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Socialisation and ethnic majorities' attitudes towards ethnic minorities: a systematic review and meta-analysis of correlational evidence

Jan-Willem Simons[a], Eva Jaspers[a] and Frank van Tubergen[a,b]

[a]Department of Sociology, Utrecht University, Utrecht, The Netherlands; [b]Netherlands Interdisciplinary Demographic Institute (NIDI), Royal Netherlands Academy of Arts and Sciences (KNAW)/University of Groningen, The Hague, The Netherlands

ABSTRACT

Negative attitudes of ethnic majorities towards ethnic minorities constitute a crucial obstacle to achieving social cohesion in ethnically diverse societies. There remains a paucity in the empirical state-of-the-art of socialisation theory on whether and how different aspects of socialisation are associated with ethnic majority outgroup attitudes. This systematic review and meta-analysis addresses this gap by examining how different sources of socialisation (parents, peers, teachers, and the ethnic ingroup) and the content, type and format of the norms they transmit are associated with ethnic majority attitudes towards ethnic minorities. The analysis synthesizes 298 correlations from 75 studies published between 2010 and 2022, representing 46,034 respondents. Our findings reveal that associations between peer norms and attitudes are stronger than those with norms from parents, teachers, or the ethnic ingroup. Regarding content, intergroup contact norms show stronger associations with attitudes than intergroup attitude or inclusivity norms. Regarding type, norms containing both injunctive and descriptive elements exhibit stronger associations than those containing only one. Regarding format, perceived norms show stronger associations than actual norms. We conclude with a conceptual and methodological assessment of the research field, highlighting avenues for future study and advocating for reintroducing socialisation theory into the sociological study of interethnic relations.

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Introduction

As western countries continue to evolve into more ethnically diverse communities, the issue of fostering peaceful coexistence among various ethnic groups has gained considerable significance (Drouhot and Nee 2019). A crucial obstacle to achieving social cohesion in ethnically diverse societies lies in the presence of negative attitudes held by ethnic

CONTACT Jan-Willem Simons j.g.simons@uu.nl
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majority members towards ethnic minority groups (Drouhot and Nee 2019). Research indicates that negative intergroup attitudes and ethnic/racial stereotypes have profound negative implications for members of ethnic minority groups, ranging from discrimination in the labour market (Zschirnt and Ruedin 2016) to patterns of segregation (Quillian 2002), hate crimes (Farrell and Lockwood 2023), and ethnic profiling (Hehman, Flake, and Calanchini 2018).

Much research has been conducted into the factors that determine the attitudes of ethnic majorities towards ethnic minorities[1] (Pettigrew and Tropp 2006; Pottie-Sherman and Wilkes 2017). One prominent line of research has concentrated on the *socialisation theory*, which posits that ethnic majority attitudes are shaped by social influence processes (Grusec and Hastings 2015), through which ethnic majority members acquire norms from their parents, peers, and other socialising agents. In line with theoretical expectations, meta-analyses show that, among ethnic majority populations, children's interethnic attitudes are associated with those of their parents (Crocetti et al. 2021; Degner and Dalege 2013). However, beyond these existing meta-analyses, there remains a paucity of the empirical state-of-the-art of socialisation theory on whether and how different aspects of socialisation are associated with ethnic majority outgroup attitudes.

This paper aims to address this critical gap in the literature. Firstly, we ask: What is the association between the norms of different socialising agents – parents, peers, teachers, and the ethnic ingroup – with the interethnic attitudes of majority group members? While prior meta-analyses have synthesised correlational evidence concerning the influence of parents (Crocetti et al. 2021; Degner and Dalege 2013), the magnitude of associations for other important socialising agents and how these compare to those of parents have not been investigated. In this meta-analysis, we consider the role of three additional agents – peers, teachers, and the ethnic ingroup – which we find are most frequently studied in the literature alongside parents.

Secondly, we investigate whether the associations between the norms of these socialising agents and ethnic majority attitudes are contingent upon characteristics of the transmitted norm. In the socialisation literature, scholars have examined norms with diverse content, which we identify as encompassing *intergroup contact*, *intergroup attitude*, and *inclusivity* norms. Intergroup contact norms shape attitudes by either encouraging or discouraging interethnic engagement; for example, ethnic majority school peers may disapprove of friendships with ethnic minority classmates. Intergroup attitude norms signal whether holding and expressing positive or negative attitudes towards ethnic minorities is socially acceptable or desirable; for instance, a parent might express a liking or disliking for ethnic minorities to their child. Finally, inclusivity norms influence attitudes by promoting the societal inclusion or exclusion of ethnic minorities in the most general sense; for example, a teacher might emphasize that equality and respect for people from all cultures are important.

Scholars have furthermore examined norms based on their type, including *descriptive* (revealing general attitudinal tendencies within a group) and *injunctive* norms (prescribing attitudes individuals are expected to conform to). They have further distinguished norms by format, differentiating between *perceived* norms (how individuals interpret norms) and *actual* norms (measured directly from the socialising agent). Despite the breadth of research into these various aspects of norm features, meta-analyses have yet to examine whether and how these different aspects of norms are associated with ethnic majority attitudes towards ethnic minorities, e.g. whether intergroup attitude

and inclusivity norms are both reliably associated with ethnic majority attitudes and differ in the magnitude of their associations.

