and well-being.

This dissertation investigates emotional acculturation as a bidimensional and situated process, and explores its implications for well-being among immigrant-origin minority adolescents in Belgium. The aims of this dissertation are: (1) to examine the potential coexistence of emotional fit with both majority and minority cultures (i.e., the bidimensional model of emotional acculturation); (2) to identify the sociocultural contexts that facilitate emotional fit with both cultures; (3) to investigate the variability of emotional fit across different sociocultural contexts; and (4) to assess the impact of emotional fit with either or both cultures on adjustment outcomes.

Three empirical chapters address these aims. Chapter 2 analyzes the social networks of Turkish-origin minority adolescents to identify characteristics that facilitate emotional fit with both majority and minority norms, testing whether these adolescents can achieve emotional fit with both cultures. Chapter 3 examines emotional fit across daily sociocultural contexts, focusing on emotionally fitting with the norm of the cultural context (i.e., congruent frame-switching) and whether this benefits situational well-being. Chapter 4 explores individual differences in emotional acculturation, identifying subgroups with varying patterns of emotional fit in school and home contexts, and examining their adjustment outcomes.

This dissertation provides a comprehensive examination of emotional fit among immigrant-origin minority adolescents, highlighting the complex interplay between emotional experiences and sociocultural contexts, and its implications for well-being.

Samenvatting

Onze emotionele levens worden voortdurend gevormd door en vormen de sociale en culturele omgevingen waarmee we omgaan. Dit proefschrift onderzoekt deze dynamiek bij adolescenten met een immigratieachtergrond, met een focus op hun *emotionele fit* – de mate van gelijkenis in de ervaren emoties van een individu – met zowel de meerderheids- als de minderheidscultuur. Eerder onderzoek toont aan dat minderheden met een immigratieachtergrond een hogere emotionele fit hebben wanneer zij meer contact hebben met de meerderheidscultuur, wat wijst op emotionele acculturatie naar de meerderheidscultuur. Acculturatie kan echter bidimensioneel zijn, wat ruimte biedt voor meerdere culturele manieren van zijn. Hoewel degenen met meer vrienden uit de cultuur van herkomst een hogere fit met hun cultuur van herkomst laten zien, is de vraag of en hoe zij emotioneel passen bij beide culturen, afhankelijk van hun context, niet expliciet getest. Bovendien zijn de voordelen van emotionele fit met de meerderheidscultuur, de cultuur van herkomst of beide niet volledig onderzocht, ondanks de bekende positieve associatie tussen emotionele fit met de eigen cultuur en welzijn.

Dit proefschrift onderzoekt emotionele acculturatie als een bidimensioneel en gesitueerd proces en verkent de implicaties ervan voor het welzijn van adolescenten met een immigratieachtergrond in België. De doelen van dit proefschrift zijn: (1) het onderzoeken van de potentiële co-existentie van emotionele fit met zowel de meerderheidscultuur als de minderheidscultuur (d.w.z. het bidimensionale model van emotionele acculturatie); (2) het identificeren van de socioculturele contexten die emotionele fit met beide culturen faciliteren; (3) het onderzoeken van de variabiliteit van emotionele fit in verschillende socioculturele contexten; en (4) het beoordelen van de impact van emotionele fit met één of beide culturen op aanpassingsuitkomsten.

Drie empirische hoofdstukken behandelen deze doelen. Hoofdstuk 2 analyseert de sociale netwerken van adolescenten van Turkse afkomst om kenmerken te identificeren die emotionele fit met zowel de meerderheidscultuur als de minderheidscultuur faciliteren, en test of deze adolescenten emotionele fit met beide culturen kunnen bereiken. Hoofdstuk 3 onderzoekt emotionele fit in dagelijkse socioculturele contexten, met een focus op het emotioneel passen bij de norm van de culturele context (d.w.z. congruent frame-switching) en of dit de situatie gebonden welzijn ten goede komt. Hoofdstuk 4 verkent individuele verschillen in emotionele acculturatie, waarbij subgroepen met verschillende patronen van emotionele fit in school- en thuiscontexten worden geïdentificeerd en hun aanpassingsuitkomsten worden onderzocht.

Dit proefschrift biedt een uitgebreide analyse van emotionele fit bij adolescenten met een immigratieachtergrond, waarbij de complexe interactie tussen emotionele ervaringen en socioculturele contexten en de implicaties hiervan voor welzijn worden belicht.

Acknowledgments

In Korean, there is a beautiful word, 인복 (Inbok), which describes the luck of meeting good people. Having inbok means being surrounded by those who lift your spirit and offer kindness and light, even in the darkest moments. Thanks to all the incredible people who've supported me throughout my PhD journey, I've been reminded time and again of just how blessed I am to have inbok.

First and foremost, my heartfelt thanks go to my supervisors, Batja, Katie, and Alba, who have been with me every step of the way. Batja, I could go on about your sharp and brilliant mind, something well-known in academia and now even more widely recognized through your book. Every time we discussed research, I was amazed by how quickly you dived deep into the topic and offered critical insights. Your honest, direct feedback – though it took some getting used to! – made me feel truly seen and taken seriously. You helped me articulate my thoughts more clearly, while also empathizing with how challenging that can be, even for you. You encouraged my independence as a researcher by allowing me the freedom to plan and grow, while always offering a helping hand. I'll never forget when I shared my fear of sending drafts, calling them “ugly paintings,” and you reassured me, saying, “Don't forget, we're painting them together.” Looking back, the lockdown during my first year was a blessing in disguise. Worried that I wouldn't survive a year of solitude, you welcomed me into your family bubble, inviting me to dinners and walks around Leuven. This gave me the privilege of getting to know you in a family setting, which helped me feel at home in a country where I initially knew no one. I will always be grateful for your warmth, care, humor, and the sense of belonging you gave me, which opened up a life beyond just my work here in Leuven.

Katie, I still remember feeling both impressed and a little intimidated after our first meeting by your vast knowledge, enthusiasm for research, intellectual curiosity, and humility. What struck me even more was your dedication to my growth. Within hours of our meeting, you sent me everything we'd discussed so I could get started right away. Little did I know that this level of support would continue throughout my PhD. Your feedback was always spot on, helping me improve my writing and expand my thinking. You pushed me to take ownership of my research and think beyond my expertise. Most importantly, you were always there when I needed you. This went well beyond academic support, as we explored Leuven together as newcomers, sharing adventures that helped me through Belgium's cold, rainy winters. I'll never forget the warmth of our conversations over cold sandwiches and beers in the forest with Ludger.

Alba, your research has been the foundation of my own, and I'm deeply grateful for your guidance. You ensured that I didn't reinvent the wheel, generously sharing the deep knowledge and meticulous methods you've developed over the years. You were always there to offer smart, practical solutions with patience and respect, making sure that I felt fully

supported in continuing your line of research. When my findings were unclear or I struggled with analyses, you patiently sat with me, helping me interpret the results and walk through the steps. You also helped me build the vocabulary to clearly explain my work, and your encouragement meant so much, especially coming from someone with extensive research experience in the field. Outside of work, your kindness, and the warmth of your family, made me feel truly welcomed and surrounded by love.

I would like to express my sincere appreciation to Karen and Eva, who have been on my advisory committee. Their engagement with my progress and their insightful feedback every year have strengthened my research. I am also grateful to my jury members – Shinobu, Judit, Jozefien, and Verónica – for dedicating their time to read my midterm and dissertation, offering expert opinions and evaluations from multiple perspectives.

I would like to extend my sincere gratitude to all current and past members of the CSCP for your kind support, valuable feedback, and the beers we've shared. Whether at brownbags, in the PSI hallway and social room, or over after-work drinks, your presence has left a lasting impact on my journey. Special thanks to Ema, Roy, Yujing, Evelyn, Yucaho, and Iris for making this experience more enjoyable over the years. I'm also grateful to Agnes and Colette for their insightful feedback and caring conversations. Jozefien, your research has been a cornerstone of my work, and I am truly thankful for your critical insights and encouragement. Katrín, thank you for your uplifting hugs and adventures including grading, Kraków, and wine nights. Erdem, thanks for always checking in on me and sharing your broad knowledge and perspective on both research and life. Aster, thank you for your kindness and humor, which brought warmth and laughter to all our conversations. Jessie, I'm deeply thankful for your friendship and mentorship. I always felt understood during our coffee breaks and lunches, and I loved how easily our conversations flowed, whether about horses or stats. Alex, my office wife, I couldn't have done this without you. Watching you navigate your PhD journey through the highs and lows inspired me, and your endless support through post-its and tea breaks brought so much joy and encouragement into my life.

I'm also grateful to my lab mates, who became not just colleagues, but wonderful friends. Tom, this PhD wouldn't have been possible without your support, which began even before I officially started – from visa application to data collection. Your thoughtful solutions, brilliant mind, and caring heart have been truly invaluable. Anouck, thank you so much for your amazing work on the diary data collection and for our friendship, which always gives me the space to talk about anything and makes me feel empowered. Qi, your inquisitive mind made lab meetings more stimulating, and I appreciated your lessons on Korean pop culture. Anna, you've been like an unofficial supervisor and therapist to me, and I'm incredibly grateful for both your guidance on my research and your friendship. Our weekly coffee dates provided constant support, validation, motivation, and excuses to procrastinate ;) Nathalie and Rüya, I couldn't have asked for better paranympths. Thank you for always standing by my side and

believing in me, even when I struggled to believe in myself. Nathalie, your empathy and remarkable memory always made me feel truly heard, and I'm so grateful for the beautiful cover you created for my dissertation. Rüya, thank you for always offering the best advice, whether on my draft or my immigrant status, and for bringing out the kid in me with your compassion.

I'd also like to thank my former advisors, Tina and Valerie, who saw my potential and encouraged me to pursue a PhD in psychology, as well as Maneeza and Jorge, whose friendship and mentorship shaped my research interests in minority adolescents and intergroup dynamics.

I'm incredibly grateful to my amazing friends – Christina, Margaux, Yeji, Ashay, and Tea – who, despite being on their own PhD journeys in other countries, have always been there to support and encourage me. Thank you for sharing this experience with me and offering your understanding.

To my friends abroad – Alice, Amelia, Brianna, Miko, Yiseul, Youhee, 수정, Anna, Jenny, Esther, and Eunice – thank you for sticking with me throughout my PhD, despite the time differences and me being a constant stress ball while you all navigated your own lives on the other side of the world. Our messages and video calls meant more to me than I can express, especially during moments when I needed a reminder that there was life beyond my research.

I also want to thank everyone in my social network here in Belgium for making me feel like I truly belong and that I can do this. A special shoutout to Benny, Ollie, and Zoë for making Belgium feel more like home. And Rema, thank you for your friendship which has been an ultimate source of comfort and strength, always making me feel cared for and loved.

I want to thank my parents, who have been my biggest rock. 엄마, 아빠, 내가 가는 길이라면 언제나 믿어주고 응원해줘서 정말 고마워. 박사 과정이 쉽지 않았지만, 엄마 아빠 덕분에 끝까지 힘낼 수 있었어. 세상에서 가장 사랑하고 존경해, 고마워!

And finally, to my husband, Tim, thank you from the bottom of my heart. Words cannot fully capture how grateful I am for everything you've done. Like every challenge I've faced since we met, you've been my biggest supporter in every way possible. You've been right by my side, taking care of everything at home while I was writing my dissertation. Your patience, generosity, and unconditional love have made all of this possible. And of course, thank you for being my number one research subject! Talking with you often gave me insights into the emotional experiences of biculturals. I love you so much, and now it's my turn to support you as you pursue your dreams.

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CHAPTER 1

Introduction

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1.1 Introduction

At the core of human experience lies the experience of emotions, which shape and are shaped by our everyday thoughts, behaviors, and social surroundings. Emotions are not mere bodily sensations or internal feelings in response to stimuli; rather, they reflect what we value and perceive in the world (Barrett et al., 2007). These reflections are intricately tied to cultural norms, goals, and values, shaping our understanding of the self and what it means to be a good person in relation to others (Markus & Kitayama, 1991; Mesquita et al., 2017). Consequently, the normative emotions of different cultures – the “right” emotions that foster the ideal self – vary as they mirror underlying cultural priorities. Cultural influence is evident in the systematic and meaningful variations in how emotions are perceived, desired, and experienced across different cultures (Kitayama et al., 2006; Masuda et al., 2008; Tamir et al., 2016). Accordingly, *emotional fit*, defined as the degree of similarity between an individual’s experienced emotions and their cultural norm, may be one crucial pathway for aligning with and cultivating a sense of belonging within one’s culture. Research largely shows that emotional fit is positively associated with psychological, relational, and physical well-being, underscoring its importance in fostering successful social relationships and overall health, though there is evidence of exceptions in certain contexts (Consedine et al., 2014; De Leersnyder et al., 2014, 2015; Kirchner-Häusler et al., 2023).¹

Building on the concept of emotional fit within a culture, it is important to recognize that emotions can evolve as our values and perceptions change over time and across different contexts. This dynamic calibration of emotions is evident in research on *emotional acculturation* – shifts in emotional experiences upon sustained contact with another culture (De Leersnyder et al., 2011). Emotional acculturation has been extensively studied in immigrant-origin minorities as they adapt to a

¹ In De Leersnyder et al. (2015), an unexpected negative association was found between European Americans’ emotional fit and psychological well-being in autonomy-promoting situations within the family/home context. This was explained by the fact that emotional fit in negative autonomy-promoting situations, such as those involving anger and irritation, may indicate conflict at home, which is understandably detrimental to well-being.

dominant (i.e., majority) culture markedly different in norms and ideals from their heritage culture. Throughout this process, emotional fit of immigrant-origin minorities with the new culture – measured by comparing the pattern of each minority’s reported emotional experiences to the average emotional patterns of the majorities – tends to increase over time (Jasini et al., 2024). Studies consistently demonstrate that immigrant minorities with greater exposure to the majority culture and contact with its members have higher emotional fit with the majority norm, suggesting that emotions are constructed within sociocultural contexts (Jasini et al., 2019). Nevertheless, immigrant-origin individuals do not necessarily lose touch with their heritage culture, implying that both heritage and majority cultures continue to shape their emotions. This raises an important question: What happens to emotional fit with the heritage culture?

Recent work provides initial evidence that immigrant-origin minorities who have more friends from their heritage culture also have higher emotional fit with that culture, suggesting that it is possible for immigrant minorities to maintain their emotional fit with their heritage culture (De Leersnyder et al., 2020). While biculturalism is well-documented in various kinds of explicit acculturation, such as attitudes and identity, biculturalism in emotions remains underexplored. Specifically, it is unclear whether immigrant minorities can achieve emotional fit with both their heritage and majority cultures independently. Moreover, the impact of emotional fit – whether with the majority culture, heritage culture, or both – on overall well-being has yet to be fully examined. Given that immigrant minorities regularly navigate between different cultural environments, understanding how emotional fit with one or both cultures influences well-being is critical.

Building on research on both explicit and emotional acculturation, this dissertation examines emotional acculturation as a bidimensional process and explores its implications for well-being among immigrant-origin minority adolescents in Belgium. One way to conceptualize biculturalism is that emotional fit with either culture is contingent on the sociocultural context. These adolescents naturally navigate diverse contexts daily, shifting between environments such as home and school. Within these settings, they form social networks that can include both

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majority and minority group members. These interactions are further shaped by linguistic and interpersonal dynamics, all of which have bearing on emotional experiences. Emotional acculturation, thus studied as a dynamic, daily process, involves the construction of emotions within these everyday sociocultural contexts. These culturally rich contexts may foster emotional fit with both majority and minority cultures among immigrant minorities.

The aims of this dissertation are fourfold: (1) to examine the potential coexistence of emotional fit with both majority and minority cultures (i.e., the bidimensional model of emotional acculturation); (2) to identify the sociocultural contexts that may facilitate emotional fit with both cultures; (3) to investigate the variability of emotional fit across different sociocultural contexts; and (4) to assess the impact of emotional fit with either or both cultures on adjustment outcomes. To achieve these aims, I focus on emotional fit with the majority culture and two types of minority cultures: ‘proximal heritage culture,’ shared among co-ethnic peers and which may not directly mirror the heritage culture at home (Chapter 2), and ‘mixed minority culture,’ shared among all minority peers and reflecting the experience of living as immigrants in the same country (Chapters 3 and 4). Hereafter, the term “minority culture” will specifically refer to one of the two types of minority cultures examined in this research, while the term “heritage culture” will exclusively pertain to the culture of the country of origin. In the following section, I begin with an overview of the frameworks that underpin my work and then situate these aims within a detailed review of the current state of research.

Conceptualizing Emotions

Defining what emotions are and how they arise is crucial for contextualizing this dissertation within emotion research, especially given the lack of consensus among scholars both within and beyond the field of psychology (Ortony, 2022). I use two different yet compatible theories to define emotions as constructed experiences and as socially enacted processes shaped by culture. At the cognitive level, emotions arise as the brain categorizes feelings of good and bad (i.e., core affect) based on prior experiences, knowledge of emotions, and language (Barrett et al., 2007). For

example, an individual who has previously felt relaxed during family gatherings may interpret similar feelings as ‘happiness’ in future social contexts. In parallel, emotions also function as social, dynamic engagements that serve relational purposes, guided by cultural norms, values, and ideals (Mesquita et al., 2010). For instance, in cultures that emphasize family bonds and interdependence, the same feeling of relaxation experienced during a family gathering might be interpreted as a deep sense of respectfulness or connectedness. Thus, emotions are neither solely internal mental states nor purely social constructs. Instead, they emerge from the continuous interplay between our cognitive processes and the cultural contexts that provide the interpretive framework for understanding feelings and meanings within social relationships.

Cultural Differences in Emotions

Cultural differences in emotions manifest in various ways, ranging from differences in the frequency and intensity of specific emotions (Kitayama et al., 2006) to variations in the folk understanding of what emotions are and their defining features (Hoemann et al., 2023). These cultural differences are not arbitrary; rather, they systematically reflect the underlying morality and ideals of each culture. People often experience emotions that are deemed appropriate for promoting culturally valued goals more frequently than those considered inappropriate (Mesquita et al., 2016). This is evident in that people within the same culture are more likely to share similar patterns of appraisals and action tendencies – two key contents of emotional experiences – compared to people from different cultures, particularly when these patterns serve culturally central goals (Boiger et al., 2018). For example, members of a culture that values independence, such as the United States, may interpret situations differently and exhibit distinct action tendencies compared to members of a culture that values interdependence, such as Japan.

Kashima et al. (2020) describe emotions as a “complete information package” that encapsulates cultural information relevant for individuals to adapt to their environment, while also facilitating cultural dynamics. This view aligns with one of the foundational premises of cultural psychology: that culture and psyche are

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mutually constitutive, meaning psychological processes such as emotions both shape and are shaped by the sociocultural context in which they occur (Markus & Kitayama, 1994). Emotions, therefore, provide a lens through which we can understand how deeply culture embeds itself in an individual's conceptual system and how skillfully a person navigates various situations within a given cultural context. Examining one's emotional experiences in a specific situation and their alignment with the typical experiences of the cultural norm provides valuable insight into an individual's positioning within that culture. Accordingly, emotional fit with the cultural norm may serve as an indicator of how well an individual has internalized cultural meanings and how effectively they are able to function within that cultural environment.

Acculturation of Emotions

Understanding emotional fit within a cultural context becomes especially relevant when considering people who navigate multiple cultural environments. This brings us to the concept of emotional acculturation: how do emotional patterns change when people are exposed to more than one culture? Over a decade of research has demonstrated that emotional experiences do indeed acculturate as individuals have sustained exposure to a new culture and form social connections with its members (De Leersnyder et al., 2011, 2017; Jasini et al., 2019, 2024). Due to their dynamic and adaptive nature, emotions are deeply embedded in social and cultural contexts, representing an experiential aspect of how individuals relate to their environment. Thus, when immigrants first engage with a new cultural environment, the cultural norms they encounter begin to shape their emotional experiences. Over time, their emotional patterns may align more closely with those typical of the majority culture, leading to emotional acculturation.

Focusing on acculturation of emotional patterns offers unique insights that go beyond traditional domains such as behavioral practices, cultural identity, and attitudes or preferences towards cultures. Without *explicitly* asking immigrant minorities about their attitudes towards the majority and heritage cultures, closely following their everyday emotional experiences and measuring how similar these experiences are to cultural norms provides an indicator of deeper cultural adaptation

or competence (Mesquita et al., 2019). In other words, by examining emotional experiences, we can *implicitly* assess how individuals internalize cultural meanings. Moreover, emotions are essential component of social interactions and relationships, suggesting that having emotional experiences aligned with the majority culture's normative patterns may improve the quality of integration and the sense of belonging in the majority society. Unlike traditional measures of acculturation, which can often be decontextualized, examining emotional fit allows for a nuanced, in situ exploration of immigrant minorities' lived experiences. To capture how they function in their daily lives, it is crucial to study their emotional experiences across various everyday situations.

Previous research on emotional acculturation has highlighted key factors, such as friendship, as potential mechanisms driving emotional fit with either majority or heritage cultural norms (De Leersnyder et al., 2011, 2020; Jasini et al., 2019, 2024). Given that immigrant-origin adolescents' daily emotional lives are shaped by both majority and minority cultural influences, this dissertation examines their emotional fit with both cultural norms. By doing so, I aim to understand whether these two cultural models are integrated or remain distinct in their emotional experiences.

1.2 Bidimensional Model of Emotional Acculturation

The foundational idea in the emotional acculturation literature is that people from different cultures tend to experience distinctive patterns of emotions. This systematic variation is well-documented, with numerous studies showing differences in the perception, desirability, and intensity of emotions (Kitayama et al., 2006; Masuda et al., 2008; Tamir et al., 2016). For example, emotions such as friendliness or shame, which promote relatedness, are more frequently and intensely experienced in East Asian cultures where interdependence is valued. In contrast, emotions like pride or anger, which promote autonomy, are more commonly experienced in Western cultures where independence is emphasized. Research indicates that people generally show the highest emotional fit with the normative emotional patterns of their own culture, compared to people from other cultures (De Leersnyder et al., 2020). For

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instance, Koreans living in Korea show the highest emotional fit with the Korean emotion norm compared to Korean Americans and European Americans.

Consequently, when immigrants first migrate to a new culture, they may experience a misfit with the new cultural norm of emotions (De Leersnyder, 2017). However, through engagement with the mainstream culture, their emotional experiences may align or acculturate (Jasini et al., 2024). In theory, acculturation towards the majority culture does not necessarily come at the expense of immigrants' emotional fit with the heritage culture. Research on explicit acculturation – referring to immigrants' explicit attitudes and identities toward both cultures – suggests that minorities may develop and simultaneously maintain positive attitudes towards, and identifications with, multiple cultures. This indicates that explicit acculturation is not a unidimensional process moving them away from one culture (heritage) and toward another (majority), and that immigrant minorities can keep their cultural values, practices, and behaviors separate (Huynh et al., 2011; West et al., 2017). It is not only possible but indeed more common for immigrant minorities to adopt the majority culture while simultaneously preserving their heritage culture – a process termed *integration* (Berry et al., 2006). Besides integration, three other acculturation strategies are recognized: *assimilation* (adopting the majority culture without maintaining the heritage culture), *separation* (maintaining the heritage culture without adopting the majority culture), and *marginalization* (neither adopting the majority culture nor maintaining the heritage culture). Empirical evidence shows that integration is the most predominant strategy among immigrant minority adolescents, while marginalization is rare (Berry et al., 2006). This prevalence of integration indicates that many immigrant minorities successfully navigate and blend both cultural worlds.

Nonetheless, there have been no studies testing whether emotional acculturation is bidimensional, meaning emotional fit with both majority and minority cultures can coexist as separate processes (see Figure 1). However, one study has hinted at the dimensionality of emotional acculturation by showing that immigrant minorities can have equal emotional fit with both cultures (De Leersnyder et al., 2020). Specifically, in Study 2, first-generation Turkish immigrants in Belgium

exhibited higher emotional fit with their Turkish heritage culture than with the Belgian majority culture, while second-generation immigrants showed the opposite pattern. Yet, these patterns held up only in specific contexts: first-generation immigrants showed equal emotional fit with both cultures in school or work settings (Belgian context), and second-generation immigrants showed this equal level of fit in home or family context (Turkish context). This suggests that immigrant minorities can achieve emotional fit with both cultures separately without compromising their emotional fit with one culture for the other, though this is more likely to occur in specific contexts and may vary by generation.

In this dissertation, I build on this prior work to examine the potential coexistence of emotional fit with both majority and minority cultures. In doing so, I follow the logic proposed by Ryder et al. (2000), who argued that acculturation can be considered bidimensional when (a) the level of identification with heritage and majority cultures is not negatively correlated (i.e., either uncorrelated or positively correlated), and (b) heritage and majority identification, respectively, exhibit distinct correlations with other relevant variables, rather than an inverse pattern. I examine these two conditions using emotional fit with both majority and minority cultures and their predictors, such as having majority friends, to determine whether both types of fit can exist independently. This will help corroborate the bidimensional model of emotional acculturation.

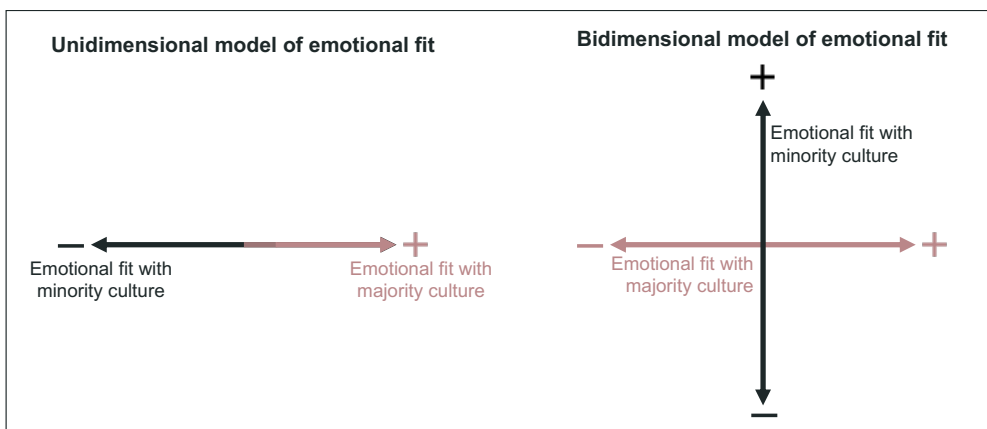


Figure 1. *Conceptual models of emotional fit with majority and minority cultures*

1.3 The Role of Sociocultural Contexts in Emotional Fit

The theoretical foundation of this dissertation is the sociodynamic model of emotions proposed by Boiger and Mesquita (2012), which posits that emotions are constructed with their social cultural context: within the interactions, the relationships, and the larger social and cultural environments in which they occur. Here “constructed” implies that emotional experiences emerge from our social relationships and cultural environments rather than originating solely from subjective feelings. For example, studies have found that individuals in close relationships, such as couples and roommates, tend to develop similar emotions over time (Anderson et al., 2003). The level of emotional convergence was positively associated with how much they liked their partner or roommate, suggesting that the quality of relationships predicts emerging emotions. Two primary processes may explain how emotions become similar within these relationships: individuals mimicking each other’s expressions and emotional experiences, and sharing appraisals of situations and their associated emotions (Parkinson, 2011). In the context of adolescence, these processes are further influenced by behaviors such as modeling, rewarding, and responding within friendships (Klimes-Dougan et al., 2014). Regardless of the process involved, it is evident that these relationships serve as the primary context in which emotions are shaped.

Furthermore, emotions can be constructed in the broader sociocultural contexts, including social networks. The network theory of social influence suggests that individuals in social networks influence and shape each other’s thoughts and behaviors through social learning and social pressure (Klärner et al., 2022; Repke et al., 2019).² Longitudinal analyses of large social networks have revealed that emotions, such as happiness and loneliness, can spread through various relationships among friends, spouses, and neighbors (Cacioppo et al., 2009; Fowler & Christakis,

² Social selection, often described by the expression ‘*birds of a feather flock together*,’ refers to the process of people with similar characteristics befriending each other, thereby contributing to the homogeneity of characteristics among people in networks. This process is not explicitly considered here, as disentangling the two effects is beyond the scope of this dissertation. Additionally, studies often find that both social influence and selection processes contribute to this homogeneity (e.g., Mercken et al., 2007).

2009). Through social influence, actors become more similar in their behaviors and thoughts (Friedkin, 2001). This notion is further supported by the finding that people acquire descriptive norms through direct observation of the behaviors of people in their social networks (Kashima et al., 2013). Thus, emotions may be similarly shaped through processes of social influence, particularly through direct observation or interaction within social networks.

Building on these findings, this dissertation identifies the specific social network characteristics that form the relational context in which the emotions of immigrant-origin minority adolescents are shaped. Analyzing an individual's immediate personal network, which includes people the focal individual (i.e., ego) interacts with, is one approach to this. Personal networks can be described by their composition and structure. Composition refers to the individuals who make up the network, while structure refers to the interaction patterns among these individuals. Together, composition and structure significantly influence the information and resources accessible to an ego within the network (Vacca et al., 2018). I propose that the composition and structure of the personal networks of minority adolescents determine the degree to which these adolescents are exposed to varying cultural norms of emotions. When personal networks facilitate patterns of emotions that are shared with cultural others, they can be considered *norm-unifying*.

A norm-unifying composition can be assessed by examining the size of each cultural group (e.g., majority, co-ethnic, and other minority) in a minority adolescent's personal network. A larger number of individuals from one cultural group in the network may lead to more exposure to the respective cultural norms for emotions, thereby promoting norm unification. Each person a minority adolescent interacts with regularly can be seen as an ambassador of culturally-informed emotions. Therefore, the more ambassadors from one culture, the more represented the typical emotions from that culture will be in a minority adolescent's social world. A recent study with a large representative sample of immigrant minority adolescents in Belgium found that having more majority culture friends in their personal networks was related to higher levels of emotional fit with the majority culture, beyond general majority contact (Jasini et al., 2023). Likewise, it is possible that having more co-

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ethnic friends in a network could result in higher levels of emotional fit with the heritage culture (i.e., minority culture shared by co-ethnics).

