

Dealing With Increasing Negativity Toward Refugees: A Latent Growth Curve Study of Positive and Negative Intergroup Contact and Approach-Avoidance Tendencies

Personality and Social Psychology Bulletin
2023, Vol. 49(10) 1466–1478
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DOI: 10.1177/01461672221110325
journals.sagepub.com/home/pspb



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Abstract

Despite increasing contact opportunities, prejudice toward refugees persists, especially in mass immigration contexts. We investigated changes in and associations between Turkish early adolescents' ($N = 687$, $M_{\text{age}} = 11.11$ years) positive and negative contact with Syrian refugees and their outgroup approach-avoidance tendencies over 15 months (three waves). Univariate growth curve models demonstrated a rise in outgroup negativity indicated by increasing negative contact and avoidance tendencies, and decreasing approach tendencies, while positive contact only slightly increased over time (nonsignificantly). Combined latent growth curve models showed that increasing positive contact buffered against increasing outgroup negativity in behavioral tendencies by predicting a less steep decline in approach and a less steep increase in avoidance. Increasing negative contact was positively associated with increasing outgroup negativity so that it predicted a more steep increase in avoidance. Findings underline the importance of early contact interventions that target the fast deterioration of positive intergroup interactions in increasingly hostile intergroup contexts.

Keywords

positive intergroup contact, negative intergroup contact, approach tendencies, avoidance tendencies, Syrian refugees

Received July 22, 2021; revision accepted June 6 2022

Increasing immigration over the years has rendered many societies ethnically and racially more diverse than ever (European Commission, 2019). This implicates an inevitable growth in intergroup contact opportunities (Kauff et al., 2020; Wagner et al., 2003), which is promising at the societal level, because contact is known to improve intergroup attitudes and reduce conflicts across a variety of intergroup contexts (Allport, 1954; Al Ramiah & Hewstone, 2013). Yet, societal level reductions in prejudice toward vulnerable minorities such as refugees might still be rare in societies experiencing a “refugee crisis” (e.g., Kotzur & Wagner, 2021), since exposure to diversity *per se* may be related to more negative outgroup attitudes in the absence of meaningful intergroup contact experiences (Stolle et al., 2013). Mass immigration from Syria to Turkey represents a salient case; while contact opportunities between natives and refugees have increased with refugees’ movement from camps to inner cities (Güçtürk, 2015), initial humanitarian and empathetic responses toward “Muslim brothers” have rapidly turned into perceptions of threat and unease with refugees’

permanent residence (E. Erdoğan & Uyan-Semerçi, 2018; Saraçoğlu & Belanger, 2019). This has led Syrians to become “the novel outcasts” in Turkey, who are now more disliked than other minority groups such as the historically oppressed Kurds, at least at the explicit attitude level (Firat & Ataca, 2021).

The paradox about increased contact opportunities but enduring prejudice has led contemporary contact researchers to revisit the original theory in two critical ways. First, although the social context allows intergroup contact to occur, individuals rarely seek intergroup contact and

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transform contact opportunities into real experiences due to a variety of psychological barriers such as anticipated intergroup anxieties (e.g., Paolini et al., 2018). Second, multicultural societies expose individuals to multiple intergroup interactions which vary in terms of closeness (superficial versus intimate, Fuochi et al., 2020), type (direct versus indirect, Harwood, 2021), and valence (positive versus negative, Paolini et al., 2010). Particularly, the latter dimension is key to determining whether the *net* effect of intergroup contact on intergroup behaviors is positive, since the damage caused by negative contact can be greater than the expected benefits from positive contact (e.g., Barlow et al., 2012; Paolini et al., 2010).

Despite these recent advances underlining the importance of various forms of intergroup contact, there are three critical gaps in the current literature. First, less is known about longitudinal associations between different types of intergroup contact (positive/negative) and outgroup behavioral tendencies (approach/avoidance). While bidirectional associations between positive contact and prejudice have been well established (e.g., Binder et al., 2009), existing research has rarely explored potential *changes* in both types of contact and tendencies over time, using a latent growth curve modeling (LGCM) approach (but see Kotzur & Wagner, 2021 and Wölfer et al., 2016, using attitudes or positive contact alone).