To address these aims, we undertake a meta-analysis, systematically examining the (relative) associations between different socialising agents and norm features with the interethnic attitudes of ethnic majorities. Given the growing interest in socialisation as a key mechanism of social reproduction in recent years (Guhin, Calarco, and Miller-Idriss 2021), our study seeks to capture the current state of the field by analysing peer-reviewed literature published between 2010 and 2022. No restrictions are placed on the population studied or the academic discipline. We develop and apply a novel, three-step methodology to retrieve the available literature. In the first step, we develop and execute an iterative search strategy that extends conventional search methods. In the second step, we execute a scoping review to filter and map the results from the search. In the third step, based on the result of the scoping review, we develop inclusion criteria, which we then apply in a systematic review to identify the available evidence. By executing the review in this way, we acknowledge and account for the heterogeneity inherent to much of the socialisation literature. Our meta-analysis encompasses 298 correlations from 75 studies, representing 46,034 respondents, which we analyse using three-level random effects meta-analyses. Additionally, we examine publication bias, conduct subgroup analyses to determine whether differences in effect sizes depend on the field of study, the use of convenience versus representative samples, and whether attitudes or behaviours are the outcome of interest. We also provide a comprehensive assessment of the quality of methodological evidence in the research field.

Theory

The socialisation theory posits that people's interethnic attitudes are shaped by social influence processes. Agents, such as parents, peers or teachers, transmit normative information that influences an individual's attitudes towards ethnic minorities, i.e. the more positive (negative) the normative cues on attitudes that the agent transmits, the more positive (negative) the attitudes of the individual (Grusec and Hastings 2015). Empirical studies have extensively shown conformity to norms transmitted by parents (e.g. Miklikowska 2017; Pehar, Čorkalo Biruški, and Pavin Ivanec 2020), peers (e.g. Miklikowska, Bohman, and Titzmann 2019; Turner et al. 2013), teachers (e.g. Bergamaschi et al. 2022; Tropp et al. 2016), and the ethnic majority ingroup (e.g. Boss, Buliga, and MacInnis 2023; Górska et al. 2022). This positive effect has been shown for norms with a different content, i.e. interethnic contact norms that promote positive engagement with ethnic minority members (e.g. De Tezanos-Pinto, Bratt, and Brown 2010; McKeown and Taylor 2018), intergroup attitude norms which promote positive outgroup attitudes as desirable or acceptable traits (e.g. Gniewosz and Noack 2015; Miklikowska 2017), and inclusivity norms which promote the inclusion of minorities in society in a broad sense (e.g. Mesman et al. 2022; Thijs, Gharaei, and de Vroome 2016). Research has also looked at two distinct types of norms, i.e. descriptive norms, that capture the general pattern of attitudes and behaviour towards ethnic minorities in a population (e.g. Badea et al. 2021; Lam et al. 2021) and injunctive norms that prescribe how people ought to feel or behave (e.g. Jargon and Thijs 2021; Lowinger, Sheng, and Hyun 2018).

For each of these different socialising agents and norm contents and types, social learning (Bandura 1977) is typically considered as the mechanism through which an individual acquires normative information on intergroup attitudes. The theory posits that agents in the ethnic majority group serve as models of normative attitudes towards ethnic minorities, which they transmit through their behaviours, i.e. verbal descriptions and physical demonstrations, and are learned by the individual by way of direct and observational social learning (Bandura 1977). Social learning theory more specifically states that, for learning to occur, an individual needs to attend to the agents' behaviour, retain what is observed in memory, and be able to reproduce it. The degree to which each of these subprocesses is activated, and the extent to which successful social learning occurs, are subsequently contingent on the individuals' *potential* and *motivation* for learning.

An individual's potential for social learning depends on the extent to which an agent can capture their attention and facilitate the attention, retainment, and reproduction subprocesses (Bandura 1977). While the potential for social learning is a necessary condition for learning to occur, it is not a sufficient one (e.g. Pettigrew and Tropp 2008). Instead, the motivation for learning crucially determines whether and to which normative cues the individual chooses to conform.

In the case of descriptive norms, the motivation for learning depends on the norms' perceived *adaptivity* (Cialdini, Kallgren, and Reno 1991), or the extent to which the norm reduces social uncertainty and enables the individual to more accurately interpret and navigate a particular social environment. Obtaining accurate information about social life is a key human motivation and is typically taken as the reason why individuals follow descriptive norms (Cialdini 2007). In the case of injunctive norms, social control theory (Durkheim 1951) argues that the individual is motivated to conform to such norms because of the expected *benefit* of approval from the individual agent and the expected social *costs* that they perceive they would incur if they were to not conform (Allport 1954).

The individuals' potential and motivation for social learning are moderated by the agent's characteristics and the content and type of norm that is transmitted (Bandura 1977). More specifically, the individuals' potential for social learning depends on the base level of exposure to the agent's behaviour, the agent's capacity and desire to influence what normative information the individual attends to, retains, and reproduces, and the complexity of the transmitted information, i.e. of the norms' content. The individuals' motivation for learning in terms of the extent to which the adaptivity and social approval motivations are activated depends in turn on the degree to which they identify with the agent, which is determined by such factors as perceived similarity, interpersonal attraction, and the agent's perceived status. It secondly depends on the perceived relevance of the content of the norm in terms of its perceived adaptivity or the perceived social approval that the individual expects upon learning and expressing it. The degree to which the social cost motivation is activated depends on the perceived capacity on the part of the agent to levy social sanctions of a particular severity against the individual and the agent's ability to monitor potential norm transgressions (Durkheim 1951). It additionally depends on the relevance of the norm, i.e. the more the norm is perceived as relevant by the individual, the higher the expected cost for violating it and the higher the expected level of social monitoring. An individual's likelihood to conform

to the norm of a socialising agent thus depends on the extent to which they are exposed to the agent, how important the relationship with the agent is to the individual, and how clear and relevant the norm is that an agent is transmitting.

