Intergroup Contact, Empathy Education, and Refugee-Native Integration in Lebanon

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Abstract: Intergroup contact interventions often yield limited results in deeply divided societies. We test contact and empathy education in Lebanon, where Syrian refugees comprise a quarter of the population. In a fully cross-randomised field experiment with 887 Lebanese and Syrian youth embedded in a psychosocial support programme, we find that contact has little effect on outgroup attitudes and behaviour, while empathy education consistently improves attitudes for Lebanese youth and behavioural engagement for both. The combined treatment achieves little beyond empathy alone, with no evidence of spillovers to parents ($n = 595$). In polarised settings, empathy education should precede — or replace — contact.

Keywords: intergroup contact; empathy education; prejudice reduction; refugee integration; social cohesion; Lebanon; field experiment

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1 Introduction

In May 2023, the Lebanese Armed Forces began summarily deporting thousands of Syrian refugees (Amnesty International 2023). The deportations capitalized on a wave of anti-refugee rhetoric in Lebanon. In the preceding months, Lebanon's former President Michel Aoun stated that the presence of Syrian refugees represented a 'conspiracy against Lebanon' by 'European countries [that] want to integrate the Syrian refugees into the Lebanese society,' while former Foreign Minister Gebran Bassil similarly claimed that Syrians were only in Lebanon thanks to a 'web of money and benefits.' Human rights organisations warned that such xenophobic rhetoric helped create a 'coercive environment' for Syrians (Voice of America 2023). Public tensions escalated to the point that security forces shut down demonstrations outside UNHCR's Beirut offices protesting the continued presence of Syrian refugees (Houssari 2023).

These views were not confined to a narrow fringe of Lebanese society. Rather, elite rhetoric echoed and amplified anti-Syrian sentiment that was already widespread, shaping the public climate in which deportations became politically feasible a decade later. A nationally representative survey conducted in 2013 found that 52% of Lebanese viewed Syrian refugees as a threat to national security, 82% believed that Syrians 'take jobs from Lebanese,' and 35% reported that Syrians benefit from 'unfair' economic assistance (Christophersen et al. 2013). These beliefs reflect common misperceptions about the living conditions of Syrian refugees, 90% of whom were living in extreme poverty as of 2021 (UNHCR 2023). Linguistic, cultural, and often religious commonalities have done little to mitigate Lebanese prejudice against Syrians in Lebanon, who have minimal access to employment opportunities, healthcare, and freedom of movement.

The case of Syrian refugees in Lebanon reveals not only persistent prejudice toward a vulnerable minority, but also rising affective and political polarisation between refugee and host communities—polarisation that increasingly undermines cooperation and trust across group lines. Existing research shows that polarisation can reshape social behaviour by hardening social boundaries and heightening perceived threats from outgroups, making cross-group cooperation more fragile (Boxell et al. 2024; Finkel et al. 2020; Kish Bar-On et al. 2024). As polarisation intensifies, individuals become more likely to anticipate negative reactions from outgroup members even during neutral or routine interactions, discouraging engagement and limiting opportunities for meaningful cooperation (Dimant and Kimbrough 2024; Panizza et al. 2024). Polarisation thus contributes to a social trust trap

by reducing opportunities for contact, eroding empathy toward outgroup members, and reinforcing patterns of social segregation.

How, then, can social cohesion—understood as everyday trust and tolerance across group lines among those living in close proximity (Gilligan et al. 2014)—be fostered in polarised environments? The causal evidence points to two promising interventions: intergroup contact and empathy education. The contact hypothesis posits that interpersonal interaction across group lines, when structured around cooperation, equal status, and institutional support, can reduce prejudice and improve intergroup relations (Allport 1954). Many OECD governments implicitly rely on this framework when designing programmes aimed at improving refugee–host relations, investing substantial resources in intergroup peacebuilding initiatives that rely on contact logics (Ditlmann and Samii 2016).[1]

Meta-analytic evidence suggests that intergroup contact typically reduces prejudice (Paluck et al. 2021; Lowe 2025), with cooperative contact found to improve intergroup relations in contexts ranging from Indian cricket leagues (Lowe 2021) and South African dormitories (Corno et al. 2022) to American universities (Carrell et al. 2015). Effect sizes tend to shrink in fragile settings, however, with mixed findings in post-conflict environments such as Iraq (Mousa 2020) and Nigeria (Scacco and Warren 2018). The evidence base suggests that in deeply divided societies, intergroup contact alone may be insufficient to build social cohesion in the absence of structural change, and may even provoke backlash among both dominant and marginalised groups (Hultman and Mousa 2025).

Moreover, despite the volume of programming and existing research on contact, existing evidence remains poorly equipped to answer basic questions about the effects of intergroup contact on migrant-host relations. Paluck et al.'s meta-analysis identifies only two high-quality experiments that involve newly mixed populations, and neither focuses on refugee interactions with members of host communities (2021). The evidence we do have seems contradictory at first glance: exposure to refugees dampened xenophobic sentiment among Colombians (Lebow et al. 2024) but boosted it among Greeks (Hangartner et al. 2019) and Austrians (Steinmayr 2021). An appreciation of meaningful contact—sustained, positive interactions—as opposed to mere exposure helps reconcile these divergent results

[1] OECD governments invested a combined 390 million USD annually in citizen-targeted peacebuilding efforts between 2000 and 2013 (Ditlmann and Samii 2016).

(Steinmayr 2021), supported by largely observational evidence on meaningful immigrant-native contact found elsewhere in Europe (Andersson and Dehdari 2021; Homola and Tavits 2018; Clayton et al. 2021) and Lebanon (Ghosn et al. 2019).[2]

Whether refugee-host contact can build social cohesion thus remains an open question. This is particularly true in the Global South, where 8 out of 10 of the world's refugees reside (Christophersen 2020). Refugee-host relations in the Global South differ from the European context in two important ways that limit our ability to extrapolate from Europe-based studies. First, refugees and hosts often share a common language and culture, potentially amplifying any positive effects of contact by making initial connections easier to form. Second, and reversing the direction of our expectations, economic anxieties tend to be more profound; potentially heightening fears about economic competition from refugees, which may trigger xenophobia more readily (Lebow et al. 2024). We therefore have much to learn about the extent to which intergroup contact, even in its most positive, Allportian form, will promote cohesion or deepen prejudice and polarisation between culturally proximate groups (Lebow et al. 2024).

Empathy education offers an alternative, and possibly complementary, pathway to social cohesion. Empathy-based approaches treat cognitive empathy, the ability to understand others' thoughts and emotions, as a trainable skill (Galinsky and Moskowitz 2000). A growing experimental literature finds that empathy interventions can improve attitudes toward refugees; reducing bullying and improving academic outcomes in Turkey (Alan et al. 2021), and reducing prejudicial attitudes through brief perspective-taking in the U.S. (Adida et al. 2018), Hungary (Simonovits et al. 2018), and Colombia (Bandiera et al. 2024). Empathy education stresses the slow, deliberative processing of social information (Alan et al. 2021), complementing broader efforts to promote self-regulation and pro-social behaviour in conflict settings (Heller et al. 2017; Blattman et al. 2017; Alan and Ertac 2018). In polarised environments, such interventions can discourage conflict escalation by promoting emotional regulation, encouraging constructive dialogue and perspective-taking to handle disagreements, and defusing retaliatory instincts.

While each intervention may be effective in isolation, combining intergroup contact with empathy education may be particularly well suited to fostering social cohesion in fractured societies. The

[2] An exception is Finseraas and Kotsadam (2017), an experimental study of contact with migrant minorities in Norway showing that contact can improve native attitudes about migrant work ethics, but not on broader social issues, such as welfare policy.

contact hypothesis assumes that intergroup interaction will naturally generate empathy and cooperation, yet this process may stall in polarised environments. Emerging work from post-war settings highlights the need for psychosocial support to help participants navigate the dissonance and discomfort that can arise from direct interaction (Hultman and Mousa 2025; Balcells and Voytas 2025). This is especially relevant when relations are contentious enough that disagreements risk spiraling into aggression, and interventions target youth, who typically possess less developed emotion-regulation skills than adults. Integrating the two approaches also speaks directly to real-world institutional practice: policymakers often create diverse classrooms or shared social spaces but leave the management of interpersonal conflict largely to participants themselves (e.g., Billings et al. 2021). Explicit training in empathy and conflict-resolution skills may therefore be needed to activate the positive potential of contact when the risk of conflict is high.

To better understand the impacts of intergroup contact, empathy education, and the combination of the two on refugee-host relations, we conducted a large-scale field experiment with *Amel Association International* (Amel), a Lebanese NGO with a long history of providing mental health-oriented programming to vulnerable communities in Lebanon. Leveraging a well-established family psycho-social support programme (FPSS), we randomised 887 Lebanese and Syrian youths into two crossed treatments: (1) intergroup contact (mixed Lebanese-Syrian vs. homogeneous Lebanese or Syrian psycho-social support sessions); and (2) empathy education (vs. a placebo curriculum focused on physical health and nutrition), over the course of a 12-week FPSS programme. This design allows us to estimate the individual and joint effects of intergroup contact and empathy education on prejudice, migration-related policy preferences, conflict resolution skills, and behavioural engagement in future intergroup activities. We also surveyed 595 parents of youth participants, in order to measure potential spillovers within households.