Second, except for a few studies (e.g., Ten Berge et al., 2017; Wölfer et al., 2016), the associations between positive and negative contact and outgroup attitudes and behaviors have been mainly investigated among adult samples. Increasingly hostile intergroup contexts require the cultivation of constructive contact experiences during early childhood years (Taylor, 2020). Compared with other age groups, early adolescents (ages 11–13) may be particularly vulnerable to negative intergroup contact and contact avoidance (Wölfer et al., 2016), since this is when prejudicial attitudes become automatic responses (Degner & Wentura, 2010) and ethnic homophily starts to increase (Wölfer & Hewstone, 2018). The existing literature examining this age group is strongly (and rightfully) focused on positive forms of contact such as cross-group friendships (e.g., Feddes et al., 2009; Hooghe et al., 2013; Titzmann et al., 2015; Trifiletti et al., 2019; van Zalk & Kerr, 2014) which provide the unique benefits of thwarting the formation of negative intergroup relationships in adulthood (Wölfer et al., 2016) and contributing to positive social-psychological outcomes (Bagci et al., 2014; Baysu et al., 2014; Kawabata & Crick, 2008). However, negative contact among early adolescents can be as important, by generalizing to negative attitudes and avoidance tendencies (e.g., Meleady & Forder, 2019; Ten Berge et al., 2017), and persisting in later stages of life as “learned behaviors” (Paolini et al., 2016).

Third, we focused on a *mass immigration* context where the refugee population has reached over 3.6 million only in 10 years, since Turkey’s open-door policy after the Syrian civil war in 2011 (United Nations Human Rights Council

[UNHRC], 2021). According to a recent public poll in 2016, the majority of Turkish citizens (79.2%) reported to have encountered a Syrian refugee in the last 1 month, with 44% reporting contact on a daily basis (Konda, 2016). In the same poll; however, Syrian immigration was considered to be “costly” for Turkey, posing both realistic and symbolic threats to citizens. Other research shows increased social exclusion and marginalization of refugees in popular media (Ünal, 2014), indicating an urgent need to devise successful positive contact strategies that facilitate the integration of Syrian refugees in Turkey. While previous correlational research has shown contact with Syrian refugees to be associated with more positive outgroup attitudes and support for refugee rights (Çirakoğlu et al., 2020; Firat & Ataca, 2021), how both positive and negative contacts change over time in relation to behavioral tendencies is not known.

We incorporate these gaps by examining the associations between Turkish native children’s positive and negative contact with Syrian refugees in schools and their avoidance and approach tendencies toward this outgroup. Our research objectives included first, exploring longitudinal changes in positive and negative intergroup contact, as well as in behavioral tendencies over 15 months (across three waves). Second, we sought to investigate whether initial levels of and changes in positive and negative contact would predict initial levels of and changes in approach-avoidance behavioral tendencies.

Changes in Contact and Approach-Avoidance Tendencies Over Time

While research shows positive contact to be generally more frequent than negative contact (Graf et al., 2014), less is known about how both types of contact, as well as how approach and avoidance tendencies may change over time in a specific social context. We posit that changes in contact and behavioral tendencies may be evaluated from (a) a developmental perspective and (b) a contextual/ecological perspective. Using a developmental approach, one may expect an increase in prejudice over time, which would also implicate a decrease in positive contact and approach tendencies, accompanied with an increase in negative contact and avoidance tendencies. Previous research has shown children to become aware of intergroup differences and racial categories as early as 4 to 5 years old (Nesdale, 2001) and social stereotypes, either positive or negative, tend to become stronger as children move into adolescence (Rowley et al., 2007). While negative attitudes toward national outgroups increase from early childhood to middle childhood and then remain stable across adulthood (Raabe & Beelman, 2011), prejudice becomes an automatic response only when children reach early adolescence (Degner & Wentura, 2010). Developmental contact research corroborates these findings demonstrating a consistent decline in cross-group friendships through adolescence (Ten Berge et al., 2017; Wölfer et al., 2016; Wölfer &

Hewstone, 2018). Examining the trajectories of positive contact from early adolescence to early adulthood, Wölfer et al. (2016) demonstrated that the quantity of cross-group friends decreased over time (although contrary evidence also exists, Cernat, 2017). According to Aboud and Spears Brown (2013), positive contact experiences with outgroup members increase between 3 and 8 years and then decline through early adolescence, while negative intergroup experiences including name-calling and bullying increase after 8 years and exclusion becomes normative at the age of 10 (Aboud & Miller, 2007; Aboud & Spears Brown, 2013). As children move toward adolescence, they are also likely to engage in ethnic/national identification processes, which may predict increased rates of exclusionary behaviors toward immigrants/refugees (Umaña-Taylor et al., 2020). Hence, while positive contact (at the beginning of the school term) is likely to be higher than negative contact in line with the general positive–negative contact asymmetry literature (e.g., Graf et al., 2014), we suggested that a developmental approach would indicate that positive contact and approach tendencies are likely to decrease and negative contact and avoidance tendencies are likely to increase, as children age through early adolescence.