A norm-unifying structure can be measured by within-group density or connectedness among the members of a given cultural group. Within-group density reflects the extent to which majority or minority group members in a personal network know one another. High-density networks embed individuals in tight-knit social enclaves, where there may be a heightened sense of closeness, community, and social support (Kazak & Marvin, 1984). However, these closures can also function as gatekeepers, limiting the inflow of new information and perpetuating existing norms (Coleman, 1988; Podolny & Baron, 1997). In highly dense networks, the social worlds of connected individuals overlap significantly, and the ego is likely to encounter repeated information (Granovetter, 1973). Supporting this, Jasini et al. (2023) found that minority adolescents with networks composed of more majority friends who were also friends with each other (i.e., forming closed triads) showed higher emotional fit with their majority classmates. This suggests that the more minority adolescents are embedded in dense network structures like closed triads, the more likely they are to be repeatedly exposed to the majority culture's emotional patterns, leading to higher emotional fit. Therefore, for minority adolescents to develop their emotional fit with either culture, they need a densely-connected social network consisting of either majority or co-ethnic minority group members who cohesively display typical emotional patterns of either culture.

1.4 Variation in Emotional Fit across Sociocultural Contexts

Imagine a day in the life of a Turkish-origin adolescent born in Belgium: starting the morning at home with a traditional Turkish breakfast, *kahvaltı*, *respectfully* engaging in conversations with parents in Turkish. Later, at school, *excitedly* participating in class discussions with friends during a Belgian history lesson conducted in Dutch. Such a culturally rich day is typical for immigrant-origin adolescents, who navigate between at least two broad cultural environments such as home and school, each embedded with varying cultural dynamics (Doucerain, 2019). As they navigate multiple sociocultural contexts on a daily basis, their emotions, such

as feelings of respect or excitement, are constructed within these contexts. Although few studies have specifically examined how minority adolescents emotionally navigate different contexts, particularly how their emotional experiences align with the salient norms of these cultural settings, existing research suggests that emotions are closely tied to the goals that are salient in a given situation, and these goals are shaped by cultural norms and values (De Leersnyder et al., 2018). Therefore, minority adolescents may navigate their everyday cultural contexts by experiencing varying emotional patterns that align with the shifting values of the sociocultural settings they encounter.

One way of such navigation might be through *cultural frame-switching*, where bicultural individuals shift between norms, values, beliefs, and behaviors depending on the salient cultural context or cues, such as language spoken and cultural imagery (Hong et al., 2000). This shifting between cultural meaning systems has been documented for various psychological phenomena such as personality (Ramírez-Esparza et al., 2006) and identification with friends (Verkuyten & Pouliasi, 2016). There is preliminary evidence that immigrant-origin individuals may engage in emotional frame-switching by experiencing emotions congruent with the emotion norms of their current cultural context. For instance, Zhou et al. (2021) conducted an experiment to examine whether Chinese-English bilinguals' emotional fit with Chinese or British cultures is influenced by the random assignment of survey language (Chinese or English). They found that Chinese-English bilinguals in the UK who completed a survey in English exhibited higher emotional fit with the typical British pattern, whereas those who completed the survey in Chinese showed a higher fit with the typical Chinese pattern. Similarly, Perunovic et al. (2007) found that the pattern of momentary positive and negative moods of East Asian-Canadians varied depending on their current cultural identification or language use.

Notwithstanding, there are studies which suggest that some biculturals engage in cultural frame-switching that contradicts the norms of the cultural context in which they find themselves. For instance, Chinese-American biculturals with low bicultural identity integration (BII) – meaning those who perceive their two cultural identities to be separated and conflicting – have been found to make external

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attributions more often after being primed with American culture (Benet-Martínez et al., 2002). This contrasts with the prevalent internal attribution norm in individualistic cultures like America, where autonomy is highly valued. In such cultures, individuals are inclined to attribute events or behaviors to personal and internal factors, such as attributing exam success to personal effort. Conversely, in more collectivistic cultures like China, there is a tendency to emphasize group harmony and interdependence, often attributing outcomes to external factors such as circumstances or luck. Similarly, East Asian-Americans with low BII have been found to behave in a manner more consistent with the typical American values of uniqueness in the Asian primed condition, rather than in the American primed condition (Mok & Morris, 2010, 2013).

Another way of navigating different cultural contexts would be *blending*, in which immigrants mix two or more cultures (Doucerain et al., 2013; Lafromboise et al., 1993). *Blending* is characterized by perceiving oneself as part of two cultures and developing multicultural patterns of behavior using elements from both cultures across contexts (Huynh et al., 2011; Phinney & Devich-Navarro, 1997; Ward et al., 2018). For example, imagine a person who identifies as Mexican-American, speaks ‘Spanglish,’ and enjoys Tex-Mex dishes like fajitas, blending traditional Mexican flavors with American influences. Although the phenomenon of blending emotions has not been directly studied, findings from two studies suggest its potential presence. For instance, Zhou et al. (2021) found that Chinese-English bilinguals who had spent more than one year in an English-speaking country showed no significant difference in their emotional fit with the typical Chinese and British emotional patterns, irrespective of the survey language. This finding suggests that they may have blended different emotional patterns to fit both cultures equally well. However, those who had spent one year or less in an English-speaking country showed the typical pattern of cultural frame-switching. Similarly, De Leersnyder et al. (2020) found that first- and second-generation immigrants show equal emotional fit with both majority and heritage cultures depending on the cultural context, implying that blending may occur among immigrants.

Additionally, immigrant minorities may demonstrate the aforementioned acculturation strategies, including *assimilation* and *separation*, by identifying primarily with either the majority or heritage culture (Berry et al., 2006). In the case of emotional acculturation, this may manifest as having higher emotional fit with one culture over another regardless of contexts. Given the general pressure to assimilate into the Belgian majority culture in Belgian schools (Agirdag, 2010), it is possible or even likely that some minority adolescents exhibit assimilation in emotional acculturation, showing higher emotional fit with the majority culture across contexts.

Moreover, major cities in Belgium with high immigrant populations are heavily segregated, with immigrants often living in ethnic enclaves spatially isolated from the Belgian majority (Costa & de Valk, 2018). Minority adolescents, despite attending schools with majority peers, frequently socialize with other minority peers. If they live in ethnic enclaves and experience segregation at school, they may not be exposed to majority-like emotions, resulting in a higher emotional fit with their minority culture at all times. We term this potential type of emotional acculturation as *preservation*.³ Along with the other types mentioned above, this dissertation examined the potential ways of navigating different cultural contexts emotionally among immigrant minority adolescents. Figure 2 illustrates the conceptualized typology of emotional acculturation, including types of *assimilation*, *preservation*, *blending*, *congruent frame-switching*, and *incongruent frame-switching*.

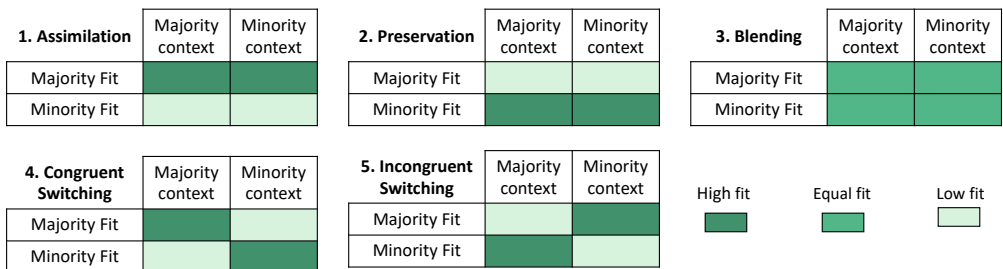


Figure 2. Conceptual typology of emotional biculturalism

³ We renamed this specific type, originally termed ‘separation’ by Berry (1974). This modification was to eliminate confusion or ambiguity. The term ‘separation’ may not clearly convey the pattern of maintaining heritage cultures without adopting majority cultures, and could also be misinterpreted as segregation. By renaming this type ‘preservation,’ we clarify that it specifically involves preserving heritage cultures.

1.5 Emotional Fit and its Positive Outcomes

Research has demonstrated that experiencing similar emotions to others or to one's culture can lead to positive outcomes for interpersonal relationships as well as psychological and relational well-being. At the interpersonal level, when two people have similar emotional responses to a situation, they tend to feel greater empathy, experience less stress, and report greater relationship satisfaction (Locke & Horowitz, 1990; Preston & de Waal, 2002; Townsend et al., 2014). At the cultural level, people who exhibit higher emotional fit with their own cultural norms tend to report better relational well-being. Specifically, European Americans, Koreans, and Belgians who have higher emotional fit in situations focusing on relationships with others reported higher satisfaction with personal relationships and social support (De Leersnyder et al., 2014). In samples from the same cultural groups, emotional fit was again largely positively associated with greater psychological well-being – such as positive self-regard and fewer depressive symptoms – but only in situations that promoted each culture's central concerns. For example, European Americans exhibited higher psychological well-being when their emotional fit was greater in situations promoting autonomy and independence at work, whereas Koreans showed a positive link between well-being and emotional fit only in situations promoting relatedness and interdependence at home.

A recent study showed that the positive link between emotional fit and well-being largely replicates across cultures, including those in the Mediterranean region (Kirchner-Häusler et al., 2023). Specifically, findings from participants in the Middle East and North African region revealed a distinct pattern. Positive disengaging emotions that promote autonomy, such as feeling proud and self-esteem, were strongly and positively associated with general well-being, even more so than in the Anglo-Western region, which is traditionally considered the epitome of independence as a cultural value. However, in these regions, emotional fit positively predicted psychological well-being only in relationship-focused situations. These findings reflect the cultural concerns of the region, which is considered to promote a mix of both independent and interdependent values, with a strong focus on honor.

However, most studies have focused on monocultural individuals, examining how well their emotional patterns align with their own cultural norms. In contrast, immigrant minorities navigate multiple cultural contexts daily, with their emotional experiences likely varying as the most salient concerns of each cultural context shift. This constant navigation suggests that their emotional fit with both cultures across different situations can impact their well-being. To date, only one study has explored the link between emotional fit and well-being in immigrant populations, finding that women from Haiti, the Dominican Republic, the English-speaking Caribbean, and Eastern Europe living in the United States who had higher emotional fit with the majority culture reported better somatic health (Consedine et al., 2014). However, as no existing studies have directly investigated the relationship between emotional fit with both majority and minority cultures and well-being, we must rely on prior research from other domains of acculturation to speculate on potential outcomes.

One such possibility is that it is advantageous for minority adolescents to engage in *congruent frame-switching*. This possibility is based on evidence that emotions reflect our values and that sharing similar emotions with others or within one's culture contributes to positive relationships and well-being (e.g., De Leersnyder et al., 2015). When minorities have emotional fit with one culture in one context and with another culture in a different context, they may experience smoother and more positive interactions within those specific cultural settings such as school and home. This may lead to a higher sense of belonging, greater satisfaction with their social relationships, and an overall better feeling in those settings. For example, emotional fit with the majority culture may be linked to feeling more satisfied in the school environment. At the same time, prior work has found that when bicultural individuals engage in frame-switching in their behaviors across cultural contexts (e.g., having two different profiles highlighting culture-specific interests on two cultural dating websites), majority group members perceive them as inauthentic (West et al., 2021). This perception of inauthenticity then led to biculturals being viewed as less likable, trustworthy, warm, and competent, potentially hindering their relationships with majority group members and affecting their well-being. As such, frame-switching, even if congruent, may have both benefits and downsides.

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In addition, *blending* may also lead to positive outcomes. For example, Ward et al. (2018) found that perceiving one's cultural identities as more blended is linked to higher life satisfaction and psychological well-being. Based on this, minority adolescents who show a pattern of blending, where emotional experiences fit equally well with both cultures across contexts, may also experience higher well-being. Blending might be plausible in multicultural environments where minority adolescents feel a sense of belonging as multicultural beings and have the freedom to select values from both cultures (Miglietta et al., 2024). Such environments may minimize the need to fit with specific emotional patterns of any one cultural context and may encourage the blending of different emotional patterns across cultural contexts. While these mixed findings shed light on the intricate nature of managing multiple cultural identities and behaviors, they are limited to other domains of acculturation. Therefore, this dissertation aims to explore the relationships between patterns of emotional fit with both cultural norms as well as their outcomes.

1.6 Overview of Dissertation

Chapter 2 addresses the first two aims of the dissertation: exploring the coexistence of emotional fit with both majority and minority cultures and identifying the sociocultural contexts that facilitate this dual emotional fit. This was achieved by analyzing the extent to which composition and structure of minority adolescents' social networks were norm-unifying; that is, exposing minority adolescents to consistent and persistent cultural norms of emotions, potentially increasing their emotional fit with the prevalent culture.

To this end, I analyzed the social networks of Turkish-origin minority adolescents, focusing on their majority and co-ethnic minority friendships. Specifically, I tested whether having a higher proportion and density of either majority or co-ethnic minority friends correlated with greater emotional fit with the corresponding culture without negatively affecting emotional fit with the other culture. By demonstrating that 1) emotional fit with one culture and fit with the other culture are not negatively correlated, and 2) network predictors of emotional fit with one culture have distinct associations with fit with the other (rather than an inverse

pattern), I provide initial evidence supporting the bidimensional model of emotional acculturation. Additionally, this chapter contextualizes minority adolescents' emotional acculturation within their relational environment, identifying the immediate social factors related to emotional fit with each culture.

Chapter 3 focuses on the last two aims of the dissertation: investigating the variability of emotional fit across different sociocultural contexts and assessing the benefits of emotional fit. This chapter examines emotional fit with both cultures across daily sociocultural contexts, with particular attention to emotionally fitting with the norm of the cultural context (i.e., congruent frame-switching) such as school and home. Additionally, it investigates whether congruent frame-switching predicts well-being for minority adolescents in the relevant context.

I hypothesized that minorities would exhibit higher emotional fit with the majority cultural norm in majority-dominated contexts such as school, whereas they would show higher emotional fit with the minority cultural norm in minority-dominated contexts such as home. I also predicted that emotional fit with the cultural norm of a given context would be associated with well-being in that context. Specifically, emotional fit with the majority norm at school would be associated with well-being at school, and fit with the minority norm at home would be associated with well-being at home. This chapter sheds light on whether emotional acculturation is a context-sensitive phenomenon and whether emotional fit is particularly beneficial within the same cultural context.

Chapter 4 investigates the same aims as Chapter 3, focusing on potential individual differences in how minorities emotionally fit with both cultures across daily cultural contexts. While Chapter 3 examines variation in emotional fit across contexts at an aggregate level, this chapter acknowledges that not all minorities are the same and explores beyond congruent frame-switching. Informed by the explicit acculturation literature, which identifies multiple acculturation strategies adopted by immigrant minorities, I explored whether different subgroups of minority adolescents exhibit varying patterns of emotional fit with both cultures across their daily contexts of school and home, and how these subgroups differ in their adjustment outcomes.

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Using latent profile analysis, I submitted scores of emotional fit with both cultures to test for the presence of five theorized types of emotional acculturation: *assimilation* (higher emotional fit with the majority culture than with the minority culture across contexts), *preservation* (higher emotional fit with the minority culture than with the majority culture across contexts), *blending* (equal emotional fit with both cultures across contexts), *congruent frame-switching* (higher emotional fit with the majority culture in majority contexts and higher fit with the minority culture in minority contexts), and *incongruent frame-switching* (higher emotional fit with the minority culture in majority contexts and higher fit with the majority culture in minority contexts). Additionally, I examined how these distinct types of emotional acculturation were associated with adjustment outcomes, including well-being, sense of belonging, contact with the majority, BII, and perceived discrimination.

The following empirical chapters are written as standalone research articles, which may result in some overlap with this introduction and among the chapters themselves. The final chapter, Chapter 5, is a general discussion where I provide an overview of the findings from all empirical chapters, discuss their implications, and offer suggestions for future research.

1.7 Dataset

Chapter 2 draws on the first wave of the *Leuven Children of Immigrants Longitudinal Study* (CILS; Phaet et al., 2018), an existing dataset collected over a three-year period, involving surveys of more than 6000 students from 70 secondary schools in the Flemish (Dutch-speaking) region of Belgium. The participating schools were selected using a stratified random sampling procedure based on a comprehensive list of secondary schools provided by the Flemish Ministry of Education. Immigrant-origin students were oversampled in the data. Half of the immigrant-origin students had Moroccan or Turkish cultural backgrounds, while the other half came from 89 countries worldwide.

Chapters 3 and 4 both use the data of the *Daily Diary School Study*, which I collected between 2021 and 2022. This dataset covers seven school days and surveys 510 Belgian adolescents from three secondary schools in Flanders, Belgium. We

recruited schools with a high diversity index of speaking non-Dutch languages at home to ensure a sufficient number of adolescents with an immigration background. This index was obtained from each school's annual report to the Flemish government on their student population. Among the participants, 324 students had an immigration background from nearly 90 different countries, while 186 students were from the Belgian majority culture (i.e., those without immigrant history up to three generations)

CHAPTER 2

The composition of friendship networks predicts emotional fit among Turkish Belgian adolescents

This chapter is based on: Lee, Y., Jasini, A., Hoemann, K., & Mesquita, B. (2024). The composition of friendship networks predicts emotional fit among Turkish Belgian adolescents. *Cultural Diversity & Ethnic Minority Psychology*. Advance online publication. <https://doi.org/10.1037/cdp0000662>

2.1 Introduction

Emotions are important modes of navigating social relationships in our personal and professional lives (Frijda & Mesquita, 1994; Parkinson, 2019). Yet cultural variation exists in how emotions are perceived, valued, and experienced (Kitayama et al., 2006; Masuda et al., 2008; Mesquita et al., 2016). Consequently, when people migrate, their emotional experiences initially differ from their new environment: they have low emotional fit with prevailing cultural norms. Prior research has suggested that emotional fit may benefit the well-being of immigrant-origin minorities (De Leersnyder, 2017) and tends to increase over time through contact with the cultural majority (Jasini et al., 2024). We build on this work by examining how the composition and structure of immigrant-origin minorities' friendship networks relates to emotional fit during adolescence.

When people have similar emotions in response to a situation, they align in their perceptions of what is at stake and the actions required. This alignment can arise from shared social identities and worldviews (Keltner & Haidt, 1999), leading to positive relational outcomes, including greater empathy toward others (Preston & de Waal, 2002), less stress during threatening situations (Townsend et al., 2014), and more satisfaction in interpersonal interactions (Locke & Horowitz, 1990). Alignment between an individual and a given cultural context is likewise beneficial. Having emotional fit with culturally dominant patterns – such as the tendency to report feelings of pride at personal achievements, or shame after letting others down – means that the individual shares salient values and goals of the culture (Röttger-Rössler et al., 2013). People with higher fit with their cultural norms report greater psychological and relational well-being (De Leersnyder et al., 2014, 2015) and, among immigrant minorities, higher fit with the majority culture is associated with fewer somatic symptoms or bodily ill-health (Consedine et al., 2014). Emotional fit appears to be a vital pathway to fostering successful social relationships and cultivating a sense of belonging within a cultural milieu.

The emotions of immigrant-origin minorities do not fit well with the norms of the majority culture initially, but rather become similar progressively. Emotional fit grows with each generation and frequent contact and friendships with majority

members appear to be key to this growth (De Leersnyder et al., 2011; Jasini et al., 2019). For example, Jasini et al. (2023) found that the number of majority friends was positively associated with emotional fit with the majority among Belgian minority adolescents. Minorities with more majority friends who were also friends with each other exhibited higher emotional fit with the majority. In these densely-connected networks, minorities are embedded in closely-knit groups of majority friends, potentially increasing the saliency of majority emotion norms through repetition (Podolny & Baron, 1997).

In principle, immigrant-origin minorities' increasing emotional fit with the majority need not undermine their fit with minority cultures. Research on values, practices, and cultural identity shows that many minorities adopt the majority culture while preserving their heritage culture, a process termed integration (Berry et al., 2006). Acculturation is thus considered as a bidimensional process involving simultaneous and independent engagement with both majority and heritage cultures, reflecting the bicultural realities of immigrant-origin individuals (West et al., 2017). In the domain of emotions, co-ethnic friendships help immigrant-origin individuals maintain emotional fit with their heritage culture (De Leersnyder et al., 2020). This leaves open the possibility of a non-zero-sum relationship where emotional fit with the majority culture can develop independently of fit with minority cultures.

Existing research on emotional fit among immigrant-origin minorities has primarily focused on either minority (De Leersnyder et al., 2020) or majority (Jasini et al., 2023) friends. However, the composition (e.g., who their friends are) and structure (e.g., whether their friends are interconnected) significantly influence cultural norms available to them (Vacca et al., 2018). In light of this, we propose that minorities' emotional fit with minority or majority cultures, or both, is contingent on the nature of their social connections and the accessibility of emotion norms. Extending research on minorities' social networks from segregated to diverse (Fleischmann & Phalet, 2018; Repke & Benet-Martínez, 2018), we investigated how the proportion and interconnectedness of friends in both minority and majority groups correlate with minorities' emotional fit with both cultures.

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We focused on Turkish-origin students, including first-generation adolescents born in Turkey, second-generation adolescents with at least one parent born in Turkey, and third-generation adolescents with at least two grandparents born in Turkey.¹ Turkish migration to Belgium began in 1964 under a bilateral agreement for “guest workers” and has since continued through family reunification (Wets, 2006). Despite being among the largest non-European minority groups in Belgium, children of Turkish-origin immigrants still face significant disadvantages, with discrimination and prejudice adversely impacting their academic and employment outcomes (Güngör et al., 2012; Heath et al., 2008). Furthermore, in Belgium’s ethnically diverse yet often segregated schools, the diversity climate tends to be overwhelmingly assimilation (Agirdag, 2010), which is linked to lower minority student belonging (Celeste et al., 2019).

We predicted that (H1a) the proportion of majority friends and (H1b) the density of ties (i.e., friendships) between them would be positively associated with minorities’ emotional fit with the Belgian majority culture, and that (H2a) the proportion and (H2b) density of minority friends would be positively associated with emotional fit with the Turkish minority culture. Importantly, we expected that (H3a) the proportion and (H3b) the density of friendships within one culture would not have a detrimental effect on emotional fit with the other culture.

2.2 Method

The anonymized data used in the current study is a subset of the Leuven Children of Immigrants Longitudinal Survey (Phalet et al., 2018) and is available at <https://osf.io/asxcn/> along with the analytic code for the analyses.

¹ We included third-generation adolescents in our study to recognize their ongoing experiences as visible minorities and their continuous ties to their grandparents’ Turkish culture. With few exceptions, Belgian citizenship is granted to children born in Belgium to a *Belgian* parent. Consequently, it is possible for third-generation adolescents to not have Belgian citizenship, although this is uncommon. In our sample, the majority of third-generation adolescents (89%) reported having Belgian citizenship. One third-generation adolescent (3%) exclusively held Turkish citizenship, while 17 (46%) reported dual citizenships of Belgium and Turkey. Our analyses found no significant generational differences in emotional fit or in the composition and structure of friendship networks. Further analyses that excluded the third generation replicated our initial findings, thereby supporting our decision to include them.

Participants

Participants were 668 Turkish minority students (47% girls; aged 12-19, $M = 15.10$, $SD = 1.19$), comprising 73 first-generation, 558 second-generation, and 37 third-generation, as well as 1657 Belgian majority students (49% girls; aged 12 – 18, $M = 14.60$, $SD = 1.05$) in 426 classes drawn from the Leuven Children of Immigrants Longitudinal Study (Phalet et al., 2018). Minority adolescents were slightly older than majority adolescents, $t(1064) = -9.17$, $p < .001$, but did not differ in gender, $\chi^2(1) = 0.82$, $p = .365$. After obtaining consent, both minority and majority participants completed questionnaires during class with research assistants and a teacher present.

Materials

Emotional Fit

Emotional fit with minority and majority cultures was measured using the Emotional Patterns Questionnaire (EPQ; De Leersnyder et al., 2011). Participants were prompted to recall one positive and one negative situation, with half receiving socially engaging prompts and the other half receiving socially disengaging prompts (See Table 1 for prompts and examples for each situation). After recalling each situation, participants rated the intensity of 15 different emotions (“ashamed”, “angry”, “connected”, “disappointed”, “elated”, “frustrated”, “good”, “guilty”, “happy”, “indebted”, “proud”, “relying”, “respectful”, “sad”, “surprised”) they felt on a scale of 1 = ‘not at all’ to 5 = ‘very much’.

We conducted a Simultaneous Component Analysis (De Roover et al., 2012) for measurement equivalence of the emotion items across the minority and majority groups. “Good” and “sad” were omitted from the analysis since they were used to gauge the general valence of the prompts as in prior research (e.g., Jasini et al., 2019; refer to Appendix A2.1 for further information). We specified two clusters (i.e., Turkish minority, Belgian majority) and four hypothetical components (i.e., positive/negative x socially [dis]engaging) and obtained comparable factor solutions. “Surprised” loaded differently across the two groups and so was excluded from further analysis.

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We computed minorities' emotional fit with their Turkish minority and Belgian majority cultures. For each participant and situation, we correlated their emotion intensity ratings with the average rating of the two reference groups (i.e., the entire sample of the Turkish minority and Belgian majority participants). Correlation scores were Fisher-transformed to fit the variable to a normal probability distribution and then averaged across situations to yield participant-level estimates of emotional fit with the Turkish minority ($M = 0.71$, $SD = 0.44$, $range = -0.51$ – 2.02) and the Belgian majority ($M = 0.66$, $SD = 0.48$, $range = -0.56$ – 2.07).

Table 1. *Prompts and Examples for Each Situation*

Situation	Prompt	Example
Positive Engaging	Think now about an event that you witnessed at school not so long ago, as a result of which you felt good about your relations with other people. For example, you felt solidarity, respect, friendship...	"In physical education, we had to work in groups when learning backflips. Trust is very important in this process. Working with my friends gave me a sense of safety and positivity."
Positive Disengaging	Think now about an event that you witnessed at school not so long ago, as a result of which you felt good about yourself. For example, you felt proud of yourself, better than others...	"The French teacher gave me a compliment on my test. I was very proud at that moment."
Negative Engaging	Think now about an event that you witnessed at school not so long ago, as a result of which you felt bad about your relations with other people. For example, you felt ashamed, guilty, jealous, uncomfortable...	"Today during the online class, I wasn't paying full attention for a moment. The teacher asked me something, and I didn't know how to respond. I was very embarrassed."
Negative Disengaging	Think now about an event that you witnessed at school not so long ago, as a result of which you felt bad about yourself. For example, you felt angry, frustrated, jealous...	"We were angry because our physics teacher scheduled a test right on Monday after the spring break."

Note. The examples given are not from the current study because we did not collect descriptions of the recalled situations from the participants. Instead, they are taken from a recent study conducted by the authors with different minority adolescents in Belgium using the EPQ.

Friendship Network

Participants were presented with the prompt: “Who are your best friends in class?” They could select as many best friends as they wished from a roster of classmates ($M = 3.35$, $SD = 2.98$, $range = 0-17$) including majority, co-ethnic minority, and other minority friends. Our study focused on Belgian majority and co-ethnic Turkish friends.

For network composition, we calculated *proportion* of majority or co-ethnic friends in each network by dividing the number of majority or co-ethnic friends by the total number of friends. Proportion ranged from 0 (no friends from either group) to 1 (exclusively from one group), with co-ethnic friends ($M = 0.36$, $SD = 0.39$) more common than majority friends ($M = 0.08$, $SD = 0.19$) on average.

For network structure, we assessed *density*, measuring the extent of friendships realized within each cultural group (majority, co-ethnic). Density was computed as the ratio of observed to possible friendships following the formula:

$$density = \frac{T}{n(n-1)}$$

where T is the actual number of one-way friendship nominations between friends from the same cultural group (either the majority or co-ethnic group), and n is the number of friends from that cultural group within a participant’s network. The denominator accounts for all potential friendship nominations among either majority or co-ethnic friends. Density ranged from 0 (none of a participant’s friends, either majority or co-ethnic, were friends with each other) to 1 (all of a participant’s friends, either majority or co-ethnic, were friends with each other). On average, the density of majority friends ($M = 0.04$, $SD = 0.17$) was lower than the density of co-ethnic friends ($M = 0.19$, $SD = 0.32$).

Analysis

Two-level random-intercept regression models were fitted to the data using the *lmerTest* package in R (Kuznetsova et al., 2017). These models were necessary given the nested structure of the data; class membership accounted for 27.8% of students’ variance in emotional fit with the majority and 22.3% of the variance in fit

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with the minority. We fitted our models using a Maximum Likelihood approach, and estimated degrees of freedom using Satterthwaite’s approximation, with rounding up to the nearest whole number. In each model, we regressed emotional fit with either the majority or minority on each network index separately, while controlling for gender and age. We determined that our first two hypotheses (H1 and H2) were supported when a statistically significant positive association ($p < .05$, two-tailed) was observed between the predictor and emotional fit. The absence of association between the predictor and emotional fit with the other culture was considered to be consistent with our third hypothesis (H3).

2.3 Results

Bivariate correlations are reported in Table 2.

Table 2. *Bivariate Correlations for All Variables*

Variables	1	2	3	4	5
1. Proportion of majority friends	-				
2. Proportion of Turkish minority friends	-.25***	-			
3. Density of majority friends	.59***	-.16***	-		
4. Density of Turkish minority friends	-.16***	.57***	-.08	-	
5. Emotional fit with majority	.06	-.05	.05	-.04	-
6. Emotional fit with Turkish minority	.02	.00	.01	-.01	.88***

*** $p < .001$.

As hypothesized in H1a, Turkish minority adolescents with a higher relative number (*proportion*) of Belgian majority friends in their social network had higher emotional fit with the Belgian majority culture ($b = 0.23$, $p = .037$). Figure 1 illustrates this finding with two participants’ friendship networks. However, contrary to H1b, the extent to which majority friends were friends with each other (*density*) was not related to emotional fit with the majority culture (see Table 3).

Contrary to H2a and H2b, neither the proportion nor the density of Turkish minority friends in their social network was related to Turkish minority adolescents’ emotional fit with co-ethnics (see Table 4).