This study makes four contributions to the evidence base on social cohesion. First, we fully cross-randomise contact and empathy education interventions. Rather than assuming that contact alone will build empathy and conflict resolution skills, and given recent evidence of backlash from cohesion interventions lacking psychosocial support (Ghosh et al. 2025; Balcells and Voytas 2025; Cilliers et al. 2016), we embed contact within a structured empathy curriculum. Second, we measure spillover effects from programme participants to parents. Even if contact and empathy-oriented interventions are effective, they typically only reach a tiny fraction of the relevant population (Enos 2017; Weiss et al. 2025). A path to scalability requires that they activate spillover effects by changing norms

about the acceptability of intergroup contact, and demonstrating that positive contact experiences are possible (the 'extended contact' hypothesis) in spite of negative experiences in the past (Zhou et al. 2019; Grady et al. 2023). Work in other domains suggests that upward spillovers from children to parents are plausible: children exposed to environmental education have been found to shift parents' climate-related beliefs (Bhattacharya et al. 2026), and school-based civics curricula have been shown to stimulate political knowledge and civic engagement among parents through child-initiated household discussions (McDevitt and Chaffee 2002). The closest experimental analogue, a school-based gender attitudes intervention in India, detected spillover effects from male—but not female—children to fathers, six years after the implementation of a female empowerment program (Dhar et al. 2024). While informative, this evidence nonetheless leaves open the question of whether generalised child-to-parent diffusion is feasible in the domain of intergroup relations. We probe this question directly by enrolling programme participants' parents as research subjects, inviting them to take baseline and endline surveys, and measuring their behavioural outcomes.

Third, contact interventions have been criticized for instrumentalising minority-group members as vehicles for majority attitude change, with outcomes for minorities themselves often treated as secondary (Paluck and Clark 2020). We instead conceptualise social cohesion as a reciprocal process in which minority-group members must feel able and willing to integrate, while majority-group members must be willing to accept and sustain these efforts. Consistent with this perspective, Syrians constitute over half of our sample, centring minority experiences. We also collect detailed measures from Syrian parents and youth on psychological integration, well-being, and mental health, and develop parallel behavioural outcomes capturing engagement with both Syrian and Lebanese cultural practices, allowing us to assess mutual adaptation rather than one-sided assimilation.

Finally, we measure real-world behaviours that capture social cohesion outside of the study setting several weeks after the intervention concludes. Even the most carefully designed contact studies often rely on self-reported attitudes measured within days of the treatment (Baumeister et al. 2007), prompting policymakers and scholars to question whether contact changes generalised behaviours toward the outgroup (Paluck et al. 2021). We contribute to a growing number of studies that measure real-world behavioural outcomes, allowing us to assess whether such interventions translate into sustained patterns of cooperation once participants walk away from the initial programme, the type of durable social cohesion that matters most from a policymaking perspective (Alan et al. 2021; Mousa 2020; Paluck 2009; Paluck et al. 2016).

While neither intervention offers a silver bullet, our results show that empathy education consistently outperforms contact. Among refugee and native youth in Lebanon, empathy education improves intergroup social proximity by 0.21 standard deviations, increases attendance at outgroup cultural events by 0.38 standard deviations, and bolsters pro-refugee policy preferences among Lebanese youth by 0.43 standard deviations. Contact, by contrast, fails to reduce prejudice and produces less consistent behavioural effects. Combining contact with empathy education performs no better than empathy education alone, although the integration of theory and practice strengthens participants' empathy skills more than either intervention in isolation. Spillover effects among parents are modest overall, with slightly more positive returns to empathy. Taken together, these findings suggest that empathy-based interventions may offer a safer, more scalable, and more effective pathway to improving intergroup attitudes in polarised societies.

2 Context: Lebanese-Syrian Relations and the Amel FPSS Programme

Despite extensive cultural ties and a tradition of relatively free movement between the two neighbouring countries, the history of Lebanese-Syrian relations is complex. Syrian forces invaded Lebanon at the outset of the Lebanese civil war in 1976 and maintained a presence in the country for 29 years, only withdrawing in 2005 as a result of mounting international pressure following the assassination of Lebanese Prime Minister Rafic Hariri. The legacy of the Syrian occupation, which involved wide-ranging military and political interference in Lebanese affairs as well as various forms of everyday repression, defined Lebanese attitudes toward Syrians in later years. The outbreak of the Syrian revolution and subsequent civil war in 2011 did little to improve Lebanese attitudes toward Syrians.

Lebanon is home to the largest number of refugees per capita in the world (UNHCR Lebanon 2024). Hosting refugees at this scale requires a sophisticated policy response that would test the most well-functioning of polities, a challenge made all the more acute in Lebanon, which has suffered from deepening political and economic crises in the wake of the Syrian refugee influx. Even before Lebanon's 2019 currency devaluation and hyperinflation crisis, Syrians had limited access to employment, housing, education, and healthcare, including being barred entirely from professions like law and medicine, and being forbidden from purchasing property. Further restrictions were imposed in 2023, when Syrian refugees were ordered to stay in their homes for two days during the Lebanese

elections, and when the Lebanese Armed Forces deported over 13,000 of Syrians, many of whom were unaccompanied children (Human Rights Watch 2024). There is no path to permanent residency, citizenship, or regularization for most Syrian refugees. The strain of what the World Bank deemed one of the worst economic crises in the past 150 years has taken its toll on intergroup relations, with Syrians accused of benefiting from aid dollars inaccessible to Lebanese and scapegoated by politicians for Lebanon's various ills (World Bank 2021).

As Syrians began to arrive by the hundreds of thousands in 2012, they were greeted by a small but vibrant network of domestic NGOs already actively providing services to Lebanon's most vulnerable communities. Our research partner for this study, Amel Association International, was founded in 1979 as a secular, non-profit organisation to provide medical, educational, and psycho-social services in response to the Lebanese civil war. From its early days working in the areas of Chiyah and Ain el Remmaneh, where distinct ethno-religious communities lived side by side yet remained socially segregated, Amel paired critical service provision with the broader aim of creating shared spaces for meaningful intergroup contact.

Amel's flagship initiative, the Family Psycho-Social Support Programme (FPSS), has operated in various forms since the 1980s. In its latest iteration, developed with UNICEF and Balamand University and funded by a consortium of international donors, the programme has reached more than 15,000 youth participants between 2011 and 2023. Designed to provide a safe and structured environment for at-risk children and their families, FPSS combines prevention and response services with a focus on mental health, well-being, and protection from violence, abuse, and exploitation. Sessions take place at existing Amel offices in small groups of 10–12 children. This group-based format not only shapes the programme's pedagogy but also makes it particularly well suited to a cluster-randomised experimental design.

Syrian refugees represent the main beneficiaries of the FPSS programme (55%), followed by Lebanese citizens (40%), and Palestinian refugees (5%), a pattern consistent with Amel's wider programming. The FPSS programme is designed to cater to children aged 12 to 17 years old who are at risk of child labour, post-traumatic stress disorder, domestic violence, and to a lesser extent, substance abuse. While Amel has 18 locations across Lebanon, this study focused on three centres, each in a different Governerate: Hay el Sellum (Mount Lebanon Governorate), Kamed el Loz (Bekaa Governorate), and Al Ain (Baalbeck-Hermel Governorate). Lebanese and Syrian communities in these areas suffer from poverty, unstable home lives and subsequent behavioural disorders, and frequent

teacher strikes at local public schools. Syrian children suffer from added burdens rooted in their lack of permanent residency, discrimination from the host community, and higher poverty rates—which, in turn, increase child labour rates and the likelihood of school drop-out. While Amel does not collect data on religious affiliation as a matter of principle, participants are drawn from communities that are primarily Muslim, although they differ in sect and national origin in some locations.[3] Amel is the main non-governmental provider of services in the three study sites, a role it fulfils regardless of beneficiaries' national origin.

As with their parents, children have few opportunities to build meaningful ties across group lines. Schools are typically seen as an ideal environment for bridging such divides (Billings et al. 2021; Alan et al. 2021), yet Lebanese public schools are segregated by nationality: Lebanese children attend the morning shift, while Syrian children attend the afternoon shift. This policy choice allowed the Lebanese education system to expand its capacity and meet each community's curricular demands, but foreclosed the daily mixing that schools can otherwise provide. As a result, over half of youth participants (52%) reported having no friends from the outgroup despite spending their entire lives in the same neighbourhoods. The Lebanese context is therefore ideal for a contact experiment in many ways: intergroup contact is physically feasible yet socially constrained, and prejudice is sufficiently entrenched to warrant intervention without being so extreme that structured contact would pose ethical or safety risks.

All participants completed the standard 12-week FPSS curriculum, delivered by Amel instructors trained in child psycho-social support. Youth met once per week for two-hour sessions centred on positive communication, anger management, identity and community, hopes for the future, and children's rights. As such, the FPSS curriculum offered participants a total of 24 hours of contact with their FPSS classmates (and 24 hours of intergroup contact for those assigned to mixed FPSS groups). We argue that this reflects a relatively high intensity treatment in comparison to other recent field experimental studies of intergroup contact. In a recent meta-analysis of 41 pre-registered, randomised contact interventions conducted since 2016 by Lowe (2025), only 11 studies (roughly 30%) provided more contact hours than ours.