Beyond a developmental approach, the ecological context where children engage in these experiences may also define the trajectories of contact and behavioral tendencies over time (Bronfenbrenner, 1979). From a more macro-level perspective, it is possible to expect a general increase in negative attitudes toward Syrian refugees at the country-level, with the intake of large number of refugees which has fueled negative public opinions (M. M. Erdoğan, 2014). Although longitudinal empirical studies that investigate Turkish citizens' attitudes toward Syrians over time do not exist, it is known that initial attitudes that were characterized by humanitarian concerns developed into more hostile attitudes in the public space (Secen & Gurbuz, 2021). As such, previous research has shown an increase in the number of outgroup members in a country to be associated with increases in anti-immigrant attitudes (e.g., Schneider, 2008). At a more specific school-level, the situation is likely to get worse, as approximately 45.1% of Syrian refugee population in Turkey are under 18 years old and need to be integrated in the educational system (UNHRC, 2021). While public schools have recently started to accept Syrian refugees, these children report experiencing systematic rejection and marginalization and many schools, in their current states, lack necessary regulations and practices to cope with such diversity (Çelik & İçduygu, 2019). These contextual cues also suggest attitudes and behavioral tendencies to possibly deteriorate over time.

Contact and Outgroup Behavioral Tendencies

The classical contact theory suggests that positive and pleasant contact with an outgroup member generalizes to positive attitudes toward the whole outgroup (Pettigrew, 1998;

Pettigrew & Tropp, 2006) and cross-group friendships facilitate the development of positive attitudes over time (Wölfer et al., 2016). Yet, contact has behavioral implications too, beyond changing the affective evaluation of the outgroup (e.g., Christ et al., 2010). For example, reflecting on existing positive contact experiences increases how positive individuals act in their future interactions with novel outgroup members (Page-Gould et al., 2010). Positive contact is related to greater willingness to approach outgroup members and more positive behavioral intentions (e.g., Bağcı & Gungor, 2019; Wang et al., 2020) and predicts the extent to which prejudice is translated into negative behavioral tendencies (Bağcı, Turnuklu, & Tercan, 2020). At the same time, such contact is likely to restrain potential negative behavioral tendencies toward outgroups such as aggression and avoidance (Schmid et al., 2014; Trifiletti et al., 2019), particularly through reducing feelings of anger and anxiety (Hayward et al., 2017). While previous research suggested initial behavioral intentions such as negative action tendencies to also predict future intergroup contact behavior, the existing literature often provides stronger evidence for the longitudinal path from contact to outgroup attitudes and behavioral tendencies (Swart et al., 2011; Trifiletti et al., 2019), which could be extended by examining both types of contact and both outgroup approach and avoidance tendencies over time.

Contact Valence: Positive Versus Negative Contact

Earlier research on positive and negative intergroup contact has found an asymmetry in their effects (Paolini et al., 2010) such that negative intergroup contact structures intergroup relationships more strongly than positive contact (e.g., Barlow et al., 2012; Graf & Paolini, 2017). Especially in conflictual intergroup settings, contact can involve unintended negativities that may harm intergroup relationships (Guffler & Wagner, 2017), suggesting the necessity of studying negative contact in intergroup contexts characterized by perceptions of threat. While later research has demonstrated mixed evidence for the relatively stronger effect of negative contact over positive contact, showing the two types of contact to have equally strong effects on attitudes (e.g., Arnadottir et al., 2018) or positive contact effects to outweigh those of negative contact (Bağcı & Turnuklu, 2019), contemporary intergroup contact literature now recognizes both positive and negative contacts as important determinants of prejudice in opposite ways. While existing research is mostly restricted to attitudinal outcomes, recent studies have suggested negative contact to also generalize to avoidance tendencies, relating to reduced intentions to engage in contact with novel outgroup members (Meleady & Forder, 2019; Wang et al., 2020).

So far, only few studies have examined simultaneously positive and negative contact experiences among youth using a longitudinal research design. Vedder et al. (2017) found

that both positive and negative contacts were related to Dutch majority children's prejudice toward immigrants cross-sectionally, while in a two-wave panel study in the Netherlands, both positive and negative contacts were associated with changes in prejudice over time, albeit in opposite directions (Ten Berge et al., 2017). In another study examining positive and negative intergroup contact effects on prejudice and future contact intentions in the United Kingdom, positive and negative contact effects were equally strong predictors of intergroup attitudes longitudinally (Wölfer et al., 2017), highlighting both types of contact to have important implications for children's intergroup relationships. We aimed to extend this literature by testing positive and negative contact in relation to approach and avoidance behavioral tendencies over time, in the unique context of immigration in Turkey.

The Current Study

The current study investigated associations between Turkish early adolescents' (11–13 years) positive and negative intergroup contact with Syrian refugees and their approach-avoidance tendencies toward this outgroup in a longitudinal study (three waves over 15 months). To test our expectations, we used LGCM which is a statistical method for examining intraindividual change over time and the predictors of individual differences in change. Growth curves describe trajectories for each person over several time points (linear or nonlinear change). LGCM can be estimated by two parameters for describing a linear change: the initial status or level, called the intercept and the rate of change in a variable called the slope. LGCM not only describes the average initial level or average change rate across individuals (indicated by intercept or slope means) but also their variability or individual differences around these averages (indicated by intercept and slope variance). Predictors can be specified to explain the interindividual differences in the initial level or change in a variable (Bollen & Curran, 2006; Preacher et al., 2008).

