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The role of the perceived engagement of the facilitator in a vicarious contact intervention:

A school-based field-experiment in three countries

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The data that support the findings of this study are available from the corresponding author, upon reasonable request

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Abstract

Indirect forms of intergroup contact have been shown to reduce prejudice. However, little is known about the factors that can contribute to implementing these methods as interventions in real-life settings. In this study, we examined whether the students' perception of the facilitator's engagement in carrying out a school-based vicarious contact intervention affects the effectiveness of the intervention among adolescents in Finland ($N = 360$), Italy ($N = 113$), and Slovakia ($N = 216$). As a result, the participants who perceived the facilitator as highly engaged held more positive intergroup attitudes after the intervention than those perceiving the facilitator less engaged. The results are discussed in relation to social and developmental psychological research on normative influences in adolescence and intergroup contact literature, in which normative support from authorities is considered to contribute to the extent to which contact reduces prejudice. By stressing the role of the facilitator, the results contribute both theoretically and practically to the understanding of the successful implementation of prejudice-reduction programs. Please refer to the Supplementary Material section to find this article's Community and Social Impact Statement.

Keywords: vicarious contact, intervention facilitator, prejudice-reduction, school intervention, intergroup contact

The role of the perceived engagement of the facilitator in a vicarious contact intervention: A school-based field experiment in three national settings

With increasing ethnocultural diversity, encouraging harmonious intergroup relations has become an important task for societies to tackle. The growing need for ecologically valid interventions that can promote positive intergroup attitudes calls for a comprehensive translation of scientific knowledge into practice. Based on extensive empirical evidence, intergroup contact is considered one of the most influential and promising strategies for prejudice-reduction (Allport, 1954; Pettigrew & Tropp, 2006; Pettigrew, Tropp, Wagner, & Christ, 2011). More recent research has also demonstrated that intergroup contact does not require face-to-face interaction, as even indirect forms of contact have been shown to diminish prejudice (for a review, see Dovidio, Eller, & Hewstone, 2011; Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014). For instance, vicarious contact, i.e., observing an ingroup member having a positive interaction with an outgroup member, improves intergroup attitudes (Mazziotta, Mummendey, & Wright, 2011). Although indirect forms of contact are often less effective than direct contact (Lemmer & Wagner, 2015), they can act as a preliminary step towards face-to-face contact, for example, by decreasing intergroup anxiety (Wölfer et al., 2019)

Despite the empirical evidence of its effectiveness, intergroup contact research has also been criticized for not being fully practitioners- and policy-ready (e.g., McKeown & Dixon, 2017; Paluck, Green, & Green, 2019). This critique is, for example, due to the lack of experimental studies in real-life settings and a focus on short-term outcomes measured immediately (i.e., less than 24 hours) after interventions (Paluck et al., 2019). Furthermore, contact interventions focusing on ethnic and racial prejudice tend to have weaker effects than those focusing on prejudice towards other groups, such as the elderly or people with mental

or physical disabilities (Beelman & Heinemann, 2014; Paluck et al., 2019). One plausible explanation for this is that prejudice toward these groups can be socially less acceptable than prejudice toward some other groups (Crandall, Eshleman, & O'Brien, 2002). Also, ethnic and racial groups can appear more as a possible threat to the ingroup and thus arouse stronger and more negative reactions (Cuddy, Fiske, & Glick, 2008). In order to fully respond to the need for research-based strategies that can effectively combat ethnic and racial prejudice and reliably guide policy, it is crucial to understand different factors that might help or hinder the implementation of prejudice-reduction interventions derived from the contact hypothesis.

In most respects, the successful implementation and effectiveness of any intervention are dependent on its delivery. The importance of factors related to the intervention facilitator has indeed been acknowledged in the broader scope of the prevention science field (e.g., Swift et al., 2017), and especially in health-promoting interventions (e.g., Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Wilde et al., 2019). However, the importance and influence of the person carrying out the intervention sessions have mostly been neglected in prejudice-reduction interventions utilizing different forms of intergroup contact.

Notwithstanding the gap in the previous contact research, we argue that the facilitator's role is crucial, as facilitators may be important role models and significant social referents promoting and supporting the message of the intervention with the expression of their own attitudes. Furthermore, they can communicate norms regarding what is valued and welcomed by the authorities, such as schools or other institutions where the intervention is conducted. Thus, the intervention facilitators can also be considered as potential sources of institutionalized norms. This makes the gap in the previous research even more striking as in the contact literature, support from authorities is considered to contribute to the extent to which contact reduces prejudice (Allport, 1954).