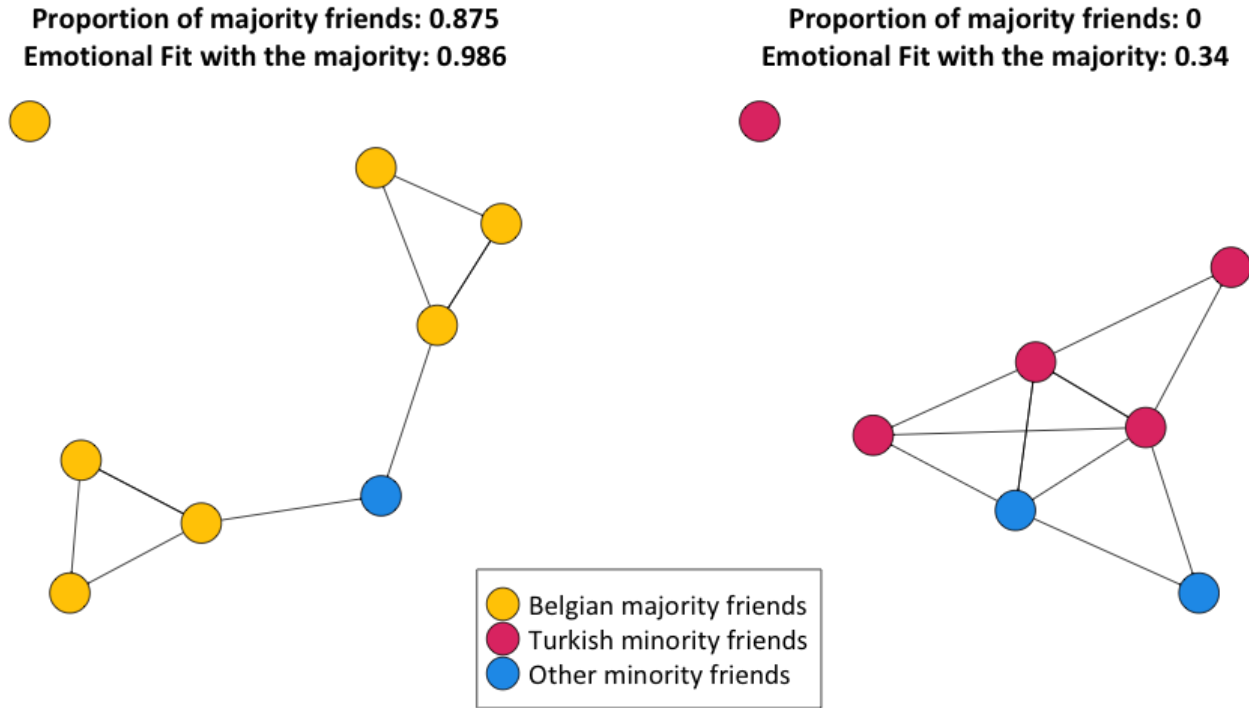


Figure 1. *Two Friendship Networks with High and Low Proportion of Majority Friends*

Note. Friendship networks of a participant with a high proportion of majority friends and a high emotional fit with the majority culture (left panel), and with a zero proportion of majority friends and a relatively low emotional fit with the majority culture (right panel). Every circle symbolizes a participant's friend, with the circles' three distinct colors denoting each friend's cultural background. Lines connecting the circles depict friendships between the friends, whereas an unconnected circle represents a friend who is not acquainted with any other friends of the participant.

Table 3. *Multilevel Models Predicting Emotional Fit with the Majority Culture*

Variable	Null model	Controls-only	H1a	H1b	H3a	H3b
Fixed effects						
Intercept	0.64 (0.03)***	0.32 (0.32)	0.21 (0.32)	0.29 (0.32)	0.33 (0.32)	0.32 (0.32)
Gender		0.14 (0.05)**	0.15 (0.05)***	0.15 (0.05)	0.15 (0.05)**	0.14 (0.05)**
Age		0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Proportion of majority friends			0.23 (0.11)*			
Density of majority friends				0.19 (0.13)		
Proportion of minority friends					-0.12 (0.06)*	
Density of minority friends						-0.05 (0.07)
Random effects						
Class-level (intercept)	0.06 (0.25)	0.05 (0.22)	0.05 (0.22)	0.05 (0.22)	0.05 (0.22)	0.05 (0.22)
Individual-level (residual)	0.17 (0.41)	0.18 (0.42)	0.18 (0.42)	0.18 (0.42)	0.17 (0.42)	0.18 (0.42)

Note. The models are based on 430 (440 in the null model) participants across 192 classes, with standard errors for fixed effects standard deviations for random effects in parentheses.

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

Table 4. *Multilevel Models Predicting Emotional Fit with the Co-ethnic Minority Culture*

Variable	Null model	Controls-only	H2a	H2b	H3a	H3b
Fixed effects						
Intercept	0.69 (0.03)***	0.37 (0.3)	0.38 (0.3)	0.37 (0.3)	0.31 (0.3)	0.37 (0.3)
Gender		0.16 (0.04)***	0.16 (0.04)***	0.16 (0.04)***	0.16 (0.04)***	0.16 (0.04)***
Age		0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Proportion of minority friends			-0.04 (0.06)			
Density of minority friends				-0.02 (0.07)		
Proportion of majority friends					0.13 (0.1)	
Density of majority friends						0.06 (0.12)
Random effects						
Class-level (intercept)	0.04 (0.21)	0.03 (0.18)	0.03 (0.18)	0.03 (0.18)	0.03 (0.18)	0.03 (0.18)
Individual-level (residual)	0.15 (0.39)	0.16 (0.4)	0.16 (0.4)	0.16 (0.4)	0.16 (0.4)	0.16 (0.4)

Note. The models are based on 431 (438 in the null model) participants across 192 classes, with standard errors for fixed effects standard deviations for random effects in parentheses.

*** $p < .001$

H3a was partially supported. In keeping with our hypothesis, the proportion of majority friends was not related to emotional fit with the Turkish minority culture. Consistent with H3b, the density of majority friends was not related to the Turkish minority culture, and similarly, the density of minority friends was unrelated to the Belgian majority culture. However, contrary to our expectation, Turkish minority adolescents with a higher proportion of Turkish minority friends had lower emotional fit with the Belgian majority culture ($b = -0.12, p = .042$).

Table 5 summarizes the results of hypothesis testing.

Table 5. *Summary of Hypothesis Testing*

Hypothesis	Association	<i>b</i>	<i>SE</i>	<i>df</i>	<i>t</i>	95% CI	Results
H1a	Majority Proportion → Majority Fit	0.23	0.11	335	2.09	[0.01, 0.45]	Supported, $p = .037$
H1b	Majority Density → Majority Fit	0.19	0.13	377	1.43	[-0.07, 0.45]	Not supported, $p = .154$
H2a	Minority Proportion → Minority Fit	-0.04	0.06	300	0.75	[-0.15, 0.07]	Not supported, $p = .455$
H2b	Minority Density → Minority Fit	-0.02	0.07	351	0.35	[-0.16, 0.11]	Not supported, $p = .723$
H3a	Majority Proportion Ø Minority Fit	0.13	0.1	337	1.29	[-0.07, 0.34]	Supported, $p = .2$
	Minority Proportion Ø Majority Fit	-0.12	0.06	350	-2.04	[-0.24, -0.01]	Not supported, $p = .042$
H3b	Majority Density Ø Minority Fit	0.06	0.12	374	0.5	[-.018, 0.3]	Supported, $p = .616$
	Minority Density Ø Majority Fit	-0.05	0.07	384	0.74	[-0.2, 0.09]	Supported, $p = .462$

2.4 Discussion

For immigrant-origin minorities, social relationships are a way of gaining access to the emotion norms of majority culture and of maintaining emotional fit with minority culture. This study investigated social network characteristics linked to emotional fit with these cultural groups. Turkish minority adolescents with more Belgian majority friends reported emotional experiences closer to those of Belgian majority peers, consistent with prior research (De Leersnyder et al., 2011; Jasini et al., 2019). This finding further supports the idea that cultural emotion norms can both shape or be shaped by close relationships, particularly with friends during adolescence. Critically, majority friendship was not associated with reduced emotional fit with co-ethnic peers, suggesting that having majority friends does not entail the loss of minority cultural experiences.

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We hypothesized that, just as majority friendships would be associated with fit with the majority, so would co-ethnic minority friendships be associated with fit with the minority. This prediction was not borne out by the data, suggesting that having co-ethnic friends does not necessarily result in greater emotional similarity to the minority culture. One possible interpretation for this finding is that the process through which minority adolescents acquire emotional norms of their minority culture differs from that of majority cultural norms. While minorities may encounter majority cultural norms primarily through interactions with their friends at school, they may acquire minority cultural norms predominantly from their parents or relatives at home. Alternatively, the minority culture might be less homogenous than the majority culture. Immigrant-origin minorities face pressures to adopt majority cultural norms and to balance them with those of their heritage culture (Berry, 2006). Thus, emotional experiences may vary among minority friends who are at different stages of acculturation, potentially resulting in heterogeneity of minority emotional norms. Indeed, our sample of Turkish minority adolescents evidenced higher variability in 83% of their emotion intensity ratings in positive situations than did their Belgian majority peers, indicating that the experiences of these minority students were more diverse.

Against our predictions, having a higher proportion of co-ethnic friends was linked to lower emotional fit with the majority culture. This unexpected outcome likely reflects the immediate social environment of our minority participants. Despite increasing ethnic diversity in Belgium (Van der Bracht et al., 2014), we observed Turkish students' social networks to be largely segregated, with 79% lacking any friendships with majority peers. This segregation could be attributed to the discrimination they often face from both peers and teachers at school (Colak et al., 2023). When minority adolescents are embedded in networks predominantly or exclusively composed of minority friends, they have limited majority contact and exposure to majority norms, upholding distinct patterns of emotional experiences. Moreover, emotional misfit with the majority culture can hinder minority adolescents from forming friendships with majority peers, possibly initiating a negative feedback loop that weakens the potential for majority friendship.

The conclusions drawn from this study are limited by the archival data set used for analyses. First, our cross-sectional data limits our ability to establish causality between friendships and emotional fit. While one study suggests that friendships with majority peers predict emotional fit with the majority culture over time, the authors of that paper proposed that the instability of the sociometric data explains the lack of association in the reverse direction (Jasini et al., 2024). In line with this perspective, we propose bidirectional links between friendship and emotional fit, underscoring the importance of longitudinal research to provide additional evidence. Second, the study's scope is confined to ego networks, which comprise a focal individual (participant) and their immediate connections (participant's friends). This lens may provide an incomplete depiction of friend-to-friend connections, as participants' nominations of the same classmates as their friends' nominations were not guaranteed. Future studies can improve upon this procedure to enhance the explanatory power of network density. Third, participants recalled only emotional situations occurring in the school context, which may be predominantly influenced by the majority culture (Giguère et al., 2010). Future studies should adopt a more comprehensive approach that includes the home environment, as immigrant minorities can shift between different cultural norms, values, beliefs, and behaviors depending on the salient cultural context or cues (e.g., Benet-Martínez et al., 2002; Ramírez-Esparza et al., 2006).

Despite these limitations, this study contributes a distinct and valuable perspective on the lived experiences of immigrant-origin minority adolescents. In a departure from prior work, we accounted for diversity within minorities' social networks by examining the associations between social relationships and emotional fit with the minority and majority within the same analysis. We focused on a specific minority group (Turkish Belgians) rather than including immigrant-origin minorities from multiple cultural backgrounds, which allowed for a targeted examination of their friendships and emotional fit with co-ethnic peers. Our findings suggest that Turkish minority adolescents who have a higher proportion of majority friends have emotional experiences that are more aligned with those of their Belgian majority peers, without compromising their emotional fit with their Turkish minority peers.

CHAPTER 3

The influence of context in daily life on emotional fit and implications for well-being for immigrant-origin adolescents

This chapter is based on: Lee, Y., Hoemann, K., & Mesquita, B. (2024). The influence of cultural contexts in daily life on emotional fit and implications for well-being for immigrant-origin adolescents. Manuscript in preparation.

3.1 Introduction

Emotional fit, or the degree of similarity in emotional experiences, plays a crucial role in fostering satisfying social relationships (e.g., Livingstone et al., 2011; Townsend et al., 2014). Its significance extends beyond interpersonal relationships and encompasses cultural contexts, where higher emotional fit with one's cultural norm benefits physical and psychological well-being (Consedine et al., 2014; De Leersnyder et al., 2015). However, cultures systematically differ in their emotion norms, posing challenges to social inclusion and well-being for immigrant minorities who initially experience a 'misfit' with the norms of the majority culture (De Leersnyder et al., 2011; Jasini et al., 2019). This misfit tends to diminish over time as immigrant minorities interact more with members of the majority group (Jasini et al., 2024). Moreover, emotional fit with the majority culture does not necessarily compromise fit with the minority culture, indicating that immigrant minorities may align with both cultural norms (Lee et al., 2024b).

Yet, our understanding of how immigrant minorities navigate diverse cultural contexts in their everyday lives remains limited, though it is evident that many of these minorities, especially adolescents, traverse different cultural contexts on a daily basis (Doucerain, 2019). As emotions are thought to be dynamic and context-sensitive (Barrett, 2011; Mesquita & Boiger, 2014), we expect the emotional experiences of immigrant minorities to vary across contexts, to the extent that the salient cultural norms vary. In each context, their emotions potentially align with the specific norms of each context. In the current study, we examine the extent to which daily cultural contexts shape the emotional experiences of immigrant minorities. Additionally, building upon previous evidence highlighting the benefits of emotional fit with cultural norms, we investigate whether emotional fit with the norm of a given cultural context predicts well-being.

Emotions of Immigrant Minorities

Prevalent patterns of emotion systematically and meaningfully differ across cultures (Mesquita et al., 2017). The emotions people most frequently and intensely experience often align with the central goals of their culture (Boiger et al., 2013;

Kitayama et al., 2006). For example, consistent with their emphasis on interdependent relationships, Japanese college students reported experiencing more socially engaging positive emotions (e.g., gratitude) in their daily lives compared to US college students. Similarly, in Turkish culture, where honor is highly valued, people often perceive anger-provoking situations – essential for defending honor – as more frequent and intense compared to Japanese culture (Boiger et al., 2014). In these ways and others, descriptive emotion norms vary across cultures in ways that mirror the underlying cultural priorities.

Within-culture similarities and between-culture differences in typical emotional experiences further support the notion that the interpretation and significance of emotions are shared within cultures but varies across them. This results in individuals exhibiting the highest emotional fit with their own cultural norms (De Leersnyder et al., 2020). For instance, Koreans living in Korea showed higher emotional fit with the Korean emotion norm than either Korean Americans or European Americans. Similarly, Turks living in Turkey exhibited higher emotional fit with the Turkish emotion norm than second-generation Turkish Belgians or the Belgian majority.

Furthermore, moving from one culture to another can result in experiences of misfit with new cultural norms of emotions. Research has indeed shown that first-generation immigrant minorities initially show low emotional fit with the majority cultural norm, indicating substantive differences in their emotional patterns compared to those of the majority group (De Leersnyder et al., 2011). However, with each successive generation, this fit increases to the point where third-generation minorities show no significant difference in their emotional fit from those of the majority group (Jasini et al., 2019). Perhaps unsurprisingly, then, the most consistent predictor of emotional fit has been the level of immigrant minorities' contact with majority group members. Increased intergroup interactions expose minorities to the values of the new culture, thereby shaping their emotional experiences in the new cultural context. For instance, in a study involving a representative sample of immigrant-origin adolescents from Belgian secondary schools, minority adolescents' friendships with majority peers predicted their emotional fit with the majority norm

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in subsequent years (Jasini et al., 2024). Additionally, emotional fit with the majority norm longitudinally predicted many majority friendships in the following year, suggesting that emotional fit may have important implications for social inclusion.

However, immigrant minorities' emotional fit with the majority culture does not come at the expense of their fit with their minority community. Recent research revealed that Turkish-origin adolescents in Belgium showed higher emotional fit with the majority norm to the extent that they had more majority than minority friends; however, an increase in majority friendship was not linked to a decrease in emotional fit with the Turkish minority cultural norm (Lee et al., 2024b). Moreover, another study showed that immigrant minorities' emotional fit with their heritage culture positively correlated with time spent with friends from their heritage culture (De Leersnyder et al., 2020). Therefore, as immigrant minorities interact with both their heritage cultural group and the majority group, their emotions may continue to be influenced by the emotion norms of both cultures.

Navigation Across Daily Cultural Contexts: Emotional Frame-Switching

Navigating between different cultural contexts is a daily reality for immigrant minorities, and emerging evidence suggests that their emotional experiences may vary as a function of the salient sociocultural environment. In a daily diary study, Perunovic et al. (2007) found that East Asian-Canadian students reported different emotional patterns depending on their cultural identification and the language used during an interaction. Specifically, when these students identified with Western culture or spoke English, they experienced high positive affect and low negative affect, or vice versa. Conversely, identifying with Asian culture or using an Asian language led to the co-occurrence of both positive and negative emotions. These findings resonate with established cultural differences in emotional experience; notably, East Asians have been found to experience emotions in a more dialectical manner, often experiencing both positive and negative emotions concurrently, in contrast to Western samples where positive emotions are typically felt to the exclusion of negative ones (Bagozzi et al., 1999).

Furthermore, two studies have found that immigrant minorities exhibit higher emotional fit with the prevailing cultural norms of their current context, as reflected in both their setting and language usage. A study involving Korean-origin and Turkish-origin immigrant minorities found that they exhibited greater emotional fit with their heritage culture when interacting in the minority context of home or family compared to the majority context of school or work (De Leersnyder et al., 2020). Similarly, a study utilizing language as a proxy for cultural context found that Chinese-English bilinguals in the UK showed higher emotional fit with the typical British pattern when responding to surveys in English, while those who completed the surveys in Chinese showed higher fit with the typical Chinese pattern (Zhou et al., 2021). Together, these findings are consistent with the phenomenon of *cultural frame-switching*, which denotes the ability or tendency of bicultural individuals to shift between distinct culture-specific behaviors and attitudes in response to situational demands (Hong et al., 1997).

While research has demonstrated that immigrant minorities may emotionally fit with both majority and minority cultural norms without compromising their fit with the one for the other (e.g., Lee et al., 2024b), the nuanced variations in their emotional fit across their daily cultural contexts remain unexplored. As minorities move back and forth between majority and minority cultural contexts, such as different settings, languages, and interaction partners, one cultural norm may come to the fore over the other. Consequently, they may experience emotions typical of this salient cultural context. This phenomenon of *emotional frame-switching* may resemble the behavioral and attitudinal shifts observed in previous research on cultural frame-switching (e.g., Benet-Martínez et al., 2002; Hong et al., 2000; Ramírez-Esparza et al., 2006). In the present study, we examined whether immigrant minorities engaged in emotional frame switching across these daily contexts by testing whether they had higher emotional fit with the norm of the cultural context they are in compared to the other cultural context. To expand upon previous studies on emotional frame-switching, which were either cross-sectional or focused solely on positive and negative affect, we aimed to comprehensively capture the daily experiences of minorities by conducting a daily diary study exploring a range of specific emotions.

Emotional Fit and Well-Being

People who experience higher emotional fit with their cultural norms tend to have better well-being. Among monocultural individuals, emotional fit with their cultural norms positively correlated with their relational well-being (De Leersnyder et al., 2014), consistent with findings showing that dyads who shared similar emotions experienced positive relational outcomes such as increased empathy and reduced stress (Preston & De Waal, 2002; Townsend et al., 2014). Moreover, among immigrant minority women, higher emotional fit with the majority cultural norm has been associated with fewer somatic symptoms (Consedine et al., 2014). Furthermore, emotional fit with cultural norms positively has also been found to correlate with psychological well-being, including more positive self-regard and fewer depressive symptoms, but only in situations important to the culture's central values (De Leersnyder et al., 2015). This positive association between emotional fit and well-being, especially in situations that emphasize a culture's central values, has been largely replicated across cultures, including East Asia, Anglo-Western, and Mediterranean regions (Kirchner-Häusler et al., 2023). This suggests that emotional fit with the norm of a given cultural context – congruent emotional fit – may predict the well-being of immigrant minorities within that cultural context.

The Present Study

The aim of this study was twofold: first, to investigate whether immigrant minorities engage in emotional frame-switching across different cultural contexts; second, to examine how such context-congruent frame-switching affects their daily well-being within those specific settings. To this end, we conducted a daily diary study with immigrant-origin adolescents in several secondary schools in Flanders, Belgium. This group was chosen because immigrant minority adolescents naturally navigate between different cultural contexts (home, school) in their daily lives. We tested sets of preregistered hypotheses. First, we hypothesized that minorities would exhibit higher emotional fit with the majority cultural norm in majority-dominated contexts, namely, at school (H1a), when using the Dutch language (H1b), and during interactions with non-immigrant Belgians (H1c). Conversely, we hypothesized that

these adolescents would show higher emotional fit with the minority cultural norm in minority-dominated contexts, such as at home, when speaking non-Dutch languages, and during interactions with other immigrant-origin individuals. Second, we expected that emotional fit with the cultural norms of a given context – a congruent fit – would be positively associated with an individual’s daily well-being within that context. Specifically, we predicted that emotional fit with the majority norm at school will be associated with well-being at school (H2a), and fit with the minority norm at home will be associated with well-being at home (H2b).

3.2 Method

We report all measures and exclusion criteria used in the current analyses below. All materials, including the preregistration of our hypotheses, study design, and analysis plan for both confirmatory and exploratory analyses, a comprehensive list of questionnaires used during data collection, the anonymized subset of data, and the R code necessary to replicate the analyses, can be found on the Open Science Framework at <https://osf.io/fm8yw/>.

Participants

We invited 15 secondary schools in Flanders, Belgium from a pool of schools that participated in the “School zonder Racisme” (SzR; School without racism) project – a non-profit initiative providing workshops aimed at combatting racism among students and teachers. Three schools agreed to take part in our research. In these schools, classes were included in the study if they had at least 40% of students of immigrant descent (refer to Procedure section below for details).

Across 42 classes, 510 students participated in the study, including 324 with immigrant history and 186 without. Prior to analysis, we removed 66 participants from the study due to insufficient or inconsistent data. Specifically, 10 participants did not report their birth country information, which was essential for determining a dominant home culture. Four participants had mixed cultural backgrounds, complicating the determination of a single home culture. Fifty-two participants were excluded because they did not meet the minimum requirement of reporting at least

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three situations per day for at least three days, rendering their data unreliable. Additionally, we removed 39 third-generation participants (i.e., those born in Belgium to Belgian-born parents and foreign-born grandparents) and 24 participants with a Western European cultural background, because a previous study (Jasini et al., 2019) found no difference between these students and the Belgian majority peers in their emotional fit with the majority norm. Finally, we removed 26 participants with English-speaking ($n = 1$), Latin American ($n = 15$), South Asian ($n = 8$), and Confucian ($n = 2$) cultural backgrounds due to their small sample sizes and their emotional patterns not being distinct from the Belgian majority adolescents in a preliminary analysis.¹

Combined, these decisions resulted in a final sample of 181 participants with Eastern European ($n = 55$) and Middle Eastern/African ($n = 126$) cultural backgrounds, consisting of 38 first-generation and 143 second-generation immigrant adolescents. The largest reported countries of birth among these participants included Morocco, Congo, Turkey, Russia, and Poland. Additionally, emotion ratings from 174 majority adolescents (i.e., those without migration background up to three generations) were used to establish the majority cultural norm. On average, minority adolescents were 15.7 years old ($SD = 1.41$, range = 13.1-18.8) and comprised 113 girls, 60 boys, 2 non-binary individuals, and 6 participants who preferred not to disclose their gender. Majority adolescents were 15.7 years old ($SD = 1.23$, range = 13-18.6) and comprised 109 girls, 62 boys, 1 non-binary individual, and 2 participants who preferred not to disclose. There were no significant differences in age ($t(341) = -0.20, p = .84$) or gender distribution ($\chi^2(1) = 0.03, p = .85$) between minority and majority adolescents.

All participants who filled out the demographics prior to data collection were entered into a raffle for a tablet computer. Participants who completed the pre-diary survey and the first diary were compensated with 10 euros. Each additional diary

¹ We selected the specific cultural groupings validated by both Inglehart & Baker (2000) and Schwartz (2008). See Appendices 3.1 ad 3.2 (pp. 83–85) for details on the procedure used to establish cultural backgrounds of all participants and the preliminary analysis conducted to justify the exclusion of other cultural groups based on their emotional patterns.

completed earned participants 2 euros, with those completing the last diary and the post-diary survey receiving an additional 30 euros, for a remuneration up to 50 euros. Additionally, we hosted a pizza party for the class with the highest completion rate in each participating school.

Procedure

In each potential participating class, we conducted an in-person introductory session led by a pair of Dutch-speaking research assistants. We used slides to introduce the study topic as “daily encounters” without mentioning emotions, explaining that we were interested in their everyday experiences as students, for example, their interactions with friends and family. During this session, we distributed informational packets containing detailed descriptions of the study for both students and their parents, along with opt-out consent forms for the parents. The packet also included a QR code and a URL leading directly to the registration page, where participants could provide electronic consent, as well as demographic information including the country of birth for themselves, their parents, and their grandparents. Based on this information, we selected classes with more than 40% of students with a migration background. A week later, we conducted brief 30-minute training sessions within these selected classes, during which participants answered sample questions on Qualtrics, and were encouraged to ask any questions on the task.

Following the training, participants completed daily diaries for seven consecutive school days. Each day, participants received links to Qualtrics via email at approximately 3:30 P.M. At the start of each diary entry, participants reported their well-being at school and home for the day. They then described both positive and negative emotional situations they experienced in each setting (i.e., school and home), rated the intensity of emotions felt from a list of emotions, and answered additional questions to discern whether the situation was dominated by the majority or minority culture.

Upon completion of the final diary entry on the seventh school day, participants reported the cultural background of the individuals they had listed in all diaries. All survey items were presented in Dutch, the official language of Flanders,

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Belgium. The KU Leuven Social and Societal Ethics Committee approved all study procedures (Approval No. G-2021-3636).

Measures

Demographics

During registration, participants provided their birthdates which were used to calculate their age. Gender was self-reported with the question “Which gender identity do you most identify with?” Options included Girl, Boy, and X for non-binary gender. Participants also reported the birth countries of themselves, parents, and grandparents, prompted with “In which country were you/mother or parent 1/father or parent 2/grandparents born?” Country options included Belgium, Morocco, Italy, Turkey, France, the Netherlands, Other, and Do not know. If “Other” was selected, participants were prompted to specify the country.

Daily Emotional Situations

Emotional Patterns. We used the Emotional Patterns Questionnaire (EPQ; De Leersnyder et al., 2011) to measure daily emotional patterns in four different types of situations varying in valence (positive and negative) and setting (school and home). Participants were asked to “Think about one situation that made you feel good (bad) at school (home) today. Please briefly describe in 2-3 sentences what happened”. See Table 1 for exact prompts and examples for each type of situation. The order of the prompts was counterbalanced across participants consistently throughout the study.

Table 1. *Prompt and Example for Each Type of Situation*

Situation Type	Prompt	Example
Positive School	Think about one situation that made you feel good at school today. Please briefly describe in 2 – 3 sentences what happened	“During the physics test, I received tips from the teacher, which allowed me to improve 3 exercises on the test. She was very nice to me and tried to help me so that I could score better on the test.”
Positive Home	Think about one situation that made you feel good at home today. Please briefly describe in 2 – 3 sentences what happened	“My mom made me a breakfast with an egg, kiwi, fruit juice and sandwiches for my birthday this morning. She also sang for me. We had dinner together.”
Negative School	Think about one situation that made you feel bad at school today. Please briefly describe in 2 – 3 sentences what happened	“The teacher made us walk during Physical Education, in the rain and I was sick. So, I stepped into the locker room and waited for school to end. But the teacher kept insisting to walk so I got mentally psycho/angry/frustrated as usual.”
Negative Home	Think about one situation that made you feel bad at home today. Please briefly describe in 2 – 3 sentences what happened	“I went shopping with my parents and then I bought food for myself and the next day I kept looking for my cookie and it turned out that my brother had eaten it.”

Note. Examples have been translated into English from Dutch, the language in which the data were collected.

For each situation, participants rated on a scale of 1 (not at all) to 5 (very strongly) the extent to which they felt 14 different emotions, in the following order: “good”, “happy”, “sad”, “proud”, “guilty”, “connected”, “frustrated”, “excited”, “ashamed”, “angry”, “indebted”, “relying on others”, “disappointed”, and “respectful to others”. These emotions were selected to encompass the dimensions of valence and social engagement (interpersonally engaging and disengaging), which have been cross-culturally validated for mapping emotional experiences (Kitayama et al., 2000).

We reviewed each reported situation to confirm it aligned with the situation type. A team of four Dutch-speaking coders evaluated descriptions in terms of valence (positive, negative, neutral) and setting (home, school), with coders working in rotating pairs. The inter-coder agreement consistently exceeded $\kappa = 0.95$, such that

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we proceeded with codes from two coders. In cases where coders labeled a situation as neutral, we examined the average ratings of positive and negative emotions. Situations were excluded from analysis if they were rated more highly for positive valence when negative valence was requested, or vice versa. Regarding the setting, situations were excluded if the description clearly did not match the prompted setting (e.g., a participant reporting a work situation for home settings), or if participants indicated the absence of positive/negative situations in that context for the day. Minority participants, on average, reported 23.34 valid situations and missed 4.66 situations out of 28 situations (17% missing; see Appendix A3.3 for more details on these counts).

Following prior research (e.g., Lee et al., 2024b), we computed emotional fit by comparing the profile of emotion intensity ratings provided for each of the four situation types against the profile of ratings for a given cultural group (i.e., the group emotion norm). We first grand-mean centered the ratings for each emotion item across all participants and situation types. This adjustment corrected for participants' tendency to rate positive emotions higher and negative emotions lower, so that this overall similarity would not bias subsequent profile comparisons. We then established group emotion norms by averaging each emotion item across participants from each cultural group (i.e., minority, majority). Subsequently, we Pearson-correlated each situational profile of emotion ratings with the norms of the two target groups, resulting in a maximum of 56 emotional fit scores per participant (4 situation types x 7 days x 2 target groups). Pearson correlation coefficients were Fisher-transformed to ensure normality for subsequent statistical analyses.²

Language Used. Participants were asked to report the main language(s) spoken in each situation with the question: "What was the main language(s) spoken during the situation at school/home?" Participants were provided with multiple choice options including Dutch, Arabic, Italian, Turkish, French, and Other, and were

² In response to recent findings highlighting the susceptibility of the Pearson correlation to data artifacts, we incorporated the Spearman correlation as an additional similarity measure (Carlier et al., 2023). We report analyses using Spearman-based emotional fit and a distance-based measure of emotional fit in Appendices A3.4 and A3.5 (pp. 86–88).

able to select multiple languages if applicable.³ If participants chose “Other,” they were prompted to specify the language(s). A dichotomous variable was created for cultural context: “majority context” if Dutch was spoken or in combination with other languages, and “minority context” if non-Dutch language(s) were exclusively spoken.