Following two lines of previous research which showed a developmental pattern of increase in prejudice and decrease in positive contact experiences as children reach adolescence (e.g., Wölfer et al., 2017), and considering the increasingly hostile behaviors toward refugees in Turkey (e.g., Secen & Gurbuz, 2021), we tentatively expected positive contact and approach tendencies to decrease, while we anticipated negative contact and avoidance tendencies to increase over time (H1: “increasing outgroup negativity”).

Our second objective was to test a “contact → behavioral tendencies model” where we expected initial levels of or changes in contact to predict initial levels of and changes in behavioral tendencies. This model was based on the classical contact theory where one would expect generalization of individual contact experiences to outgroup behaviors (Pettigrew, 1997) and prior contact history to drive contact-seeking behavior (Kauff et al., 2021). To the extent that we found a decrease in approach tendencies and increase in avoidance tendencies,

we expected positive contact to buffer against these worsening behavioral tendencies (H2a: “buffering effect of positive contact”). In other words, positive contact should be associated with a less steep decline in approach and a less steep increase in avoidance behavioral tendencies. Based on negative contact's capacity to also generalize to avoidance tendencies (Meleady & Forder, 2019), we expected negative contact to be associated with increasing outgroup negativity in behavioral tendencies, for instance, by predicting a greater decline in approach or a greater increase in avoidance (H2b: “deteriorating effect of negative contact”).

Method

Participants and Procedure

A total of 687 Turkish early adolescents (48% female, 52% male; $M_{age} = 11.11$, $SD = .86$; fifth to seventh grade) completed scales over three waves with approximately 7.5 months gap between each wave. We determined our sample size based on the school's availability and conventional Structural Equation Modelling (SEM) power analyses (recommended sample size = 538 for a medium effect size, .80 power and alpha of .05, Soper, 2022); however, against possible dropouts in longitudinal studies, we recruited more participants. Out of 687 participants, 19% were missing in Wave 1, 20% in Wave 2 and 7% Wave 3. The most obvious reason for dropout rates was absenteeism and/or classroom changes over the year. We compared those who were missing at least in one wave (27.5%, $n = 189$) to those who were present in all three waves (72%, $n = 498$) in contact and behavioral tendencies across three time points. None of the mean differences were significant (all p 's > .05) except for avoidance at Time 3. Those who were present in all waves reported higher avoidance ($M = 3.57$; $SD = 2.18$) than those missed at least one wave ($M = 3.15$; $SD = 2.16$), $t(629) = 2.04$, $p = .041$. Overall findings do not suggest selective missingness.

Data were collected from a public secondary school in Izmir (Turkey) during class hours. Classes ($n = 40$) were randomly chosen according to the school's convenience. Before the beginning of the academic year, the participating school was contacted and invited to take part in the research. Upon acceptance, necessary ethical approvals were granted from the affiliated university of the fourth author, Republic of Turkey Ministry of Interior Directorate General of Migration Management, and the Ministry of National Education. Teachers and school authorities acted in *loco parentis*. The mean self-reported number of Syrian refugees in classrooms was 2.11 ($SD = 1.78$).¹ The mean subjective socio-economic status that included a single item assessing the rating of family income (ranging from 1 = *very low* to 7 = *very high*) was 4.70 ($SD = 1.49$). All data and materials can be found at: https://osf.io/ukav8/?view_only=d6aba9eb58f04f3db4c2639933b5b201.

Measures

Positive and negative intergroup contact were each measured by a single-item measure frequently used in intergroup contact literature (Barlow et al., 2012, "How frequently do you have POSITIVE/NEGATIVE contact with your Syrian peers?," response scale ranging from 1 = *very rarely*, 7 = *very frequently*).

Approach and avoidance tendencies toward the outgroup were measured by adapting the scales previously used in the contact literature (e.g., Bagci & Gungor, 2019; Turner et al., 2013). Approach items stated whether children would like to "spend time with," "learn more about," "have a conversation with," and "play with" an unknown Syrian child. Avoidance items included three items whereby children reported whether they would like to "avoid," "stay away from," and "have nothing to do" with him or her. The response scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Both scales were reliable across three waves (α 's ranging between .84 and .93).