On the basis of this theoretical framework, we theorise that, ceteris paribus, parents and peers constitute the most important socialising influences, followed by teachers. Specifically, parents serve as important agents of socialisation because, in terms of learning potential, they maintain long-lasting relationships with individuals in which they have both a high capacity and a strong desire to influence the individual's normative socialisation. In terms of motivation for learning, parents are highly identifiable role models, especially during childhood, where they fulfil the adaptivity motivation while also possessing considerable capacity for social sanctioning and monitoring. We expect that peers are similarly important, though somewhat less so in terms of learning potential compared to parents, as exposure to peers increases gradually from childhood onward. However, in terms of motivation, peers are important because individuals self-select into peer relationships, which increases homophily. This self-selection fosters strong identification with peers, a heightened desire for adaptivity, social approval, and greater perceived costs of non-conformity. We anticipate that the influence of teachers is less important than those of either parents or peers, due to comparatively lower levels of opportunities and motivations for social learning. Empirical evidence supports such an ordering of the relative importance of agents (McKeown and Taylor 2018; Miklikowska 2017; Miklikowska, Bohman, and Titzmann 2019; Pehar, Čorkalo Biruški, and Pavin Ivanec 2020; Tropp et al. 2016). Therefore, we hypothesize:

H1: The strength of the association between transmitted norms and ethnic majority attitudes towards ethnic minorities is largest for parents and peers, followed by teachers.

We secondly expect that intergroup contact and intergroup attitude norms will, ceteris paribus, exert a stronger influence on an individual's outgroup attitudes than inclusivity norms. As noted earlier, social learning is less likely when the content of the norm is more complex and more likely when it is more relevant and immediately applicable (Bandura 1977). Inclusivity norms are generally more complex because they refer to a broad set of abstract values. In contrast, norms that de(pre-)(pro-)scribe normative attitudes in terms of contact or affect are typically more easily attended to, retained, and reproduced. Recent comparative empirical work found intergroup contact norms in schools to be positively associated with outgroup prosocial behaviours, but the same association was not observed for the inclusivity climate (Pavin Ivanec, Čorkalo Biruški, and Pehar 2023). On that basis, we formulate the following hypothesis:

H2: The strength of the association between transmitted norms and ethnic majority attitudes towards ethnic minorities is largest for intergroup contact and intergroup attitude norms, followed by inclusivity norms.

We thirdly hypothesize that the strength of the association between transmitted norms and ethnic majority attitudes towards ethnic minorities is strongest for mixed norms that contain both descriptive and injunctive elements, followed by injunctive, and descriptive norms, respectively. Injunctive norms have been argued to be more potent than descriptive norms because they influence motivation for learning across various contexts, whereas descriptive norms influence it only in the immediate context (Cialdini

et al. 2006). Learning is furthermore most likely if the individual believes that the behaviour is both common, and approved or sanctioned by others, i.e. if the norm consists of descriptive and injunctive norms which align. On that basis, we formulate the following hypothesis:

> *H3: The strength of the association between transmitted norms and ethnic majority attitudes towards ethnic minorities is greatest for mixed norms that contain both descriptive and injunctive elements, followed by injunctive norms and then descriptive norms.*

We finally hypothesize that the association between perceived norms and ethnic majority attitudes will be stronger than that of actual norms. The social norms approach argues that individuals may misperceive the normative cues that agents transmit, leading them to wrongfully infer which attitudes are more prevalent in the ethnic majority, which will result in them being more likely to adopt and express such misperceived attitudes themselves (Berkowitz 2005). We argue that it is critical to examine this issue because it may help explain variation in social influence. Studies that rely on an individual's report of the norms of relevant agents, may find larger effect sizes, even when the actual attitudes of the socialising agents are misperceived:

> *H4: The association between perceived norms and ethnic majority attitudes towards ethnic minorities is stronger than the association with actual norms.*

Method

Literature search

The literature search consisted of two steps.[2] In the first step, we identified a set of 'naïve' keywords extracted from six seed articles selected by the second author. These seed articles each examined the influence of socialisation on ethnic majority attitudes towards ethnic minorities and were taken as articles that would ideally be included in a systematic review. From each seed article, we extracted all listed keywords. We additionally used an adapted version of the Rapid Automatic Keyword Extraction (RAKE) algorithm to extract all keywords that occurred at least once in the titles or abstracts (Grames et al. 2019). The resulting keywords were screened for relevance by the corresponding author and classified as a predictor or outcome. They were then related to each other in a search query as: (socialisation_1 OR … OR socialisation_n) AND (attitudes_1 OR … OR attitudes_n). In this first step, we searched for exact phrases only. Appendix A in the online supplement provides an overview of the 'naïve' search query.