The socio-emotional content of the core curriculum thus incorporated empathy-adjacent themes and skills that likely bias against detecting additional empathy-specific effects. Activities were highly structured and interactive: children worked in stable groups of 10–12, established shared

[3]Hey el Sellum residents are mainly Lebanese Shia and Syrian Sunnis, Kamed el Loz residents are largely Sunni Lebanese and Syrians, and Al Ain residents consist of a mixture of Sunni and Shia Lebanese, and Sunni Syrians.

norms of respect and active listening, and engaged in role-playing, collaborative tasks, and peer feedback exercises designed to reinforce the programme's core lessons. Sessions took place in small groups, and Amel staff worked to create a safe, supportive environment, within which our experimental interventions were embedded. Contact within FPSS was therefore cooperative, egalitarian, and endorsed by respected facilitators; conditions thought to optimise intergroup interaction for prejudice reduction (Allport 1954). Recruitment occurred through internal referrals and outreach at nearby public schools. During the study period, a mix of Syrian and Lebanese facilitators led sessions in Al Ain and Kamed el Loz, while Lebanese facilitators ran those in Hey el-Sellom.

Working with a Lebanese child development scholar, we developed two supplementary curricula: an empathy-building curriculum, rooted in perspective-giving and perspective-taking, and a placebo curriculum focused on physical health and nutrition. Study participants were assigned to one of these conditions for eight out of 12 total programme sessions, in addition to the main FPSS programming. Topics included understanding others' feelings, active listening, and building friendships with diverse peers (see Table 1 for a summary of the curriculum). While the sessions covered topics such as developing and maintaining friendships with peers from different backgrounds, the Syrian-Lebanese social conflict was not explicitly discussed. This approach of developing empathy skills without increasing the salience of the refugee-native division is similar to that taken by Alrababah et al. (2020) in Jordan, and aligns with other perspective-taking interventions that stress shared experiences to reduce prejudice (Kalla and Broockman 2023).

The eight sessions of the placebo health curriculum focused on topics that should not, in principle, have any bearing on intergroup relations, such as the importance of leading an active lifestyle in a digital age, the dangers of substance abuse, and issues related to personal hygiene (see Table A1 for a summary). To promote standardisation across classes, facilitators were given detailed lesson plans for each session that included the following components: objectives, life skills to be taught, key messages, preparation, session flow, instructions for at least two activities, and notes for processing, generalization, and closing reflections. These design features ensured that differences between conditions stemmed from the content of the supplementary curriculum rather than variation in delivery or facilitator discretion.

Topic	Content
1. Self-esteem	Self-acceptance, self-awareness, goal setting
2. My identity	affirming identity and responsibility, resisting pressure, redefining self-position, self-management and self-control
3. Empathy	Understanding emotions, empathizing with others, emotional regulation
4. Active listening	How to listen to others, bridging the gap between You and I, interpersonal communication
5. Community	Collaborating in my groups and communities, rights and responsibilities towards self and others, treating others with respect, cooperation, respect, and teamwork
6. Inclusive Friendships	Accepting and understanding others, respecting differing opinions, communication and relationship building
7. Interpersonal conflict	Responding to peer pressure and bullying, negotiating beyond win-lose scenarios, decision making and problem solving, negotiation, assertiveness, and refusal skills
8. Trust	Relying on oneself and others, building trust, self-control, and critical thinking

Table 1: Outline of Empathy Education Curriculum

3 Empirical Strategy

We randomly assigned individual participants to: (1) attend either heterogeneous or homogeneous FPSS classes and (2) receive either the empathy curriculum or the placebo focused on physical health and nutrition. We measure attitudes, self-reported behaviours, and real-world behaviours among direct FPSS programme participants and at least one of their parents, allowing us to detect child-to-parent spillover effects. Attitudes were measured via a baseline and endline survey administered approximately two weeks before the FPSS programme launched and two weeks after it concluded. Behavioural outcomes, meanwhile, were measured three to four weeks after the FPSS programme concluded.

3.1 Experimental protocol

The experimental protocol began with participant recruitment through Amel's existing community networks. Programme staff conducted outreach through advertisements at local public schools and at Amel offices across the three participating study locations. Parents of interested children first completed a registration form and baseline survey containing the measures required for randomisation, after which youth participants completed their own baseline survey. Once baseline data collection was

complete, families were informed of their FPSS group assignments. The recruited youth participants then embarked on a 12-week psychosocial support programme, with the final eight weeks devoted to empathy education or a placebo curriculum (described in detail in Section 2). The research design was preregistered with the Open Science Foundation (OSF protocol Fdbp3) and received IRB approval at Yale University (Protocol 2000032754).

To increase precision, and to manage constraints that arose from idiosyncratic features of the field setting, we conducted randomisation in two steps. First, children were randomly allocated to a study group conditional on three factors: location (one of three study sites), scheduling availability (Friday mornings, Friday evenings, other weekday mornings, other weekday evenings), and having enrolled siblings, as most parents required siblings to attend the same sessions for practical purposes. Group sizes were randomly chosen among those that minimise deviation from an optimal group size of 11 children. Half of the groups were assigned to be heterogeneous with regards to nationality, while the other half were assigned to be homogeneous (i.e. all-Syrian or all-Lebanese). Additionally, we verified that each group contained at least two boys and two girls, and that there was no clear group-level skewing based on age or nationality. Heterogeneous groups were always composed of roughly equal numbers of Lebanese and Syrian participants, a design choice intended to discourage within-group clustering and encourage genuine intergroup interaction (Carrell et al. 2013). This procedure represents a slight deviation from the simple block-randomisation specified in our pre-analysis plan while ensuring feasibility in the field and maintaining balance across key covariates relevant to implementation.

Amel, like most NGOs, typically allows participants to sign up for whichever programme session suits them best. This system is not ideal for optimizing for positive intergroup contact for two reasons. First, because Syrian and Lebanese children attend different school shifts, their schedules overlap little—Lebanese children are free in the afternoons, while Syrian children are free in the mornings. Syrian children, often pulled into child labour, face additional barriers to scheduling availability. Second, selection bias poses a serious threat to intergroup contact, motivating the need for experimental tests of contact in the first place (Paluck et al. 2021). Interviews with Amel staff reinforced concerns about selection bias, stressing that Lebanese and Syrian beneficiaries alike tended to avoid each other when signing up for programmes.[4]

[4]Author interviews with two child protection programme officers at Amel, online, August 2021.

We worked with Amel to expand the FPSS programme's available time slots, identify scheduling windows with sufficient overlap across the two national communities, and randomly assign participants to classes, eliminating selection into sessions on the basis of baseline prejudice. These design choices respected Amel's operational constraints while substantially increasing the likelihood that participants would encounter peers from the other group. During piloting, we found that 42% of potential participants had no scheduling overlap with the outgroup under the standard range of FPSS session times; expanding available slots (for example, including Friday sessions, when both Syrian and Lebanese children tended to be off school) and randomly allocating participants raised the share of potential study participants who could in principle be assigned to a mixed FPSS group to nearly 100%, pointing to substantial selection bias in the pre-study registration process.

Two weeks after the FPSS programme ended, participants and their parents were asked to complete an endline survey. Two weeks after the endline survey was completed, a benchmark which represented roughly one month after the FPSS programme ended, participants and their parents were invited to attend two events. These events served as the basis for our behavioural outcomes, described below. This process was repeated for four programme cycles at each of the three study locations, which ran from June 2022 to August 2023.[5]

4 Outcomes

We attempted to measure attitudes, self-reported behaviour, and real-world behaviour for all programme participants and at least one parent per FPSS participant. These outcomes were designed to capture intergroup affect, attitudes about policy, and willingness to engage with outgroup members.

4.1 Attitudinal outcomes

The study's primary measures of intergroup attitudes, outlined in Table 2, are based on a common battery of eight survey items for youth and nine for parents, in addition to a policy preference item asked only of Lebanese study participants (both youth and parents). Where possible, we analyse these items as indices to increase precision. Using the baseline responses from all four survey cycles, we proceeded in three steps, each repeated separately for youth respondents and their parents. First, we applied a hierarchical K-means clustering algorithm to group similar items together (see Section

[5]Programme cycle 1 took place from June to September 2022, cycle 2 from October to December 2022, cycle 3 from February to April 2023, and cycle 4 from June to August 2023.

C for details). Second, we ran a factor analysis on the resultant indices. Third, we assessed internal consistency and dropped any index with Cronbach's alpha below 0.6, opting instead to analyse these outcomes as individual items.[6] This method of identifying outcome indices is entirely data driven, and reduces researcher discretion relative to manually selecting items for index construction.

For youth, the resulting outcome indices measure *Social proximity* to the outgroup as perceived cross-group commonality, willingness to form cross group friendships, and ingroup social norms supportive of such friendships; basic *Conflict knowledge* about the nature of interpersonal disagreement; *Conflict skill*, which reflects an individual's comfort in intervening as a mediator in a conflict situation; and *Emotional skill*, measured by how well individuals feel they can understand their peers' emotions. For parents, outcome indices measure *Social proximity* through attitudes about cross-group interactions, openness to working with outgroup members and comfort with intermarriage; *Market impartiality* through willingness to engage in economic exchange across group lines; *Arbitrary divide* as perceived arbitrariness of social divisions; and *Universalism* as an endorsement of treating others as individuals rather than as members of ethnic or religious communities. We also ask Lebanese youth whether they believe that Syrians should be allowed to stay in Lebanon or whether they should return home, a fraught national policy debate given the implications for offsetting Lebanon's fragile sectarian balance (Janmyr 2017).