Numerous studies have tested the influence of perceived social norms on attitudes, but relatively few studies have investigated how the normative context adds to the prejudice-reducing effect of intergroup contact (Paluck et al., 2019). Nevertheless, intergroup contact, both direct and indirect, does not occur outside the realm of its social surroundings; instead, social context can strengthen or diminish contact's effect on attitudes (Kende, Tropp, & Lantos, 2017; Merino, 2013). For instance, in an intervention study conducted among university students in Hungary, Kende and colleagues (2017) found that perception of institutionalized norms against prejudice towards the Roma moderated the effect of direct contact with a Roma student on outgroup attitudes. The participants who perceived stronger non-prejudice norms prevailing at the university and in the society at large showed a more noticeable change in their attitudes (but not in contact intentions) than those who perceived institutional norms to be weaker.

Also in vicarious contact, the role of social norms is accentuated. Based on the theory of social learning (Bandura, 1986), vicarious contact builds on the idea that we learn attitudes and behavior favored in the given social context by observing others (Mazziotta et al., 2011). Consequently, social norms have been distinguished as one of the central mediators of vicarious contact's effect on intergroup attitudes (Vezzali et al., 2014). However, previous studies have not fully examined how vicarious contact interventions could benefit from the normative support from authorities, such as a person facilitating the intervention sessions. To our knowledge, this research need has so far been addressed in only one previous experimental study. In their study using vicarious contact through a film of two basketball teams practicing together, Gómez and Huici (2008) found that a coach, as an authority figure, giving positive feedback to both teams strengthened the positive effect of vicarious contact among the supporters of the teams. Based on Allport's (1954) classic theorization, we argue

that the perceived normative support from a person facilitating vicarious contact interventions requires more attention.

Social norms and their impact on the effectiveness of the prejudice-reduction interventions are especially important to consider in interventions targeted for adolescents. Youth is a critical developmental stage for the formation of intergroup attitudes (Dunham & Degner, 2010) due to this age group being responsive to normative influences in their social environment (Raabe & Beelmann, 2011). For instance, in their longitudinal study, Gniewosz and Noack (2015) found that parental attitudes predicted those of adolescents up until the age of 16. However, the most substantial effect of the parental attitudes took place in early adolescence (i.e., among students between grades six and seven). Similarly, another longitudinal study examining the effects of parents' and peers' attitudes on adolescents' anti-immigrant prejudice showed significant effects of both parents and peers on changes in youths' attitudes over time, although the impact of parental prejudice was highlighted (Miklikowska, 2017).

While the importance of parental and peer norms has been widely attested, the school's normative context is also a central predictor of adolescents' intergroup attitudes and behavior (Pehar, Čorkalo Biruški, Pavin Ivanec, 2020). Previous studies have shown that teachers' views and actions impact their students in several ways. For example, teachers' attitudes toward diversity (Grütter & Meyer, 2014), their perceived interpersonal relationship with classmates (Geerlings, Thijs, & Verkuyten, 2019), and even the implicit, unconscious responses to outgroup members, such as eye contact or body language (Castelli, De Dea, & Nesdale, 2008; Vezzali, Giovannini, & Capozza, 2012), may be detected by the students, influencing their intergroup attitudes. Moreover, teachers can also play a focal role in establishing the school's normative climate in general. For instance, in their study focusing on

social norms on drug use, LaRusso, Romer, and Selman (2008) found that adolescents who experienced more support and regard for students' perspectives from their teachers were more likely to consider the school climate as promoting healthier norms.

Like teachers (LaRusso et al., 2008) or other mentoring adults (Gómez & Huici, 2008), intervention facilitators can also be seen as authority figures who impersonate the institutionalized norms. Therefore, facilitators may have a focal role in the delivery of the intervention as they provide students with normative support for the intervention and its message regarding positive intergroup contact and positive attitude change. To examine this in the current study, we focus on the degree to which the student participants perceived the facilitators to be engaged in delivering the intervention, referred to here as facilitator's engagement. Through this concept, we aim to depict the facilitator's perceived sentiments towards the intervention that we propose to consist of both cognitive and affective aspects, i.e., to what extent the facilitators are considered to find the intervention important and to enjoy conducting it. With this, we follow the operationalization of institutionalized norms in previous studies (e.g., Kende et al., 2017), where the extent to which the authority figures or institutional actors consider prejudice reducing actions important influences intergroup attitudes. In addition, it is vital to take into account the degree of the facilitator's personal enjoyment in conducting the intervention as an enthusiastic and emotionally involved facilitator can send a stronger normative and persuasive message for attitude change by showing that they "practice what they preach" (see, e.g., Abacioglu et al., 2019).