Cultural Background of the Interaction Partner. The cultural background of the interaction partner was assessed using a method designed to prevent undue focus on race, ethnicity, or cultural background during diary data collection. Participants were asked to provide the full name of the individual with whom they interacted in each situation with the prompt: “What is the full name of the person who was involved in the situation? If more people were involved, name the one who was the most important for you in that situation.” Only after completing the final diary on day 7, participants were asked to report the cultural background of each person they listed over the 7-day period using the question: “What is X’s cultural background?” Here X represented the full name of the individuals they interacted with in each situation. Participants were presented with options including Belgian, Moroccan, Italian, Turkish, French, Dutch, and Other. If participants selected “Other,” they were prompted to specify the cultural background of the interaction partner. A dichotomous variable was created for cultural context: “majority context” if participants explicitly mentioned the presence of Belgian majorities in each situation and “minority context” if the interaction partner was non-Belgian or people with mixed cultural backgrounds (excluding Belgian majorities).

Daily Well-Being

Participants provided daily ratings of their well-being at school and home using four items: “How well was your life going at school (home) today?” on a scale ranging from 1 (not well at all) to 10 (very well), and “How stressed were you at school (home) today?” on a scale from 1 (not stressed at all) to 10 (very stressed). The stress variable was reverse-coded, and an average was computed across the two

³ The options provided correspond to languages spoken by the largest immigrant communities in Belgium, as estimated by the Central Intelligence Agency in 2012.

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items to calculate a composite daily well-being score for each setting (i.e., school and home). Cronbach's alphas for school and home well-being were .81 and .84, respectively. A higher score indicated a higher level of well-being, while a lower score indicated lower well-being in each respective setting.

Analytic Plan

For all analyses, we utilized multilevel regression models with the 'lmer' function from the *lme4* package (Bates et al., 2015) in R (v4.3.0; R Core Team, 2023), with maximum likelihood estimation. We estimated the *p*-values for the *t*-tests using the *lmerTest* package (Kuznetsova et al., 2017), which calculates *p*-values based on degrees of freedom estimated using Satterthwaite's approximation, rounded up to the nearest whole number. This approach was necessary to accommodate the nested structure of the data, with situations nested within participants. The data technically encompasses multiple levels of hierarchy, including situations nested within days, nested within participants, nested within classrooms, all of which are further nested within schools. Considering our research question on emotional fit across situations and the need to balance model complexity and interpretability, we opted to account for variability within participants only. An intraclass coefficient indicated that a substantial portion of the variance in emotional fit with both the majority and minority norms was within participants: 79% and 85% of the variance in emotional fit with the majority and minority norms, respectively, was attributed to differences within individuals, while 21% and 15% were due to differences between participants. To evaluate the goodness-of-fit for each model, we compared log-likelihood ratios between models with predictors and controls-only models (Snijders & Bosker, 2012), only accepting the significance of predictors when the complex model demonstrated a better fit compared to the controls-only models. To estimate effect size, we calculated the marginal R^2 (R^2_m) for fixed effects and the conditional R^2 (R^2_c) for both fixed and random effects (Nakagawa & Schielzeth, 2013).

To test the first hypothesis regarding the effect of cultural context on emotional fit, we ran six separate models. Each model included setting (school vs. home), language (Dutch vs. non-Dutch), or cultural background of interaction

partner (Belgian majority vs. immigrant-origin minority) as the predictor, and emotional fit with one of the two target groups as the dependent variable. Within each model, the reference group for the predictor variable was the cultural context closest aligned to the majority culture. For instance, when examining emotional fit with the minority culture, the reference group would consist of the majority context (i.e., school, Dutch, Belgian majority interactant). For language and cultural background of interaction partner, we controlled for setting (home, school) to isolate the unique effect of each variable.⁴

To examine the second hypothesis regarding the effects of congruent fit on well-being within specific contexts, we partitioned the data according to the setting in which the situation was prompted and conducted separate analyses for each setting. Each model included emotional fit with a target group as the predictor. Well-being in each setting served as the dependent variable. Specifically, in the model predicting well-being at school, emotional fit with the majority group was entered as a predictor. In the model predicting well-being at home, emotional fit with the minority group was included as a predictor. In all models, we included gender (with boys as the reference group) and age as control variables. While we did not formulate specific hypotheses regarding the valence of situation types, we explored its interaction with emotional fit based on prior research suggesting that emotional fit tends to be higher in positive situations (De Leersnyder et al., 2011).

3.3 Results

Daily Cultural Contexts

We posited that settings would serve as proxies for distinct cultural contexts, with school representing the majority culture and home representing the minority culture. However, setting was culturally heterogeneous. Of the 2134 valid situations reported by minority participants at school, nearly half ($n = 1008$; 47%) involved interactions with immigrant-origin minorities, suggesting that school was not

⁴ As described in the Results, initial descriptive analyses indicated that settings did not exclusively represent one culture and are likely mixed with different cultural contexts. For this reason, we adjusted our original analysis plan prior to testing our hypotheses (see OSF for changes).

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exclusively a majority-dominated context (see Figure 1 for the breakdown of the situations per setting). This exceeded the number of situations involving interactions with Belgian majority individuals ($n = 892$; 42%).⁵ Regarding language use, Dutch was predominantly spoken at school ($n = 2033$; 95%), indicating that even during interactions with other minority individuals, participants mostly conversed in Dutch. Non-Dutch languages were spoken in a small percentage of cases ($n = 93$; 4%) as well.

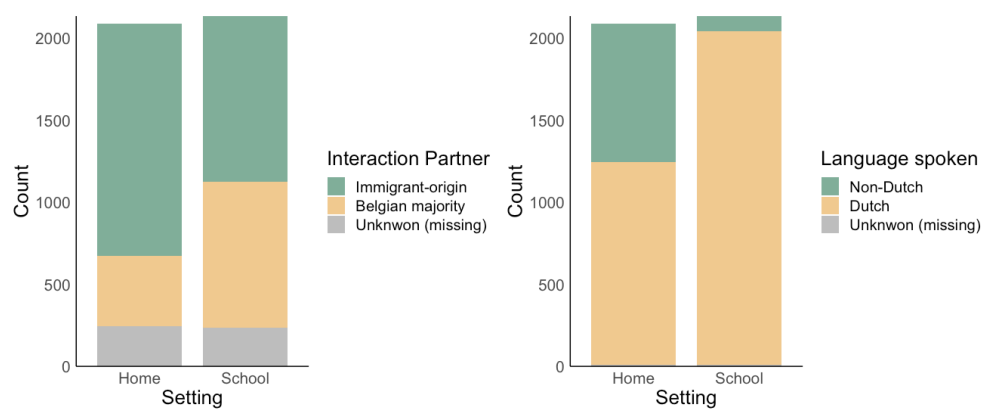


Figure 1. Situation Count by Setting, Interaction Partner, and Language Use

Similarly, the home environment was not strictly dominated by minority culture. Of the 2090 valid situations reported by minority participants at home, Dutch ($n = 1234$; 59%) was spoken more frequently than non-Dutch languages ($n = 845$; 40%). While participants interacted more with immigrant-origin individuals ($n = 1416$; 68%) than with Belgian individuals ($n = 429$; 21%), interactions with Belgians occurred more frequently than anticipated, considering the immigrant backgrounds of the participants.

On average, the immigrant-origin participants reported interacting with Belgian individuals in 10.40 situations and with immigrant-origin individuals in 12 situations. However, over half of the 181 minority participants ($n = 99$; 55%)

⁵ Compared to the data on language use, a significant amount of information regarding interaction partners was missing (noted as “Unknown” in Figure 1). This was likely because the data were not collected daily with the situation descriptions, and some situations did not involve humans (e.g., pets).

reported no interactions with majorities, while 35 participants reported no interactions with other minorities. Notably, only 61 participants reported interactions with both groups, suggesting a relatively segregated social network among minority participants.

H1a. Emotional Fit with the Cultural Norms Across Setting (School vs. Home)

A complete overview of the findings is presented in Tables 4. As part of our first hypothesis, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the majority culture when at school. We found a significant effect of setting on Pearson-correlated emotional fit with the majority, $b = -0.05$, $p = .002$, but contrary to our hypothesis, immigrant-origin adolescents showed less emotional fit with the majority at school than at home (see Figure 2a).

Relatedly, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the minority culture when at home. In keeping with this prediction, a significant effect of setting was found on Pearson-correlated emotional fit with the minority ($b = 0.04$, $p = .006$). Immigrant-origin adolescents showed higher emotional fit with the minority at home than at school (see Figure 2b).

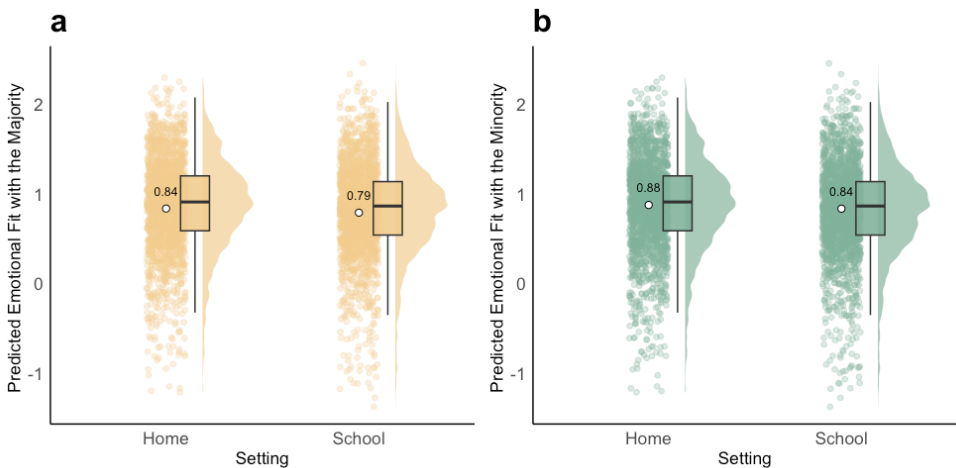


Figure 2. *Predicted Values of Pearson-correlated Emotional Fit with the Majority (a) and Minority (b), as a Function of Setting*

Note. The white dots represent the marginal means of emotional fit for each setting adjusted for age and gender, with values annotated for clarity. Colored dots indicate individual data points. The density plots and box plots illustrate the distribution of individual fit scores.

H1b. Emotional Fit with the Cultural Norms by Language (Dutch vs. Non-Dutch)

As part of our first hypothesis, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the majority culture when speaking Dutch. In keeping with this prediction, we observed a trending effect of language on Pearson-correlated emotional fit with the majority, controlling for setting, $b = 0.04$, $p = .068$. Regardless of the setting in which the situations occurred, immigrant-origin adolescents showed higher emotional fit with the majority when speaking Dutch compared to non-Dutch languages.

Relatedly, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the minority culture when speaking non-Dutch languages. We found a trending effect of language on Pearson-correlated emotional fit with the minority, controlling for setting, $b = -0.04$, $p = .061$. However, contrary to our hypothesis, immigrant-origin adolescents showed lower emotional fit with the minority when speaking non-Dutch languages compared to Dutch, irrespective of setting.

H1c. Emotional Fit with the Cultural Norms by Interaction Partner (Belgian-Majority vs. Immigrant-Origin)

As part of our first hypothesis, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the majority culture when interacting with Belgian majority people. As expected, we found a trending effect of interaction partner on Pearson-correlated emotional fit with the majority, controlling for setting, $b = 0.04$, $p = .075$. Irrespective of setting in which the situations occurred, immigrant-origin adolescents showed higher emotional fit with the majority when interacting with Belgian majority people compared to other immigrant-origin people.

Relatedly, we predicted that immigrant-origin adolescents would exhibit higher emotional fit with the minority culture when interacting with immigrant-origin people. We found a significant effect of interaction partner on Pearson-correlated emotional fit with the minority, controlling for setting, $b = -0.04$, $p = .043$. However, contrary to our hypothesis, immigrant-origin adolescents showed lower

emotional fit with the minority when interacting with immigrant-origin individuals compared to Belgian majority people.

Table 4. *Cultural Context Predicting Pearson-Correlated Emotional Fit*

Context	Estimate (SE)	df	t	p	95% CI	R^2_m	R^2_c
Majority Fit							
Setting (School)	-0.05 (0.01)	3835	-3.12	.002*	[-0.08, -0.02]	.01	.21
Language (Dutch)	0.04 (0.02)	3970	1.83	.068	[0.00, 0.09]	.01	.21
Partner (Belgian Majority)	0.04 (0.02)	3485	1.78	.075	[0.00, 0.07]	.01	.20
Minority Fit							
Setting (Home)	0.04 (0.02)	3839	2.73	.006*	[0.01, 0.07]	.01	.15
Language (Non-Dutch)	-0.04 (0.02)	3894	-1.87	.061	[-0.09, 0.00]	.01	.14
Partner (Immigrant-origin)	-0.04 (0.02)	3324	-2.03	.043*	[-0.08, -0.01]	.01	.15

Note: CI = confidence interval; R^2_m = marginal R-squared; R^2_c = conditional R-squared.

* $p < .05$

H2a. Well-Being at School by Emotional Fit with the Majority Norm

As part of our second hypothesis, we predicted that emotional fit with the majority culture at school would be positively associated with well-being at school. Contrary to our hypothesis, Pearson-correlated emotional fit with the majority was not related to well-being at school ($b = 0.01$, $SE = 0.03$, $t(1910) = 0.15$, $p = .88$, 95% CI = [-0.06, 0.07], $R^2_m = .03$, $R^2_c = .45$). Immigrant-origin adolescents who had higher emotional fit with the majority at school did not report higher well-being at school.

H2b. Well-Being at Home by Emotional Fit with the Minority Norm

As part of our second hypothesis, we also predicted that emotional fit with the minority culture at home would be positively associated with well-being at home. Contrary to our hypothesis, Pearson-correlated emotional fit with the minority was not related to well-being at home ($b = 0.01$, $SE = 0.03$, $t(1849) = 0.15$, $p = .88$, 95% CI = [-0.06, 0.07], $R^2_m = .03$, $R^2_c = .45$). Immigrant-origin adolescents who had higher emotional fit with the minority at home did not report higher well-being at home.

Exploratory Analysis: Fit-Valence Interaction on Well-Being

Exploratory analyses revealed a significant interaction between emotional fit with the majority and situational valence ($b = 0.31$, $SE = 0.07$, $t(1914) = 4.72$, $p < .001$, 95% CI = [0.18, 0.44], $R^2_m = .04$, $R^2_c = .44$). Emotional fit with the majority was positively associated with well-being at school in positive situations, but negatively associated in negative situations (see Figure 3a). When participants had higher emotional fit with the majority at school during positive situations, immigrant-origin adolescents reported higher well-being at school. When they had higher emotional fit with the majority at school during negative situations, they reported lower well-being at school.

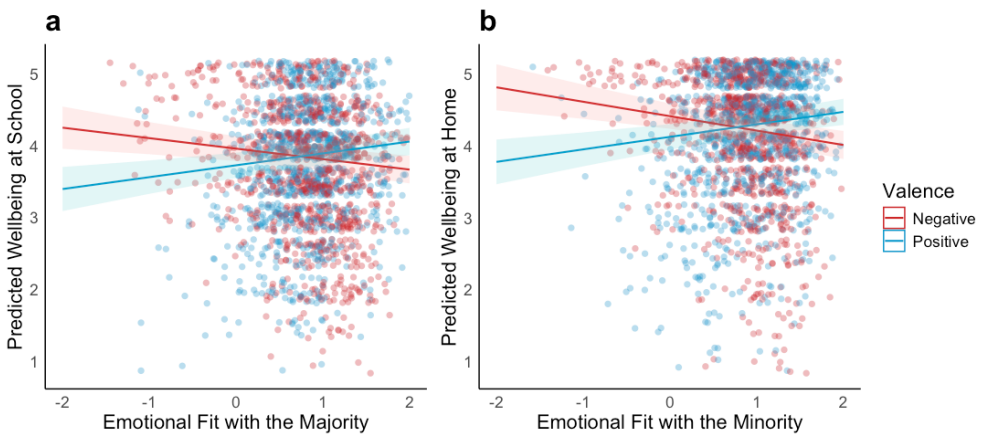


Figure 3. *Predicted Values of Well-Being for Positive Versus Negative Situations at Home and School, as a Function of Emotional Fit with the Majority Norm (a) and the Minority Norm (b)*

Similarly, a significant interaction between emotional fit with the minority and situational valence emerged ($b = 0.37$, $SE = 0.07$, $t(1890) = 5.33$, $p < .001$, 95% CI = [0.24, 0.51], $R^2_m = .05$, $R^2_c = .43$). Emotional fit with the minority was positively associated with well-being at home in positive situations, and negatively associated in negative situations (see Figure 3b). When participants had higher emotional fit with the minority at home during positive situations, immigrant-origin adolescents reported higher well-being at home. When they had higher emotional fit

with the minority at home during negative situations, they reported lower well-being at home.

3.4 Discussion

Many immigrant-origin adolescents navigate dual cultural contexts in their daily lives, characterized by diverse settings, languages, and social interactions. This study aimed to investigate whether their emotional experiences vary depending on the cultural context they navigate and whether fit with the normative emotional patterns of the dominant culture within that context is linked to well-being. To achieve this, we employed a daily diary method, where participants recorded their emotional situations each day. This approach enabled us to closely monitor adolescents' emotional experiences and analyze how emotional fit varies as they traverse their daily sociocultural environments.

Our findings revealed complex relationships between context and emotional fit. While the physical location of emotional experiences significantly influenced emotional fit with both majority and minority cultural norms, the effects of language use and interaction partners were marginal. Additionally, we uncovered the implications of congruent emotional fit for well-being. Overall, our study contributes to understanding the dynamics of emotions and sociocultural environments, highlighting the role of cultural context in shaping emotional experiences within immigrant communities.

Cultural Context in Emotional Frame-Switching

We hypothesized that immigrant minorities engage in cultural frame-switching in emotions, aligning their emotional experiences to match the norms of their current cultural context. This phenomenon, observed in various psychological processes like attributional tendencies (Benet-Martínez et al., 2002), personality traits (Ramírez-Esparza et al., 2006), and social identity (Verkuyten & Pouliasi, 2016), was partially supported by our findings. Specifically, when immigrant-origin minority adolescents experienced emotional situations at home, their emotional fit with the minority cultural norm was higher compared to situations at school. As expected,

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emotional experiences were more aligned with the typical minority norm in contexts dominated by the minority culture than in those dominated by the majority culture.

Contrary to our expectations, minority adolescents' emotional fit with the majority culture was unexpectedly lower at school than at home. This may be attributed to these adolescents frequently interacting with other immigrant-origin peers rather than with majority peers while at school. Furthermore, over half of the minority participants reported no interactions with Belgian-majority individuals during the data collection period, which illustrates the segregated nature of much of the social life at Belgian schools (Lee et al., 2024b). When controlling for the school versus home setting, fit with the majority emotions was higher in situations where participants spoke Dutch (i.e., the majority language) and interacted with Belgian majorities, rather than those situations involving heritage languages and interactions with minority partners, though the latter results did not reach conventional levels of significance. Together, these findings yield overall support for emotional frame-switching, showing that minority adolescents' emotional experiences aligned with the cultural norms of the peers they interacted with most frequently.

The setting – whether home or school – appears to matter primarily to the extent that it represents interactions within a specific cultural and linguistic context. The specific school context, where we intentionally selected diverse schools and classes to sample enough immigrant-origin minority participants, turned out to be not as representative of the majority culture as anticipated. At school, interacting mostly with other immigrant-origin peers likely influenced minority adolescents' emotional experiences such that their emotional fit with the majority culture was reduced, contrary to expectations in a more intercultural school setting. The unexpected direction of the frame-switching is consistent with previous research indicating that having more heritage friends positively influences emotional fit with the heritage culture (De Leersnyder et al., 2020). These findings contribute to a broader literature on emotions as dynamic processes situated in and shaped by interactions and relationships (Boiger & Mesquita, 2012).

Our research also builds on previous studies that highlight the significant role of language in emotional frame-switching (Perunovic et al., 2007; Zhou et al., 2021)

by examining the influence of cultural backgrounds of interaction partners. When controlling for the setting of home versus school, we observed a marginal pattern of frame-switching related to the use of majority language and interaction with majority group individuals. This suggests that, in addition to language, the cultural backgrounds of interaction partners may also influence emotional fit with cultural norms. The trending effect of interaction partners aligns with research indicating that having majority friends positively influences emotional fit with the majority culture (Jasini et al., 2019, 2023b).

Furthermore, long-term dyadic relationships, such as roommates or romantic partners, tend to share similar emotional experiences (Anderson et al., 2003) and become better at predicting each other's emotions over time (Zhao et al., 2022). Given that participants reported a limited number of emotional situations experienced at the end of the day, they likely focused on interactions with people they regularly interact with, such as their majority friends. These established relationships may socialize minorities into the normative emotional repertoire of majority peers. Consequently, sustained interaction with majority friends had likely shaped minorities' emotional experiences, explaining the trend of higher emotional fit with the majority norm during interactions with majorities than with minorities. It is noteworthy that the majority of our immigrant-origin minority participants were second-generation (79%) and therefore born in Belgium. They are likely exposed to predominantly majority-oriented emotional patterns due to regular interaction with the Belgian-majority culture. Effective frame-switching hinges on the availability of diverse emotional repertoires.

Emotional Fit in Positive Situations

Previous research has demonstrated the benefits of emotional fit with one's cultural norms on well-being (e.g., Kirchner-Häusler et al., 2023). Motivated by this, our study investigated the association between situational fit and situational well-being among minority adolescents. However, our findings qualify previous research indicating that emotional fit is beneficial for well-being regardless of the valence of the situations (Cho et al., 2018; De Leersnyder et al., 2014). Specifically, we found

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that fit with the salient norm was beneficial for positive situations but not negative ones. Participants reported feeling better in environments where their emotional experiences fit well with the normative patterns in positive situations. In contrast, in negative situations, fitting well with the normative emotional patterns was associated with feeling worse.

This pattern aligns with an unexpected finding from De Leersnyder et al. (2015), who observed that for European Americans, emotional fit with their cultural norm in negative autonomy-promoting situations within the family or home context was negatively associated with psychological well-being. The authors explained that emotional fit in such negative situations entails experiencing intense anger and irritation at home, potentially indicating familial conflict, which is detrimental to well-being. Similarly, for adolescents, higher emotional fit in negative situations both at school and home may signal conflicts with family members, teachers, or friends. Such conflicts are likely to be more severe for adolescents, who are particularly sensitive to interpersonal tensions (Collins & Steinberg, 2006), thereby inevitably leading to lower well-being in these contexts.

Further supporting this explanation, a study by Jasini et al. (2018) showed that higher emotional fit correlated with a greater sense of acceptance in positive situations but not in negative ones. Specifically, in positive situations with majority peers, minorities showed higher emotional fit with the majority norm when feeling more accepted (e.g., “I felt respected by the other person”) and less excluded (e.g., “I felt left out”). On the other hand, in negative situations, emotional fit was higher when minorities felt less accepted and more excluded. Jasini et al. (2018) further explored whether emotional complementarity could explain this difference, positing that complementary emotions, such as guilt, rather than replicating normative negative emotions like anger, were experienced to protect high-quality relationships (Keltner & Haidt, 1999). Their results indicated that intense positive, relatedness-promoting emotions, such as respect, mediated the relationship between low emotional fit and high acceptance in negative situations. Thus, higher emotional fit in negative situations might be associated with lower daily well-being due to increased feelings of exclusion and intensified negative emotions. Conversely, feeling

a sense of belonging and acceptance in negative situations might evoke positive emotions, resulting in lower fit with the normative pattern of intense negative emotions but generally positive feelings within that context. Thus, the extent to which minorities feel a sense of belonging and their emotional fit may vary depending on whether the situation is positive or negative, which in turn influences their daily well-being (Lataster et al., 2022).

Alternatively, our measures of daily well-being and emotional experiences in each setting might have inadvertently captured the corresponding affective states, possibly reflecting momentary affect rather than distinct emotional patterns in each valenced situation. Participants completed a daily diary assessing their well-being with two items: how *well* things were going and how *stressed* they were in each setting. Subsequently, they reported their emotional experiences in situations that made them feel *good* and *bad* at each setting. These questionnaires were similar, both probing for positive and negative affect. Consequently, their general affective state in each setting could have influenced their specific emotional experiences in that context, or vice versa. For instance, if a participant had a positive day at school – experiencing smooth interactions and low stress – this general positive affect might manifest in their emotional patterns. They would report more intense positive emotions in positive situations and less intense negative emotions in negative situations, leading to lower emotional fit with the normative emotional pattern in negative situations. This potential confound suggests that future research should employ more distinct measures of well-being and emotions to disentangle these effects and clarify the nuanced relationships between emotional fit and well-being across varying situations.

Limitations and Future Directions

First, emotional fit is assessed by comparing individuals to a single group norm (i.e., the mean emotional pattern). Although we ensured some homogeneity within each majority and minority group by selecting participants with identical cultural backgrounds and examining comparable data structures of their emotional patterns, the established norm for each culture is subject to change. Variations in sample composition or segments can shift the average majority and minority patterns,

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meaning they may not always represent the true norm of each culture. This variability can challenge both reproducibility and generalizability, as well as make it difficult to capture the actual norms that participants contend with in their daily lives. Previous studies have shown that minorities tend to have higher fit with local majorities (e.g., classmates) compared to the average across all majorities (Jasini et al., 2019). This suggests that fitting with the proximal environment may be a more accurate measure for assessing frame-switching than using group or culture-level fit. Future research should consider using more proximal samples when computing norms to better capture emotional fit with the immediate environment.

Second, while each cultural context was hypothesized to be culturally salient enough to elicit distinct emotional patterns, these contexts often exhibited mixed cultural elements. Our study design did not comprehensively capture the diversity of cultural backgrounds and focused primarily on the majority-minority dichotomy. For instance, at school – hypothesized to be the majority context – we found that minorities engaged more with other minority peers than with majority peers. Furthermore, minorities interacted with both co-ethnic and other ethnic minority individuals, making their interactions more culturally heterogeneous. This means that the minority context (i.e., interactions with non-majority individuals) was not fully represented by the minority cultural norm in our study, which was limited to the shared norm of Middle Eastern/African and Eastern European participants. To capture emotional frame-switching more effectively, future research can consider experimental designs that manipulate cultural saliency within one minority cultural group or have a large, representative sample for each cultural group to better reflect the complexity and diversity of real-world cultural contexts.

Finally, the present study utilized Dutch questionnaires, even though language has been found to be an important cultural prime in previous studies (Perunovic et al., 2007; Zhou et al., 2021). The use of Dutch, the majority language, could have influenced the participants' responses and their emotional fit with the majority culture. Future research should investigate the impact of different survey languages on emotional fit to determine how language primes shape emotional experiences and to rule out language as a confounding factor. For instance, limiting

the sample to a minority group and administering questionnaires in either the majority or heritage languages, while controlling for the language used, could help isolate the role of cultural context in emotional experiences, independent of questionnaire language effects.

Conclusion

The present study provides valuable insights into the daily emotional lives of immigrant minorities as they navigate both majority and minority cultural contexts. Immigrant-origin adolescents demonstrated greater emotional fit with minority peers at home than at school and exhibited greater fit with the majority peers through Dutch language use and interactions with majority group members. For many participants in this sample, school turned out to be more of a minority context, and consistently, the participants aligned more closely with the minority emotion norm than the majority emotion norm. Emotional fit in either context (majority or minority) was beneficial in positive situations, but detrimental to daily well-being in negative situations. This study underscores the complexity of immigrant minorities' culturally rich daily lives, characterized by fluidity and heterogeneity rather than a simple dichotomy between majority and minority cultures.

CHAPTER 4

Typology of emotional acculturation: Exploring individual differences in emotional fit across cultural contexts among immigrant-origin adolescents

This chapter is based on: Lee, Y., Hoemann, K., Ceulemans, E., & Mesquita, B. (2024). Typology of emotional acculturation: Exploring individual differences in emotional fit across cultural contexts among immigrant-origin adolescents. Manuscript in preparation.

4.1 Introduction

Immigrant-origin minorities undergo shifts in their emotional experiences upon sustained contact with another culture, a phenomenon termed *emotional acculturation* (De Leersnyder et al., 2011). Empirical evidence suggests that minorities who frequently engage with either the majority or their heritage culture, particularly through friendships, show greater similarity in experienced emotions, or *emotional fit*, with each respective culture (De Leersnyder et al., 2020; Jasini et al., 2019). Moreover, the degree of emotional fit varies significantly between majority-dominated and minority-dominated contexts – on average (Lee et al., 2024a).

However, not all minorities experience this variation in the same way. Different levels of exposure to each culture in their immediate environments, along with individual preferences and experiences, may shape how they emotionally navigate and balance their daily cultural contexts. Consequently, emotional fit with each cultural norm can vary not only across different contexts but also significantly among individuals. Despite this potential variability, existing research has yet to comprehensively explore individual differences in emotional fit with both cultural norms across daily contexts.

Moving beyond aggregate levels of emotional fit, this study aimed to address this gap by examining individual-level variation in emotional acculturation. Using a person-centered approach, we sought to uncover distinct types of immigrant minorities, each reflecting different patterns of emotional acculturation across daily cultural contexts. Furthermore, we investigated the associations between these types and various acculturation factors as well as adjustment outcomes, thereby deepening our understanding of immigrant minorities' bicultural realities.

Bidimensional Nature of Emotional Acculturation

When immigrants migrate to a new culture, they initially experience a misfit with the culturally normative pattern of emotions, but many increasingly adopt the emotion norm of the “new majority” (De Leersnyder, 2017). Research consistently indicates that contact and exposure to the majority culture are positively correlated with emotional fit with the majority cultural norm (e.g., Jasini et al., 2019; Lee et al.,

2024b), suggesting that subjective emotional experiences undergo acculturation. Specifically, factors such as social interactions with majority peers, generational status (i.e., first, second, and third generation), and the local presence of majority peers were positively related to emotional fit with the majority. Conversely, the use of heritage culture's language was negatively associated with emotional fit. Supporting the relationship between contact and emotional fit over time, a longitudinal study revealed that having majority friends in the previous year predicted a subsequent increase in emotional fit with the majority norm the following year (Jasini et al., 2024).

Similarly, having heritage friends was positively associated with emotional fit with the heritage cultural norm, suggesting that minorities do not lose emotional fit with the cultural norms of their heritage cultures (De Leersnyder et al., 2020). Indeed, a recent study supported the coexistence of emotional fit with both norms within immigrant minorities, indicating that emotional fit with one culture does not come at the expense of emotional fit with the other culture (Lee et al., 2024b). This conclusion was drawn based on the logic presented by Ryder et al. (2000), who argued that acculturation could be considered bidimensional when (a) the level of identification with heritage and majority cultures is not negatively correlated (i.e., either uncorrelated or positively correlated), and (b) heritage and majority identification, respectively, exhibit distinct correlations with other relevant variables rather than an inverse pattern. Consistent with this logic, the study found a positive correlation between emotional fit with both cultural norms, with each fit showing distinct correlations with other relevant variables (Lee et al., 2024b). Specifically, having contact with majority friends was positively associated with emotional fit with the majority norm, yet it was not negatively associated with fit with the minority norm. This finding suggests that emotional acculturation, similar to attitudinal and behavioral acculturation, is not unidimensional. Fitting with one cultural norm does not imply misfit with another, indicating that these are two independent processes.