This search query was entered into four databases, each conforming to a set of quality requirements (Gusenbauer and Haddaway 2020). These databases were, with the specific database that was searched in parentheses: OVID (PsycINFO), ProQuest (Sociological Abstracts), Scopus (Full index), and Web of Science (Web of Science Core Collection). This search was conducted on the 12th of August 2022, resulting in 13,305 candidate articles. We subsequently inspected whether all seed articles were retrieved in the search, which they were, except for one which was published outside the inclusion time frame. We then assessed the degree to which a snowball sample of 39 articles with the seed articles as its input could be retrieved as an external validity assessment.

This sample was obtained by entering the title of each seed article in the search box of the 'connectedpapers.com' website and selecting all articles that were suggested in the resulting network and the 'Derivative works' tab that were published within the 2010–2022 period. 34 of the 39 articles, or 87.18%, were retrieved at this stage.

In the second step of the search strategy, we iterated on the first 'naïve' search. By doing so, we expected to identify keywords that provided a more general description of the literature we wanted to retrieve. By again checking the degree to which the external article set was retrieved, we could estimate the degree to which this was the case. Keywords were now extracted from the 13,305 candidate articles by calculating a ranking based on the occurrence and co-occurrence of keywords in a keyword occurrence network (KCN). Relevant keywords were manually selected from this ranking, classified as a predictor or an outcome, related to each other in a search string, and entered into each of the four databases. Appendix A in the online supplement provides an overview of the resulting search queries. The first iteration for this search was conducted on the 24th of August 2022 in Ovid, Scopus, and Web of Science and on the 25th of August 2022 in ProQuest.

The search resulted in 31,290 candidate documents. 37 of the 39 articles in the snowball sample, or 94.87%, were retrieved. Due to the large number of candidate documents and the fact that almost all articles from the snowball sample were retrieved, the search was terminated. Please refer to the identification tab of the PRISMA diagram (Figure 1) for an overview of how the 31,290 candidate documents were obtained. A replication package of the literature search is available on OSF (https://osf.io/hcdkf/).

Scoping review

We subsequently executed a scoping review across the results of the literature search. A scoping review is used to provide researchers with an indication of the volume and focus of a literature (Munn et al. 2018). We provide more detailed reasoning for executing a scoping review as a precursor to a systematic review in the replication package on OSF. The corresponding author, a student assistant, and the second author executed the scoping review in ASReview (Van De Schoot et al. 2021). We supplied the seed articles as training data. We used the default ASReview specification throughout. The reviewers screened titles, abstracts, and, when in doubt, the full text. The stopping criterion of the corresponding author was to review a minimum of 20% of the total article set combined with a minimum of 100 consecutive exclusions. Stopping past 10% of the total reviewed was also permissible if the number of consecutive exclusions was equal to at least 250. The stopping criterion of the student assistant was time-based, reviewing for a total of 40 hours. The second author reviewed until 100 consecutive inclusions.

With respect to inclusion criteria, broad definitions were provided for the socialisation and ethnic majority to ethnic minority attitude concepts. The inclusion criteria further specified that the article should be published in English in a peer-reviewed journal in the 2010–2022 period and report an empirical estimate of the relationship of interest. Please refer to Appendix B in the online supplement for the specific instruction set that was used. Articles were excluded if they were a systematic review, special issue, book chapter, a theoretical or qualitative article, or a dissertation. We note that

we excluded articles from special issues due to practical constraints, though we acknowledge this may have limited the representativeness of the retrieved literature, as such studies can present novel findings. We also excluded corrigenda and duplicates. The 'Irrelevant outcome(s) and/or determinant(s)' exclusion was used when the article was not relevant. Note that these exclusion categories were not mutually exclusive but that only one was assigned when multiple applied.

We assessed the level of agreement between reviewers during the scoping review using percent agreement, which averaged 81.40%. Based on interrater reliability guidelines, this level of agreement is generally considered acceptable (Stemler 2004). As a second external validity check, we inspected the degree to which articles from relevant systematic reviews (Crocetti et al. 2021; Degner and Dalege 2013; Hsieh, Faulkner, and Wickes 2022; Ülger et al. 2018; Windisch et al. 2022) were retrieved. 43 of 61 articles, or 70.49%, were retrieved. To be as conservative as possible, we constructed the systematic review corpus by combining articles over which there was both agreement and disagreement among reviewers about their inclusion. Additionally, we included 20 more articles: 2 from the snowball sample and 18 from the relevant systematic reviews that had not been retrieved during the two respective external validity checks. The deduplicated result consisted of a final total of 494 articles. Please refer to the upper part of the screening tab of the PRISMA diagram (Figure 1) for an overview of exclusions. A record of the decision process and the scoping review results are available on OSF.

Systematic review

Seven graduate students manually reviewed the articles in the systematic review corpus. An instruction set was formulated based on the results of the scoping review (see Appendix C). Interrater reliability was low and insufficient for both the dependent attitudes ($\alpha = 0.393$) and independent socialisation variables ($\alpha = 0.318$) (Krippendorff 2019). The low interrater reliability indicates that the student assistants did not always agree on their inclusion and exclusion decisions, likely because the systematic review instructions were too broad to be applied consistently. Specifically, we found that it was necessary to incrementally refine our theoretical framework during the systematic review, as it was initially unclear which aspects of the socialisation process could be systematically included in a meta-analysis. We therefore reevaluated the work of the student assistants after they completed it, systematically applying the refined theoretical framework to ensure all relevant evidence was captured.