Research on intergroup contact finds that negative contact experiences carry an outsized influence relative to positive ones (Paolini et al. 2010), raising the possibility that even a well-designed contact programme may nonetheless incur psychological costs or a negative experience alongside attitudinal gains. Beyond intergroup attitudes, we therefore track three sets of secondary outcomes motivated by concerns about potential unintended programme effects. First, both youth and parents were asked whether they would recommend the FPSS programme to others in their community. We interpret study participants' overall appraisal of the programme experience as indicative of valence; if the programme is well-received, it suggested a positive experience, and vice versa if the programme was not well-received.

Second, we measure mental health for both youth and parents (see Table J1 for a list of questions). Third, both Syrian and Lebanese parents were asked about their degree of psychological integration in Lebanon. Validated among populations of refugees and host communities in Lebanon and globally (Harder et al. 2018; Alrababah et al. 2023), these questions capture respondents' plans

[6]This is a slight deviation from the pre-analysis plan, which set the cutoff at 0.70. The parent social proximity and psychological integration indices were close ($\alpha = 0.68$ and 0.63), so we retained them. See Table C.

Table 2: Survey-based primary outcomes for youth and parents

Factor (α)	Item text	Range
Youth		
Social proximity	- How much do you think you have in common with kids from the [outgroup]?	0–3
(.74)	- In general, [outgroup] people are friendly toward [ingroup].	0–3
	- I can imagine becoming close friends with an [outgroup] person.	0–3
	- My friends would be supportive if I became close friends with an [outgroup] person.	0–3
	- My family would be supportive if I became close friends with an [outgroup] person.	0–3
Conflict knowledge	- Conflict is... [select one]: *A normal part of life (1) / something that should never happen (0).*	0–1
Conflict skill	- Let's say two of your friends get into an argument and they ask for your help resolving it. How comfortable would you feel about stepping in to help?	0–2
Emotional skill	- When a friend is sad, I can usually understand why.	0–1
Allow Syrians to stay (*Leb. only*)	- Should Syrians be allowed to stay in Lebanon, or should they return home?	0–4
Parents		
Social proximity	- In the last 12 months, how often did you have a meal with [outgroup members] not part of your family?	0–4
(.68)	- [Outgroup] contacts in your phone: how many did you speak with in the last 4 weeks?	0–4
	- How do you perceive [ingroup]–[outgroup] relations?	0–3
	- I share a lot in common with [outgroup members].	0–3
	- I would feel comfortable working with an [outgroup] person.	0–3
	- I would feel comfortable if my child married an [outgroup] person.	0–3
Market impartiality	- Suppose you are buying tomatoes from the market. There are two stores next to each other, one run by an [outgroup member] and one by an [ingroup member]. The tomatoes are the same quality, but the [ingroup] store is more expensive. At what point would you buy from the [outgroup] store instead? *Always buy cheapest / 25% cheaper / 50% cheaper / 75% cheaper / always buy from [ingroup]*	0–4
Arbitrary divide	- It is arbitrary to divide Lebanon into ethnic and religious communities.	0–3
Universalism	- Lebanon would be a better society if we treated each other as people first, instead of ethnic and religious communities.	0–3

Note: See Appendix **??** for details on the clustering procedure and Appendix **??** for the full survey instruments.

to remain in Lebanon, their feelings of connection to Lebanon, and how often they feel like outsiders in Lebanon (see Appendix M for the full item text). These questions allow us to gauge whether Lebanese parents' sense of national belonging is unsettled by greater proximity to Syrian refugees, and for Syrian parents, whether the programme helped them feel more integrated or, in fact, made their outsider status more salient.

4.2 Behavioural outcomes

We worked closely with Amel programme staff to co-design behavioural outcome measures that meaningfully capture social cohesion in the local context. Interviews with Amel staff guided by the prompt of 'how would you know if Lebanese and Syrians in this community were no longer prejudiced toward each other?' led us to measure interest in the outgroups' culture. Based on this insight, our two key behavioural outcomes are registering for, and actually attending, a cultural event celebrating the other group's traditions—either a Syrian or Lebanese *dabke* dance performance featuring professional troupes from third-party organisations. Because Amel regularly hosts cultural events for its clients, the performances were unremarkable from the perspective of participants, making attendance a locally-tailored, unobtrusive measure of social cohesion.[7]

The discrete behavioural outcomes of event RSVP and attendance come with several benefits: low measurement error, no missing data, and minimal risk of social desirability bias. This final advantage is particularly important when evaluating educational interventions in the realm of intergroup relations, where participants may simply learn what the 'right' answer is without changing deeply-held beliefs, whereas attending an event of this form indicates an interest in, and respect for, the outgroup's culture. Invitations were sent to parents and children immediately after the end of the FPSS programme, and the events took place three to four weeks after the end of each programme cycle. The sequencing of the Syrian and Lebanese cultural events was randomised across cycles. Conditional on attending the event, field documentation from research staff indicates that participants did not tend to self-segregate, with youth attendees in particular joining in the *dabke*.

We deviate from the pre-analysis plan with respect to behavioural measures in three ways. First, to distinguish between behavioural intent and behaviour, we refrain from collapsing all behaviours into a single index. Second, we drop our measure of attending a post-treatment arts and crafts workshop. Unlike the main cultural events, which we advertised explicitly as a *Syrian dabke*

[7] This outcome was introduced from the second programme cycle onward, hence the sample sizes differ for this outcome relative to the others in analyses plots like Figure 2.

and a *Lebanese dabke* to make clear that attendance would involve celebrating a particular group's culture, the arts and crafts workshop was billed as a generic diversity-themed activity (*'Come join us for an arts and crafts activity on diversity'*), without specifying the form of diversity. This event thus offered a less direct signal of outgroup affect than a Lebanese study participant attending a Syrian cultural event, or vice versa. Third, we drop a survey outcome measuring study participants' willingness to donate school books to an ingroup, outgroup, or mixed Lebanese-Syrian charity due to limited of variation: 90% of respondents indicated a preference for a mixed beneficiary group. We nonetheless report results from these dropped outcomes in Figures G6 and J3.

5 Estimation

We estimate average treatment effects by regressing outcomes on each treatment indicator, their interaction, and a set of covariates: programme cycle, age, gender, nationality, education, employment status (measured for both parents and children), baseline intergroup contact levels, and the baseline value of the outcome where available to improve precision. To account for randomisation constraints in the field, we additionally control for participants' scheduling availability.[8] We deviate from the pre-analysis plan by employing the estimator proposed in Lin (2013) rather than standard OLS; a more robust estimator under unequal assignment probabilities across groups, which arose from asymmetric numbers of Syrian and Lebanese registrants.[9] We also interact nationality with all other control variables to allow covariate effects to vary across groups. Standard errors are clustered at the classroom level, the unit of randomisation (Abadie et al. 2023). To address multiple comparisons, we apply the Benjamini–Hochberg correction at the $\alpha = 0.1$ level separately to the two behavioural outcomes (RSVP and Attendance), to the skill-based outcomes (conflict resolution knowledge, conflict resolution skills, and empathy skills), and to the social proximity index.[10]

From these models, we estimate marginal treatment effects of contact, empathy training, and the combined treatment, each relative to the pure control (physical health education in a homogeneous

[8] This control variable takes the form of an availability dummy for each shift (Monday morning, Monday evening, Friday morning, Friday evening). We do not control for sibling status due to the small constraint this posed on randomisation: Siblings were automatically assigned to the same group but otherwise followed the identical assignment procedure.

[9] The Lin (2013) estimator is more robust because it includes full treatment–covariate interactions. When assignment probabilities differ across groups, simple OLS adjustment can rely too heavily on a single linear relationship between covariates and outcomes. The approach in Lin (2013) instead allows those relationships to vary by treatment arm, preserving the unbiasedness of the experimental comparison and improving efficiency without imposing strong structural assumptions.

[10] This deviates from the pre-analysis plan, which grouped all survey outcomes and behavioural outcomes together. The revised approach reflects the emergence of distinct outcome families in the data; in particular, the social proximity index captures a substantively different construct from the other survey-based outcomes.

group). Appendix F additionally reports marginal effects of contact and empathy while pooled across all other treatment conditions. We examine pre-registered heterogeneous treatment effects among youth along four baseline characteristics: nationality, gender, prior outgroup contact (no outgroup friends vs. at least one), and household income. For parents, heterogeneity is analysed by nationality, gender, and prior contact (never vs. at least once shared a meal with an outgroup member). Together, these tests assess whether effects vary across demographic characteristics and pre-existing intergroup attitudes.

6 Baseline Descriptive Statistics

We collected baseline and endline data for 887 youth participants (59% Syrian) across 81 classrooms, each representing a cluster in our analysis, as well as 595 parents (58% Syrian). Dropout rates, defined as attending fewer than 50% of sessions, were low: 3.9% for youth and 2.0% for parents. Because many families enrolled multiple children in the programme, the parent sample is smaller than the youth sample: the study covers 608 households, of which 374 enrolled one child, 191 enrolled two, 40 enrolled three, and 3 enrolled four. Of the 688 parents who completed the endline survey, 644 passed a data quality check comprising of consistent age and gender responses at baseline and endline, of whom 595 had children who could be randomised into treatment conditions.