The current study aims to complement the scarce previous research on the role of authority figures in delivering prejudice-reduction interventions. We do this by examining the extent to which the perceived engagement of the facilitator carrying out a school-based vicarious contact intervention adds to the effectiveness of the intervention in eliciting a

positive change in intergroup attitudes. As a preliminary research question, we first test whether the intervention is successful in improving intergroup attitudes among adolescents. Based on theorizing and previous empirical evidence on vicarious intergroup contact, we expect that the intervention will improve majority students' intergroup attitudes in all three national contexts (H1). As our primary research question, we examine in intervention groups only, whether the intervention effect on intergroup attitudes is moderated by the students' perception of the facilitator's engagement in the intervention. We predict that the perceived engagement of the facilitator contributes positively to the improvement of the majority adolescents' intergroup attitudes (H2). As prior direct contact with outgroup members may influence the effect of the vicarious contact intervention (Vezzali et al., 2014), we also controlled for its effect.

Method

Participants

Participants were secondary school students belonging to the national majority group in Finland, Slovakia, and Italy. After excluding participants who took part only in the baseline assessment ($N_{FI} = 28$; $N_{SK} = 37$; $N_{IT} = 27$), the final sample consisted of 360 Finnish students (46.9 % girls; mean age 14.38 years, $SD = .53$), 216 Slovak students (46.8 % girls; mean age 13.94 years, $SD = .69$) and 113 Italian students (26.5 % girls; mean age 16.35 years, $SD = .59$). Students with an ethnic minority background (i.e., at least one foreign-born parent) were not included in this study ($N_{FI} = 138$; $N_{SK} = 9$; $N_{IT} = 55$). In the Finnish and Italian samples, the students were determined to belong to the national majority group when neither of their parents was foreign-born (for a similar procedure, see e.g., Geerlings, Thijs, & Verkuyten, 2018). In the Slovak sample, the children of the parent(s) not born in Slovakia

(e.g., in the former Czechoslovakia) were also considered belonging to the national majority group if their nationality was Slovak.

The contexts of the study

The study was conducted in Finland, Slovakia, and Italy. The three countries represent different European national settings that differ regarding their immigration context. Both Slovakia and Finland have traditionally been countries of emigration rather than immigration. After joining the EU in 2004, the number of foreigners in Slovakia has steadily grown, although the representation of foreigners in the population has remained one of the lowest in Europe (International Organization for Migration, 2020). On the other hand, in Finland, ethnic and cultural diversity has been increasing notably since the 1990s, and this change has been relatively rapid. For example, the number of foreign-born inhabitants has nearly quadrupled in the past two decades (Statistics Finland, 2020). In Italy, a similar demographic change has started earlier, with net migration becoming positive in the 1970s and foreign nationals forming the increasing body of migration flows from the second half of the 1980s onwards (Bonifazi, Heins, Strozza, & Vitiello, 2009). These differences in the countries' migration history are also visible today in the percentages of foreign-born people in the total populations. In 2018, the year of the data collection, immigrants accounted for 10.2 percent of the population in Italy, 6.6 percent in Finland, and 3.5 percent in Slovakia (Eurostat, 2020).

In Italy and Finland the data was collected in areas where the proportion of immigrants was higher than in the rest of the country in total. In Finland, the study was conducted in the capital region, where people with a foreign background comprised 14.3% of the inhabitants in 2018 (Statistics Finland, 2020). In Italy, the data was collected from a medium-sized city in Northern-Italy, where immigrants represented 12.9% of the total

population (ISTAT, 2019). Instead, in Slovakia, the study context was slightly more varied as the study was conducted in schools located in both the capital area and smaller towns in Western and Central-Eastern parts of the country. These regions had a lower proportion of immigrants than Bratislava, where 32% of all the foreigners residing in the country lived, forming 8% of the city's inhabitants in the year of data collection (Kadlečíková, 2018). These areas were ethnically very homogeneous, except for one town with a substantial Roma community (18% of inhabitants, Atlas of the Roma Communities, 2019) and a moderately high proportion of ethnic Hungarians (29,62 % of the inhabitants). However, the differences between the regions were not visible in the sample obtained from the schools. From the total Slovak sample, students with an immigrant background counted for only four percent. On the other hand, in the Finnish and Italian samples, minority students comprised 27.7 and 32.7 percent, respectively.