Of the 494 candidate articles, 223 were included at this stage. We note that, of the 20 articles not retrieved during the two external validity checks, almost all of the 18 identified in other systematic reviews were irrelevant to our review query ($n = 17$). This was primarily because they focused on media interventions, did not examine ethnic majority attitudes, or addressed outgroups other than ethnic ones. However, one article from the systematic reviews and two articles from the snowball sample were relevant ($n = 3$), indicating the potential presence of some bias in the literature retrieved during the search. Please refer to the bottom part of the screening tab of the PRISMA diagram (Figure 1) for an overview of the exclusion decisions made by the student assistants and the corresponding author in this

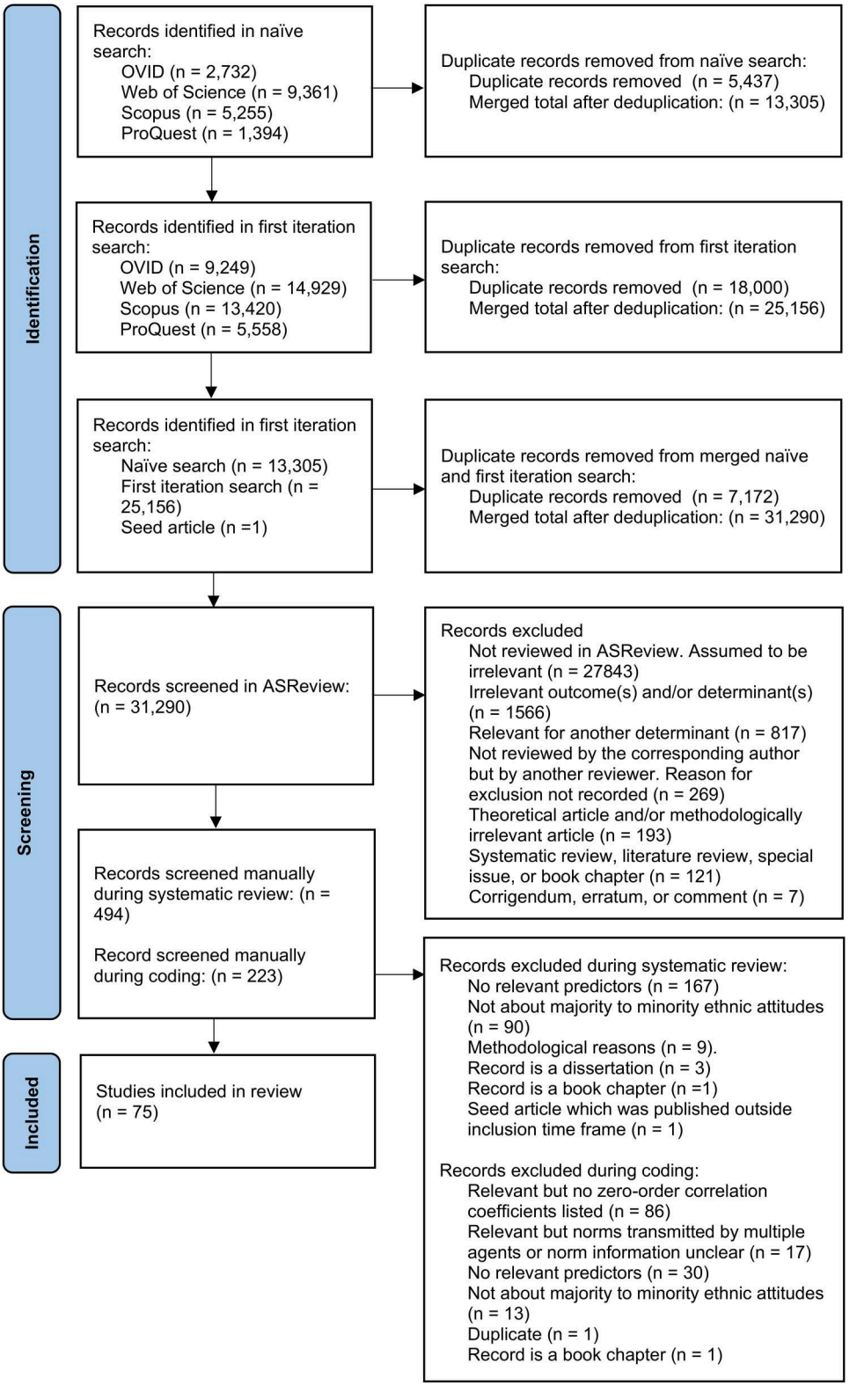

Figure 1. PRISMA flow diagram.

phase. A record of the decision process and the results from the systematic review are available on OSF.

Data extraction

We continued by coding information on the 223 studies identified during the systematic reviewing. During this phase, a further 148 articles were excluded. Please refer to the bottom part of the screening tab of the PRISMA diagram (Figure 1) for an overview of the exclusion decisions.