Analytical Strategy

Analyses were conducted using Mplus 8.3 (Muthén & Muthén, 2017). We first ran univariate LGCMs to test whether the main variables change over time (see Figure S1 in Supplemental Materials). LGCM allows for estimating latent initial levels (i.e., intercepts) as well as latent average changes over time (i.e., slope). We then estimated our combined model using LGCM with four variables, where the initial status of positive and negative intergroup contact predicted the initial status of approach and avoidance as outcomes, and both initial status and slopes of positive and negative intergroup contact predicted the slopes of approach and avoidance as outcomes. We use "directional associations" to refer to regression paths and to differentiate them from the correlations/covariances, that is, bidirectional associations among the intercepts and slopes of the predictors, and among the intercepts and the slopes of the outcomes. Although referring to longitudinal directional associations, we note that our results do not indicate causal relationships, as LGCM does not test causality.

We used MLR as an estimator as it is more robust to deviations from normality. Missing data were handled using full information maximum likelihood estimation (FIML). FIML uses all available data without imputing missing data and is therefore unbiased and preferable to other methods (Dong & Peng, 2013). Intraclass correlations (ICCs) were overall low ranking between .01 and .08 (except for positive contact at Times 2 and 3 and approach at Time 2, ICCs = .19, .13, .10, respectively). To consider the nested structure of the data (students in classrooms), we used the clustering function in Mplus for univariate models. Due to the restriction that number of parameters < number of clusters, we used single-level analyses for the main and alternative models. We ran several

additional analyses such as testing an alternative model, using the clustering function, testing control variables, age outlier analysis and testing the models separately for each outcome; these can be found in the additional analysis in Supplemental Materials.

Results

Descriptive statistics are displayed in Table 1. Results of the univariate LGCMs can be seen in Table 2. In line with our expectations (H1: "*increasing outgroup negativity*"), negative contact was increasing and approach was decreasing over time (as indicated by significant positive and negative slopes, respectively). While avoidance was also increasing, this trend was marginally significant. Contrary to our expectations, positive contact was slightly increasing, although this change was not significant (see Supplemental Materials for model fit indices).

Results of the combined LGCM with approach and avoidance tendencies as outcome variables are shown in Table 3 and Figure 1. First, looking at the links between slopes of contact and slopes of approach and avoidance, we found three significant directional associations in line with our expectations. Accordingly, increases in positive contact were related to a less steep/lower decline in approach tendencies ($B = 1.00$, $SE = .17$, $p < .001$). The marginally significant negative association between the slopes of positive contact and avoidance suggests that increasing positive contact was related to a less steep increase in avoidance ($B = -0.28$, $SE = .15$, $p = .060$). These two associations provided evidence for the "buffering positive contact" hypothesis (H2a) was therefore partially confirmed. We also found partial evidence for the "deteriorating negative contact" hypothesis (H2b): the significant positive association between the slopes of negative contact and avoidance indicates that increasing negative contact was associated with a more steep increase in avoidance tendencies ($B = 0.47$, $SE = .16$, $p = .004$), but was not significantly related to the slope of approach. Second, looking at the associations between the intercepts of contact and slopes of approach and avoidance, we did not find any significant associations, contrary to our expectations. However, we found significant associations between their intercepts (initial levels): while higher initial levels of positive contact were associated with higher initial levels of approach ($B = 1.22$, $SE = .14$, $p < .001$) and lower initial levels of avoidance ($B = -0.60$, $SE = .13$, $p < .001$), higher initial levels of negative contact were associated with lower levels of approach ($B = -0.42$, $SE = .24$, $p = .081$), and higher levels of avoidance ($B = 0.56$, $SE = .30$, $p = .063$), but these latter paths were only marginally significant.

Additional Analyses

We ran an alternative model where the contact variables were outcomes and behavioral tendencies were the predictors

Table 1. Descriptive Statistics of Main Study Variables.

No.	Variables	M(SD)	2	3	4	5	6	7	8	9	10	11	12
1	T1-positive contact	2.33 (1.81)	0.35***	0.31***	0.04	0.07	-0.04	0.38***	0.38***	0.33***	-0.13**	-0.09 ^a	-0.19***
2	T2-positive contact	2.62 (1.94)		0.40***	0.02	-0.09*	-0.09*	0.31***	0.59***	0.42***	-0.14**	-0.28***	-0.22***
3	T3-positive contact	2.46 (1.83)			0.05	-0.02	-0.11**	0.29***	0.47***	0.59***	-0.17***	-0.22***	-0.27***
4	T1-negative contact	2.01 (1.68)				0.23***	0.08 ^b	-0.05	0.00	0.04	0.07	0.06	0.01
5	T2-negative contact	2.56 (2.04)					0.24***	-0.08 ^b	-0.09*	-0.04	0.09*	0.21***	0.07
6	T3-negative contact	2.66 (2.17)						0.01	-0.08 ^a	-0.13**	0.07	0.11*	0.23***
7	T1-approach tendencies	2.95 (1.90)							0.52***	0.45***	-0.31***	-0.31***	-0.23***
8	T2-approach tendencies	3.01 (1.94)								0.62***	-0.23***	-0.41***	-0.29***
9	T3-approach tendencies	2.58 (1.80)									-0.19***	-0.26***	-0.33***
10	T1-avoidance tendencies	3.24 (2.13)										0.32***	0.30***
11	T2-avoidance tendencies	3.28 (2.04)											0.35***
12	T3-avoidance tendencies	3.48 (2.18)											

^a<=.06. ^b<=.07.

p* < .05. *p* < .01. ****p* < .001.