Procedure

With the approvals obtained from the school boards, the principals, and the parents of the participants in each country, the study was conducted in secondary schools during the academic year of 2017-2018. Altogether seven schools (38 classes) in Finland, five schools (12 classes) in Slovakia and three schools (12 classes) in Italy participated in the study. The classes within the schools were randomly allocated to experimental and control conditions. Out of a total of 689 participants, 49.2 percent were allocated to the experimental condition ($N_{\text{Finland}} = 177$; $N_{\text{Slovakia}} = 116$, $N_{\text{Italy}} = 46$). The intervention was assessed through a pretest-posttest design: the baseline assessment at T1 was conducted three weeks before the intervention and the T2 assessment two weeks after the intervention. In the experimental group, additional assessments were also conducted as a part of the intervention sessions.

The intervention consisted of altogether four 45-minute sessions that were implemented in the experimental group once a week for four consecutive weeks while the control group followed a normal curriculum. In Finland and Slovakia, the facilitators of the intervention sessions were part of the schools' teaching staff, either teachers or study councilors. In Italy, research assistants carried out the sessions. All facilitators conducted the sessions according to a facilitator's manual that contained instructions and designated time frames for every session.

Intervention program

During the intervention, called *Stories about friendship* (Solares, Huttunen, Mähönen, Hirvonen, & Liebkind, 2012), the students were introduced with altogether six written friendship stories told by peer models who belonged either to the national majority group (four stories) or to an ethnic minority group (two stories). The minority narrators, as well as the outgroup friends in the stories told by majority members, represented the largest minority groups in the country where the data was collected. Peer models of different ethnicities were used as the narrators of the friendship stories to make the intervention more inclusive and to avoid framing only majority members as active agents in intergroup contact. According to the findings of a previous study using the same intervention program, the ethnic status of the storytellers (i.e., narrators being either in- or outgroup members) did not affect the results of the intervention (Mäkinen, Liebkind, Jasinskaja-Lahti, & Renvik, 2019). Based on that, we assume that the use of both majority and minority storytellers is making the intervention more sensitive to various contexts without compromising its effectiveness.

In addition to the written friendship stories that were read out loud in the class, the sessions also included class discussions led by the facilitator, and a group task of filming short video blogs in which students described their own positive intergroup contact

experiences. The purpose of these additional tasks was to emphasize the central message of the friendship stories and to make participants act as positive norm senders to each other.

The intervention followed, to a large extent, an intervention manual created for teachers to use for anti-prejudice practices in schools (Solares et al., 2012) and tested earlier among Finnish secondary school students (Liebkind et al., 2014, 2019; Mäkinen et al., 2019). An English translation of the intervention manual used in this study along with friendship stories used in the Finnish context are provided as a supplementary material.

Measures

Intergroup attitudes were assessed pre- and post-intervention by asking the participants to indicate their overall feelings towards people from other cultural groups on a single-item 'Feeling thermometer' (Haddock, Zanna, & Esses, 1993) scaling from 0 = *feelings extremely cold* to 100 = *feelings extremely warm*.

Perceived engagement of the facilitator was measured among students in the experimental condition after the last intervention session. The measure was developed for this study and consisted of two items which asked the students to think about the person who carried out the lessons: "How happy do you think they were to run these lessons?", "How important do you think they consider it to have such lessons in schools?". Participants responded to the items on an 11-point scale ranging from 0 = *not at all* to 100 = *very much*. The two items moderately correlated ($r = .513, p < .001$), and were used to create a composite score for perceived engagement (Spearman-Brown coefficient $r_{sb} = .678$).

Frequency of direct contact was assessed before the intervention by asking the participants: "How often do you spend time with people from other cultural groups? They can be, for example, friends, parents of your friends, or neighbors." Response options ranged from 1 = *never* to 5 = *very often*.