Typology of Emotional Acculturation

Given the bidimensional nature of emotional acculturation, minority individuals may differ in their level of fit with different cultures, and their emotions could be further shaped by various daily cultural contexts. Although no studies have specifically theorized individual differences in navigating bicultural environments in terms of emotional fit, the explicit acculturation literature has shown multiple strategies for doing so. For example, Berry (1992) introduced four acculturation strategies: *assimilation* (high majority culture adoption and low minority culture maintenance), *separation* (low majority culture adoption and high minority culture maintenance), *biculturalism* (high majority culture adoption and high minority culture maintenance), and *marginalization* (low majority culture adoption and low minority culture maintenance). Among these strategies, biculturalism is the most commonly embraced by immigrant minorities, while separation is rarely, if ever, adopted within these communities. (Schwartz & Zamboanga, 2008; Unger et al., 2002).

Moreover, Lafromboise et al. (1993) proposed *alternation* as a type of biculturalism, which involves the ability to switch between distinct cultural contexts. For example, individuals might speak their heritage language in heritage context and the majority language in majority context to meet situational cultural demands. This phenomenon of shifting between norms, values, beliefs, and behaviors depending on the salient cultural context or cues, documented at the group level in bicultural individuals, is known as *cultural frame-switching* (Hong et al., 2000). In a similar vein, studies on emotional fit of immigrant minorities suggest that emotional experiences are often context-specific. At the aggregate level, immigrant minorities experience emotions more congruent with the norms of their current cultural context. For instance, they show higher emotional fit with the majority culture in majority contexts (speaking Dutch and interacting with Belgian majorities) than in minority contexts (Lee et al., 2024a). Conversely, they show higher emotional fit with the minority cultural norm at home than at school. Another study found that second-generation immigrants fit better with the majority cultural norm in majority contexts such as school and work, while first-generation immigrants fit better with the

minority cultural norm in the minority context of home (De Leersnyder et al., 2020). Furthermore, Zhou et al. (2021) found that among Chinese-English bilinguals who were newcomers in the UK (less than one year), those who completed a survey in English exhibited higher emotional fit with the typical British pattern, while those who completed the survey in Chinese showed higher fit with the typical Chinese pattern. These findings suggest that, at the aggregate or group level, minorities' emotional experiences shift alongside cultural contexts, or frames, to align with the predominant norms. This process, akin to cultural frame-switching in other psychological domains, suggests that alternating biculturalism could also manifest at the individual level in emotional acculturation.

More recent studies have found that some biculturals engage in *incongruent cultural frame-switching*, in which they contradict the norms of a given cultural context or cue (Benet-Martínez et al., 2002). Interestingly, whether their responses are congruent or incongruent with the given cultural context depended on bicultural identity integration (BII; Benet-Martínez & Haritatos, 2005). BII refers to the degree to which minorities' two cultural identities are perceived as blended versus compartmentalized and harmonious versus conflicting. For example, East Asian-Americans with low BII, meaning they view their two cultural identities to be less integrated (but still strong identification with both cultures), behaved in a manner more consistent with typical Asian values of group harmony in the American-primed condition rather than in the Asian-primed condition (Mok & Morris, 2010). Motivation to protect cultural identity has been proposed as the underlying mechanism for this phenomenon.¹ Mok and Morris (2013) tested whether individuals with low BII exhibit a contrasting response as a defense mechanism to protect their cultural identity of non-cued culture when exposed to cues of another

¹ Another proposed mechanism is the valence discrepancy between the identities of individuals with low BII and cultural primes, although empirical evidence is inconsistent. The priming literature suggests that individuals tend to contrast with primes perceived as nonrepresentative or dissimilar to themselves. Low BII individuals, often having negative acculturation experiences, may respond incongruently to positively valenced cultural primes (e.g., Mickey Mouse) used in past studies (Benet-Martínez et al., 2002). Cheng et al. (2006) supported this idea, showing incongruent cultural frame-switching among low BII individuals with positive cues, but congruent cultural frame-switching with negative cues. However, another study found no significant effect of cue valence on the influence of BII on response styles (Mok & Morris, 2009).

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culture. Their findings indicated that the perception of identity exclusion threat mediated the impact of BII on response styles. This suggests that individuals with low BII perceive situations dominated by one culture as a threat to their identity and thus act counter to the cultural norm to preserve their other cultural identity.

In addition to alternation, Lafromboise et al. (1993) introduced another type of biculturalism known as *fusion*, a strategy of *blending* that entails mixing elements of both cultures.² For example, individuals may develop a merged cultural identity from two cultures, such as Anglo-Indian, Chicano/a, or Turkish-Belgian (Phinney & Devich-Navarro, 1997). BII measures the individual differences in this blended biculturalism in the identity domain (Benet-Martínez & Haritatos, 2005; Schwartz et al., 2019). Studies on BII have shown that it is associated with various benefits, including better psychological well-being (Chen et al., 2008) and larger, denser social networks of majority friends (Mok et al., 2007). Two studies suggest the potential presence of blended biculturalism as a type of emotional acculturation. Zhou et al. (2021) found that Chinese-English bilinguals who had spent more than one year in an English-speaking country showed no significant difference in their emotional fit with typical Chinese and English emotional patterns, regardless of the survey language. This suggests they may have blended different emotional patterns to fit both cultures equally well. However, those who had spent one year or less in an English-speaking country showed the typical pattern of cultural frame-switching. De Leersnyder et al. (2020) also found that first- and second-generation immigrants showed equal emotional fit with both majority and heritage cultures in certain contexts. This implies that blending, in the form of fitting equally well with both norms, may occur among immigrants.

² More recent research suggests that minorities can manifest both blending and frame-switching across various facets of bicultural experiences, including identity and behavior (Benet-Martínez et al., 2021). An individual's identity or attitudinal acculturation type may not necessarily correspond to their behavioral acculturation type. For instance, a minority individual may identify with both cultures (blending) while exhibiting behaviors typical of each culture in different contexts (cultural frame-switching), rather than displaying a mixed pattern of behavior. For a typology encompassing both behavioral and identity aspect of acculturation, see Birman (1994).

The Present Study

Immigrant minorities navigate between majority and minority cultures in diverse ways. Recognizing this heterogeneity, our study aimed to identify distinct types of emotional acculturation among immigrant minorities. We focused on immigrant-origin minority adolescents in secondary Belgian schools because they naturally navigate two distinct cultural contexts – home and school – on a daily basis. These minority adolescents were asked to report, each school day for a week, on positive and negative emotional situations they encountered at school and at home. We examined how their emotional tendencies in these two contexts aligned with those of other minority students and majority peers by computing their emotional fit with both cultural norms in all situations. By applying latent profile analysis to these emotional fit scores, we identified subgroups of minority adolescents or types of situated emotional fit in a data-driven manner.

Based on prior literature, we postulated the existence of five types of emotional acculturation. Table 1 presents a summary and illustration of each. These types were pre-registered, along with our analysis plan, on the OSF at <https://osf.io/aydzg>.

Our first hypothesized type, *assimilation*, is based on Berry's (1974) assimilation strategy, where immigrants adopt the new culture at the expense of their heritage culture. Given the general assimilative pressure to adopt the Belgian majority culture in Belgian schools (Agirdag, 2010), we expect that some immigrant-origin minority adolescents will report emotional experiences similar to their majority peers in all situations, with higher emotional fit with the majority norm regardless of context. This type of emotional acculturation may best be described as assimilation.

Our second hypothesized type, *preservation*, is based on Berry's (1974) separation strategy, where immigrants maintain their heritage culture without contact with the new culture. This type might be prevalent in ethnic enclaves in Belgium. Minorities who report emotional experiences more similar to their minority peers in all situations, with higher emotional fit with the minority norm regardless of context, can be described as fitting the type of preservation.

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Our third hypothesized type, *blending*, is informed by blended biculturalism in cultural identity literature, where immigrants mix or blend two or more cultures (Lafromboise et al., 1993). Minorities who show equal fit with both cultural norms across all contexts can be considered as fitting the type of blending.

Our fourth hypothesized type, *congruent frame-switching*, is informed by alternating biculturalism and cultural frame-switching, where immigrants shift between different cultural frames to align with the salient cultural demands (Hong et al., 2000; Lafromboise et al., 1993). Minorities who have higher fit with the majority culture in majority contexts and higher fit with the minority culture in minority contexts can be classified as fitting the type of congruent frame-switching.

Our fifth and last hypothesized type, *incongruent frame-switching*, is informed by studies finding some biculturals engage in cultural frame-switching in a way that contradicts the norms associated with their current cultural context (Benet-Martínez et al., 2002; Mok & Morris, 2010, 2013). Minorities who have higher fit with the minority culture in majority contexts and higher fit with the majority culture in minority contexts can be described as the type of incongruent frame-switching.

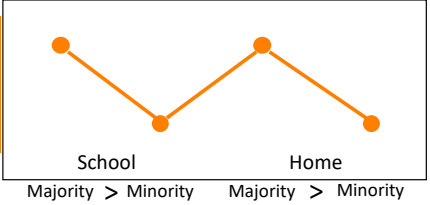
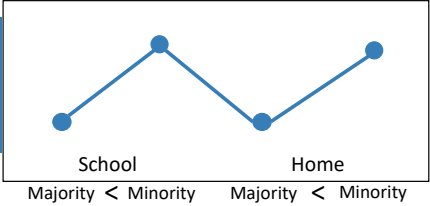
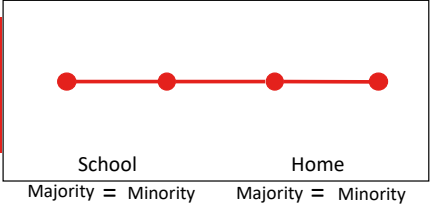
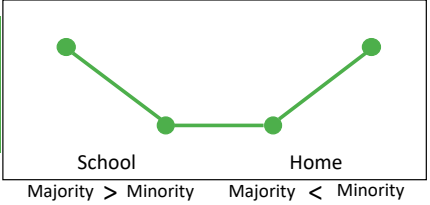
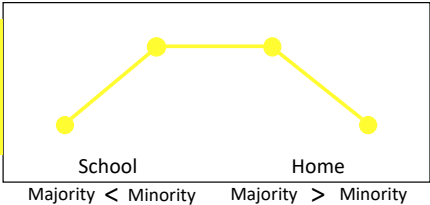
We also examined whether contact with the majority culture, BII, and perceived discrimination predict the likelihood of specific types of situated emotional fit. We expected that minorities with greater contact with the majority culture and higher levels of BII would be more likely to be classified within two types of biculturalism – *blending* and *congruent frame-switching* – while those reporting higher levels of perceived discrimination would be less likely to fall into these types.

Social contact with the majority cultural group has consistently predicted emotional fit with the majority norm (De Leersnyder et al., 2011; Jasini et al., 2019). These interactions may equip minorities with the emotional repertoire of the majority culture (Jasini et al., 2023), enabling them to flexibly switch between different cultural frames or blend to fit both norms across contexts. Additionally, minorities with high BII, who perceive their bicultural identities as harmonious and complementary, are more likely to engage in congruent cultural frame switching (Benet-Martínez et al., 2002). Alternatively, high BII means two identities are well integrated, potentially leading to blending in the domain of emotions. Lastly, among

acculturating youths, those who adopt biculturalism as their acculturation strategy report the least amount of discrimination (Berry et al., 2006), suggesting a potential link between higher discrimination and a lower likelihood of belonging to the two types.

Furthermore, we expected that minorities within these types would differ in well-being and sense of belonging, with *blending* and *congruent frame-switching* likely reporting higher levels of both compared to other types. This expectation was based on a few previous findings. First, biculturalism as acculturation strategy has been found to be associated with the best adjustment outcomes, such as higher self-esteem and lower depression (Berry et al., 2006). Second, emotional fit with one's cultural norm has been found to be beneficial for relational, psychological, and physical well-being (Consedine et al., 2014; De Leersnyder et al., 2014, 2015). Given this, we expect that minorities who can frame-switch to achieve emotional fit with the norm of the cultural context will have smoother and more positive interactions within that specific cultural context, leading to higher well-being than other profiles. On the other hand, minorities who fit equally well with both cultures may be at liberty to blend different emotional patterns. In such an environment, where they can maintain consistency in their emotional experiences across cultural contexts, their well-being might be higher. Finally, having similar emotions to those around you means sharing a similar view of the world (Frijda & Mesquita, 1994). Emotional fit with the norm of a given context may lead to a higher sense of belonging in that context.

Table 1. *Hypothesized Typology of Emotional Acculturation*

Type	Description	Illustration
Assimilation	Higher emotional fit with the majority norm than the minority norm regardless of context.	<div><div>Emotional Fit</div></div>
Preservation	Higher emotional fit with the minority norm than the majority norm regardless of context.	<div><div>Emotional Fit</div></div>
Blending	Equal emotional fit with the majority norm and minority norm regardless of context.	<div><div>Emotional Fit</div></div>
Congruent Frame-Switching	Higher fit with the majority than the minority norm in the majority context and higher fit with the minority than the majority norm in the minority context.	<div><div>Emotional Fit</div></div>
Incongruent Frame-Switching	Higher fit with the minority than the majority norm in the majority context and higher fit with the majority than the minority norm in the minority context.	<div><div>Emotional Fit</div></div>

4.2 Method

Participants

The dataset used in this study was drawn from a larger research project. For details on the procedure and preliminary analyses used to validate the sample, see Lee et al. (2024a).

The original study recruited a sample of 510 adolescents from three secondary schools in Flanders, Belgium, including 324 with an immigrant history and 186 without. We applied the same exclusion criteria as the original study, resulting in the removal of 66 participants due to insufficient or inconsistent data, 39 third-generation participants, and 24 participants with Western European backgrounds, as previous studies found no significant differences in their emotional fit with Belgian majority peers (Jasini et al., 2019). Additionally, we excluded 26 participants with English-speaking ($n = 1$), Latin American ($n = 15$), South Asian ($n = 8$), and Confucian ($n = 2$) cultural backgrounds due to their small sample sizes and non-distinct emotional patterns compared to Belgian majority adolescents in preliminary analyses. One participant who did not report any negative situations at home was also excluded, as this was necessary for the current analyses.

This resulted in a final sample of 180 minority adolescents with Eastern European, Middle Eastern, and African cultural backgrounds (38 first-generation and 142 second-generation), who exhibited similar emotional patterns and were thus considered to represent the same minority culture for the present analyses. Additionally, data from 174 majority adolescents without a migration history up to three generations were used to establish the majority cultural norm. The minority adolescents ($M = 15.7$ years, $SD = 1.41$, range = 13.1-18.8) included 113 girls, 60 boys, 2 non-binary individuals, and 6 who preferred not to disclose their gender. The majority adolescents ($M = 15.7$ years, $SD = 1.23$, range = 13-18.6) included 109 girls, 62 boys, 1 non-binary individual, and 2 who preferred not to disclose their gender. There were no significant differences in age ($t(341) = -0.20$, $p = .84$) or gender distribution ($\chi^2(1) = 0.03$, $p = .85$) between the minority and majority groups.

Participants were compensated 10 euros for completing the pre-diary survey and the first diary, and 2 euros for each additional diary. Completing the final diary

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and post-diary survey earned an additional 30 euros, with total remuneration ranging from 10 to 50 euros based on participation.

Procedure

Participants completed the first pre-diary survey about their demographic information a week before the start of the diary collection. On the day of the first diary entry, they filled out a second pre-diary survey about their well-being. Following these surveys, they began their daily diaries for seven consecutive school days, reporting their daily emotional situations, both positive and negative, at school and at home. After completing the last diary entry on day seven, participants filled out post-diary surveys assessing their level of contact with the majority, BII, perceived discrimination, and sense of belonging. For all surveys and diaries, participants received links to Qualtrics via email at approximately 3:30 P.M. All survey items were presented in Dutch, the official language of Flanders, Belgium. The KU Leuven Social and Societal Ethics Committee approved all study procedures (Approval No. G-2021-3636).

Measures

Emotional Patterns

To measure emotional patterns, we used the Emotional Patterns Questionnaire (EPQ; De Leersnyder et al., 2011). Participants were prompted to recall and describe each situation type in writing as follows: “Think about one situation that made you feel good (bad) at school (home) today. Please briefly describe in 2-3 sentences what happened.” After each recall, they rated how intensely they felt 14 different emotions during the situation on a scale of 1 (not at all) to 5 (very strongly). The emotions were presented in the following order: “good”, “happy”, “sad”, “proud”, “guilty”, “connected”, “frustrated”, “excited”, “ashamed”, “angry”, “indebted”, “relying on others”, “disappointed”, and “respectful to others”. This set of emotions represents the dimensions of valence and social engagement (interpersonally connected/engaging vs. disengaging), which have been empirically

validated in prior cross-cultural studies (e.g., Jasini et al., 2018; Kitayama et al., 2000).

Potential Predictors of Emotional Acculturation Typology

Contact with the majority. We measured the general level of social contact with the majority culture using a proxy composite index. This index was calculated by averaging the frequency of speaking Dutch with friends (“How often do you talk in Dutch with friends?”) and classmates (“How often do you talk in Dutch with classmates?”) to approximate overall contact with the majority peers. Participants rated the questions on a five-point Likert scale ranging from 1 (never) to 5 (always).

Bicultural identity integration (BII). We measured BII using a 12-item shortened version of the BIIS-2 (Huynh et al., 2018), which was validated through focus group discussions with bicultural youth in Belgium (Jasini et al., 2018). The scale assessed two factors: cultural blendedness (versus compartmentalization) and cultural harmony (versus conflict). Blendedness measures the perceived overlap between two cultures, while harmony assesses the perceived compatibility between them, each factor comprising six items. Participants rated their level of agreement with each statement on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach’s alpha for harmony and blendedness was 0.67 and 0.74 respectively, showing acceptable internal consistency.

Perceived discrimination. We measured the frequency of discriminatory experiences in daily life using the five-item Everyday Discrimination Scale (Stucky et al., 2011). Participants rated how often they experienced discrimination due to their cultural background on a Likert scale ranging from 1 (never) to 5 (almost every day). Cronbach’s alpha was 0.86, showing high internal consistency among the items.

Potential Outcomes of Emotional Acculturation Typology

Well-being. To capture the multifaceted aspects of well-being, we measured three major components for adolescents: physical health, mental health, and life satisfaction. Physical and mental health were measured using the 19-item KIDSCREEN-52 (Ravens-Sieberer et al., 2005), which covers the dimensions of

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physical well-being (physical activity, energy, and fitness), psychological well-being (positive emotions and perception), and moods and emotions (experiences of depressive emotions and stressful feelings). Because the KIDSCREEN-52 only samples positive emotions that are normatively high in arousal (e.g., cheerful, full of energy), we added two items to measure low-arousal positive emotions: “Have you felt calm?” and “Have you felt relaxed?”. We validated our revised scale through both exploratory and confirmatory factor analyses, which suggested that low-arousal positive emotions loaded onto a separate, fourth dimension (‘tranquility’); see Appendix A4.1 (pp. 89–90) for details. Cronbach’s alpha for each dimension ranged from 0.67 (tranquility) to 0.88 (moods and emotions), indicating acceptable internal consistency.

We measured life satisfaction using 39 items from the Multidimensional Students’ Life Satisfaction Scale (Gilligan & Huebner, 2007), which covers five dimensions: family, friends, school, living environment, and self. We added two items (“I wish I had different parents”, “Teachers help me when I need it”) and replaced the original item of “this town is filled with mean people” with “I don’t feel safe in my environment.” See Appendix A4.1 (p. 90) for information on scale validation. Cronbach’s alpha for each dimension ranged from 0.80 (self) to 0.87 (family), indicating high internal consistency.

Sense of belonging. We measured sense of belonging at school using six items from Walton and Cohen (2007). We added a set of six items to measure sense of belonging at home, in which we changed “school” to “home” and “friends” to “family” in the items (e.g., “I get along with people at my school” and “I get along with my family at home”). See Appendix A4.1 (p. 91) for information on scale validation. Cronbach’s alphas for school and home were 0.82 and 0.88, respectively, indicating high internal consistency.

Academic engagement. As part of the exploratory analysis, we used a measure of active engagement in academic activities consisting of 12 items from a scale by Skinner et al. (2008). This scale included three items each for behavioral engagement (“I work as hard as I can in class”), emotional engagement (“I enjoy learning new things in class”), behavioral disaffection (“My mind wanders in class”), and emotional disaffection (“Class is not fun for me”). The behavioral dimension

assessed students' effort and attention, while the emotional dimension measured positive affect, such as enthusiasm and enjoyment during learning activities. Engagement captures goal-directed and focused interactions within the environment, whereas disaffection reflects not only a lack of engagement but also maladaptive behaviors such as withdrawal and emotions like boredom during learning activities. Cronbach's alpha for each dimension ranged from 0.53 (emotional disaffection) to 0.79 (behavioral engagement). Although the emotional disaffection dimension exhibited lower reliability, this is not uncommon for scales with a limited number of items.

Perceived diversity climate. As part of the exploratory analysis, we used six items from Multicultural–Colorblind Scale (Ryan et al., 2007). This scale assessed the perceived diversity climate at school regarding multiculturalism and colorblindness among different sociocultural groups. It measured two dimensions: multiculturalism (acknowledging and valuing cultural differences) and colorblindness (ignoring or minimizing cultural differences). Participants read statements about their school (e.g., “Differences between socio-cultural groups are recognized or acknowledged”) and rated their agreement on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha for the multiculturalism and colorblindness dimensions were 0.59 and 0.62, respectively, indicating low internal consistency, likely due to the small number of items per dimension.

Demographic Variables

Age. Participants provided their birthdates which were used to calculate their age.

Gender. Gender was self-reported with the question “Which gender identity do you most identify with?” Options included Girl, Boy, and X for non-binary gender.

Socioeconomic status (SES). We measured SES using the seven-item Family Affluence Scale (FAS; Hobza et al., 2017). The FAS assessed family finances through questions about car ownership, number of bathrooms, and other factors. We tailored the scale by replacing the question on dishwasher ownership with one on tumble

dryer ownership and adding a question about hiring household staff to better reflect the nuanced indicators of socioeconomic status in Belgium.¹

Statistical Analyses

Computing Emotional Fit

We included emotion ratings for analysis only if the situation description matched the prompted type. Four Dutch-speaking coders evaluated matches in terms of valence (positive, negative, neutral) and setting (home, school), with high inter-coder agreement ($\kappa > 0.95$). Based on this high agreement, we proceeded with the data from the two coders who were paired most frequently. Situations were excluded if the description was deemed neutral, if the mean intensity of positive emotions (good, happy, proud, connected, excited, reliant on others, and respectful to others) was lower than the mean intensity of negative emotions (sad, guilty, frustrated, ashamed, angry, indebted, disappointed) in positive situations, and if mean negative intensity was lower than mean positive intensity in negative situations. Situations were also excluded if they did not match the prompted context (e.g., reporting an argument with parents for a school prompt) or if participants indicated no relevant experience. Minority participants reported an average of 23.34 valid situations out of a possible 28, with 17% missing and excluded situations (see Appendix 3.3 for exact counts).

Following previous research (Lee et al., 2024b), we computed emotional fit by comparing participants' emotion intensity ratings to the normative patterns of majority and minority adolescents, which represented the respective cultural norms. First, we grand-mean centered each emotion item across all participants and situation types to adjust for general tendencies to rate positive emotions higher and negative emotions lower (Kenny et al., 2006). We then averaged intensity ratings for each emotion across the participants in each cultural group to establish the majority and minority cultural norms: profiles of emotion intensity across the 14 emotion items.

¹ These changes were intended to provide a clearer distinction of economic status, as tumble dryers are less common and household staff hiring more directly reflects disposable income and lifestyle choices.

Pearson correlations between these profiles and the profile of intensity ratings for each reported situation yielded up to 56 emotional fit scores per participant (4 situation types \times 2 target cultural groups \times 7 days). These Pearson correlation coefficients were Fisher transformed for normality. Finally, we averaged each participant's Fisher-transformed fit scores for each situation type, yielding 8 fit scores (4 situation types \times 2 target cultural groups) per person that we used to identify a typology of emotional acculturation. By using aggregated fit scores, we ensured more interpretable and reliable results in the latent profile analysis.

Identifying A Typology of Emotional Acculturation

We used the 'mclust' function from the *mclust* package (Scrucca et al., 2023) in R to identify a unique typology of emotional acculturation using 8 scores of emotional fit with the majority and the minority in 4 types of situations (i.e., positive/negative \times school/home). Gaussian finite mixture models were fitted from 2 profiles up to 9 profiles (the default maximum setting), to determine the optimal number of clusters. We evaluated four models in order of increasing complexity: (1) EEI, with equal variances across different profiles and covariances between variables fixed at 0; (2) EEE, with equal variances across different profiles and equal covariances between variables; (3) VVI, where variances are allowed to vary freely across profiles while covariances between variables are fixed at 0; and (4) VVV, with both variances and covariances freely estimated, providing the most flexibility. These configurations are most commonly used in the literature for their balance between flexibility and interpretability (Fraley & Raftery, 2002; Pastor et al., 2007; Rosenberg et al., 2018). The Expectation-Maximization algorithm was employed for the estimation process. This iterative method maximized the likelihood of the observed data given the model parameters.

Model selection relied on the Bayesian Information Criterion (BIC), ensuring a good balance between model fit and complexity. Following this, we conducted the Bootstrap Likelihood Ratio Test (BLRT) to test the statistical significance of adding more profiles by comparing the likelihood of the model with $k - 1$ profiles against the model with k profiles. If the p -value from the BLRT was below the significance level

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of .05, we rejected the null hypothesis, indicating that the model with k profiles provided a significantly better fit.

We assessed classification quality using two key metrics: average posterior classification probabilities and entropy. Posterior classification probabilities represent the mean membership probabilities of individuals for each profile, with values of 0.70 or higher considered desirable, indicating strong classification confidence at the individual level (Masyn, 2013). Entropy provides a summary measure of classification uncertainty for the model as a whole, with values of 0.80 or higher being desirable, reflecting a high level of certainty in profile assignment across the entire sample (Asparouhov & Muthén, 2014).

Additionally, we conducted visual inspections of the classification plots to identify clear and meaningful differences among profiles, ensuring the selection of the most fitting model. Visual inspections, while somewhat subjective, provided an extra layer of verification to complement the quantitative indices by comparing the plotted profiles against theoretical expectations. After selecting the best fitting model based on these criteria, each participant was assigned to a profile according to the highest classification probability.

Testing Potential Predictors of Emotional Acculturation Typology

We examined the relationships between the typology of emotional acculturation and their potential predictors (e.g., contact with the majority) using multinomial logistic regressions. These regressions were conducted using the ‘multinom’ function from the *nnet* package in R (Venables & Ripley, 2002), controlling for age, gender, and SES. This analysis allowed us to examine whether increases in predictor variables were associated with a higher probability of being categorized into specific profiles.

Testing Potential Outcomes of Emotional Acculturation Typology

We assessed the relationship between the typology of emotional acculturation and their potential outcomes (e.g., well-being). Specifically, we conducted a set of one-way ANOVAs using the ‘aov’ function from the default *stats*

package in R to compare the means of well-being and sense of belonging across the latent profiles, determining if these outcomes significantly differed among the profiles. When the ANOVA results were significant, post-hoc comparisons were performed using Tukey's HSD test with the TukeyHSD function from the same package, which adjusts for multiple comparisons to control for Type I error.

4.3 Results

Typology of Emotional Acculturation

The best fitting model based on BIC was a four-profile solution with an EEE model (equal variance and equal covariances). The Bootstrap Likelihood Ratio Test (BLRT) indicated significant improvements in fit from two to three profiles (LRTS = 63.30, $p = .001$), from three to four profiles (LRTS = 63.25, $p = .001$), and a marginal improvement from four to five profiles (LRTS = 26.45, $p = .059$). Therefore, we selected the four-profile solution as the most suitable model for our data. The average posterior class probabilities for each profile exceeded the desirable threshold, with values of 0.89, 0.84, 0.96, and 0.99 for profiles 1, 2, 3, and 4, respectively, indicating high confidence in the classification accuracy. Similarly, the entropy value of 0.81 surpassed the desirable threshold, suggesting clear delineation between profiles. Figure 1 shows the four-profile solution (i.e., types) with means across emotional fit scores in eight situations.

Although we did not find all five hypothesized types of emotional acculturation, we identified three expected types. Notably, the differences in emotional patterns across profiles were mainly driven by emotional fit in positive situations, except for Profile 4. The other three profiles did not differ in their emotional fit across four negative situations, both within and between the profiles. Therefore, the following comparisons are based on patterns of emotional fit primarily in positive situations.