We note that 86 articles were excluded because they did not list zero-order correlation coefficients. The 75 articles identified as relevant during the coding phase and for which all information for inclusion in a meta-analysis could be retrieved were subsequently hand-coded and double-checked with a codebook. This resulted in 298 zero-order correlation coefficients retrieved from 75 articles across 78 unique datasets and 46,034 unique respondents. We provide a reference list of these studies in online Appendix D. A descriptive overview of all coded variables is available in online Appendix F. Additionally, an Excel file containing all retrieved information along with the codebook that was used is available on OSF.

Independent variables

Agents

We identified and recorded information on four types of agents: parents, peers, teachers, and the ethnic ingroup. Agents were assigned to the 'parent' category when referred to as a parent, mother, or father. Agents were assigned to the 'peer' category when they were defined as individuals similar in age or social status to the respondent (e.g. older siblings, friends, classmates, and work colleagues). All agents in schools other than peers (e.g. teachers and principals) were assigned to the 'teacher' category. If studies referred to the agent as the school or classroom, we tried to identify which agents the study referred to exactly. If peers were emphasized, the agent was set to the 'peer' category. If agents in schools other than peers were emphasized, the agent was assigned to the 'teacher' category. Effect sizes were excluded if it was unclear to which agents in schools it referred to exactly. The agent was recorded as the 'ethnic ingroup' when respondents were asked about their ethnic ingroup (e.g. White Americans). We finally excluded effect sizes when the agent referred to multiple actors simultaneously (e.g. family and friends).

Norm content

We identified and recorded information on three classes of norm content: intergroup contact, intergroup attitude, and inclusivity norms. Measurement items in each article were checked to examine the content of the social norm. Norm content was assigned to the 'intergroup contact' class when it de-, pre- or proscribed contact with the ethnic minority group. It was assigned to the 'intergroup attitude' class when it de-, pre-, or proscribed positive or negative attitudes towards the ethnic minority group (e.g. affect, xenophobia, prejudice). It was finally assigned to the 'inclusivity' category if it de-, pre-, or proscribed (non-)inclusive attitudes towards the ethnic minority group based on respective ethnic group membership (e.g. multiculturalism, assimilation, colourblindness). If the

content of the social norm was measured exclusively for one of the three content classes, we assigned it to that class. If it was not, we used a simple majority rule to assign it instead. If only example items were provided, we based our decisions on that information. If no measurement items were provided, the effect size was excluded. Table 1 in online Appendix E provides classification examples for each content class.

Norm type

Measurement items in each article were checked to examine whether the norm contained descriptive, injunctive, or both descriptive and injunctive elements. If the norm was measured as being either wholly descriptive or injunctive, it was assigned to the 'descriptive and 'injunctive' norm types, respectively. It was assigned to a category 'mixed' if it contained both. If only example items were provided, we based our decisions on that information. If no measurement items were provided, the effect size was excluded. Table 2 in online Appendix E provides classification examples for each norm type.

Norm format

Measurement items in each article were checked to examine whether the norm was perceived by the individual respondent or reported by the agent. If the individual was asked about their perception of the norm held by the agent, it was coded as 'perceived'. If the agent self-reported their value on the norm or the researcher observed it, it was assigned to a category 'actual' instead.

Study characteristics

Field of study

For each article, we recorded information on the field of study based on the subject category of the academic journal in which it was published from Journal Citation Reports. If multiple categories were reported, we selected the category with the highest impact factor. Because most studies were published in psychology outlets, we use a dichotomised version of this variable which indicates whether a study was published in a psychology outlet or not. An overview of the original variable, which lists all subject categories, is available in Table 3 in online Appendix F.

Study quality

For each effect size, we coded information on three measures of study quality: (a) *sample size*, (b) *study design*, specifically whether it was retrieved from a study with a cross-sectional or longitudinal design, and (c) *sample type*, in terms of whether the sample was listed as being representative of the target population (representative sample) or not (convenience sample).

Outcome type

This is a dummy variable which indicates whether effect sizes were calculated with respect to (a) *attitudes* as the outcome, which included measures of emotional (e.g. liking) or cognitive evaluations (e.g. stereotypes) of ethnic minorities or (b) *behaviours*, which included measures of intentions, such as the intention to participate in collective action supporting ethnic minorities, and behaviours, such as the number of ethnic

minority friends. We included intentions and behaviours alongside attitudes for two reasons. First, attitudes and behaviours are often correlated, with behaviours revealing preferences about ethnic minorities (Paluck et al. 2021). Second, a key challenge in ethnic prejudice research is understanding how key factors such has socialisation differentially affect negative attitudes and behaviours towards ethnic minorities (Paluck et al. 2021).

Effect sizes

We opted for zero-order correlation coefficients (ZOCCs) as our effect size of interest, because this is the most commonly reported measure of association that is reported in observational studies. ZOCCs were recorded when estimated with respect to a sample that consisted of at least 50% ethnic majority members. For longitudinal studies, we retrieved effect sizes within (e.g. from T1 to T1) but not between (e.g. from T1 to T2) waves. We, therefore, treat such estimates as cross-sectional estimates of the relationship of interest. In doing so, we assume that agents influence individuals within the same point, which we estimate to be reasonable as long as such influence can be assumed to have been active for some time prior. ZOCCs were calculated as (Borenstein 2009): $r = \rho$, with variance: $v_r = \frac{(1 - r^2)^2}{n - 1}$. To calculate ZOCCs we thus recorded information on the reported Pearson correlation coefficient and sample size. ZOCCs were reversed when necessary such that positive (negative) normative cues transmitted by the agent correlated positively with the individuals' positive (negative) attitudes towards ethnic minorities. ZOCCs were transformed to Fisher's z (Fisher 1921) for the analyses and back-transformed for interpretation of the results. Pearson correlation coefficients of |0.10|, |0.30|, and |0.50| denote small, medium, and large effect sizes, respectively (Cohen 2013).