The number of outgroup friends was measured before the intervention by asking the participants to estimate how many close friends from other cultural groups they have with whom they are in contact most frequently. Response options included: 1 = none; 2 = one friend; 3 = two friends; 4 = 3-5 friends; 5 = 6-10 friends; 6 = 11-20 friends; 7 = over 20 friends.

Analyses

To examine the overall intervention effect on intergroup attitudes (H1), 2×2 mixed design ANOVAs were conducted by using the condition (experiment vs control) as a between-subjects factor and time (intergroup attitudes at T1 and T2) as a within-subjects factor. The analyses were run separately for the whole sample and separately for three national samples. For testing the role of the perceived engagement of the facilitator (H2), one-way ANOVAs were run by using intergroup attitudes at T2 as the dependent variable and the facilitator's engagement as a continuous predictor when adjusting the model for baseline values of the intergroup attitudes. We also ran the same models with the frequency of direct contact with outgroup members, the number of outgroup friends and age as control variables. SPSS IBM version 26 was used in all statistical analyses.

Results

Preliminary analyses

We first examined country differences in the main variables studied at T1 by using one-way ANOVAs. As regards to intergroup attitudes, the results indicated a statistically significant difference in the mean scores for intergroup attitudes at T1 between the countries ($F(2,679) = 30.290, p < .001, \eta^2 = .082$). The post hoc comparisons using the Tukey HSD test indicated that there was a significant difference between intergroup attitudes among Finnish and Slovak ($p < .001$) and Finnish and Italian adolescents ($p < .001$), participants in

Finland showing more positive prior outgroups attitudes (see Table 1 for means and standard deviations). There was also a significant difference between Slovak and Italian adolescents ($p = .003$), prior intergroup attitudes being more positive among Slovak participants.

Next, we compared the mean scores in the frequency of direct contact at T1 between the participants in the three countries. Because the assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances ($p = .015$), Welch's test was used instead of on the one-way ANOVA. There was a difference in the frequency of direct contact between the samples, *Welch's* $F(2,293.937) = 67.448$, $p < .001$. The post hoc comparison using the Games-Howell test indicated that the differences between Finnish and Italian ($p < .001$) samples, Finnish and Slovak samples ($p < .001$), and Slovak and Italian samples ($p < .001$), were statistically significant. As shown in Table 1, Finnish adolescents had had more direct contact with outgroup members before the intervention when compared to Italian adolescents, who, on the other hand, had more direct contact than Slovak adolescents.

Similarly, we also tested for mean differences in the number of outgroup friends among the samples. The one-way ANOVA indicated a statistically significant difference in the mean scores ($F(2,682) = 23.325$, $p < .001$, $\eta^2 = .064$). The Tukey HSD test indicated that in Italy the participants had more outgroup friends than in Finland ($p = .004$) or Slovakia ($p < .001$), where number of the outgroup friends was the lowest (Table 1).

Taken together, these descriptive analyses suggest that the three countries studied differed in terms of baseline measures of intergroup attitudes and in terms of participants' prior intergroup contact, namely the frequency of direct contact and the number of outgroup friends. This is why we conducted the main analyses for the whole sample and each country separately, controlling for prior intergroup contact variables along with age.

INSERT TABLE 1 HERE

We also compared the mean scores for perceived engagement of the facilitator between the participants of the experimental groups in Finland, Italy and Slovakia. The differences between these sample groups were not statistically significant, $F(2, 292) = 2.747$, $p = .066$ (Italy: $M = 82.88$, $SD = 12.70$; Finland: $M = 76.66$, $SD = 18.85$; Slovakia: $M = 75.15$, $SD = 17.91$).

Main analyses

Before testing the research question regarding the role of perceived engagement of the intervention facilitator on the effectiveness of the intervention, we tested the overall effectiveness of the intervention in order to know whether the mean change on intergroup attitudes between pre-intervention (T1) and post-intervention (T2) was different in the experimental and control groups. We used 2×2 mixed design ANOVAs in which the condition (intervention vs control) was set as a between-subjects factor and time (intergroup attitudes at T1 and T2) as a within-subjects factor. There were no intervention effects on intergroup attitudes in the whole sample ($F(1,668) = .23$, $p = .630$, $\eta^2 = .000$) and in any of the three country samples separately (See Table 2). The results remained the same after controlling for the frequency of direct contact, number of outgroup friends and age ($F(1,656) = .19$, $p = .664$, $\eta^2 = .000$). Notably, adolescents' attitudes seemed to improve over time with age ($F(1,656) = 5.24$, $p = .018$, $\eta^2 = .008$). Based on the results we concluded that the first hypothesis was not supported.