Table 3 presents baseline characteristics for youth. The median participant was 12 years old, and indicators of economic precarity were common. Notably, 14% of children reported paid work, which typically implies being forced out of school to earn meager wages in the context of Syrian refugees in Lebanon (UNICEF 2017). Intergroup ties were limited: over half reported having no outgroup friends, and a similar share felt they had 'nothing' or 'only some things' in common with the outgroup, even though the median respondent perceived the other group as generally friendly toward them.

Table 4 provides baseline descriptive statistics for parents. The median respondent is 42 years old, married (88%), does not have a high school diploma (83%), has a household size of six and has one child participating in the FPSS programme. Poverty is widespread, with 100% of respondents reporting having gone without medicine or kerosene at least once in the previous three months and 53% having gone without both. Fewer than a third of respondents (26%) report being engaged in

Table 3: Youth Baseline Summary Statistics

Variable	N	Min	Max	Median	Mean	SD
Study cycle	888	1	4	3	2.77	1.04
Age	888	10	18	12	12.59	1.57
Education	887	0	2	0	0.43	0.60
Gender (1 = Male)	888	0	1	0	0.45	0.50
Nationality (1 = Lebanese)	888	0	1	0	0.42	0.49
Work dummy	888	0	1	0	0.14	0.35
Outgroup friends	887	0	2	0	0.49	0.53
In common with outgroup	888	0	2	1	0.81	0.64
Outgroup friendly	888	0	3	2	1.63	0.73

Note: *Study cycle* indicates programme cohort (1–4). *Work dummy* indicates that the child is in paid work. *Education* is coded 0 = primary or below, 1 = some secondary, 2 = finished secondary. *Work dummy* = 1 if the respondent reports paid employment. *Outgroup friends* measures the number of close friends from the other nationality group (0 = none, 1 = a few, 2 = most). *In common with outgroup* captures perceived commonality with the other nationality group (0 = nothing, 1 = some things, 2 = a lot). *Outgroup friendly* captures agreement that the outgroup is friendly toward one's own group (0 = strongly disagree, 3 = strongly agree).

part- or full-time employment. Mental health is poor, with the median respondent feeling 'cheerful and in good spirits' less than once per month.

Parents report more positive outgroup attitudes than their children. 86% say they share 'some things' or 'most things' in common with the outgroup, 18 percentage points higher than youth (68%). More than two-thirds indicate they would feel comfortable if their child married an outgroup member, though tolerance is higher among Syrian parents (80%) than Lebanese parents (52%). While nationally representative benchmarks are limited, our participants—perhaps reflecting generational change or shifting post-crisis attitudes—appear more tolerant than Lebanese respondents surveyed in 2013 (Christophersen et al. 2013).

Roughly a quarter ($n = 261$) of youth participants were assigned to the pure control condition, meaning they were assigned to homogeneous FPSS groups and to the placebo health and nutrition curriculum. Of the remaining participants, 211 were assigned to the pure curriculum treatment (empathy-focused curriculum in homogeneous classrooms), 183 were assigned to the pure contact treatment (placebo curriculum in heterogeneous classrooms), and 233 were assigned the combined treatment (empathy curriculum in heterogeneous classrooms).[11] To assess balance across treatment

[11] 109 participants had to be excluded from the analysis, as scheduling constraints did not allow for randomisation into different treatment conditions.

Table 4: Parents baseline summary statistics

Variable	N	Min	Max	Median	Mean	SD
Study cycle	595	1	4	3	2.78	1.01
Age	595	26	66	42	41.88	6.76
Married	595	0	1	1	0.88	0.33
High school degree	595	0	1	0	0.18	0.38
Gender (1 = Male)	595	0	1	0	0.17	0.38
Nationality (1 = Lebanese)	595	0	1	0	0.42	0.49
HH size	592	2	8	6	6.06	1.45
Children in programme	595	1	4	1	1.49	0.68
Gone without medicine/kerosine	595	0	2	2	1.42	0.67
Employed	593	0	1	0	0.26	0.44
Felt cheerful	595	0	3	0	0.83	1.01
In common with outgroup	595	0	3	2	2.04	0.63
Comfortable with outgroup marriage	595	0	3	2	1.65	0.79
Outgroup conversation past month	595	0	4	2	1.78	1.46
Camp/informal settlement	595	0	1	0	0.49	0.50
Outgroup neighborhood	595	0	4	1	1.46	1.21

Note:
Study cycle indicates programme cohort (1–4)., *Gone without medicine/kerosene* is a binary hardship index indicating whether the respondent went without medicines or medical treatment and/or enough kerosene to cook food in the past three months (0 = neither, 1 = one, 2 = both). *Felt cheerful* measures how often the respondent felt cheerful and in good spirits (0 = less than once a month, 3 = about once a day). *In common with outgroup* measures agreement with "I share a lot in common with [outgroup nationality]" (0 = strongly disagree, 3 = strongly agree). *Comfortable with outgroup marriage* measures comfort with a son or daughter marrying someone from the outgroup nationality (0 = strongly disagree, 3 = strongly agree). *Outgroup conversation past month* measures the number of outgroup contacts the respondent conversed with by phone or messaging in the past four weeks (0 = none, 4 = 15 or more). *Outgroup neighbourhood* measures the share of outgroup members among the respondent's neighbours (0 = nearly all ingroup, 4 = nearly all outgroup).

assignments, we run a linear model that regresses treatment status on demographic variables measured in the baseline survey, controlling for the same set of covariates as in the main specification. These coefficients are plotted in Figure D1. Approximately the same number of variables yield significant differences at the 5% level as one would expect by chance. Programme attendance rates also show little heterogeneity: attendance for any given session hovered around 90% with no significant fluctuations based on treatment condition, education, gender, or nationality (Figure 1).

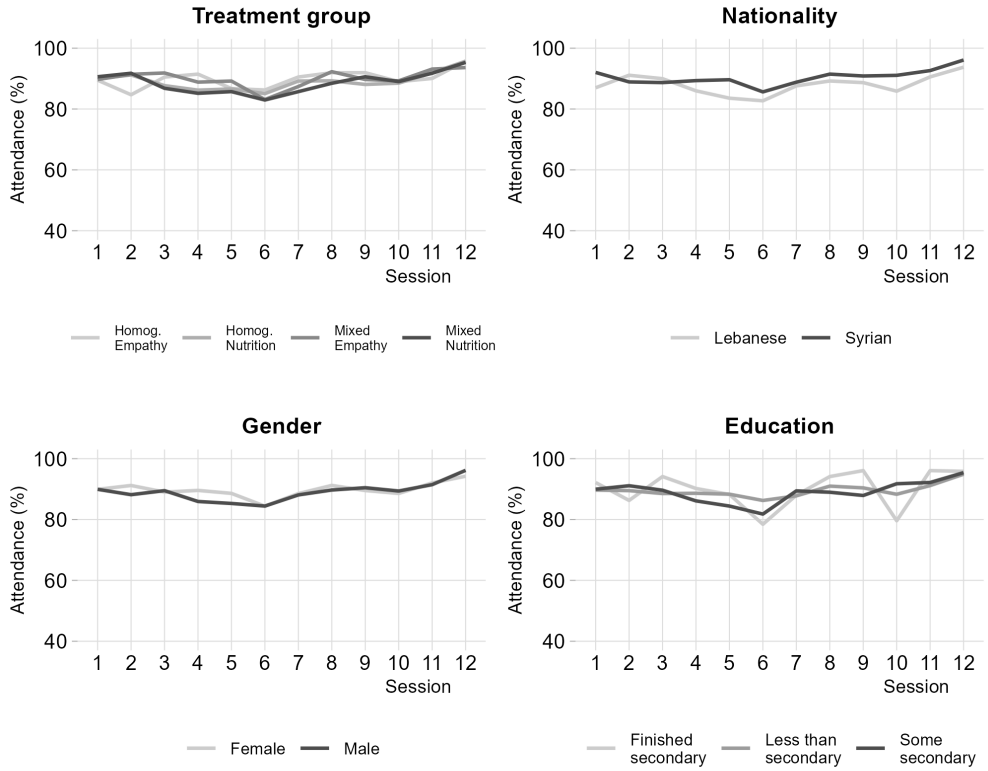


Figure 1: Average Programme Attendance Over 12 Sessions, by Subgroup

7 Results

7.1 Youth

We begin by examining the effects of intergroup contact among youth participants. On average, assignment to a mixed FPSS classroom had little impact on either attitudinal or behavioural outcomes: estimates for the social proximity index and behavioural engagement are small and statistically indistinguishable from zero (circles in Figure 2). These average null effects conceal substantial heterogeneity by nationality, however. Among Lebanese youth, contact produces no reduction in prejudice (left panel of Figure 3) and, when pooling across empathy conditions, even decreases the likelihood of RSVPing to or attending an outgroup cultural event (Figure F2). In contrast, Figure 2 shows the opposite pattern for Syrian participants, for whom the likelihood of RSVPing to and attending the outgroup's