Analytical strategy

Our analytical strategy consists of four steps. We start by interpreting descriptives of independent variables and study characteristics. We secondly inspect potential publication bias with a multilevel Egger's regression test for funnel plot asymmetry (Egger et al. 1997). We note that Egger's regression test is only meaningful when it refers to an effect size that can be interpreted as an estimate of a true effect size in the population (Hak, van Rhee, and Suurmond 2018). We try to approximate such populations by executing the Egger's test for combinations of our four independent variables for which more than ten studies are available (Sterne et al. 2011).

We thirdly fit three-level random effects models to the levels of each independent variable using the rma.mv function in the metafor package in R (Viechtbauer 2010). Because multiple effect sizes were retrieved from single studies, we estimate three-level meta-analytic models to account for a different variance component at each level of the model: sampling variance of effect sizes at level one, variance between effect sizes from the same study at level two, and variance between studies at level three (Assink and Wibbelink 2016). We use the multi-level version of the I^2 index to estimate the relative share of heterogeneity at each level. We furthermore report and interpret 95% prediction intervals (IntHout et al. 2016), that estimate the range within which the true effects of 95% of similar future studies are expected to fall. When there is no between-study heterogeneity,

the prediction interval aligns with the corresponding confidence interval (CI). Given significant heterogeneity, the prediction interval is wider than the CI.

We subsequently execute subgroup analyses to examine the degree to which three study characteristics – field of study, sample type, and outcome type – can account for differences in observed effect sizes. We then estimate adjusted meta-analyses were we inspect estimated marginal mean (EMM) correlations with proportional weighting. Here, we adjust the estimate for the level of each independent variable for all other independent variables and those study characteristics which were found to explain a significant amount of effect size heterogeneity. In a fourth and final step, we use Wald-tests to examine whether estimates of zero-order correlations obtained from the unadjusted and adjusted analyses differ significantly between the levels of each independent variable. We use Knapp and Hartung's (2003) adjustment to calculate standard errors, *p*-values, and confidence intervals throughout (Assink and Wibbelink 2016).

Results

Descriptives

Table 1 presents the frequencies of independent variables and study characteristics. Note that the number of studies do not necessarily aggregate to the sum total when the information is on the level of the effect size. Most correlational studies in the socialisation literature examine the role of either peers (41.33%) or parents (36%), followed by teachers (25.33%) and representations of the ethnic ingroup (17.33%). Regarding the content of norms, the majority of studies focus on intergroup attitude norms (46.67%), followed by inclusivity (33.33%) and intergroup contact norms (28%). In terms of the type of norm studied, studies give roughly equal attention to descriptive (36%), injunctive (38.67%), and mixed (41.33%) norm types. Furthermore, most studies focus on perceived (64%) rather than actual norm formats (41.33%).

Turning to study characteristics, Table 1 shows a clear increase in the number of studies on the association between socialisation and ethnic majority outgroup attitudes over time, rising from 7 studies during the 2010–2012 period to 27 studies in the 2021–2022 period. This trend confirms a growing interest in this research question. The majority of correlational studies are furthermore published in psychology outlets (78.67%), with fewer appearing in other social science outlets (21.33%). With respect to study quality, Table 1 indicates that most studies use sample sizes in the 100–199 range (29.33%), followed by the 200–299 (13.33%), 300–499 (20%), and 500–999 (20%) ranges, with comparatively smaller percentages for the 24–99 (9.33%) and 1000–5683 (12%) ranges. Most studies adopt a cross-sectional design (70.67%) rather than a longitudinal one (30.67%), and primarily rely on convenience samples (91.89%) rather than representative samples (9.46%). Finally, most studies focus on attitudes (87.84%) as outcomes, while a smaller proportion also considers behaviours (41.89%).

Publication bias

Table 2 presents the coefficients and significance levels for a series of Egger's regression tests, performed for each independent variable combination for which effect sizes are available

Table 1. Frequency table of independent variables and study characteristics.

Independent variables	Categories	#N[a] = 75	#E[b] = 298
Agent	Parent	27	92
	Peer	31	100
	Teacher	19	58
	Ingroup	13	48
Norm content	Intergroup contact	21	105
	Intergroup attitude	35	121
	Inclusivity	25	72
Norm type	Descriptive	27	79
	Injunctive	29	99
	Mixed	31	120
Norm format	Perceived	48	192
	Actual	31	106
Study characteristics	**Categories**	**#N[a] = 75**	**#E[b] = 298**
Year of publication	2010–2012	7	(–)
	2013–2014	6	(–)
	2015–2016	10	(–)
	2017–2018	11	(–)
	2019–2020	14	(–)
	2021–2022	27	(–)
Field of study	Psychology	59	(–)
	Other	16	(–)
Sample size	24–99	7	25
	100–199	22	79
	200–299	10	42
	300–499	15	56
	500–999	15	59
	1000–5683	9	37
Study design	Cross-sectional	53	195
	Longitudinal	23	103
Sample type	Convenience	69	264
	Representative	7	34
Outcome type	Attitudes	66	213
	Behaviours	32	85

[a]Number of studies. Note that the number of studies do not necessarily aggregate to the sum total when the information is on the level of the effect size.
[b]Number of effect sizes.

from 10 or more studies (Sterne et al. 2011). The table also includes the number of effect sizes used in each test. The regression slopes indicate funnel plot asymmetry for four concept combinations: intergroup attitude norms transmitted by parents ($p < .01$), mixed norms which are perceived ($p < .05$), and mixed norms transmitted by either parents ($p < .01$) or peers ($p < .01$). Funnel plots for these combinations are provided in online Appendix G.