INSERT TABLE 2 HERE

Next, we turned to our primary research question, i.e., the role of the facilitator in the magnitude of attitudinal change among students in the intervention groups. After adjusting the model for baseline intergroup attitudes, results showed that the perceived engagement of

the facilitator affected the change in intergroup attitudes across the intervention groups in all three countries, $F(1, 293) = 9.13, p = .003, \eta^2 = .030$). The effect of the facilitator remained significant also after controlling for the frequency of direct contact, number of outgroup friends and age $F(1, 293) = 9.02, p = .003, \eta^2 = .031$). Thus, the second hypothesis was supported stating that the effectiveness of the intervention is dependent on the perceived engagement of the intervention facilitator. However, when looking at the three countries separately we found that perceived engagement of the facilitator particularly improved intergroup attitudes among Finnish ($F(1,127) = 5.87, p = .017, \eta^2 = .044$) and Slovak ($F(1,88) = 9.12, p = .003, \eta^2 = .094$), but not among Italian students ($p = .643$). To illustrate these results, we examined the intergroup attitudes among students perceiving different degrees of facilitator's engagement during the intervention by using median split to dichotomize the variable to high versus low perceived engagement groups. As seen in Figure 1, the Finnish and Slovak students who perceived the facilitator to be highly engaged held more positive intergroup attitudes after the intervention than the students who perceived the facilitator to be less engaged.

INSERT FIGURE 1 HERE

Discussion

Previous research has shown that indirect forms of contact, although effective in reducing prejudice, do not yield as strong effects as direct intergroup contact (Lemmer & Wagner, 2015). Furthermore, school-based interventions performed by the schools' teaching staff are usually less effective than interventions carried out by researchers (Ülger, Dette-Hagenmeyer, Reichle, & Gaertner, 2018). Thus, researchers look at ways to enhance the effectiveness of interventions based on indirect contact in school environments. Given that salient people in one's immediate social environment can act as a potential source of social

influence (e.g., Telzer, Van Hoorn, Rogers, & Do, 2018), the role of a person carrying out an intervention program is a crucial, yet unresearched, aspect in implementing prejudice-reduction interventions in a naturalistic setting.

Research employing social norms in intervention programs among adolescents has often focused on how to decrease or prevent problem behavior rather than to support positive development among youth (for discussion, see Telzer et al., 2018). The present study contributed to the latter body of research by testing the extent to which the social influence of an intervention facilitator can promote a positive change in intergroup attitudes in a school-based vicarious contact intervention. Our results stress the importance of the student's perception of the facilitator's engagement in implementing the intervention as the participants who perceived the facilitator to be highly engaged held more positive intergroup attitudes after the intervention than those perceiving the facilitator to be less engaged.

Based on the results obtained in this study, vicarious contact via written stories of cross-group friendship was in itself not enough to produce a positive change in adolescents' intergroup attitudes. Although research on vicarious contact via story reading has been shown to be generally effective, effects may be weak and fade quickly (e.g., McKeown, Williams, & Pauker, 2017; cf. Vezzali & Stathi, 2021, Chapter 3). Possibly, this research did not consider enough intervening factors that may determine the direction of the effects. In this study, we considered just one of these potential factors, that is, the facilitator's engagement. Consequently, we found that the intervention effect was strengthened when the message of the intervention was coupled with the perception of the facilitator's engagement, which speaks for the importance of the social context for prejudice-reduction interventions. These results are consistent with earlier theorizing on intergroup contact (Allport, 1954), according to which providing normative support is one prerequisite for the prejudice-reducing effects of

intergroup contact. In line with this, previous meta-analytical investigations on prejudice-reduction interventions have shown the importance of the authority figure interacting with the participants compared to, for example, video, poster-, or web-based interventions without any facilitating person (Beelmann & Heinemann, 2014; Ülger et al., 2017). Furthermore, the notion of the social influence of the intervention facilitator is also consistent with previous research in the fields of prevention science and health psychology (e.g., Forman et al., 2009; Swift et al., 2017; Wilde et al., 2019), where the role of intervention facilitators has been acknowledged for much longer than in research on indirect contact.