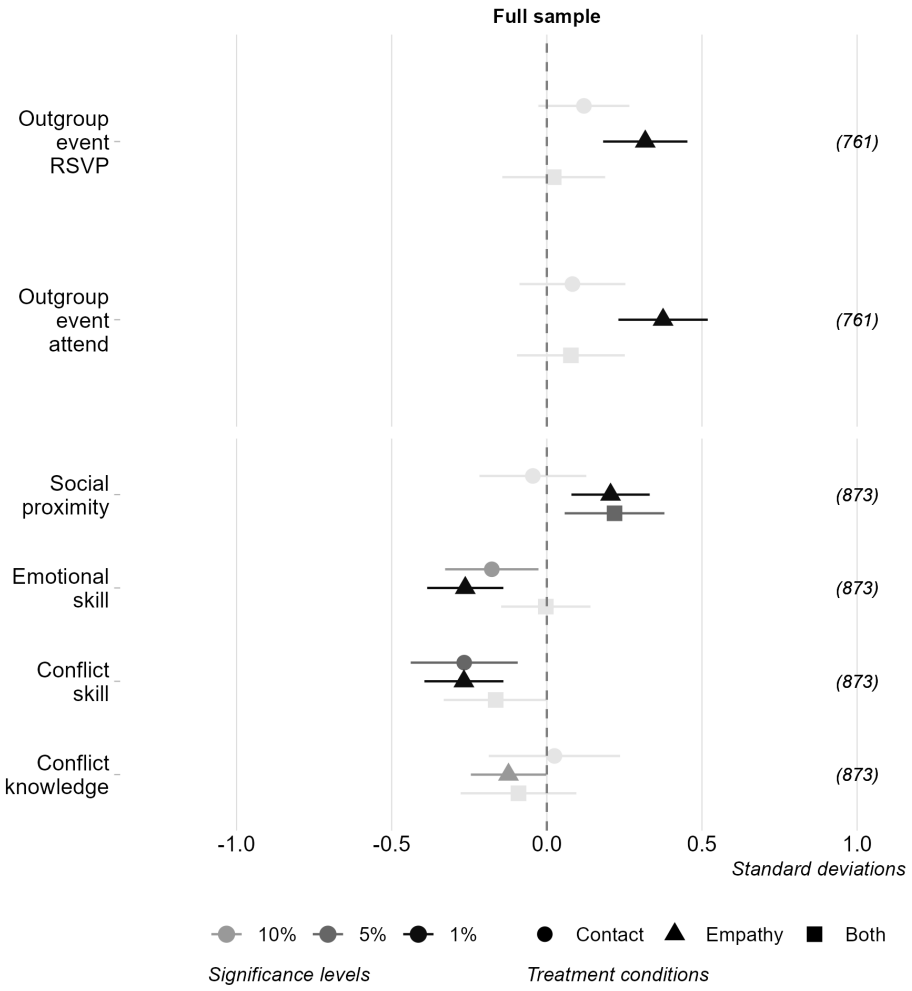


Figure 2: Average treatment effects across the entire sample relative to the placebo group.
Circles, triangles, and squares represent point estimates of the marginal treatment effects of the contact treatment, empathy treatment, and both interventions (see Tables K1 and K2 for model details). Effect sizes in standard deviations relative to same-nationality placebo group. Confidence intervals are Benjamini-Hochberg adjusted. Sample size in parentheses.

cultural event increases by 0.21 and 0.29 standard deviations ($p = 0.08$ and $p = 0.02$; Table E2), respectively.

In contrast to the contextual effects of contact on behaviours—null on average, at times negative for Lebanese, but positive for Syrians—we observe universally negative effects on conflict-related competencies. Relative to the pure control group that received neither contact nor empathy, contact worsens conflict resolution skills and emotional skills (Figure 2), an effect that seems to be

driven by Lebanese respondents (Figure 3). We find only weak evidence that contact shifts policy preferences over whether Syrians should be allowed to remain in Lebanon: the effect size is small and positive at 0.17 standard deviations when compared to the pure control (Figure 3 and Table E2, $p = 0.11$) and vanishes when pooling across all non-contact conditions (Figure F2).[12] In sum: when it comes to attitudes, contact has no discernible effects on underlying prejudice, and worsens conflict resolution skills as well as the confidence to implement those skills.

Compared to the ambiguous effects of contact, we observe more consistently positive effects of empathy education. The empathy curriculum improved the social proximity index by roughly 0.21 standard deviations when compared to the pure control group (triangles in Figure 2) and pooling across all non-empathy conditions (Figure F2). These improvements are driven by increases in positive social norms, especially the feeling that one's family would be supportive of an outgroup friendship, shown in Figure J3. Empathy education also bolstered Lebanese participants' belief that Syrian refugees should be allowed to stay in Lebanon by 0.43 standard deviations, a large and positive result regardless of the choice of comparison group (bottom row of Figures 3 and F2; Table E2).

The empathy treatment was also more effective at spurring behavioural change relative to contact. Empathy education improves the probability of intending to attend, and attending, the outgroup social event by 0.32 and 0.38 standard deviations, respectively ($p < 0.001$, Figure 2 and Table E1). The same result appears when considering each nationality separately, with empathy boosting behavioural engagement by 0.22–0.28 standard deviations among Syrians ($p < 0.05$) and unlocking an effect size twice as large among Lebanese, at 0.47–0.52 standard deviations ($p < 0.01$; Figure 3 and Table E2). Empathy education is therefore more likely than contact to reduce prejudice, as measured by social proximity on both sides and welcoming attitudes among natives. Somewhat paradoxically, however, empathy education reduces skills and confidence related to conflict resolution (Figure 2); a negative effect similar in size and direction to that of contact. As shown in Figure 3 and echoed in F2, the negative effect of both treatments on the cognitive and socio-emotional skills needed to resolve conflict is driven by Lebanese respondents.

What happens when we combine both treatments? Compared to the pure control group, combining contact and empathy education boosts the social proximity index in ways identical to the effect of empathy education alone (0.22 vs. 0.21 standard deviations, Figure 2 and Table E1). Mirroring the effect of empathy education, positive combined effects on social proximity are concentrated among

[12] By design, this question was asked only of Lebanese participants.

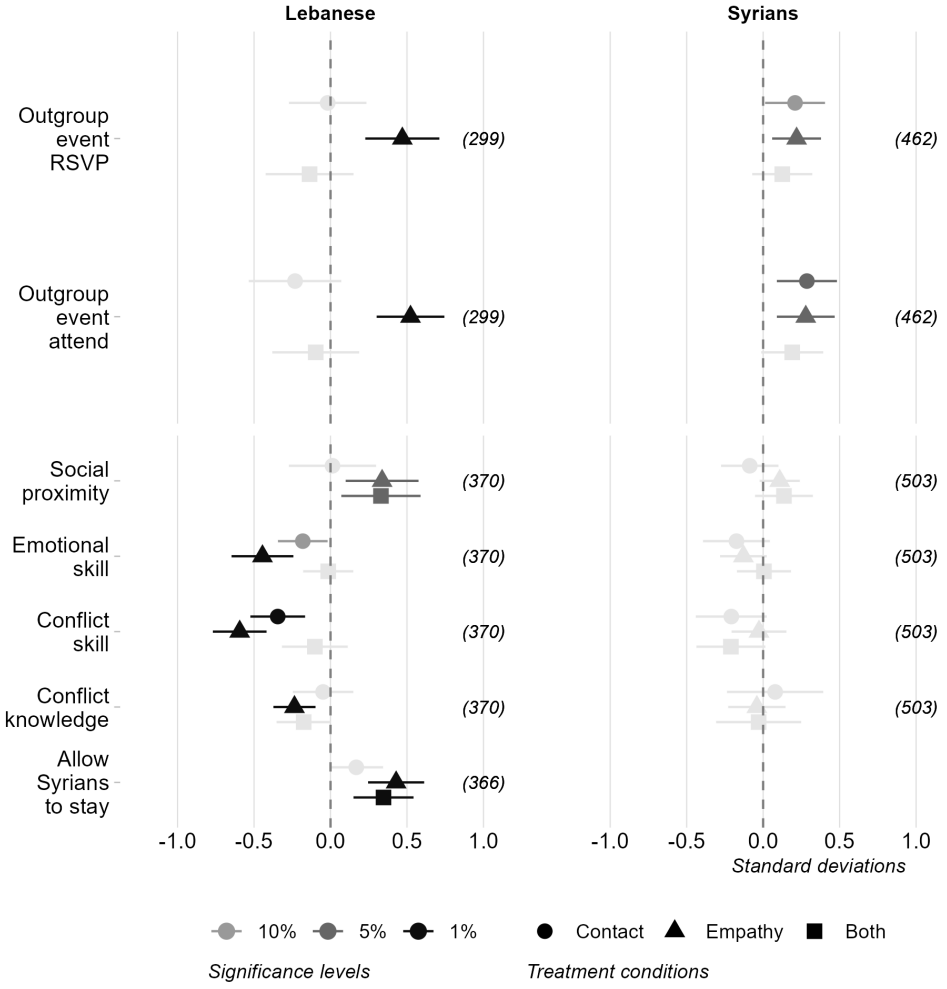


Figure 3: Treatment effects by nationality compared to the placebo group.
Circles, triangles, and squares represent point estimates of the marginal treatment effects of the contact treatment, empathy treatment, and both interventions (see Tables K1 and K2 for model details). Effect sizes in standard deviations relative to same-nationality placebo group. Confidence intervals are Benjamini-Hochberg adjusted. Sample size in parentheses.