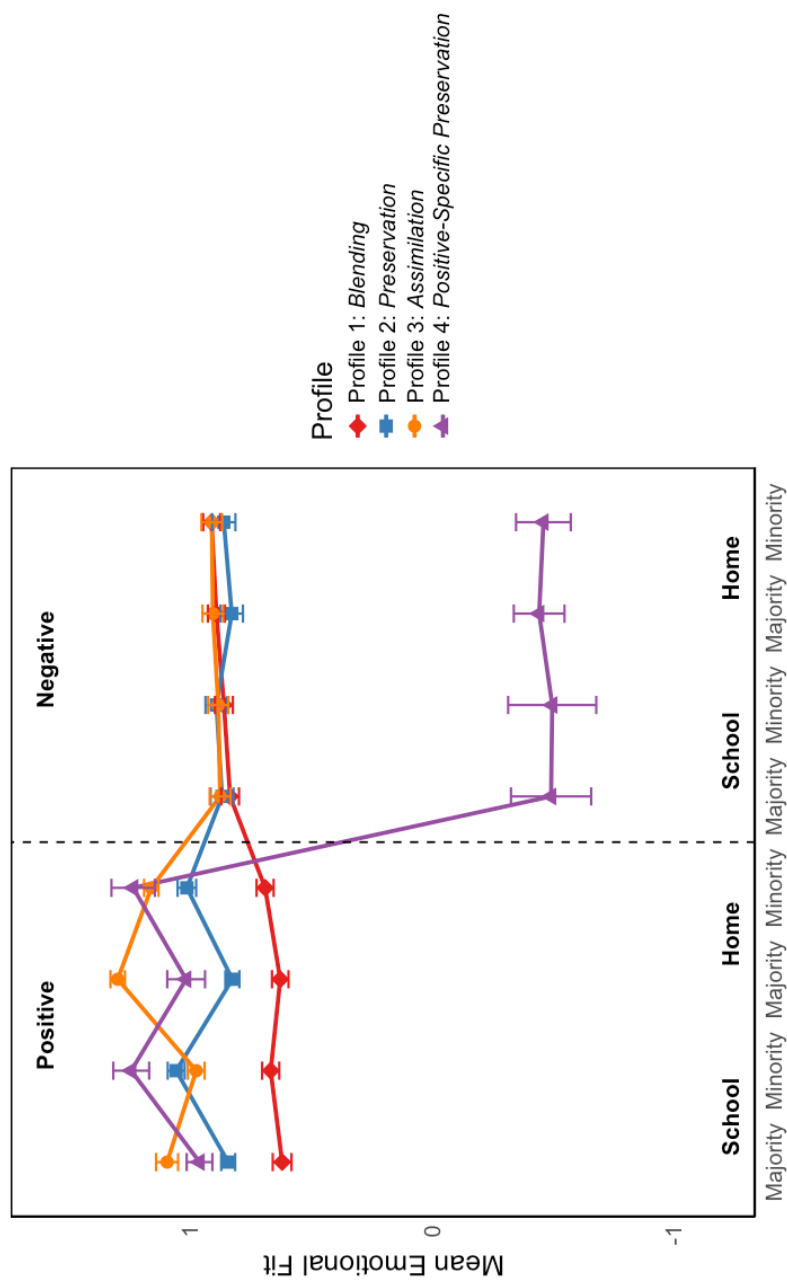


Figure 1. *Four-Profile Solution from Latent Profile Analysis*

Note. The x-axis depicts emotional fit with majority and minority cultural norms across eight different positive and negative situations at school and home. Mean scores of emotional fits per profile are shown on the y-axis. Error bars represent standard errors for each emotional fit score.

First, participants in Profile 1 (red diamonds ♦ in Figure 1), which comprised 46% of the sample ($n = 83$), exhibited the emotional acculturation type of the *blending*. Minority adolescents in this profile showed no difference in their emotional fit between the majority norm and minority norm across contexts. Although we did not have specific expectations regarding the absolute level of fit across types, they showed the lowest emotional fit with both norms in all positive situations compared to the other three profiles. As expected, there was a group of minorities who showed equal fit with both norms across different contexts but had the lowest fit with both norms.

Second, participants in Profile 2 (blue squares ■ in Figure 1), which comprised 21% of the sample ($n = 38$), demonstrated the type of the *preservation*. Minority adolescents in this profile showed higher emotional fit with the minority norm than with the majority norm across all contexts in positive situations. Regardless of whether they were at home or at school, they experienced emotions in a way that was more typical of their minority peers than their majority peers. They also exhibited higher emotional fit with both norms in positive situations compared to Profile 1 (*blending*).

Third, participants in Profile 3 (orange circles ● in Figure 1), which comprised 29% of the sample ($n = 53$), matched the type of the *assimilation*. Minority adolescents in this profile showed higher emotional fit with the majority norm than with the minority norm across contexts, suggesting that they experienced emotions more similar to their majority peers than their minority peers, regardless of the context. They demonstrated the highest emotional fit with the majority norm among all profiles in positive situations.

Finally, we identified a small profile with only 6 participants, comprising 3% of the sample. Minority adolescents in this profile, Profile 4 (purple triangles ▲ in Figure 1), exhibited a similar pattern to the *preservation* in positive situations, showing higher emotional fit with the minority norm than with the majority norm across contexts. They indeed showed the highest emotional fit with the minority norm among all profiles in positive situations. However, their emotional fit with both norms in negative situations was extremely low. By examining individual reports on the

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intensity of emotions experienced in these situations, we found that they reported higher positive emotions than average, particularly engaging positive emotions such as feeling connected, relying, and respectful in negative situations, making their emotional pattern distinctively different from the rest of the sample (for this investigation, see Appendix A4.2). Acknowledging the heterogeneity of different emotional patterns, we decided to retain the profile for descriptive purposes and named it the *positive-specific preservation*. However, we excluded this profile from subsequent analyses due to concerns about statistical robustness and potential biases in inferential analyses arising from its small size. Table 2 presents the means and standard deviations of emotional fit in each situation and summarizes the results from one-way ANOVA and post-hoc tests, highlighting differences in emotional fit across profiles.

Table 2. *Comparison of the Four Profiles on Emotional Fit*

Measure of Emotional Fit	Profile 1: Blending (n = 83; 46%)	Profile 2: Preservation (n = 38; 21%)	Profile 3: Assimilation (n = 53; 29%)	Profile 4: Positive-Specific Preservation (n = 6; 3%)	F	Post-hoc
Positive School Majority	0.63 (0.35)	0.84 (0.18)	1.10 (0.33)	0.96 (0.13)	35.97***	1 < 2 < 3
Positive School Minority	0.66 (0.32)	1.06 (0.22)	0.98 (0.25)	1.25 (0.18)	34.62***	1 < 2, 3
Positive Home Majority	0.63 (0.31)	0.82 (0.18)	1.32 (0.22)	1.02 (0.19)	114.48***	1 < 2 < 3
Positive Home Minority	0.68 (0.32)	1.02 (0.24)	1.17 (0.22)	1.24 (0.22)	55.51***	1 < 2 < 3
Negative School Majority	0.84 (0.34)	0.87 (0.29)	0.86 (0.31)	-0.50 (0.41)	0.21	1 = 2 = 3
Negative School Minority	0.86 (0.34)	0.90 (0.28)	0.87 (0.31)	-0.50 (0.45)	0.16	1 = 2 = 3
Negative Home Majority	0.89 (0.32)	0.83 (0.29)	0.90 (0.31)	-0.45 (0.26)	0.73	1 = 2 = 3
Negative Home Minority	0.91(0.32)	0.86 (0.30)	0.90 (0.31)	-0.47 (0.28)	0.36	1 = 2 = 3

Note. For post-hoc analyses, we used Tukey's HSD.

*** $p < .001$

Table 3 presents descriptive statistics for all profiles and compares demographic variables of Profiles 1-3, revealing no significant differences.

Table 3. *Descriptive Statistics of Demographic Variables*

Demographic Variables	Profile 1: <i>Blending</i> (n = 83; 46%)	Profile 2: <i>Preservation</i> (n = 38; 21%)	Profile 3: <i>Assimilation</i> (n = 53; 29%)	Profile 4: <i>Positive-Specific Preservation</i> (n = 6; 3%)	<i>F/χ²</i>
Age, <i>M(SD)</i>	15.6 (1.41)	15.7 (1.48)	16.1 (1.38)	15.1 (1.71)	1.96
SES, <i>M(SD)</i>	15.3 (2.09)	15.2 (2.35)	15.5 (2.23)	15 (2.53)	0.30
Gender, <i>N (%)</i>					0.78
Female	50 (60%)	26 (68%)	34 (64%)	2 (33%)	
Male	27 (33%)	12 (32%)	17 (32%)	4 (67%)	
X	2 (2%)				
School, <i>N (%)</i>					1.28
A	35 (42%)	18 (47%)	22 (41%)	3 (50%)	
B	26 (31%)	11 (29%)	20 (38%)	1 (17%)	
C	22 (27%)	9 (24%)	11 (21%)	2 (33%)	
Generation, <i>N (%)</i>					0.31
First	19 (23%)	8 (21%)	10 (19%)	1 (17%)	
Second	64 (77%)	30 (79%)	43 (81%)	5 (83%)	
Home culture, <i>N (%)</i>					0.65
Eastern Europe	25 (30%)	13 (34%)	14 (26%)	2 (33%)	
Middle Eastern /African	58 (70%)	25 (66%)	39 (74%)	4 (67%)	

Note. For continuous variables (age and SES), means (*M*) and standard deviations (*SD*) are reported, and ANOVAs are used for comparisons. For categorical variables (school, generation, and home culture), counts (*N*) and percentages (%) are reported, and chi-square tests are used for comparisons.

Potential Predictors of Emotional Acculturation Typology

We examined whether contact with the majority, BII, and perceived discrimination were significantly associated with the emotional acculturation typology by running a set of multinomial logistic regression analyses. Profile 1 (*blending*; equal fit with both norms) was used as the reference category because it

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was the most common profile observed in the data. Table 4 shows the odds ratios and regression coefficients for all predictors.

We found that increased contact with majority peers marginally increased the odds ($OR = 1.91$) of being classified in Profile 3 (*assimilation*; higher fit with the majority than the minority) compared to Profile 1. An exploratory analysis of individual items revealed that the marginal association was driven by the frequency of speaking Dutch with friends, not classmates. Specifically, the odds of being categorized in Profile 3 (assimilation) versus Profile 1 (blending) were 1.91 times higher for each additional unit increase in the frequency of speaking Dutch with friends (e.g., moving from “sometimes” to “often”). Minority adolescents who reported speaking Dutch more frequently with their friends were more likely to demonstrate higher emotional fit with the majority than the minority across all (positive) contexts.

Additionally, higher BII in the domain of harmony increased the odds ($OR = 2.38$) of being classified in Profile 3 (assimilation) compared to Profile 1 (blending). This means that minority adolescents who perceived Belgian and their minority cultures as more compatible and less conflicting were more likely to have higher emotional fit with the majority than the minority across all (positive) contexts. Perceived discrimination was not significantly associated with any of the emotional acculturation types.

Table 4. *Logistic Regression Coefficients*

Predictor	Profile 2: <i>Preservationist</i>				Profile 3: <i>Assimilationist</i>			
	β	<i>SE</i>	<i>p</i>	<i>OR</i>	β	<i>SE</i>	<i>p</i>	<i>OR</i>
Majority contact	0.36	0.35	.301	1.43	0.65	0.34	.056	1.91
Majority friend	0.26	0.27	.342	1.29	0.65	0.27	.016*	1.91
Majority classmates	0.35	0.35	.320	1.42	0.25	0.30	.401	1.28
BII: Harmony	0.29	0.35	.406	1.33	0.87	0.33	.009*	2.38
BII: Blendedness	-0.13	0.24	.586	0.88	0.20	0.23	.369	1.23
Discrimination	0.31	0.23	.188	1.36	-0.10	0.22	.630	0.90

* $p < .01$

Potential Outcomes of Emotional Acculturation Typology

We ran a set of one-way ANOVAs to examine whether the three emotional acculturation types differed in their levels of well-being and sense of belonging at school and home. Figure 2 shows the means of the adjustment outcomes per profile. We found that the effect of psychological well-being, measured by positive affect ($F(2, 168) = 4.26, p = .016$), and moods and emotion, measured by negative affect ($F(2, 168) = 4.86, p = .009$), were significant. Post hoc analyses revealed that Profile 3 (assimilation) reported higher positive affect than Profile 1 (blending), while Profile 2 (preservation) reported lower negative affect than Profile 1 (blending). Minority adolescents who exhibited higher emotional fit with either the majority or minority norm across all contexts reported higher psychological well-being compared to those with lower fit levels who balanced their fit with both norms.

We also found that the effects of satisfaction with family ($F(2, 167) = 3.26, p = .041$) and satisfaction with school ($F(2, 166) = 4.28, p = .015$) were significant. Profile 3 (assimilation) reported higher satisfaction with their family members and school life than Profile 1 (blending). The sense of belonging at school was also significant ($F(2, 156) = 4.58, p = .012$); Profile 2 (preservation) reported a higher sense of belonging at school than Profile 1 (blending). Contrary to our expectations based on other acculturation research, minority adolescents with higher emotional fit with the majority norm reported greater satisfaction with family and school, while those with higher fit with the minority norm felt stronger school belonging, compared to peers with equally low fit to both norms.

Exploratory Analyses

Given the significant differences in school satisfaction and belonging between the profiles, we explored additional school-related constructs, including academic engagement and diversity climate, and found significant differences among the three profiles (academic engagement: $F(2, 157) = 5.64, p = .004$; diversity climate: $F(2, 157) = 5.79, p = .004$). Specifically, Profile 2 (preservation) reported higher levels of emotional engagement with academic activities and perceived a higher multicultural climate at school than Profile 1 (blending).

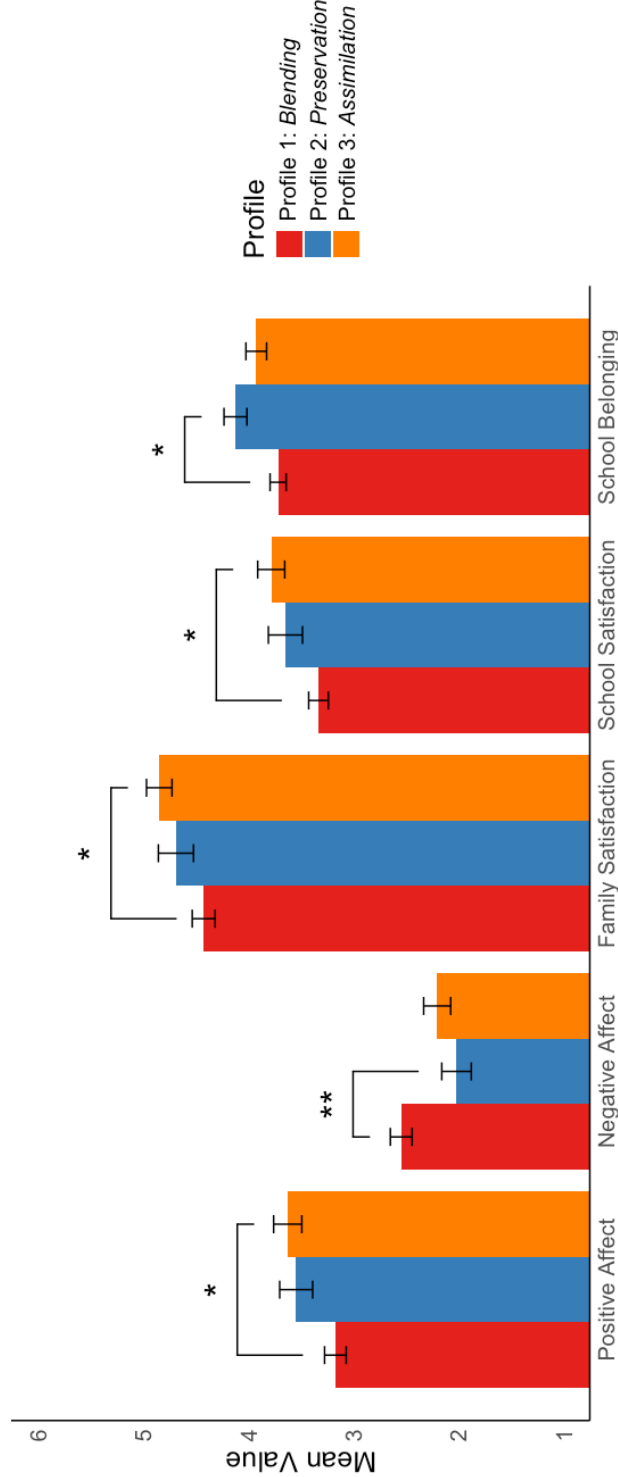


Figure 2. Means of Adjustment Outcomes by Profile

* $p < .05$; ** $p < .01$

4.4 Discussion

Immigrant minorities navigate varying emotion norms as they move daily between their cultural contexts. This study aimed to examine individual differences in minorities' emotional fit with majority and minority peers in school and home and to relate these differences to specific predictors and outcomes. Using latent profile analysis, we discovered four distinct patterns among immigrant minority adolescents. Our findings provide the first evidence that immigrant minority individuals show variation in their emotional fit with both majority and minority norms across cultural contexts, demonstrating engagement in different types of emotional acculturation. Furthermore, we found that contact with majority friends and BII predicted the likelihood of being categorized into certain types, each with distinct real-life consequences. These findings highlight the contextual and dynamic nature of emotional acculturation, shaped by levels of contact with majority friends and BII, and its impact on sense of belonging and well-being.

Typology of Emotional Acculturation

The broader literature on psychological acculturation has established that immigrant minorities engage in different acculturation patterns, primarily in the domains of cultural identity and behaviors. Building on these patterns, we postulated five potential types of emotional acculturation: *assimilation* (higher emotional fit with the majority than the minority across contexts), *preservation* (higher emotional fit with the minority than the majority across contexts), *blending* (equal emotional fit with both across contexts), *congruent frame-switching* (higher emotional fit with the culture of a given context), and *incongruent frame-switching* (lower emotional fit with the culture of a given context). Our study extends this broader theoretical framework by applying it to the domain of emotional acculturation, revealing three distinct types: blending, assimilation, and preservation. This discovery is significant because it shows that some of the patterns identified in cultural identity and behavioral acculturation also manifest in the emotional experiences of immigrant minorities.

By employing a person-centered approach, we revealed that immigrant minorities predominantly exhibit one of two patterns: fitting one cultural norm better

than the other across all contexts (assimilation and preservation) or fitting both norms equally well (blending). This finding contrasts with aggregate analyses, which often highlight the average relationship between emotional fit with either cultural norm and cultural contexts (e.g., Jasini et al., 2019). For instance, a recent study found that, on average, immigrant minorities engage in emotional frame-switching, showing higher emotional fit with the minority culture at home and higher fit with the majority culture in other majority contexts (i.e., speaking the majority language and interacting with majority group members). Though, as expected, we found evidence for blending, assimilation, and preservation, we did not find any evidence of congruent or incongruent frame-switching at the individual level. The person-centered approach yielded distinct types from the ones that were apparent in group-level analyses.

Emotional Fit in Positive and Negative Situations

Interestingly, the types of assimilation and preservation showed the expected patterns of emotional fit with both cultural norms only in positive situations. In negative situations, there were no significant differences in their levels of emotional fit with either norm, indicating that all types exhibited the blending pattern in negative situations. This finding aligns with previous research showing that cultural differences are more pronounced in positive emotions than in negative emotions. For example, meta-analyses of 190 cross-cultural studies on emotions found that positive emotions had more unexplained variance than negative emotions after accounting for ecological, sociopolitical, psychological, and methodological variables (Van Hemert et al., 2007). This suggests that positive emotions are more culturally nuanced and sensitive to various aspects of culture, whereas negative emotions can be explained by country-level factors such as average temperature, the Gini index, and cultural dimensions like individualism. Scollon et al. (2011) proposed that norm clarity might explain why positive emotions are more culturally distinctive than negative emotions. There is a broader consensus on the appropriateness of negative emotions across cultures, while the consensus on positive emotions tends to be stronger within cultures (Eid & Diener, 2001). This implies that norms for positive

emotions are clearer within cultures and less so across cultures, widening the cultural differences in positive emotions. This norm clarity may explain why immigrant minority adolescents show emotional patterns typical of one culture or another more distinctly in positive situations than in negative situations.

Our findings extend existing research by highlighting differential emotional fit in positive versus negative situations. Previous studies on emotional acculturation have consistently found that emotional fit with both majority and heritage cultural norms is higher in positive situations than in negative ones (e.g., Jasini et al., 2019). This trend holds true for both assimilation and preservation types, where emotional fit with both norms is generally higher in positive situations. One potential explanation for this pattern is that negative situations are inherently more complex, evidenced by greater variability in emotion ratings (De Leersnyder et al., 2011). This complexity might seem contradictory to the idea that positive emotions exhibit more pronounced cultural differences. However, previous research on emotional acculturation was conducted at the group level and did not compare emotional fit with two different norms within a single situation. We speculate that higher emotional fit with either cultural norm in positive situations can be attributed to the distinct patterning of positive emotions, which tends to be more culture-specific and clearly defined, making them easier to learn and fit with. In contrast, the broader and more complex nature of negative situations leads to greater variability and a blending pattern, reducing the distinctiveness of emotional fit with different cultural norms. In summary, the more pronounced differences in emotional fit with both cultural norms and the higher emotional fit in positive situations compared to negative situations can be attributed to the clearer and more specific cultural norms governing positive emotions. Meanwhile, the complexity and variability of emotions in negative situations may contribute to lower and less distinct emotional fit across different cultural norms, leading to a blending pattern in negative situations.

Unexpected Type: Positive-Specific Preservation

We identified an unexpected type, which we named positive-specific preservation. This type exhibited a pattern of higher emotional fit with the minority

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norm in positive situations. In negative situations, individuals in this type showed no significant difference in fit like other types, but their overall level of fit with both norms was markedly lower. Despite the small number of participants ($n = 6$) displaying this type, their lowest emotional fit in negative situations warranted further inspection. All six participants accurately described their negative situations according to the prompts. However, they reported the intensity of positive emotions (e.g., feeling respectful) as significantly higher and the intensity of negative emotions (e.g., feeling frustrated) as much lower than both the norms and other types.

We propose two possible explanations for their unique emotional experiences. First, these participants may engage in reappraisal of negative situations when reporting them at the end of the day. As data were not collected at the moment the negative situations occurred, it is possible that recalling the situation and rating the intensity of emotions led to a reappraisal, making the situation seem more positive. This is supported by research on positive appraisal, which shows that people often report perceived benefits from reappraising stressful situations even without apparent resolutions (Garland et al., 2009). An alternative explanation could be cultural differences in how these participants manage emotions in negative situations. The most intensely felt positive emotion was respectful, a socially engaging emotion that promotes connection with others. This suggests that, despite the unpleasant situation, these participants felt more engaged in their relationships. This aligns with the values of more collectivistic cultures, where social harmony and connection are often emphasized (Kitayama et al., 2006), reflecting the cultural background of our minority sample from relatively more collectivistic regions of the world.

The Role of Social Contact and BII

We investigated whether contact with the majority culture, BII, and perceived discrimination predict the likelihood of specific types of situated emotional fit. Specifically, we hypothesized that minorities with greater contact with the majority culture and higher levels of BII would be more likely to be classified within the blending or congruent frame-switching types. Unexpectedly, we found that minorities with higher contact with majority group friends were more likely to be

categorized as having the assimilation type. Although this was not within our initial expectations, it aligns with previous research consistently demonstrating a positive association between contact and friendship with majority group peers and emotional fit with the majority culture (Lee et al., 2024b). This suggests that increased social interaction with majority group members may facilitate higher emotional fit with the majority cultural norms, leading to the assimilation pattern.

Furthermore, we found that minorities who perceive their majority and minority cultural identities as compatible and harmonious, as measured by items like “I find it easy to balance both my minority and Belgian cultures,” are more likely to be categorized into the assimilation type. BII harmony captures the affective and relational aspects of managing two cultures, including positive associations with emotional stability and intercultural relations, and negative associations with perceived discrimination, depressive symptoms, and anxiety symptoms (Huynh et al., 2011). This indicates that individuals with high BII harmony may find it easier to emotionally align with the majority culture across various contexts. Conversely, having higher emotional fit with the majority culture might facilitate navigating majority contexts, thereby enhancing their perceived ease in balancing both cultural identities. Perceived discrimination did not predict the likelihood of specific types of situated emotional fit. This finding suggests that while perceived discrimination is an important factor in the overall experience of immigrant minorities, it does not directly influence the categorization into specific emotional acculturation type. This distinction highlights that the process of emotional acculturation is different from that of identity and attitudes, consistent with previous studies showing their lack of correlation (De Leersnyder et al., 2011).

Consequences for Adjustment

We examined whether minorities within these types differ in well-being and sense of belonging, hypothesizing that those in the blending and congruent frame-switching types would report higher levels of both compared to other types. Contrary to our expectations, minorities in the blending type consistently fared worse than those in the assimilation and preservation types. Our analysis revealed significant

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differences between different types of emotion acculturation across five adjustment outcomes related to well-being and belonging: positive affect, negative affect, family satisfaction, school satisfaction, and school belonging. Specifically, minorities in the assimilation type reported higher levels of positive affect and greater satisfaction with both school and family compared to those in the blending type. This suggests that individuals who emotionally align more closely with the majority culture experience better emotional and social outcomes. Moreover, minorities in the preservation type reported lower levels of negative affect and higher levels of school belonging than those in the blending type. This indicates that having higher emotional fit with their minority peers, while not necessarily aligning with the majority culture, can still provide significant emotional benefits and a sense of belonging at school.

To further understand this phenomenon, we can speculate that adolescents of the assimilation type experience acceptance for their majority-like emotions both at school and home, as indicated by high satisfaction with both school and family. Although assimilation is often seen as maladaptive because it involves adopting the majority culture at the expense of the heritage culture (Choi et al., 2018), our sample mostly comprised second-generation immigrant adolescents who are typically more fluent and proficient in the majority culture than in their parents' heritage culture. These adolescents acquire heritage cultural knowledge differently from their parents, often without first-hand contact (Giguère et al., 2010). As such, minority adolescents who display similar emotional patterns to their majority peers, regardless of being at home or school, are likely to experience fewer family-cultural conflicts and pressures, which are risk factors for acculturative stress (Bekteshi & Kang, 2020). In both environments, they likely receive a greater sense of acceptance and support, enhancing their overall well-being. Similarly, minority adolescents in the preservation type may find their school environment more accepting of their minority culture, as evidenced by their significantly higher perception of multiculturalism and predominant engagement with other minority peers at school (Lee et al., 2024a). Having heritage friends can increase emotional fit with the heritage culture (De Leersnyder et al., 2020), suggesting that interactions with minority friends may also foster emotional fit with fellow minority peers. Such supportive and accepting school

interactions can increase their sense of belonging (Celeste et al., 2019) and may buffer against negative affect.

Limitations and Future Directions

While our study provides valuable insights into individual differences in emotional acculturation, several limitations warrant further consideration. First, we did not hypothesize the absolute level of emotional fit for the blending type. Instead, we focused on the pattern of emotional fit with both cultural norms across contexts. Although the blending type showed equal fit with both norms, it had the lowest emotional fit compared to other types. This makes it difficult to distinguish blending from marginalization, which denotes minorities who do not engage with either culture (Berry, 1992). Given the limited empirical evidence on marginalization and the assumption that immigrant minorities navigating between cultures are unlikely to remain uninfluenced by either, we did not expect marginalization to be present. However, the low emotional fit and negative consequences associated with blending suggest the need for a clearer definition. Future studies should specify the absolute level of emotional fit to clearly distinguish blending from marginalization and accurately represent the experiences of bicultural individuals. For instance, a quartile split or standard deviation cutoff can provide specific cut-off levels for high and low emotional fit within each sample. Additionally, conducting meta-analyses of previous studies to establish standardized thresholds for emotional fit could further enhance the accuracy and comparability of the types.

Second, as a data-driven technique, LPA is highly sensitive to sample characteristics such as sample size, the number of indicator variables (e.g., emotional fit scores), and sample homogeneity. Consequently, the profiles identified in our study may not be replicable in other immigrant minority samples with different characteristics. For instance, our study focused on immigrant minority adolescents of Middle Eastern/African and Eastern European origin, and the profiles identified may not be replicable in other samples, such as those of different ages or with different cultural backgrounds. Moreover, we identified a profile termed “positive-specific preservation,” which included only six individuals, representing about 3% of our

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sample. This small group size limits our ability to draw concrete conclusions about this type and its potential replication in other datasets. Additionally, the mechanism underlying very low emotional fit in negative situations remains unclear. As the first study to examine individual differences beyond group-level effects of emotional fit, our findings underscore the need for further research with a wide variety of immigrant-origin samples. This will help determine whether the types identified in our study are present among other immigrant minority adolescents and, if so, to identify the mechanisms explaining each type's unique emotional patterns.

Finally, average patterns are inherently approximations of cultural norms. We defined cultural groups based on the country of birth of participants and their parents. However, culture extends beyond national and ethnic boundaries (Adams & Markus, 2001), and it is not uniform; rather it is constantly evolving (Sewell, 1999). As a result, depending on the composition of majority and minority samples, the norms could change, influencing the findings and interpretations. Moreover, our sample of minority adolescents naturally crosses these national boundaries as they are predominantly socialized by at least two cultures, making the minority norm inherently heterogeneous. Future research should consider using a more nationally representative sample and/or employing a more data-driven approach to emotion ratings to identify subgroups within each sample. This approach would help determine how different segments influence the approximated norms and the heterogeneity of these norms. It would also provide a more nuanced understanding of what constitutes culture.

Conclusion

The present study underscores the importance of examining individual differences to gain a more nuanced understanding of emotional acculturation. Our findings demonstrate that emotional acculturation is not a uniform process but varies significantly among individuals, with some showing consistent patterns of assimilation, preservation, or blending across different contexts. Minorities with more social contact with majority friends and who perceive their dual cultural identities as harmonious are more likely to fall into the assimilation type, exhibiting greater

emotional fit with the majority norm than with the minority norm across contexts. Overall, the consequences of different emotional acculturation types suggest that having higher emotional fit with either culture is more beneficial than blending with lower level of emotional fit. Understanding this variability allows for the development of tailored interventions that address the specific needs of different subgroups of minorities.

CHAPTER 5

Discussion

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5.1 Introduction

“We navigate emotional life with extraordinarily odd charts, whose contours change, sometimes very substantially, whenever we make a course correction.”

– William M. Reddy, *The Navigation of Feeling*, 2001, p. 256

Our emotional lives shape and are shaped by complex and ever-changing social environments, much like evolving charts influenced by our interactions, relationships, and cultural norms. This dynamic leads to continuous recalibration of our feelings from one situation to another, highlighting the flexible and constructed nature of our emotional experiences. This dissertation examines such calibration in immigrant-origin minority adolescents who navigate varying sociocultural contexts. Prior research on emotional acculturation demonstrates that minorities with more contact with either majority or heritage culture, particularly through friendships, tend to achieve higher emotional fit with the respective culture. Moreover, monocultural individuals with higher emotional fit with their culture tend to report better relational and psychological well-being. However, little is known about what happens to immigrant minorities' emotional fit with both cultures as they navigate majority and minority cultural contexts in their daily lives and what consequences emotional fit with one or both cultures have on their adjustment such as life satisfaction and sense of belonging. Thus, this dissertation addressed four aims across three empirical chapters with samples of Belgian immigrant-origin adolescents: (1) examine the potential coexistence of emotional fit with both majority and minority cultures (i.e., the bidimensional model of emotional acculturation); (2) identify the sociocultural contexts that may facilitate emotional fit with both cultures; (3) investigate the variability of emotional fit across different sociocultural contexts; and (4) assess the impact of emotional fit with either or both cultures on adjustment outcomes.