It should be noted that the perceived facilitator's engagement did not emerge as significant in the Italian sample, where the intervention was implemented by research assistants rather than by teachers. We believe that having included different types of facilitators (teachers in the Finnish and Slovak sample, and research assistants in the Italian sample) represents an added value of our study. In addition to paralleling research in the field, which made use of both, it allows us to assess when perception of engagement by the facilitator is more relevant. Teachers represent the authority figures for students, as they also represent the school as an institution. Perceiving their engagement may therefore indirectly provide the institutional support, considered as an essential optimal condition by Allport (1954). In contrast, research assistants are external to the school environment, and can hardly be considered as authority figures by students. In this case, perception of their engagement is unlikely to denote institutional support, or at least much less so than that ascribed to facilitators who directly represent the school. Our study therefore allows us to speculate not only that the facilitator's engagement is key for the success of an intervention, but also that this is true only when such an engagement is interpreted as institutional support. Future studies should provide direct evidence for this speculation.

Following the body of research speaking for the significant influence of teachers on the positive development of youth (Pianta & Hamre, 2009; Rhodes, Spencer, Keller, Liang, & Noam, 2006), our findings emphasize the role of engaged teachers in strengthening the message of the intervention. Teachers can act as mentors for the youth, offering a supportive relationship with a non-parental adult, and through this relationship, teachers can serve as role models for adolescents (Rhodes et al., 2006). As previous studies have suggested, students monitor their teachers' intergroup attitudes and behavior both at the expressed (e.g., Grütter & Meyer, 2014; Geerlings et al., 2019) and the implicit level (Castelli et al., 2008; Vezzali et al., 2012). Through their attitudes and behavior, the teachers also simultaneously communicate larger institutional and societal norms (LaRusso et al., 2008). However, it is important to note that teachers' authoritative position does not in itself guarantee that they will, as facilitators, add to the intervention effect. Instead, our results suggest that teachers' support for the intervention must be perceived by the students as genuine, i.e. the teachers must be perceived to find the intervention important and to enjoy conducting it.

Given that the teachers' influence on the attitude formation of youth has been well demonstrated in previous studies, it is interesting to note that Ülger and colleagues (2018) found school-based prejudice-reduction interventions carried out by the schools' teaching staff to be usually less effective than interventions carried out by researchers. Based on our results, we argue that this might be due to ignoring possible underlying factors, such as the perceived engagement or disengagement of the teachers, that might better capture their impact. Thus, we argue that the potential of teachers as intervention facilitators should not be overlooked. Instead, more efforts should be placed on supporting the teachers and providing them with appropriate tools for carrying out prejudice-reduction programs in schools.

More research is required to gain a more in-depth understanding of which factors can contribute to the students' perception of the facilitator's engagement in vicarious contact interventions. Future research should also look more closely at how the students' perception of the facilitators' engagement could be reinforced to increase the effectiveness of teacher-led prejudice-reduction interventions. This knowledge would also have much-needed policy implications as it would increase the effectiveness of prejudice-reduction interventions and guide their implementation. Future research is also needed to explore other aspects or characteristics that might foster the facilitators' role in promoting the message of prejudice-reduction interventions. For example, students' identification with the facilitators could strengthen their influence in a similar way that the identification with the role models of the intergroup contact has shown to enhance the effects of vicarious contact (Liebkind et al., 2014; Vezzali, Stathi, Giovannini, Gapozza, & Trifiletti, 2015).

Future research should also try to overcome the shortcomings of our study. Firstly, the samples used in our study were not ideal for cross-cultural comparisons, especially regarding the age differences between the participants. Further cross-cultural comparisons would be much needed to disentangle the effects of context on the effectiveness of prejudice-reduction interventions (Pettigrew, 2017). Secondly, the use of a one-item measure to assess intergroup attitudes is suboptimal. Furthermore, it could be said that the intervention's relatively short duration might not have been optimal for obtaining strong and enduring changes in attitudes. However, unlike one-session interventions, our intervention included altogether four sessions, 45 minutes each (cf., Ülger et al., 2018). Nevertheless, we still succeeded in finding effects even two weeks after the intervention and after controlling for age, the frequency of direct contact, and number of outgroup friends, which speaks for the robustness of our findings. Overall, the limitations of our study design are rather typical challenges when conducting

interventions in real-life settings such as schools, where all classes are not open for researchers, and the intervention needs to fit into schools' everyday program.