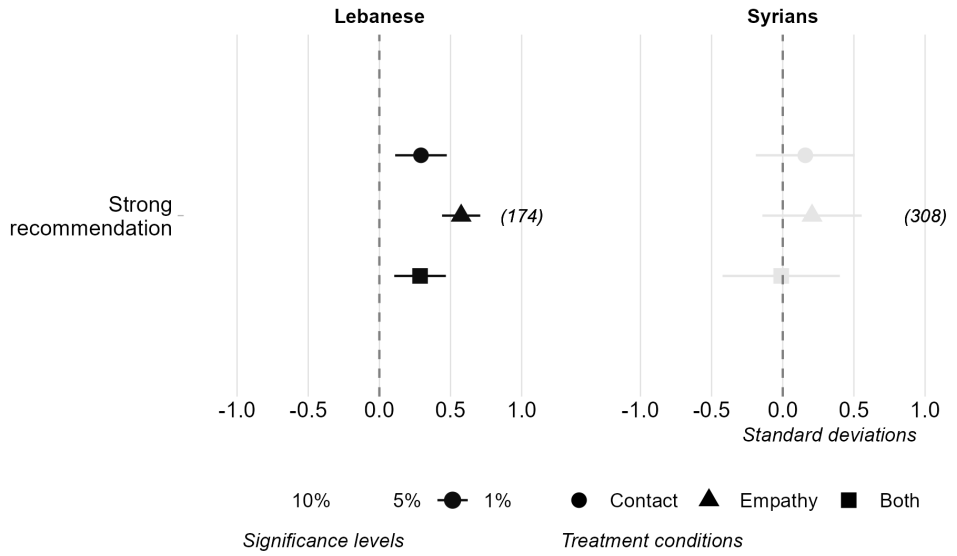


Figure 4: Treatment effects on programme recommendation by nationality.
Circles, triangles, and squares represent point estimates of marginal treatment effects of child's contact treatment, empathy training treatment, and both interventions. See Tables K1 and K2 for model details. Effect sizes in standard deviations relative to same-nationality placebo group. Confidence intervals are Benjamini-Hochberg adjusted. Sample size in parentheses.

Lebanese participants (Figure 3). A parallel set of results emerges when analysing the willingness of Lebanese participants to concretise Syrians' path to permanent residency. Empathy education boosts this preference by 0.43 standard deviations while the combined treatment achieves a similar impact at 0.35 standard deviations ($p < 0.01$, Table E2). Unlike empathy education in isolation, however, the combined treatment insulates respondents from negative treatment effects on emotional skills, conflict resolution skills, and the knowledge of how to operationalise those skills (Figure 2). By and large, the combination of contact and empathy therefore performs no better than empathy alone.

Finally, we examine appraisals of the FPSS programme among youth participants (Figure 4). Lebanese youth assigned to *any* treatment condition relative to the placebo are substantially more likely to strongly recommend the FPSS programme to others (contact: 0.29 SDs; empathy: 0.58 SDs; combined: 0.29 SDs; all $p < 0.01$; Table J2). The same cannot be said of their Syrian counterparts, for whom programme recommendation does not change regardless of treatment status (Figure 4). Among Lebanese participants, the programme is thus perceived more favourably when it includes contact or the empathy curriculum, despite null and even negative reactions to the two interventions on other outcomes.

7.2 Parents

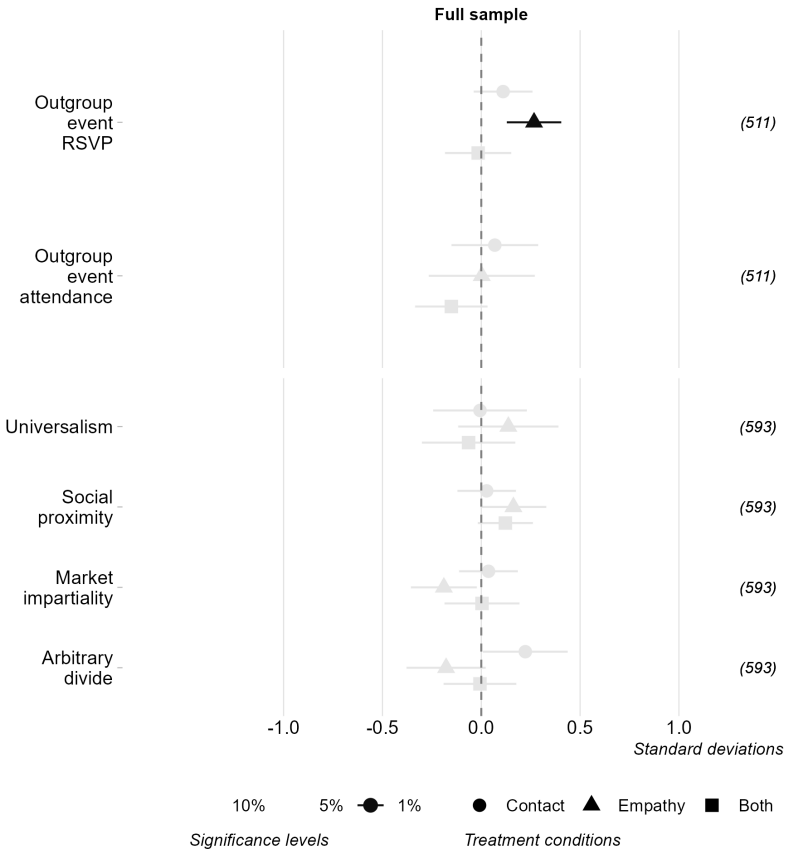


Figure 5: Spillover effects on parent outcomes

Circles, triangles, and squares represent point estimates of marginal treatment effects of child's contact treatment, empathy training treatment, and both interventions. See Tables K3 and K4 for model details. Effect sizes in standard deviations relative to same-nationality placebo group. Confidence intervals are Benjamini-Hochberg adjusted. Sample size in parentheses.

Moving to spillover effects among parents, we find broadly null results on average, with several meaningful exceptions that do not differentiate between treatments. Having a child assigned to a mixed classroom or an empathy-based curriculum has no detectable effects on most parental behavioural or attitudinal outcomes relative to the pure control group (Figure 5). One exception appears for programme advocacy. Mirroring the pattern among youths, Lebanese parents whose children were assigned to *any* treatment arm relative to a placebo exhibit large and statistically significant increases in their likelihood of strongly recommending the FPSS programme to others (contact: 0.55 SDs; empathy: 0.70 SDs; combined: 0.46 SDs; contact and empathy $p < 0.01$, combined $p < 0.05$; Figure 7

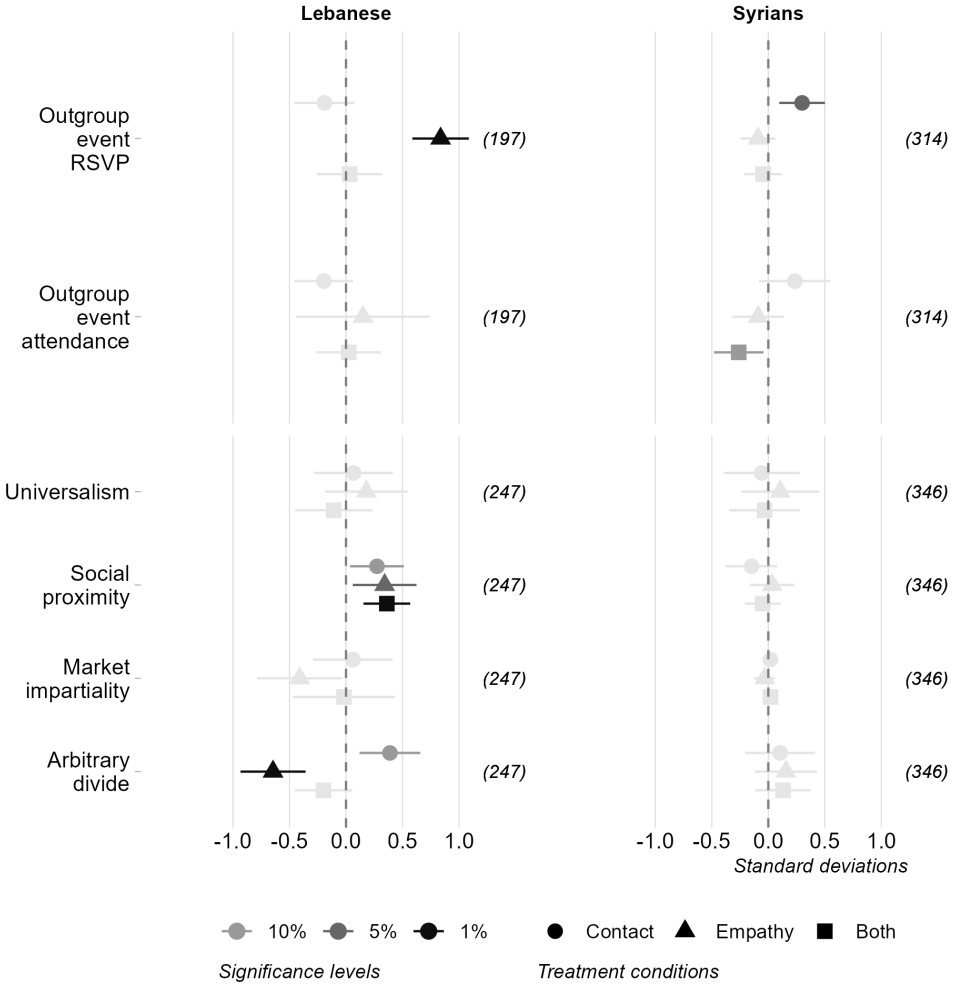


Figure 6: Spillover effects on parents, by nationality.
Circles, triangles, and squares represent point estimates of the marginal treatment effects of child's contact treatment, empathy treatment, and both interventions relative to the placebo group (see Tables K3 and K4 for model details). Effect sizes in standard deviations relative to same-nationality placebo group. Confidence intervals are Benjamini-Hochberg adjusted. Sample size in parentheses.

and Table J3), with no comparable effects among Syrian parents. Lebanese parents also respond similarly to both treatments when it comes to the social proximity index (contact: 0.27 SDs, $p < 0.10$; empathy: 0.34 SDs, $p < 0.05$; Figure 6 and Table E4). Like their children, Syrian parents are more likely to RSVP for the outgroup cultural event as a result of contact (0.30 SDs, $p < 0.05$; Figure 6 and Table E4), while empathy education has the same effect among their Lebanese counterparts (0.84 SDs, $p < 0.01$; Figure 6 and Table E4). Both treatments move in lock-step when it comes to negative effects, too, with Lebanese parents less likely to report feeling psychologically connected to Lebanon following both contact exposure (-0.56 standard deviations, $p < 0.01$; Figure H1) and empathy education (-0.70 standard deviations, $p < 0.01$; Figure H1). When it comes to spillovers, the only clear pattern is a lack of difference, whether positive or negative, when it comes to empathy or contact.