Table 2. Univariate Growth Models.

	Positive contact	Negative contact	Approach tendencies	Avoidance tendencies
Means				
Intercept	2.37	2.04	3.02	3.22
p value	<.001	<.001	<.001	<.001
Slope	0.07	0.34	-0.21	0.12
p value	.112	<.001	<.001	.066
(Co-)variances				
Intercept	1.37	1.25	2.31	1.36
p value	<.001	<.001	<.001	.003
Slope	0.27	0.63	0.50	0.07
p value	.126	.004	<.001	.740
Slope-intercept	-0.17	-0.48	-0.37	0.02
p value	.385	.034	.009	.922

Table 3. Results of the Main LGCM With Approach and Avoidance as Outcomes.

Regression coefficients	Intercept				Slope			
	Approach		Avoidance		Approach		Avoidance	
	B (SE)	t	B (SE)	t	B (SE)	t	B (SE)	t
Regression intercept/constant	0.98 ^a (.53)	1.86	3.50*** (.64)	5.48	-0.54 ^b (.30)	-1.80	0.06 (.37)	0.15
Intercept positive contact	1.22*** (.14)	8.64	-0.60*** (.13)	-4.57	-0.05 (.07)	-0.73	0.00 (.06)	0.06
Intercept negative contact	-0.42 ^b (.24)	-1.75	0.56 ^a (.30)	1.86	0.20 (.13)	1.56	-0.04 (.16)	-0.27
Slope positive contact					1.00*** (.17)	6.07	-0.28 ^a (.15)	-1.88
Slope negative contact					-0.01 (.08)	-0.23	0.47** (.16)	2.90

Note. Confidence intervals can be calculated as $B \pm (1.96) * (SE)$.

^a ≤ .06. ^b ≤ .08.

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

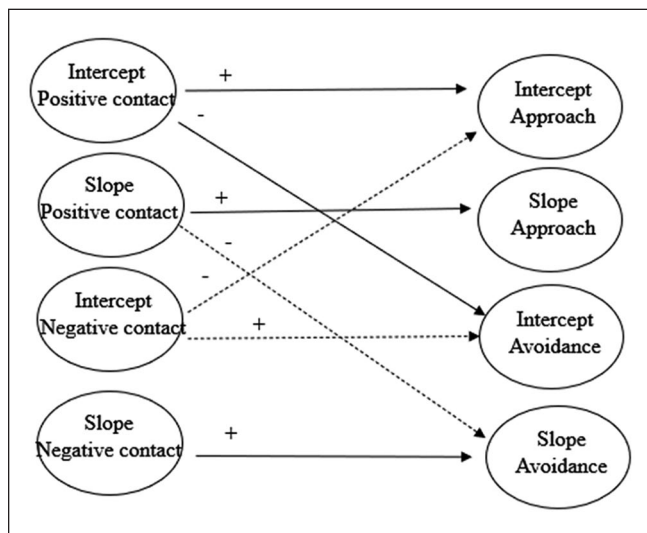


Figure 1. Main latent growth curve model.

Note. Dashed lines indicate marginally significant effects ($p = .05-.08$). Nonsignificant effects and covariances between predictors and those between outcomes were estimated but not shown for visual clarity.

(“behavioral tendencies → contact” model presented in Supplemental Materials). This model might be based on the assumption that approach-avoidance tendencies are likely to encourage or hinder one’s potential to benefit from existing contact opportunities (e.g., Paolini et al., 2018; Wölfer et al., 2016; Wölfer & Hewstone, 2018). Findings showed that both models had comparably good fits. Moreover, the directional associations across both models were more similar than different: four intercept associations and two slope associations (positive contact approach; negative contact approach) out of four were similar. The slope associations between positive/negative contact with avoidance were only significant in the model reported here. A noteworthy finding from the alternative model was an intercept–slope association that was not present in the main model: initial levels of avoidance were associated with less increase in positive contact. Full results for the models (including model fit statistics, covariances and means) were presented in Supplemental Materials.

All other additional analyses using clustering functioning to take into account the nested structure of the data, including control variables in the analysis, excluding age outliers and

running the analysis separately for the dependent variables largely confirmed the results reported here. More detailed results for these additional analyses can also be found in Supplemental Materials.