5.2 Overview of Findings

Coexistence of Emotional Fit with both Majority and Minority Cultures

As my first aim, I examined the potential coexistence of emotional fit with both majority and minority cultures. In other words, I tested whether emotional

acculturation can be considered bidimensional – whether immigrant minorities can simultaneously achieve emotional fit with both cultures. **Chapter 2** revealed that emotional fit with the majority cultural norm and the minority cultural norm were positively correlated. This simple yet significant finding suggests that fitting with one culture does not come at the expense of fitting with the other. A negative correlation would have indicated otherwise (i.e., high fit with the majority and low fit with the minority, or vice versa). Additionally, the proportion of majority friends in minorities' social networks was positively associated with emotional fit with the majority culture and *not* negatively associated with emotional fit with the minority culture. This indicates that having majority friends does not undermine minority fit. Together, these findings align with the logic proposed by Ryder et al. (2000), according to which acculturation can be considered bidimensional when (a) the level of identification with heritage and majority cultures is not negatively correlated (i.e., either uncorrelated or positively correlated), and (b) heritage and majority identification, respectively, exhibit distinct correlations with other relevant variables rather than an inverse pattern. Thus, the findings from this chapter provide the evidence that emotional acculturation can also be considered bidimensional: fit with both norms can be separate processes that are not negatively correlated and are distinctively associated with covariates.

Facilitative Sociocultural Contexts of Emotional Fit

Given this bidimensional nature of emotional acculturation, I further identified sociocultural contexts that may facilitate emotional fit with both majority and minority cultures, meeting the second aim of my dissertation. **Chapter 2** focused on the social networks of minority adolescents of Turkish descent. I theorized that certain network compositions and structures could be *norm-unifying*, leading to higher emotional fit with a given culture. As expected, minority adolescents with networks consisting of more Belgian majority friends (i.e., a higher proportion of majority friends) demonstrated greater emotional fit with the majority norm. This finding is consistent with previous research showing that minority adolescents who had more majority friends in their social networks had higher emotional fit with their

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majority peers, even when controlling for general contact with majority members. This relationship was even stronger for Turkish and Moroccan students, highlighting the importance of friendship (Jasini et al., 2023). It was also hypothesized that, just as majority friendships correlate with majority fit, co-ethnic minority friendships would correlate with minority fit. However, this was not supported by the data, suggesting that a network composed of more co-ethnic minority friends did not necessarily enhance emotional fit with the minority culture.

As mentioned previously in Chapter 2, two interpretations can be considered. One possibility is that, unlike majority friends, minority friends do not function as socializers of emotional norms. Minority adolescents likely learn majority-like emotions primarily through encounters with majority peers at school (Jasini et al., 2023), whereas they may acquire minority-like emotions predominantly from their parents or relatives at home. For example, a previous study found that the network density of majority versus minority group members has differential outcomes on integrating cultural identities, with a curvilinear relationship where heritage density facilitates integration up to a moderate level but becomes less effective beyond that point. (Douceirain et al., 2021). Similarly, a network with more minority friends may not effectively socialize minority adolescents into minority-like emotions. Another interpretation is the heterogeneity of the minority “norm.” The norm – here, an aggregate measure averaging emotional patterns of all minorities of Turkish descent – may vary widely even among co-ethnic minorities as culture is not bounded by nation (Adams & Markus, 2001). Moreover, immigrant minorities vary widely in how they acculturate and balance two cultures (Sam & Berry, 2010). Consequently, the norm may not be as homogeneous or clear as the majority norm, especially at school, introducing more variability.

Unexpectedly, I found that minority adolescents with networks consisting of more co-ethnic minority friends exhibited lower emotional fit with the majority culture. This reflected the segregated school environment, where 79% of these adolescents did not have a single majority friend in their social network. This lack of majority friendships limits exposure to majority-like emotions, resulting in lower emotional fit with the majority culture. Additionally, this emotional misfit may hinder

befriending majority peers, potentially creating a negative feedback loop that reduces the potential for majority friendships.

I also hypothesized that the density of friends within each cultural group (majority and co-ethnic), reflecting the level of connectedness among friends, would be positively associated with emotional fit to the respective cultural norm. However, no significant associations were found. This might indicate that the extent to which minorities are embedded in a network where all friends know each other is not crucial for socializing the normative emotional patterns of either culture when measured across all participants (i.e., distal fit). Similarly, an earlier study with a larger sample of minority adolescents did not find significant associations between minority adolescents' distal emotional fit and the interconnectedness of their majority friends (Jasini et al., 2023). However, the level of connectedness may play a crucial role in shaping more localized emotional patterns, as shown by the significant association between emotional fit with immediate majority classmates (i.e., proximal fit) and the interconnectedness of majority friends. Alternatively, analyzing ego networks heavily depends on nominations of an ego (participant), which may not overlap with their friends' nominations, potentially compromising the accuracy of capturing true friend-to-friend connections.

In summary, Chapter 2 identified that social networks with more majority friends foster higher emotional fit with the majority culture, while networks with more co-ethnic minority friends appear to hinder emotional fit with the majority culture. However, having more majority friends does not diminish the chances of fitting with the minority culture. Building on these findings, **Chapter 3** extended the investigation to explore the dynamics of daily life. By examining situational settings, language spoken, and the cultural background of interaction partners, I aimed to address the third aim of investigating the variability of emotional fit across different sociocultural contexts.

Variation of Emotional Fit across Sociocultural Contexts

Chapter 3 examined whether minorities had differential emotional fit with cultures depending on the sociocultural contexts they were in. I hypothesized that

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these minorities would exhibit higher emotional fit with the majority cultural norm in majority-dominated contexts: namely, at school, when using the Dutch language, and during interactions with non-immigrant Belgians. Conversely, in minority-dominated contexts – at home, when speaking non-Dutch language(s), and during interactions with immigrant-origin individuals – these adolescents would show higher emotional fit with the minority cultural norm. In other words, I examined whether minority adolescents, as a group, engage in emotional frame-switching congruent to the salient culture of the context.

I found complex relationships between context and emotional fit with both cultural norms, with partial support for congruent frame-switching. The physical location where emotional experiences took place – school and home – significantly influenced emotional fit with both majority and minority norms, but not always in the way that I had predicted. At home, as expected, emotional fit with the minority was higher than at school, but at school, contrary to expectations, emotional fit with the majority was lower than at home. As in Chapter 2, this finding can be attributed to the segregated reality of immigrant minority adolescents at school. Nearly half of the situations at school reported by minority participants involved interactions with other immigrant-origin people, and more than half of the minority participants reported no interaction with majority individuals at all throughout the data collection. Thus, contrary to my hypothesis, school was not a majority-dominated context. At school, interacting mostly with other immigrant-origin peers may lead minority adolescents' emotional experiences to align more closely with their minority peers than with their majority peers. These findings are thus consistent with previous research indicating that having more heritage friends positively influences emotional fit with the heritage culture (De Leersnyder et al., 2020).

After controlling for the setting of situations, I found marginal effects indicating that minority adolescents showed higher emotional fit with the majority when speaking Dutch and interacting with Belgian majority individuals than when speaking non-Dutch languages and interacting with other immigrant-origin individuals. These trending effects are consistent with previous studies highlighting the significant role of language in emotional frame-switching (Perunovic et al., 2007;

Zhou et al., 2021) and expand on this literature by showing that the cultural background of the interaction partner may also be an important cultural context for emotional frame-switching. Unexpectedly, minority adolescents showed lower emotional fit with the minority norm when interacting with other immigrant-origin individuals compared to interactions with majority individuals. This may be because the minority interaction partners came from diverse cultural backgrounds not represented by the minority norm, which was an aggregate of the emotional patterns of participants from Middle Eastern, African, and Eastern European backgrounds. These groups were chosen for their relatively large group size and similar emotional patterns, based on preliminary analyses (reported in Appendix 3.2), to create a homogenous minority norm comparable to the majority norm. This added complexity highlighted the need for further investigation into the phenomenon beyond group-level effects.

Chapter 4 addressed this need by examining individual differences in emotional fit across sociocultural contexts. Drawing from the literature on explicit acculturation and biculturalism (Berry, 1997; Lafromboise et al., 1993), I hypothesized five potential types of emotional acculturation: *assimilation*, *preservation*, *blending*, *congruent frame-switching*, and *incongruent frame-switching*. By analyzing the patterns of how immigrant-origin minority adolescents emotionally fit with majority and minority cultures in situations at school and at home, I identified four unique types of situated emotional fit among minority adolescents. These were: *blending*, characterized by equal fit with both cultures across contexts; *assimilation*, showing higher emotional fit with the majority than the minority across contexts; *preservation*, displaying higher emotional fit with the minority than the majority across contexts; and *positive-specific preservation*, exhibiting the preservation pattern only in positive situations. This finding contrasts with Chapter 3's aggregate analyses of the same dataset, which indicated emotional frame-switching.

However, at the individual level, neither congruent nor incongruent frame-switching was found. This discrepancy between individual- and group-level findings has been explored by Zhou et al. (2021). They demonstrated that Chinese-English bilinguals, as a group, exhibited distinct congruent frame-switching: participants

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showed higher emotional fit with Chinese culture when taking the survey in Chinese, and the opposite pattern, higher fit with British culture, when taking the survey in English. However, when they replicated the analyses at the individual level, incorporating the individual's cultural exposure as a predictor, they found that participants with high cultural exposure (those who had lived more than one year in an English-speaking country) displayed almost equal fit with both cultural patterns, regardless of the survey language. This underscores the importance of a person-centered approach, as it reveals nuanced findings that might explain the unexpected results in Chapter 3, where opposing patterns may have cancelled each other out in group-level analyses.

Moreover, the likelihood of being categorized into these types was significantly influenced by the level of social contact with majority group members and bicultural identity integration (BII) harmony. Minority adolescents with more contact with majority friends and who perceived their dual cultural identities as compatible and harmonious were more likely to fit the assimilation type. This aligns with previous research highlighting the significant role of majority friendships in emotional fit with the majority culture (Jasini et al., 2023). Together, Chapters 3 and 4 investigated the variability of emotional fit across contexts and found that minorities vary in their emotional fit not only across contexts but also across individuals.

Positive Outcomes of Emotional Fit

Finally, I assessed the impact of emotional fit with either or both cultures on adjustment outcomes, addressing my fourth aim. Motivated by previous research highlighting the benefits of emotional fit with one's cultural norm (e.g., De Leersnyder et al., 2014), **Chapter 3** examined the association between situational fit (i.e., emotional fit with the majority at school and with the minority at home) and situational well-being. I found that minority adolescents with higher fit with the context's salient norm reported feeling well in positive situations, but higher fit was linked to feeling worse in negative situations. These findings nuance previous research, which showed that experiencing normative emotions, differing across

cultures, relates to happiness regardless of the emotion's valence (Cho et al., 2018). However, they also replicate a finding from a previous study, which found that for European Americans, emotional fit with their cultural norm in negative autonomy-promoting situations within the family or home context was negatively associated with personal well-being (De Leersnyder et al., 2015). Similarly, minority adolescents navigating multiple cultural contexts benefitted from emotional fit only in positive situations, mirroring monocultural adults at home. This suggests that for adolescents, higher emotional fit in negative situations both at school and home may indicate conflicts with family members, teachers, or friends. Such conflicts are likely to be more severe for adolescents, who are particularly sensitive to interpersonal tensions (Collins & Steinberg, 2006), thereby inevitably leading to lower well-being in each context. It is important to interpret these findings with caution, as our measures of daily well-being and emotional experiences were similar and may have captured the corresponding affective states in each situation. Moreover, while situational well-being or feeling well in the moment is important, it is only one aspect of overall functioning in life. Experiencing and effectively regulating negative emotions in the moment may not feel good, but over time, it can significantly contribute to enhanced well-being and improved social relationships (Gross, 2015).

Accordingly, in **Chapter 4**, I employed more nuanced measures including physical and psychological well-being, life satisfaction, and sense of belonging to delve deeper into the relationship between emotional acculturation typology and adjustment outcomes. The findings revealed significant variation among minority individuals across five adjustment outcomes: positive affect, negative affect, family satisfaction, school satisfaction, and school belonging. Specifically, minorities categorized under the *assimilation* type reported higher levels of positive affect, family satisfaction, and school satisfaction compared to those categorized under the *blending* type. Moreover, minorities in the *preservation* type experienced lower levels of negative affect and higher levels of school belonging than those in the *blending* type.

These results suggest that higher emotional fit with either culture is more beneficial for minority adolescents than lower, yet equal, fit with both cultures

(blending). It is possible that adolescents in the assimilation and preservation types experience acceptance for who they are, without the family-cultural conflicts and pressures that are the risk factors of acculturative stress (Bekteshi & Kang, 2020). Although assimilation is often viewed as maladaptive because it involves adopting the majority culture to the exclusion of the heritage culture (Choi et al., 2018), our sample mostly comprised second-generation immigrant adolescents. These adolescents are naturally more fluent and proficient in the majority culture than in their parents' heritage culture, as they do not acquire heritage cultural knowledge in the same way (Giguère et al., 2010). Given that minority adolescents in the assimilation type showed the best adjustment outcomes, including the highest levels of satisfaction with school life and family, it is plausible that they do not experience conflicts or pressures from their family members. Such lack of pressure may pave the way for their emotions to be similar with their majority Belgian peers across home and school. Similarly, minority adolescents in the preservation type may experience support and acceptance at school, as evidenced by their highest perceived multiculturalism at their schools. These adolescents interact more frequently with other immigrant-origin peers than with Belgian majority peers. Such interactions may foster their emotional fit with fellow minority peers, thereby enhancing their sense of belonging at school.

However, these findings contradicted our initial hypothesis, where we expected that participants who had equal fit with both cultures – the blending type – would fare the best among other types. Instead, we found that those described as the blending type actually showed the lowest emotional fit with both cultures across contexts and had the worst adjustment outcomes compared to the other types. This finding should be considered in light of the limitation that we did not hypothesize the absolute level at which blending would occur. This makes it difficult to distinguish from marginalization, which is characterized by not fitting with either culture and would also show a similar pattern to blending but at a lower level of emotional fit. Given the worst outcomes, the operationalization of blending needs to be re-evaluated to distinguish it from a form of maladjustment. Moreover, the findings should be interpreted against the backdrop of our specific samples, as we deliberately

selected schools and classes with a sufficient number of minority students. These findings could vary if data were collected from predominantly Belgian-majority schools, which represent a majority-dominated context. In such settings, different types of frame-switching may occur due to the distinct cultural contexts. Additionally, the outcomes for assimilation and preservation might not be as favorable as in the present study, potentially indicating greater misfit with the culture in more heavily majority-dominated schools.

In summary, within the specific sample examined in Chapters 3 and 4, minority adolescents with higher emotional fit with either the majority or minority culture experienced better situational well-being in positive situations, higher satisfaction with school and family, a stronger sense of belonging at school, and greater psychological well-being. Despite inherent limitations, these findings provide the first evidence of the association between emotional fit with both cultures and positive outcomes among immigrant-origin minority adolescents.

5.3 Theoretical Contributions

This dissertation extends the current literature on emotional acculturation and on emotions in several ways. First, the findings suggest that emotional acculturation can be considered a bidimensional process wherein immigrant minorities can achieve emotional fit with both the majority and minority cultures without losing fit with either. In Chapter 2, I established the bidimensionality of emotional acculturation by demonstrating that emotional fit with both cultures is not negatively correlated, and that each fit is distinctively related to network covariates. This empirical evidence supports the notion that immigrant minorities' emotional lives can be shaped by both cultures, comparable to other domains of explicit acculturation such as behavior, values, and identities (e.g., Berry et al., 2006; Huynh et al., 2018). However, although the idea of examining bidimensionality stemmed from explicit acculturation research, it also showed that known acculturation patterns do not always apply to emotional acculturation. This is not surprising, as previous studies found no association between emotional fit and traditional measures such as attitudes toward cultures (De Leersnyder et al., 2011). Sharing culturally normative

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emotions implies that one aligns with the dominant values of a given culture without bringing culture to the forefront of the mind. Thus, having two emotional repertoires and fitting well with both cultures indicates competence in navigating a bicultural reality. By demonstrating the bidimensionality of emotional acculturation and its differing patterns from traditional acculturation research, this dissertation suggests that emotional fit may serve as an important measure of one's (bi)cultural expertise.

Second, the dissertation advances our understanding of how emotions are shaped and situated within various contexts. It shows that immigrant minorities likely acquire the emotional repertoires of the majority culture through friendships with majority peers (Chapter 2) and their emotional fit with both cultures varies across different contexts (Chapter 3), with significant individual differences in this variation (Chapter 4). These findings suggest that the emotional experiences of immigrant minorities are not static but are dynamically influenced by specific contexts, both situationally and over time, through interactions and relationships within the broader cultural environment. This aligns with existing research recognizing the constitutive role of interpersonal and cultural contexts in emotions (Mesquita & Boiger, 2014). Additionally, the findings corroborate previous research emphasizing the contextual interplay between personal, situational, and cultural levels and its impact on emotional experiences, expression, perception, and regulation (Greenaway et al., 2018). The empirical evidence from this dissertation integrates and extends existing emotion research by demonstrating the role of contexts in the emotional experiences of immigrant minority adolescents navigating multiple cultural contexts daily.

Third, the findings from Chapter 2 and 4 further support the socialization of emotions through friendships among immigrant minority adolescents. Early in life, our emotions are socialized by interactions with our primary caregivers, such as our parents; during this time, we learn how to regulate and display our emotions in ways that are socially appropriate and competent (Zeman et al., 2006). Throughout adolescence, the main source of emotional learning shifts from caregivers to peers, and the expression and regulation of emotions can be directly and indirectly shaped by modeling, rewarding, and responding within the context of friendships (Klimes-Dougan et al., 2014). Previous studies have found that minority adolescents'

friendships with majority peers are a consistent predictor of their emotional fit with the majority norm (Jasini et al., 2019). A longitudinal study by Jasini et al. (2024) demonstrates that friendships with majority peers not only predict the current level of emotional fit but also contribute to its growth over time, and vice versa. Specifically, they found that minority adolescents' self-reported majority friendships in the previous year predicted an increase in emotional fit with the majority culture in the following year. In turn, those with higher emotional fit with the majority in the previous year reported more majority friendships in the subsequent year. This bidirectional relationship suggests that, for immigrant minorities, majority friendships play a significant role in shaping emotional experiences and indicates that sharing similar emotional experiences with majority peers may also increase the likelihood of forming intercultural social networks. Replicating these findings, my dissertation provides more specific characteristics of these friendships by demonstrating that the proportion of majority friends in one's social network is positively associated with emotional fit with the majority culture (Chapter 2). Additionally, increased contact with majority friends increases the likelihood of minorities showing the assimilation type. Furthermore, this dissertation provides the first evidence that friendships with co-ethnic minority peers can be negatively correlated with emotional fit with the majority norm, further highlighting the critical role of friendship in emotion socialization. These findings contribute to better understanding of emotional socialization by elucidating the nuanced role of friendship in emotional acculturation.

Fourth, this dissertation further expands emotional acculturation research by providing the first evidence of individual differences in how minorities emotionally navigate their daily cultural contexts, identifying distinct types of emotional acculturation (Chapter 4). To date, all studies on emotional acculturation have examined group-level effects, showing average associations between covariates and emotional fit across all minority samples. However, every immigrant minority differs in their level of acculturation, even across different domains (Birman, 1994). For example, a second-generation Korean immigrant in the US may identify as only American, showing assimilation in the domain of identity, while fluently speaking

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Korean at home with her parents and English at school with her friends, demonstrating cultural frame-switching in the domain of behaviors. This dissertation found similar individual differences in the emotional experiences of immigrant minority adolescents, showing that their emotional navigation of different cultural contexts varies by person. These individual differences highlight that emotional acculturation is not a uniform process but rather a personalized one, associated with various factors such as contact with the majority and BII.

Finally, this dissertation provides the first empirical evidence that emotional fit with either culture benefits immigrant minority adolescents. Previous literature on emotional acculturation assumed that emotional fit is beneficial for immigrant minorities based on studies of monoculturals and dyads, but this assumption had only been directly examined among immigrant minorities in a single study until now (Consedine et al., 2014). In Chapter 3, I found that emotional fit with either culture was related to situational well-being, but only in positive situations. This replicates a previous finding that the relationship between emotional fit and psychological well-being was negative in autonomy-promoting, negative situations at home (De Leersnyder et al., 2015). In Chapter 4, I discovered that minorities with higher emotional fit with either the majority or minority culture reported better adjustment outcomes than those with lower but equal fit with both cultures. This finding does not fully align with explicit acculturation research, which suggests that minorities who adopt integration (via blending or frame-switching) show the best adjustment outcomes, while those who adopt marginalization show the worst outcomes (Berry et al., 2006). The interpretation of our findings varies depending on whether equal emotional fit with both cultures at the level found in this dissertation is viewed as a form of integration or marginalization, highlighting the need for further research. Despite this ambiguity, this dissertation supports longstanding theoretical assumptions about the benefits of emotional fit and provides new insights into how emotional acculturation enhances the well-being of immigrant minority adolescents.

5.4 Methodological Contributions

Throughout the studies, I employed a variety of methodological approaches to examine emotional acculturation among immigrant minority adolescents, contributing significantly to the scholarship in this field. First, for Chapters 3 and 4, I used the diary method to collect data on the daily emotional experiences of immigrant minorities at both school and home – hypothesized to be two distinct cultural environments. This approach has previously been used to study emotional acculturation in minority adolescents in Belgium, allowing for a close yet naturalistic examination of their daily interactions with the majority peers and their emotional experiences as situated processes (Jasini et al., 2018). Building upon and expanding this methodology, I collected data on two situations from each context per day, resulting in up to four situations per day over seven school days. Participants thus reported as many as 28 emotional situations in total. This significantly increased the number of data points compared to the cross-sectional design of earlier research on acculturation, thus providing more statistical power. Most importantly, this method allowed for the examination of the variation of emotional fit across different contexts at the situational level, including the physical location, the use of language, and the cultural background of interaction partners. It also enabled the exploration of how emotional fit is related to well-being at the situational level. Overall, the daily diary method allowed for an in-depth examination of the situated nature of emotional acculturation and provided a closer understanding of the daily bicultural reality of immigrant minority adolescents.

Second, in Chapter 2, I analyzed the social networks of immigrant minority adolescents by computing their network properties to quantify their composition and structure. This analysis revealed patterns in minority adolescents' relationships, such as within-group density and group size proportions, which I then associated with emotional fit. Social network analysis, widely used in psychology and other social sciences, provides a detailed understanding of how elements such as information, norms, and capital flow among interconnected individuals (Zhang, 2010). I hypothesized that certain characteristics of social networks, described as norm-unifying, may facilitate emotional fit with a given culture. For norm-unifying

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composition, I computed the proportion of majority and co-ethnic friends to examine relative group size and its potential influence on emotional fit. For norm-unifying structure, I analyzed within-group density, measuring how tightly friends from the same cultural group were connected. This proportion of connections among friends over total possible connections allowed me to assess how cultural norms circulated within the group.

This approach extends previous research on emotional acculturation that also utilized social network analysis in two significant ways (Jasini et al., 2023).¹ First, it measures the relative influence of each cultural group and its norm by considering the entire friendship network. For example, having 4 majority friends out of a total of 20 friends (20% majority friends) would result in a different level of cultural influence compared to having 4 friends, all of whom are majority (100% majority friends). The same applies to within-group density; having 4 majority friends who are all friends with each other versus having 4 majority friends where only 2 are friends with each other may result in different levels of influence. By analyzing proportions, I could compare the relative influence of friends from each cultural group. Additionally, examining co-ethnic friends allowed for the simultaneous assessment of the influence of both co-ethnic and majority friends, addressing a gap in previous research that focused solely on majority friends. Through social network analysis, this dissertation sheds light on how close relationships serve as a context for minority adolescents to learn the emotional patterns of each culture.

Finally, I utilized data-drive approaches to investigate emotional patterns and to discover a typology of emotional acculturation among immigrant minority adolescents. In Chapter 3, I conducted Clusterwise Simultaneous Component Analysis (C-SCA; De Roover et al., 2012) which allowed me to model the meaningful

¹ Jasini et al. (2023) analyzed network data from the entire minority sample, which I partially used to examine the Turkish minority subgroup in Chapter 2. While they did not study emotional fit with the minority culture, they focused on two levels of emotional fit: proximal fit with majority classmates and distal fit with the overall majority sample. They measured three network parameters: the number of majority friendship ties, closed triads (where two of a participant's majority friends are also friends), and the average centrality of majority friends (how well-connected one's majority friends are). Their findings showed that majority friendship ties were associated with both proximal and distal fit, but the connectedness measures were only related to proximal fit.

“minority cultural norm”, ensuring its internal coherence distinct from the majority norm. This approach was necessary due to the diverse cultural background of the minority participants, who had ties up to 90 different countries. Since emotional fit measures the similarity between individuals’ patterns and a normative pattern, it was crucial to base the normative pattern on individuals with similar cultural backgrounds and comparable emotional patterns. C-SCA, a data reduction method, identifies component structures for all data blocks while simultaneously examining the existence of subgroups or clusters. This technique allowed me to investigate whether subgroups of participants shared similar structures in their reported emotion intensity ratings. After running C-SCA, participants were assigned to mutually exclusive clusters, and I examined the distribution of Schwartz’s (2008) cultural backgrounds across these clusters (see Appendices A3.1 and 3.2 for the procedure). The results indicated that, at both school and home, Belgian majority participants predominantly belonged to one cluster, suggesting similar emotional patterns in each setting. Conversely, the two minority groups with the largest sample sizes, Eastern European and Middle Eastern/African, showed a dominant presence in the cluster not populated by majority participants. Although the distribution was not clean-cut, these analyses provided a data-driven justification for using data from these two minority groups to establish the minority cultural norm, contrasting it with the majority norm. Additionally, this dissertation was the first to employ a data-driven, person-centered approach to discover a typology of emotional acculturation. Using Latent Profile Analysis (LPA), I analyzed emotional fit scores from all minority adolescents to identify subgroups sharing latent profiles. LPA allows for an unbiased classification of individuals into profiles based on the data without pre-selecting the number of profiles, enabling more accurate identification of distinct types. By utilizing these data-driven approaches, this dissertation advances methodological rigor in studying emotional acculturation, providing robust empirical testing of cultural homogeneity, and contributing to a nuanced understanding of the emotional experiences of immigrant minority adolescents.

5.5 Limitations and Future Directions

There are several limitations to this dissertation that warrant discussion and should be the subject of future research. One key limitation is the assumption that the average emotional pattern shared by participants within cultural groups, defined by their country of birth or the birth countries of their parents or grandparents, represents the culture or cultural norm of the group. For example, “majority culture” throughout this dissertation referred to the mainstream Belgian culture shared by adolescents without a migration history up to three generations. However, culture is neither bounded nor static; it extends beyond national and ethnic boundaries, allowing anyone to engage with and be influenced by diverse cultural patterns (Adams & Markus, 2001). What I considered as culture or its norm is *not* uniform and is likely malleable. Borrowing Sewell’s (1999) conception of culture, I view culture not only as a system of symbols and meanings but also as a set of practices shaped by these symbols and meanings. Emotions, as practices, play a key role in communicating and achieving values and goals imbued with cultural meanings. Through emotions, these meanings might be reinterpreted and transformed, indicating that boundaries of majority and minority cultures are imposed and continuously shifting.

Yet, to study and compare cultures, some boundary, however artificial, must be imposed, and nationality and cultural heritage are meaningful ways to describe coherence in cultural meanings. Empirical evidence from numerous cross-cultural psychology studies demonstrates significant national differences in various psychological processes, including emotions (Akaliyski et al., 2021). However, since immigrant-origin adolescents, particularly those from later generations, naturally integrate multiple nation-states, future studies should delve deeper into the diversity within cultural groups. For instance, I used C-SCA to examine the emotional patterns of all participants and to justify the minority sample, though the resulting clusters were not used to define culture. Future research could employ more data-driven analyses to identify homogeneous cultural patterns and examine within-group diversity, highlighting cultural differences beyond nationality. Additionally, longitudinal studies examining the impact of cultural change on

emotional experiences would provide valuable insights, tracking how cultural norms and emotions evolve over time and influence emotional fit within and between cultural groups.

Another significant limitation of this dissertation is the lack of consideration for the developmental perspective, given that the entire sample consisted of adolescents. Adolescence is a critical period characterized by significant emotional, cognitive, and social changes (Smetana et al., 2006; Steinberg, 2005). During this period, adolescents' emotions become increasingly socialized and susceptible to peer influence, particularly regarding negative emotions (Dishion & Tipsord, 2011; Klimes-Dougan et al., 2014). These changes can result in emotional patterns that are less stable and quite distinct from other life stages such as childhood or adulthood. For example, the developmental trajectory of emotional granularity or differentiation – the ability to create differentiated and specific emotional experiences (Tugade et al., 2004) – demonstrates a significant quadratic relationship with age (Nook et al., 2018). From childhood to adolescence, emotional differentiation decreases, reaching its lowest point during adolescence, before increasing again into adulthood. This decline during adolescence can be attributed to the frequent co-occurrence of many different emotions that are poorly differentiated, unlike in childhood when single emotions are typically experienced in isolation. Moreover, minority adolescents undergo ethnic-racial socialization through intercultural interactions, wherein they learn about cultural differences outside their family (Ruck et al., 2021). This increasing awareness of their minority position could potentially influence their emotional lives, making them more diverse and variable than those of their majority peers. Consequently, the present dissertation does not fully capture the complexity of the emotional lives of immigrant-origin minority adolescents and how these are intertwined with emotional acculturation. Furthermore, the findings from this dissertation may not be generalizable to younger or older generations of immigrant minorities. Future research should incorporate a developmental perspective to better understand how emotional patterns and emotional fit evolve across different life stages. Including a broader age range in future studies could provide a more

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comprehensive view of the emotional trajectories of immigrant-origin individuals and their acculturation processes.

Finally, this dissertation does not fully address the conditions that facilitate or hinder emotional acculturation, including individual differences and the broader socio-political context. At the individual level, factors such as personality traits and prior experiences with cultural diversity significantly influence emotional acculturation. For example, Van der Zee and Van Oudenhoven (2014) identified five personality dimensions predictive of effective intercultural interaction in multicultural environments: *cultural empathy*, *open-mindedness*, *social initiative*, *emotional stability*, and *flexibility*. Minorities who are highly open-minded and proactive in social initiatives are more likely to engage in intercultural contact with majority peers, thereby facilitating their emotional acculturation towards the majority culture. Furthermore, minorities with high flexibility, defined as the ability to adapt to novel and ambiguous situations, may find it easier to navigate diverse cultural contexts. This adaptability can lead to smoother interactions in varying contexts, potentially enhancing emotional acculturation towards both majority and minority cultures.