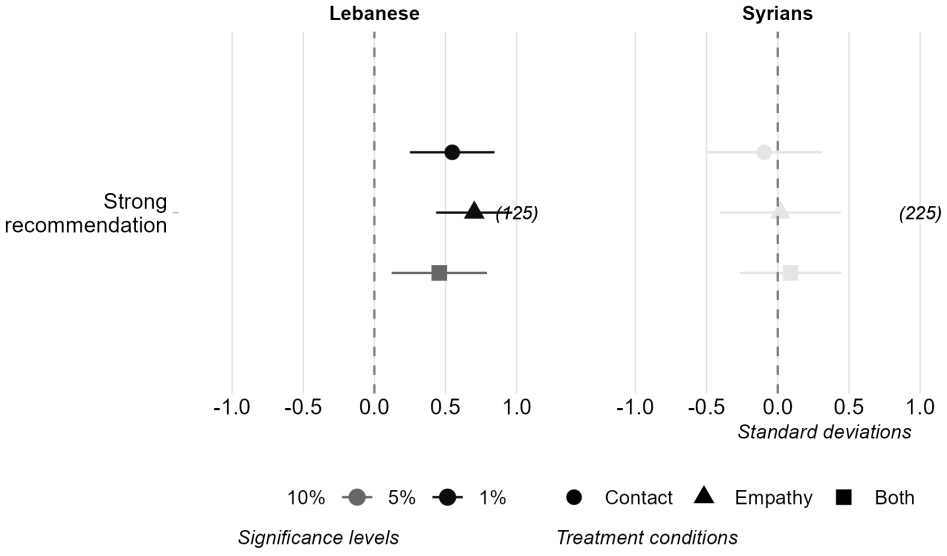


Figure 7: Spillover effects of contact, empathy education, and both interventions on programme recommendation for parents

Circles, triangles, and squares represent point estimates of parents' marginal treatment effects of contact treatment (child assigned to heterogeneous vs. homogeneous group assignment), empathy training treatment (peace-messaging curriculum vs. nutrition curriculum), and both interventions, based on fully interacted regression models (see Tables K3 and K4 for model details). Effect sizes are given in standard deviations. Lines indicate 90 % confidence intervals, number of relevant observations in parentheses.

8 Discussion and Conclusion

As societies grapple with surging levels of displacement, deepening prejudice and polarisation threaten to undermine prospects for cohesion between newcomers and host communities. Intergroup contact and empathy-building education are at the forefront of academic and practitioner work in the peacebuilding domain (Hultman and Mousa 2025). We experimentally test these two approaches in Lebanon, where refugees and natives share a similar language and culture, but where complicated history, populist rhetoric, and structural segregation sustains mistrust and prejudice.

Our baseline survey data already illustrates how polarisation manifests not only in attitudes but in behavioural self-selection away from heterogeneous environments. Notably, we find that 42% of participants would have opted out of mixed-group activities if not for random assignment. This self-selection likely reflects anticipated discomfort as well as structural divides, with segregated schooling systems shaping daily routines and intergroup exposure. In addition to underscoring the importance of randomisation, this practical insight builds a case for NGOs optimizing programme schedules to mitigate endogenous sorting and encourage meaningful intergroup interactions. Within this context, we test two strategies that aim to reduce intergroup conflict: direct contact and empathy-based education.

Embedding a field experiment within an existing psychosocial support programme, we uncover important patterns linking contact, empathy education, and the combination of the two to a range of intergroup attitudes and behaviours. Contact did little to reduce prejudice among Lebanese and Syrian children or their parents. The impact it *did* have was nationality-dependent, surfacing positive behavioural engagement among Syrian children and their parents, but with null and at times negative analogous results among Lebanese children. This pattern mirrors backlash effects found among dominant-group members in other studies of youth contact programmes in societies with violence intergroup ruptures, like Hindus and Muslims in India (Ghosh et al. 2025), and Jews and Palestinians in Israel (Porat et al. 2024). Both treatments equally increased parents' evaluation of the programme, but worsened feelings of psychological integration among Lebanese parents. These divergent results by nationality underscore the difficulty of designing a one-size-fits-all programme aimed at building two-sided cohesion. Empathy education, by contrast, boosted tolerant attitudes and welcoming behaviours weeks after the initial intervention, among both Lebanese and Syrians. Contrary to expectations, overlaying empathy and contact added little that was not achieved by empathy education alone.

One potential explanation for the limited effects of the contact treatment is that participants may have self-segregated within heterogeneous FPSS sessions, limiting deeper intergroup interactions. We have several reasons to doubt that this happened in a systematic way. First, by design, heterogeneous classrooms maintained approximately equal numbers of Lebanese and Syrian participants—reducing the kind of asymmetry that Carrell et al. (2013) identify as most conducive to within-group clustering. If anything, given the relative group sizes within the FPSS programme, Lebanese participants were more likely to be in the minority than Syrians. Second, facilitators kept session notes throughout the 12 weeks of the intervention and recorded no clear patterns of clustering or avoidance by nationality, which aligned with the research team's field observations. In other words, we believe that intergroup contact took place as it was designed to, but that it simply did not shift most of our outcomes in a meaningful way.

Another potential explanation lies in sequencing. Our design delivered empathy education and contact simultaneously. An alternative approach might front-load empathy training as a prerequisite for intergroup contact rather than a companion to it. If the limited effects of contact reflect insufficient socio-emotional skills when interactions begin, then prior empathy education might help unlock greater gains relative to a simultaneous treatment. We therefore propose the *sequencing* of prejudice reduction interventions as a promising direction for future research.

Perhaps the most surprising result is that both treatments somewhat *worsened* the core competencies around interpersonal conflict resolution and cooperation that they were designed to build. Two interpretations are consistent with this counterintuitive result. It is possible that neither treatment fostered the skills it was designed to ingrain, or that they *did* succeed, but also made participants less confident in their self-reported knowledge and skills. We lean toward the latter possibility, speculating that this result may be driven by increasing participants' awareness of the complexity and nuances involved in conflict resolution techniques, and in applying them first-hand. These seemingly adverse consequences of empathy education and contact may reflect a healthy dose of introspection and humility when it comes to participants' own ability to deal with complex conflict situations. Studies of diversity, equity, and inclusion training similarly find small, short-term, and sometimes negative effects on self-reported knowledge, likewise finding that perceptions of skills and actual skills may point in opposite directions (Kulik and Roberson 2008; Bezrukova et al. 2012; Dobbin and Kalev 2018).

Consistent with a confidence-based interpretation, girls exhibit the largest negative effects on self-reported skills (Figure G1), in line with evidence that girls and women tend to be more humble about their own abilities than boys and men (Ehrlinger and Dunning 2003; Bian et al. 2017; Niederle and Vesterlund 2007). We note that insulating participants from these negative effects on self-reported skills is among the few positive impacts of the combined treatment. This result tentatively points to the importance of layering contact and the educational tools needed to resolve the conflicts it provokes. This insulation effect aside, overlaying empathy and contact achieved little else that was not achieved by empathy education alone.

The positive empathy effects we *do* find translate into changes in behavioural outcomes of between 8% and 12% for Syrians and between 18% and 22% for Lebanese — effects that are considerably larger than those found in Alan et al. (2021)'s study of a perspective-taking intervention aimed improving attitudes toward Syrian refugees in Turkish schools. While we run the risk of overestimating effect sizes because of sample size constraints (Gelman and Carlin 2014), we speculate that this difference in magnitude may be explained by the study's sample of highly vulnerable children. Our Lebanese youth participants, while still part of the dominant social group in terms of their nationality, were socio-economically marginalised within Lebanese society more broadly. As such, prejudice may have been easier to overcome here than in other host communities with a more pronounced socio-economic distinction between majority and minority group members.

Our results contribute to a growing body of evidence on the trade-offs inherent in contact- and empathy-based interventions in contentious settings (Lowe 2025). We conclude that while neither intervention is ready for wholesale adoption, empathy education holds more promise. Unlike contact effects, which can range from negative to positive depending on group power status, empathy education yields modest but consistent reductions in prejudicial attitudes and exclusionary policy preferences, as well as universally increasing behavioural engagement. With further refinement to ensure that core competencies are internalised without undermining participant confidence, empathy emerges as the more effective and scalable approach for improving intergroup relations in polarised settings.

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