Discussion

Focusing on an understudied mass immigration context, we investigated whether and how Turkish early adolescents' positive and negative contact with Syrian refugees and their approach-avoidance tendencies toward this outgroup have changed over time and whether these changes were associated. Confirming H1 ("*increasing outgroup negativity*"), we found that almost all of our contact and behavioral measures changed for the worse, reflecting increasingly negative intergroup relationships over time even in the short time period that we investigated, in line with developmental accounts showing prejudice to increase and positive contact to decrease over time in adolescence (Wölfer et al., 2016; Wölfer & Hewstone, 2018), as well as contextual accounts showing increasing anti-refugee prejudice in Turkey (E. Erdoğan & Uyan-Semerci, 2018). While the initial level of positive contact was slightly higher than negative contact and positive contact also seemed to increase over time (nonsignificantly), the escalation in negative contact is worthy of attention. The intake of Syrian children into Turkish schools provides a fresh intergroup context where children engage potentially in first meaningful direct contact with refugees. Our findings demonstrate that in such a novel intergroup context, children start their intergroup relationships with more positive contact compared with negative contact, but these interactions tend to involve negativities over a relatively short period. Previous research demonstrated that positive contact is more frequent than negative contact and this superiority in terms of quantity may decrease the disproportionate effects of negative contact over positive contact (Graf et al., 2014). Our findings suggest that such compensating nature of positive contact abundance over asymmetrical valence effects may fade away in time. This indicates the need for far greater attention directed to increasing negative contact processes in the current intergroup context and particularly in school settings.

Second, in addition to some initial studies that documented the potential interactions between positive and negative contact (e.g., Arnadottir et al., 2018), our results provided the first evidence that increasing positive contact can buffer against increasing outgroup negativity in behavioral tendencies, while increasing negative contact can be associated with increasing outgroup negativity in behavioral tendencies over time. Specifically, increases in positive contact were associated with a less steep decline in approach, as well as a less steep increase in avoidance, suggesting the potential buffering role of positive contact against increasingly negative outgroup tendencies. Negative contact also seemed to be associated with worsening intergroup relationships, as

increasing negative contact predicted a more pronounced increase in avoidance tendencies, confirming our "deteriorating negative contact" hypothesis. These findings go beyond traditional contact research studying the role of positive contact on attitudes (e.g., Binder et al., 2009; Swart et al., 2011; Wölfer et al., 2016) and show how changes in both types of contact can be associated with the changes in behavioral tendencies over time.

We did not find any evidence that initial levels of contact can predict changes in approach or avoidance, which was also observed in studies investigating the role of initial contact on later prejudice among adult samples (Kotzur & Wagner, 2021). However, higher initial levels of positive contact were associated with higher initial levels of approach and lower initial levels of avoidance tendencies, in line with existing evidence (Trifiletti et al., 2019). Negative contact also predicted behavioral tendencies in the proposed direction (e.g., Meleady & Forder, 2019); however, paths from negative contact were weaker (as indicated by lower *t* values). Therefore, particularly at initial levels of contact processes, positive contact seemed to be a stronger predictor of both tendencies. These findings confirm previous research showing positive contact to have a greater predictive value on attitudes in Turkey (Bagci & Turnuklu, 2019) and elsewhere (Brylka et al., 2016). One explanation concerning the current context may be a reversed asymmetrical effect whereby positive contact, as the unexpected contact type in a negatively characterized intergroup context is perhaps more salient than negative contact, and eventually generalizes to attitudes more quickly (Brown & Hewstone, 2005).

Our additional analyses investigating an alternative model (behavioral tendencies predicting contact) showed that although both were equally good fitting models, changes from contact to behavioral tendencies were more often significant than the other way around. This is not surprising given that existing research on contact and avoidance and approach tendencies typically tested contact as antecedents of these behavioral tendencies (e.g., Meleady & Forder, 2019; Trifiletti et al., 2019), and longitudinal research on the contact-prejudice association shows initial contact's effects to be stronger than initial attitudes' effects over time (e.g., Binder et al., 2009; Swart et al., 2011). Yet, theoretically it can be assumed that the approach-avoidance tendencies are also likely to have long-term implications for one's potential to benefit from existing contact opportunities (e.g., Paolini et al., 2018). In the current study, a noteworthy finding from the alternative model was that the initial levels of avoidance predicted a lower increase in positive contact, confirming the assumption that avoidance tendencies might be responsible of curbing one's engagement in positive contact over time (e.g., Paolini et al., 2018). A promising finding was, however, the lack of this association as regards the change in negative contact, which indicates that avoidance may not directly fuel negative contact, but may only restrict the growth of positive contact.