To conclude, our results highlight the role of perceived engagement of the intervention facilitator. As noted above, this could indicate the importance of institutional support in intervention strategies derived from the contact hypothesis. As Paluck and colleagues (2019) state, investigating the preconditions of the contact hypothesis is not only a matter of theoretical importance but also an urgent policy question. For research on intergroup contact to reliably guide policy, it is vital to understand and identify factors that can add to the effectiveness of prejudice-reduction interventions. This study calls for the need to focus more on the delivery of such interventions and the facilitators' role in that process.

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VICARIOUS CONTACT INTERVENTION

Figure 1

Intergroup attitudes at T2 by country by low versus high perceived engagement of intervention facilitator

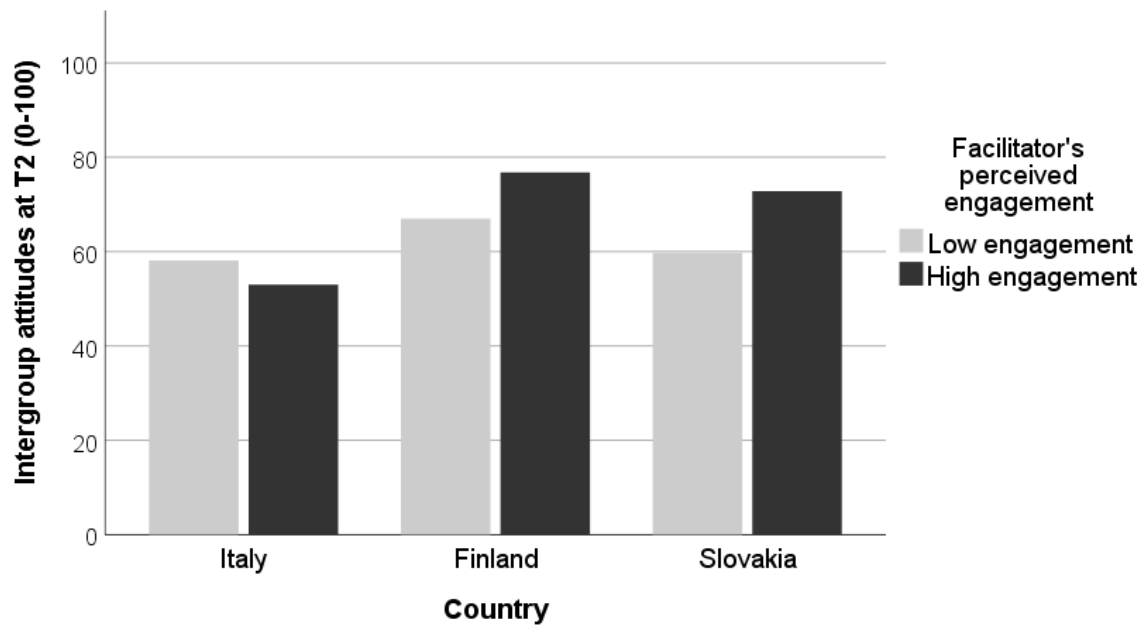


Table 1. Means and standard deviations for the baseline assessment of intergroup attitudes, number of outgroup friends and frequency of direct contact.

Measure (scale)	Finland		Italy		Slovakia	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Intergroup attitudes (0-100)	74.15	21.77	56.33	23.36	64.91	22.82
Outgroup friends ^a (1-7)	3.66	1.72	4.23	1.38	2.98	1.65
Frequency of direct contact (1-5)	3.76	1.00	3.18	.97	2.72	1.09

^aThe values do not refer to the actual number of outgroup friends

Table 2. The result of 2 (time) x 2 (condition) mixed design ANOVAs.

Dependent measure per condition	Finland					Italy					Slovakia				
	<i>N</i>	T1	T2	time x group	ES	<i>N</i>	T1	T2	time x group	ES	<i>N</i>	T1	T2	time x group	ES
		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	Partial η^2		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	Partial η^2		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i>	Partial η^2
Intergroup attitudes (0-100)				.37	.001				3.62	.035				.91	.004
<i>Control</i>	177	74.86 (22.29)	75.08 (21.98)			61	52.95 (25.39)	51.31 (28.49)			100	64.60 (21.85)	65.10 (19.92)		
<i>Experimental</i>	175	73.20 (21.28)	72.17 (22.18)			41	61.95 (17.21)	52.93 (19.52)			116	65.17 (23.72)	67.84 (22.33)		