Additionally, the socio-political environment, including the diversity climate and immigration policies at school, communities, and societies, plays a crucial role in shaping immigrants' acculturation (e.g., Schachner et al., 2016). Supportive policies and a climate that values multiculturalism – recognizing and appreciating cultural diversity (Plaut, 2010) – may facilitate emotional acculturation towards both cultures. Conversely, restrictive immigration policies and a climate favoring assimilation or colorblindness, which ignore cultural differences, may impede emotional acculturation towards either culture. In the context of Belgium, where my data was collected, the diversity climate is largely described as assimilationist, with prevalent anti-immigrant sentiments among those who perceive higher numbers of immigrants in their communities (Hooghe & de Vroome, 2015). Moreover, visible minorities in Belgium experience discrimination and delays in their educational trajectories (Verhaeghe et al., 2017). This limits the generalizability of our findings; for instance, minorities identified as the assimilation type, who show the highest satisfaction with

their school and home, might not fare as well in cultural contexts where cultural differences are more appreciated. It is possible that aligning with the majority's preference for assimilation in Belgium can be beneficial for immigrant minorities in certain aspects. Future research should incorporate these individual and contextual dimensions to provide a more comprehensive understanding of the factors influencing emotional acculturation. Comparative studies across different socio-political environments and examinations of how individual differences interact with these broader conditions will be particularly valuable in elucidating the complexities of emotional and cultural adaptation.

5.6 Conclusion

This dissertation aimed to elucidate how immigrant-origin minority adolescents emotionally navigate their bicultural reality by examining their emotional fit with both majority and minority cultures. By exploring their sociocultural context, encompassing social networks and daily situations embedded with different languages and interaction partners from various cultural backgrounds at school and home, I investigated emotional acculturation as a situated and bidimensional process. The findings reveal that minority adolescents exhibit variability in their emotional experiences not only across different contexts but also among individuals, each displaying unique patterns of emotionally navigating their multicultural environments. They demonstrate the ability to emotionally fit with both cultures without sacrificing one fit for the other, driven largely by their friendships. Moreover, achieving high emotional fit with either culture proves beneficial for their situational and overall well-being. Overall, this dissertation underscores the importance of considering both individual differences and contextual factors in understanding emotional acculturation.

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APPENDIX

A2.1 Valence Check

To ensure the accuracy of participants' recall of the prompted situations, we examined emotional fit scores of those whose scores deviated by two standard deviations above or below the mean. Within this subset, we assessed whether their intensity rating for "good" was higher than that for "sad" in positive situations and if the opposite pattern held for negative situations. In instances where the ratings were equal, we conducted further analysis to determine whether their "happy" rating exceeded that of "angry" in positive situations, and conversely, the reverse pattern in negative situations.

Among the emotional fit scores with the majority culture, 16 scores were set as missing values. These comprised 6 scores from negative disengaging situations, 8 scores from positive disengaging situations, and 2 scores from positive engaging situations, while no missing values were identified from negative engaging situations. Similarly, among the emotional fit scores with the minority culture, 19 fit scores were designated as missing values. Specifically, these comprised 5 scores from negative disengaging situations, 8 scores from positive disengaging situations, 3 scores from both negative and positive engaging situation.

A3.1 Establishing Cultural Background

We established the “majority” culture based on Belgian nationality. Participants who, along with their parents and grandparents, were born in Belgium were categorized as reflecting the majority cultural norm.

We sought to establish “minority” culture(s) in a similar manner, reflecting broad yet relatively homogeneous groups of cultural backgrounds. However, immigrant-origin participants represented a diverse range of nationalities, with 70 countries of birth reported for themselves and their parents. For these participants, then, we used a two-step procedure to classify their cultural background. We first grouped the reported countries of birth based on Schwartz’s (2008) seven mutually exclusive cultural categories: Western European ($n = 24$), English-speaking ($n = 1$), Latin American ($n = 15$), Eastern European ($n = 55$), South Asian ($n = 8$), Confucian ($n = 2$), and Middle Eastern/African ($n = 126$). These categories are derived from similarities and differences between cultures in prevailing ideals and values – cultural value orientations. Schwartz empirically validated a set of seven value orientations with data from 73 countries, using multidimensional scaling to map each country onto one of seven data-driven groups. We used the Schwartz cultural categories to classify each minority student’s cultural background. For first-generation participants, this was based on the cultural grouping shared with at least one parent (e.g., a participant and one parent both born in the Middle East). For second-generation participants, this was based on the cultural grouping of one parent other than Belgium (e.g., a participant born in Belgium with one parent born in the Middle East). Participants who had parents from two different cultural groupings other than Belgium were excluded ($n = 4$) because determining their single home culture was not feasible.

A3.2 Validating the Cultural Groupings

To validate the above cultural groupings, we examined the distribution of participants across clusters based on their emotion ratings. We aimed to confirm that participants with Belgian nationality predominantly clustered together and participants with minority background clustered together. To achieve these goals, we

submitted participants' emotion ratings to a Clusterwise Simultaneous Component Analysis (C-SCA; De Roover et al., 2012). Like other component analyses, this technique serves as a data reduction method, identifying component structures for all data blocks (i.e., groups of data points on the same set of variables) while simultaneously examining the existence of subgroups or clusters within and across data blocks. Using the Multi-Block Component Analysis (MBCA) software, we entered each participant as a separate data block and investigated whether clusters of participants sharing similar emotion rating structures existed. We configured the program to fit C-SCA models up to 5 clusters and 4 components, where participants were assigned to mutually exclusive clusters, with components representing the distinct structure of emotion ratings within each cluster. We theorized the presence of at least 5 distinct cultural groups, including the 4 Schwartz groups (Western European: $n = 24$, Latin American: $n = 15$, Eastern European: $n = 55$, and Middle Eastern/African: $n = 126$) each with at least 10 participants, plus the Belgian majority ($n = 174$) and 4 dimensions of emotions (positive engaging, positive disengaging, negative engaging, and negative disengaging). As we hypothesized distinct emotional patterns across settings, we conducted separate analyses for home and school.

For both settings, the program suggested a 2-cluster and 2-component structure for representing emotion ratings based on the maximal scree ratio (see below). We examined the distribution of cultural backgrounds across the two clusters and found that, at both school and home, the Belgian majority participants predominantly belonged to Cluster 1, accounting for 63% and 66% of cluster membership, respectively (see Figure A1). This indicates that majority students reported similar emotional patterns in each setting, supporting our grouping based on Belgian nationality. We then examined which minority groups were assigned to Cluster 2, which had fewer Belgian majority participants in both settings. At school, 53% of participants with Eastern European and 56% with Middle Eastern/African backgrounds constituted the non-majority cluster. At home, 56% and 66% of individuals with Eastern European and Middle Eastern/African backgrounds, respectively, were assigned to Cluster 2. Given a more dominant presence in Cluster

2 than 1 and the largest sample sizes among the minority students, we conducted our analyses using only data from participants from Eastern European and Middle Eastern/African backgrounds.

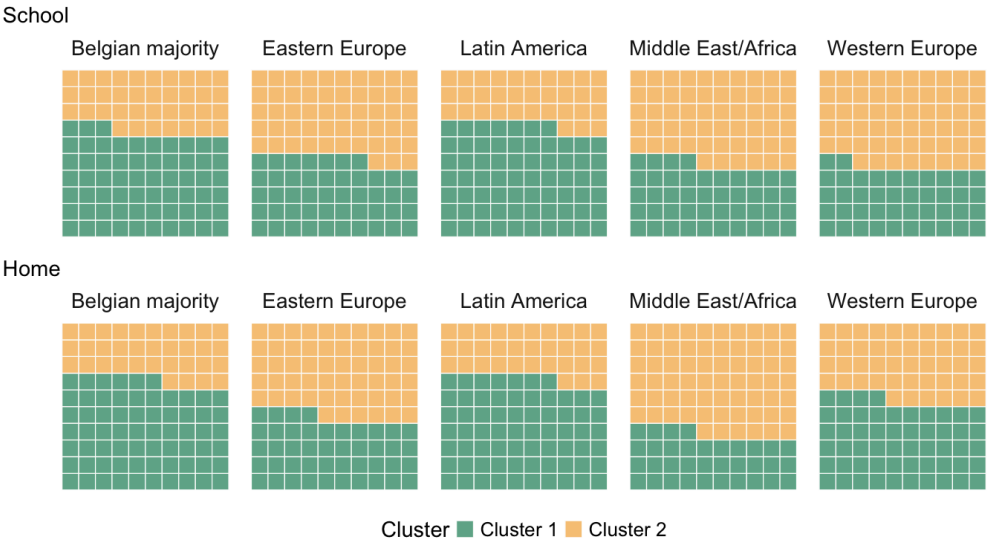


Figure A1. *Percentage Distribution of Cultural Group Members in Each Cluster*

C-SCA Solution with 2-clusters and 2-components

Partition matrix. The partition matrix indicates each participant's cluster assignment. For example, in the format [participant ID, 0, 1], a 0 indicates the participant does not belong to the first cluster, while a 1 indicates they belong to the second cluster. This is repeated for every participant.

Cluster loading matrices. While our primary focus was on the assignment of participants into distinct clusters which differ in their underlying emotional patterns, we present the loadings of the 2-cluster and 2-component solution in Tables A2 and A3. Upon examining the component loadings of each cluster, it becomes evident that the clusters differ from each other, particularly in the dimension associated with negative emotions. For instance, in the school setting (see Table A1), cluster 1 exhibits high loadings on feeling guilty, ashamed, and indebted in the second component, whereas cluster 2 demonstrates higher loadings of frustration, anger, and disappointment in the second component. A similar pattern is observed in the 2-cluster and 2-component solution for the home setting.

Table A1. *Orthogonally Rotated Cluster Loadings for Emotion Ratings at School*

	Cluster 1 (majority: 63%)		Cluster 2 (minority: 53%;56%)	
	Component 1	Component 2	Component 1	Component 2
Good	0.90	-0.27	0.65	-0.67
Happy	0.90	-0.27	0.67	-0.68
Sad	-0.58	0.39	-0.22	0.57
Proud	0.70	-0.24	0.54	-0.40
Guilty	-0.17	0.83	-0.01	0.41
Connected	0.81	-0.15	0.79	-0.15
Frustrated	-0.84	0.21	-0.43	0.74
Elated	0.70	-0.16	0.34	0.39
Ashamed	-0.28	0.67	0.01	0.48
Angry	-0.80	0.16	-0.41	0.75
Indebted	-0.02	0.71	0.05	0.33
Relying	0.74	-0.02	0.79	-0.01
Disappointed	-0.76	0.32	-0.33	0.73
Respectful	0.69	-0.02	0.78	-0.01

Note. Loadings greater than +/- .30 are highlighted in boldface.

Table A2. *Orthogonally Rotated Cluster Loadings for Emotion Ratings at Home*

	Cluster 1 (majority: 66%)		Cluster 2 (minority: 56%;66%)	
	Component 1	Component 2	Component 1	Component 2
Good	0.89	-0.30	0.70	-0.61
Happy	0.89	-0.30	0.73	-0.61
Sad	-0.62	0.31	-0.31	0.63
Proud	0.72	-0.23	0.61	-0.32
Guilty	-0.26	0.83	-0.05	0.57
Connected	0.82	-0.22	0.81	-0.07
Frustrated	-0.84	0.21	-0.51	0.68
Elated	0.72	-0.22	0.18	0.35
Ashamed	-0.20	0.70	-0.05	0.48
Angry	-0.81	0.17	-0.54	0.70
Indebted	-0.06	0.80	0.01	0.43
Relying	0.74	-0.02	0.78	0.04
Disappointed	-0.76	0.26	-0.37	0.71
Respectful	0.74	-0.01	0.77	0.04

Note. Loadings greater than +/- .30 are highlighted in boldface.

A3.3 Number of Excluded Situations

In total, 598 situations were excluded due to not meeting the prompted valence or setting criteria. Table A3 shows the distribution of exclusions across different days and types of situations. The first day of data collection saw the highest number of exclusions, while Day 5 had the fewest, with an average of 16.25 exclusions. By type, the most frequently excluded situations were negative situations at home (33.43), followed by negative situations at school (28.71). Positive situations at school were excluded at an average of 16.43, and positive situations at home had

the lowest exclusion rate at 6.86. This suggests that participants had a somewhat consistent understanding of positive emotional experiences at home, whereas there was more difficulty in reporting negative experiences, both at home and school.

Table A3. *Summary of Excluded Situations by Day and Type*

Day	Setting	Valence	Number of excluded situations	Average per day
1	School	Positive	17	27.6
	School	Negative	37	
	Home	Positive	16	
	Home	Negative	44	
2	School	Positive	24	21.5
	School	Negative	24	
	Home	Positive	3	
	Home	Negative	35	
3	School	Positive	10	18.75
	School	Negative	28	
	Home	Positive	5	
	Home	Negative	32	
4	School	Positive	15	24.25
	School	Negative	34	
	Home	Positive	9	
	Home	Negative	39	
5	School	Positive	10	16.25
	School	Negative	19	
	Home	Positive	6	
	Home	Negative	30	
6	School	Positive	28	23.5
	School	Negative	33	
	Home	Positive	4	
	Home	Negative	29	
7	School	Positive	11	16.75
	School	Negative	26	
	Home	Positive	5	
	Home	Negative	25	

A3.4 Findings with Spearman-based Emotional Fit

In response to recent findings highlighting the susceptibility of the Pearson correlation to data artifacts, we incorporated the Spearman correlation as an additional similarity measure (Carlier et al., 2023). The Spearman correlation is considered more robust as it can detect non-linear or monotonic relationships. We computed Spearman-based emotional fit following the procedure outlined above for the Pearson coefficient, but omitting the Fisher transformation because Spearman coefficients are already normally distributed.

H1a – c: Emotional Fit with the Cultural Norms by Cultural Context

Table A4. *Cultural Context Predicting Spearman-Correlated Emotional Fit*

Context	Estimate (SE)	df	t	p	95% CI	R ² _m	R ² _c
Majority Fit							
Setting (School)	-0.01 (0.01)	3834	-1.08	.28	[-0.03, 0.01]	.01	.21
Language (Dutch)	0.02 (0.01)	3970	1.16	.25	[-0.01, 0.04]	.01	.21
Partner (Belgian Majority)	0.03 (0.01)	3470	2.32	.021*	[0.01, 0.05]	.01	.19
Minority Fit							
Setting (Home)	0.01 (0.01)	3836	1.21	.23	[-0.01, 0.03]	.01	.17
Language (Non-Dutch)	-0.02 (0.01)	3934	-1.17	.24	[-0.04, 0.01]	.01	.17
Partner (Immigrant-origin)	-0.03 (0.01)	3360	-2.54	.011*	[-0.06, -0.01]	.01	.15

Note: CI = confidence interval; R²_m = marginal R-squared; R²_c = conditional R-squared.

*p < .05

H2a – b: Well-being by Emotional Fit with the Cultural Norms

Spearman-correlated emotional fit with the majority was not related to well-being at school ($b = 0.01$, $SE = 0.05$, $t(1910) = 0.03$, $p = .97$, 95% CI = [-0.10, 0.10], $R^2_m = .03$, $R^2_c = .45$). Spearman -correlated emotional fit with the minority was not related to well-being at home ($b = 0.02$, $SE = 0.05$, $t(1856) = 0.42$, $p = .67$, 95% CI = [-0.08, 0.13], $R^2_m = .03$, $R^2_c = .45$).

A3.5 Findings with Gower distance-based Emotional Fit

Both correlation-based fit measures reflect (dis)similarities in the shape of the emotional profiles being compared (See Figure A2). That is, they capture whether participants prioritize emotions in a similar manner to the norms: In a given situation type, does a participant rate one or more emotions more highly than others, regardless of their absolute intensity level? Previous studies have highlighted this type of difference in emotional patterns across cultures, like Japanese prioritizing connection over pride in positive situations and Americans favoring anger over shame in negative situations (Kitayama et al., 2006). Given this, we were primarily interested in assessing (dis)similarity in shape. However, we acknowledge that

emotional experiences may also exhibit (dis)similarities in scatter (variance of emotions) and in elevation (intensity of emotions).

Therefore, we computed a third, exploratory measure called Gower distance, which considers all three aspects of similarity (shape, scatter, and elevation). The formula for Gower distance is as follows:

$$\frac{1}{n} \sum_{i=1}^n \frac{|a_i - b_i|}{range_i}$$

where we calculate the average absolute difference between each emotion rating and the average rating for that item, and then divide this difference by the range of the item. We subsequently average these standardized differences across all items to obtain participant-level emotional fit with the minority and majority norms separately.

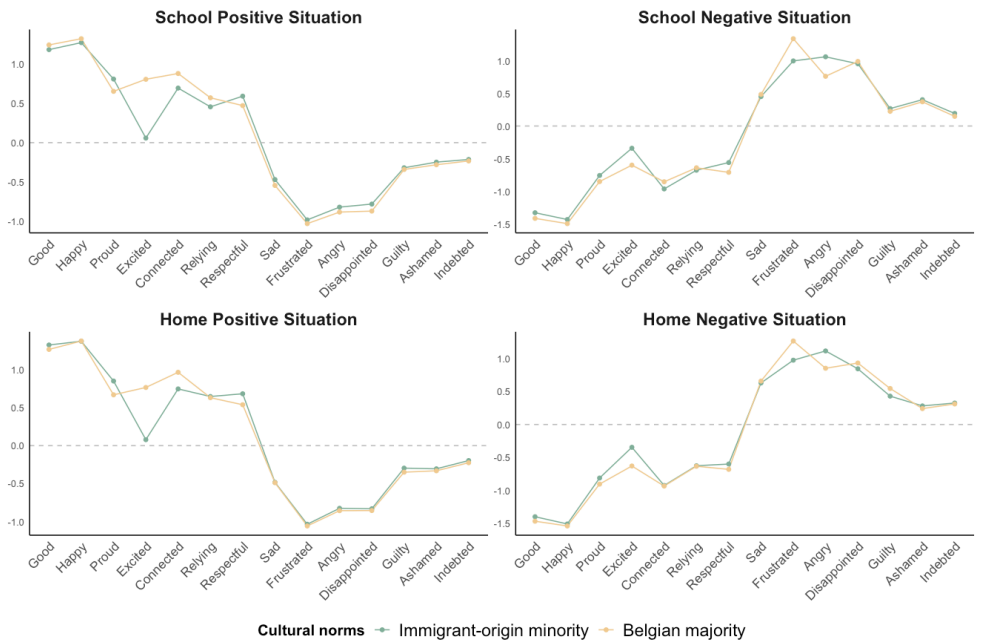


Figure A2. Cultural Norms of Emotions per Situation

H1a – c: Emotional Fit with the Cultural Norms by Cultural Context

Table A5. *Cultural Context Predicting Distance-based Emotional Fit*

Context	Estimate (SE)	df	t	p	95% CI	R ² _m	R ² _c
Majority Fit							
Setting (School)	0.01 (0.01)	3821	0.71	.48	[-0.01, 0.01]	.01	.25
Language (Dutch)	0.01 (0.01)	3964	2.05	.041*	[0.00, 0.01]	.01	.25
Partner (Belgian Majority)	-0.01 (0.01)	3546	-0.37	.72	[-0.01, 0.01]	.01	.26
Minority Fit							
Setting (Home)	-0.01 (0.01)	3822	-0.3	.76	[-0.01, 0.01]	.01	.24
Language (Non-Dutch)	-0.01 (0.01)	3954	-1.92	.055	[-0.01, 0.00]	.01	.24
Partner (Immigrant-origin)	0.01 (0.01)	3543	0.52	.60	[-0.01, 0.01]	.01	.25

Note: CI = confidence interval; R²_m = marginal R-squared; R²_c = conditional R-squared.

*p < .05

H2a – b: Well-being by Emotional Fit with the Cultural Norms

Distance-based emotional fit with the majority was marginally related to well-being at school ($b = 0.43$, $SE = 0.24$, $t(1928) = 1.80$, $p = .072$, 95% CI = [-0.04, 0.90], $R^2_m = .03$, $R^2_c = .45$). Distance-based emotional fit with the minority was marginally related to well-being at home ($b = 0.43$, $SE = 0.24$, $t(1866) = 1.82$, $p = .070$, 95% CI = [-0.03, 0.89], $R^2_m = .04$, $R^2_c = .45$).

A4.1 Scale Validation

We modified pre-existing scales to measure well-being, sense of belonging, and discrimination. To validate these scales, we examined their validity using both Confirmatory Factor Analysis (CFA) and Exploratory Factor Analysis (EFA) when new items measuring different domains were added. Additionally, we assessed their reliability through Cronbach's alpha.

Well-being

Well-being is multifaceted, and we aimed to measure domains that are important in the well-being of adolescents. Traditionally, psychologists have focused on negative indicators of psychopathology, such as internalizing and externalizing behaviors. However, recent studies motivated by positive psychology suggest that positive constructs of well-being are also crucial in youth development. According to the tripartite model proposed by Diener (1984), subjective well-being has three major components: *positive affect*, *negative affect*, and *life satisfaction*. A person is considered to have high subjective well-being when they report relatively frequent positive emotions, infrequent negative emotions, and a high degree of life satisfaction. This model implies that positive mental health and psychopathology are not on opposite ends of a single continuum of mental health (Huebner & Hills, 2013). The absence of psychopathology does not necessarily mean positive mental health or subjective well-being (Greenspoon & Saklofske, 2001). Additionally, health-related quality of life in the domains of psychological and physical health is considered important for children and adolescents' well-being.

Therefore, we used 19 items covering three dimensions from the KIDSCREEN-52, including *physical well-being* (physical activity, energy, and fitness), *psychological well-being* (positive emotions and perceptions), and *moods and emotions* (experience of depressive emotions and stressful feelings). We modified the item "Have you been able to run well?" to "How often has physical pain or illness prevented you from doing what you want or need to do?" to be inclusive and measure ill-health, not disability. We also removed the item "Have you had fun?" and added two items measuring low arousal positive emotions: "Have you felt calm?" and "Have

you felt relaxed?”. This adjustment was made to ensure the scale captures a wider range of emotional experiences, as emotions can be represented not only by valence but also by arousal levels (Russell, 1980). Recognizing cross-cultural differences in arousal (Lim, 2016), this enhancement improves the scale’s cultural sensitivity and provides a more nuanced understanding of emotional experiences across different cultural contexts.

Cronbach’s alpha for each dimension ranged from 0.67 (calm – our new dimension) to 0.88 (moods and emotions), indicating acceptable internal consistency. Eigenvalues greater than one and parallel analysis suggested retaining four factors, which align with the theorized factors, including the three preexisting domains and the additional domain of low arousal positive emotions. EFA with oblique rotation showed that all items, except one, had loadings greater than .30 on the four-factor solution. A four-factor CFA produced mixed results: a significant chi-square value, which is sensitive to sample size and often significant, a Comparative Fit Index (*CFI*) of 0.89, Tucker-Lewis Index (*TLI*) of 0.87, Root Mean Square Error of Approximation (*RMSEA*) of 0.08, and Standardized Root Mean Square Residual (*SRMR*) of 0.05. Using the modification indices, we allowed covariance between similar items “pleased” and “satisfied” with your life, significantly improving the model fit with *CFI*: 0.97, *TLI*: 0.97, *RMSEA*: 0.05, and *SRMR*: 0.04. The item “How often has physical pain or illness prevented you from doing what you want or need to do?” did not load higher than .30 on any factor. Reliability analysis suggested that dropping this item would increase the raw alpha from 0.73 to 0.79 in the physical well-being domain. The item had a low raw correlation coefficient (0.21), and both CFA and EFA indicated poor loading on any factor. The model fit improved when this item was removed, so we decided to exclude it.

We also used 39 items covering five domains of life satisfaction from the Multidimensional Students’ Life Satisfaction Scale (MSLSS; Huebner, 1994). The five domains were *family*, *friends*, *school*, *living environment*, and *self*. Previous studies reported strong internal consistency coefficients ranging from .70s to low .90s and test-retest coefficients from .70 to .90 over two- and four-week periods. Exploratory and confirmatory factor analyses have supported the dimensionality and hierarchy of

the MSLSS. It has been found to correlate with other self-, parent-, and teacher-reported well-being indexes and social desirability scales.

We added two items, “I wish I had different parents” and “Teachers help me when I need it,” and replaced the item “This town is filled with mean people” with “I don’t feel safe in my environment” from the adolescent version (Gilligan & Huebner, 2007). We removed “I am fun to be around” and “I like to try new things” from the self-domain to keep the questionnaire shorter and reduce participant burden. Cronbach’s alpha for each dimension ranged from 0.80 (self) to 0.87 (family), showing high internal consistency. The theorized five-factor CFA showed a relatively poor fit: significant chi-square, *CFI*: 0.82, *TLI*: 0.80, *RMSEA*: 0.07, *SRMR*: 0.07. Examining the modification indices suggested allowing covariance between three pairs of items: 1) “I look forward to going to school” and “I like being in school”, 2) “I enjoy being at home with my family” and “I like spending time with my family”, and 3) “My friends treat me well” and “My friends are nice to me”. Following these suggestions improved the model fit, though not within the recommended threshold (*CFI*: 0.85, *TLI*: 0.84, *RMSEA*: 0.06, *SRMR*: 0.06). Nonetheless, fit indices are guidelines and not strict rules to follow. Based on these analyses, we proceeded to create composite scores for each domain.

Sense of Belonging

We used six items from (Walton & Cohen, 2007) to measure the sense of belonging at school and adapted them to measure belonging at home by changing references from “school” to “home” and “friends” to “family.” We expected two factors to emerge. Cronbach’s alpha for school and home were 0.82 and 0.88 respectively, indicating high internal consistency. The theorized two-factor CFA showed a relatively fair fit: significant chi-square, *CFI*: 0.90, *TLI*: 0.88, *RMSEA*: 0.10, and *SRMR*: 0.07. When we conducted an EFA, eigenvalues and parallel analysis suggested retaining three factors, due to the item “feeling isolated at home/school” emerging as a separate factor. Despite this, we created aggregate scores for belonging at both school and home, justified by the high internal consistency and the relatively fair fit of the theorized two-factor structure.

Discrimination

We used five items from (Stucky et al., 2011) to measure daily perceived discrimination. Cronbach's alpha was 0.86, indicating high internal consistency among the items. The single-factor CFA showed an acceptable model fit, with $CFI = 0.97$, $TLI = 0.95$, and $SRMR = 0.03$, although the chi-square was significant and the $RMSEA$ was higher than recommended at 0.11.

A4.2 Investigation of Profile 4: Positive-specific Preservation

We began by reviewing the descriptions provided by the six participants identified in Profile 4, who demonstrated significantly low emotional fit with both cultural norms in all negative situations. This review aimed to verify that the reported situations aligned with the prompts, ensuring no erroneous coding by our coders, who had already checked all descriptions. The review confirmed validity, as participants described various situations congruent with negative experiences at school and home. For instance, participants reported being bullied during recess, classmates not talking to them, feeling lonely even when friends were around, and stress due to a science test. At home, situations included helping a sister with homework but feeling irritated because she didn't understand, parents discovering a poor test grade, and a pet not wanting to play with them.

Subsequently, we examined the emotion intensity ratings provided by these participants and compared the average patterns with those of the other three profiles. As detailed in the results section of Chapter 4, these participants exhibited unique emotional patterns in negative situations compared to other profiles, reflected in their significantly low emotional fit with both norms. Figure A3 illustrates these patterns. Notably, they reported experiencing significantly more positive emotions in negative situations than others, particularly socially engaging positive emotions such as feeling connected, relying on others, and respectful, while reporting less intense negative emotions.

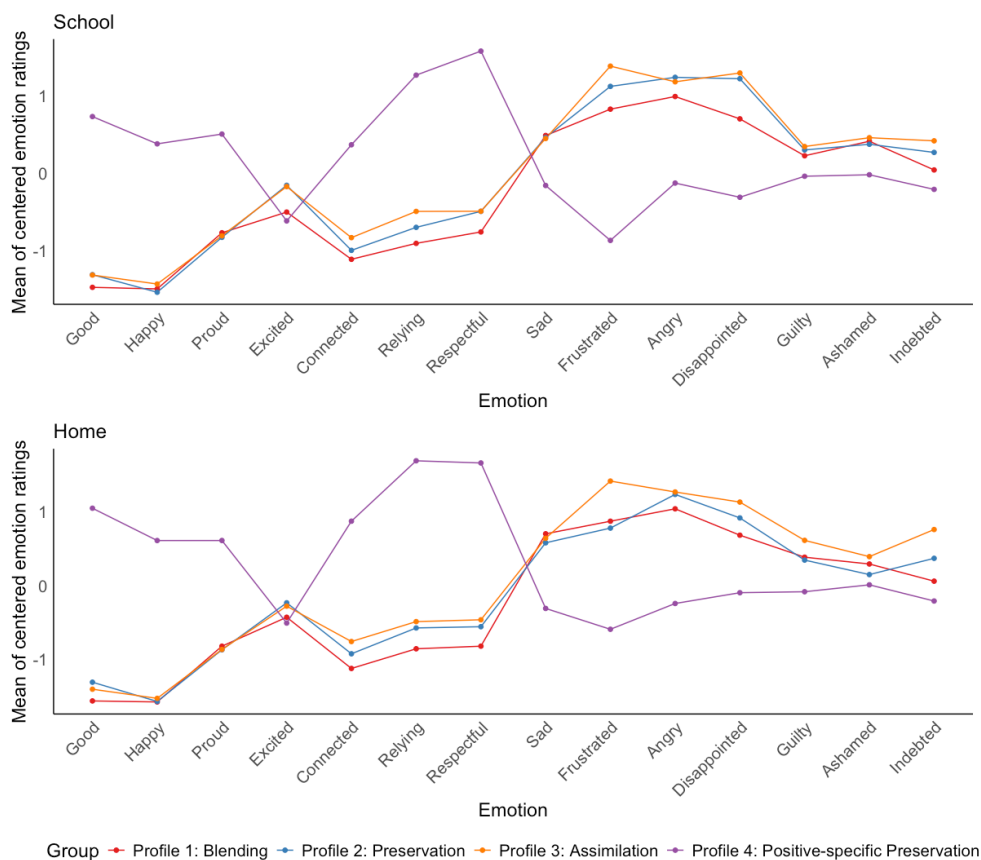


Figure A3. Average Emotion Rating of Each Profile in Negative Situations at School and at Home