Among limitations, one methodological drawback was the measurement of positive and negative contact which was single-item and self-reported, which includes the subjective perception of children. Although the measure has been commonly used among both adults and adolescents (e.g., Bagci & Gungor, 2019; Barlow et al., 2012), recent research has devised more advanced techniques to measure contact including social network analyses (Wölfer et al., 2017) and highlighted the importance of individual variations in the evaluation of contact experiences (Keil & Koschate, 2020). Moreover, we could only monitor changes within 15 months, which restricts our assumptions about changes in variables as purely *developmental*. Nevertheless, as in previous research observing longitudinal changes in contact and attitudes even in 7 months (e.g., Feddes et al., 2009; Trifiletti et al., 2019), this developmental period may be particularly sensitive to changes in attitudes even across brief intervals (Brown et al., 2013).

Contextually, Syrian immigration in Turkey represents a unique immigration case that involves a substantial level of threat perception (M. M. Erdoğan, 2014). Nevertheless, we believe our findings would generalize to other socio-cultural contexts, as research in other Western countries also demonstrates anti-immigrant/refugee attitudes to be on rise, especially due to the prevalence of right-wing populist ideologies that encourage a sense of deprivation among dominant group members in many Western countries (Mols & Jetten, 2016). This necessitates an understanding of natives' both positive and negative contacts experiences with, as well as their avoidance and approach tendencies toward refugees in childhood, before these early experiences become "chronic" experiences in later stages of life (Kauff et al., 2017). In addition, it is also critical to note that the city where the study was conducted also included a number of immigrants/refugees from other countries than Syria. Although we did not focus on contact and attitudes regarding these different outgroups (such as Afghans,..) and the participating school included Syrian refugees as the most salient outgroup, it is possible that children also build contact with other refugees/immigrants in their neighborhood and home contexts, which may be important to compare to and investigate in future studies.

At the applied level, our findings call for immediate preventive interventions that counter the development of negative contact and avoidance, as well as ones that encourage the initiation of positive contact and approach tendencies toward refugees over time. Currently, many public schools lack structured regulations and practices related to the integration of Syrian children and deal with many challenges such as teachers' lack of prior experiences, as well as language barriers (Sarmini et al., 2020). Yet, it is critical to implement large-scale school-level strategies that may facilitate both Turkish and Syrian children's adaptation to this newly emerging intergroup setting, by involving school practitioners and using a variety of direct and indirect contact

strategies. Our findings show that it is important to "deal" with negative contact as early as possible, since negative contact seems to increase sharply in a relatively short period of time. Moreover, although increasing positive contact seemed to buffer some outgroup negativity, the actual increase in positive contact was only marginal, which indicates that over time, children transform existing contact opportunities into negative contact rather than positive contact. At the same time, initial avoidance (but not approach) tendencies predicted the change in positive contact, which implicates that reducing avoidance tendencies at initial stages of contact may be prioritized rather than instilling approach tendencies in the first place. Therefore, early interventions may include the reduction of avoidance and particularly negative contact that may stem from the anticipation of intergroup anxiety, while also aiming to facilitate the development of further positive contact over time.

Among potential contact strategies, recently Tercan et al. (2021) applied a vicarious contact intervention among Turkish children and found that the intervention increased helping intentions toward Syrian refugees, particularly among children who reported a higher level of initial prejudice. Other researchers have shown imagined contact whereby individuals engage in a mentally stimulated contact condition (Turner et al., 2007) to be successful in improving attitudes toward Syrian refugees (Bagci et al., 2018). Nevertheless, the majority of intergroup contact studies and interventions in the literature pay particular attention to the formation of positive contact and the drivers of contact seeking behavior (e.g., Kauff et al., 2021), rather than preventing negative contact and avoidance tendencies. In order to ensure that contact opportunities become positive contact experiences rather than negative ones, possible interventions may include the satisfaction of some contact conditions such as the institutional support and equal status or may target increasing self-efficacy in cross-group interactions in the first place (Bagci, Cameron, et al., 2020; Cameron & Turner, 2016).

In summary, the current research offers an understanding of the changes in and associations between both positive and negative contacts and both approach and avoidance tendencies in the context of Turkish native and Syrian refugee children in Turkey. Findings contribute to the existing intergroup contact literature not only by showing the trajectories of various forms of contact and outgroup behavioral tendencies over time in a unique intergroup context, but also by indicating how contact and behavioral tendencies are associated longitudinally. Future research could extend the current findings by investigating longer term changes across a wider range of developmental periods and replicating the findings in other immigration contexts.

Disclosure Statement

The authors report all manipulations, measures, and exclusions in these studies.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Data Availability Statement

All data and materials can be found at: https://osf.io/ukav8/?view_only=d6aba9eb58f04f3db4c2639933b5b201.

Supplemental Material

Supplemental material is available online with this article.

Note

1. The school where data were collected is located in İzmir, which has been used for years as a main gateway for migration to the West by individuals originating from several countries, not only Syria. The diversity of the immigrants/refugees in the participating school is not high and the Syrian refugees make up the most salient outgroup. Nevertheless, it is possible that children engage in contact with other immigrant/refugee groups in a variety of social settings (such as Afghans).

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