We therefore find evidence of systematic differences between effect sizes with high and low precision for these four combinations. For mixed norms transmitted by peers, and mixed norms which are perceived by the respondent, the positive slopes suggest the potential presence of publication bias. However, the slopes for the parent-related combinations are negative, indicating that while systematic differences between high- and low-precision effect sizes exist, they are unlikely due to publication bias. Instead, these differences may be attributable to other factors, such as variations in study design quality (Page et al. 2021).

Meta-analyses

Table 4 in online Appendix H presents unadjusted meta analyses of zero-order correlations across the levels of each independent variable. We find significant positive

Table 2. Multi-level Egger's regression test for all combinations of independent variables.

	Agent				Norm type			Norm format	
	Parent	Peer	Teacher	Ingroup	Descriptive	Injunctive	Mixed	Perceived	Actual
Norm content									
Intergroup contact	–	0.74 (50)	–	–	–	−3.02 (49)	–	1.26 (97)	–
Intergroup attitude	**−3.50** (55)**	1.37 (42)	–	–	−0.69 (42)	–	−1.09 (51)	0.29 (47)	−1.13 (74)
Inclusivity	–	–	0.90 (26)	–	0.67 (30)	0.06 (22)	–	0.53 (48)	–
Norm format									
Perceived	–	−0.13 (75)	–	−1.96 (48)	1.92 (53)	−1.76 (69)	**2.03* (70)**		
Actual	−1.77 (73)	–	–	–	0.52 (26)	–	−1.61 (50)		
Norm type									
Descriptive	–	–	–	–					
Injunctive	−0.51 (31)	−0.58 (40)	–	–					
Mixed	**−3.05** (37)**	**4.08** (40)**	–	–					

$^{***}p < .001$; $^{**}p < .01$; $^{*}p < .05$, two-sided. Significant tests printed in bold. Number of effect sizes in parentheses. A dash indicates that less than 10 studies were available for that particular combination.

associations for all agents and the different norm features with ethnic majority attitudes towards ethnic minorities, ranging from small to medium sizes. Measures of effect size heterogeneity in the table furthermore provide strong evidence of differences in effect sizes across all analyses.

Table 3 reports subgroup analyses aimed at explaining this effect size heterogeneity by regressing the observed effect sizes on the field of study, sample type, and outcome type study characteristics. The 'Unadjusted' row in Table 3 presents the pooled, unadjusted zero-order correlation estimates for each level of each independent variable, as also reported in online Appendix H Table 4. The analyses indicate that effect size heterogeneity does not depend on field of study or whether studies use convenience or representative samples. However, it does depend on outcome type. Specifically, effect sizes are significantly larger for attitudes compared to behaviours in the following cases: norms transmitted by parents ($p < .01$) and peers ($p < .05$), intergroup attitude ($p < .001$) and inclusivity norms ($p < .05$), descriptive norms ($p < .05$), and perceived ($p < .05$) and actual norms ($p < .001$).

Difference analyses

Figure 2 depicts the unadjusted and adjusted estimates, along with 95% confidence intervals, for the differences in zero-order correlations across category pairings for each independent variable. Please note that a comparison reflects the difference of the second variable relative to the first. For example, for the norm content variable, we examine the difference in the correlation of intergroup attitude norms relative to intergroup contact and inclusivity norms, and intergroup contact norms relative to inclusivity norms, respectively. Estimates of the difference for each category pairing for each independent variable, along with their associated 95% confidence intervals, are presented in Table 5 in online Appendix I.

In partial confirmation of our first hypothesis, the top-left panel in Figure 2 shows significantly stronger unadjusted and adjusted associations between norms transmitted by peers and the attitudes of ethnic majorities towards ethnic minorities than for norms transmitted by either parents or teachers. The figure additionally shows a significantly stronger adjusted association for norms transmitted by peers than for norms transmitted by the ethnic majority ingroup. It finally shows a stronger adjusted association for the association of transmission by the ethnic ingroup with ethnic majority attitudes compared to those of teachers. No significant differences are observed for norm transmission between any of the remaining agent pairs, meaning that our expectation that the association of parents would be stronger than those of teachers is not confirmed.

In partial confirmation of our second hypothesis, the top-right panel in Figure 2 shows significantly stronger unadjusted and adjusted associations between intergroup contact norms and ethnic majority out-group attitudes than for inclusivity norms. It additionally shows stronger unadjusted and adjusted associations for intergroup contact norms compared to intergroup attitude norms. However, no significant differences are observed between the respective unadjusted and adjusted associations of intergroup attitude and inclusivity norms. As such, our expectation that the association of intergroup attitude norms would be stronger than that of inclusivity norms is not confirmed.

Table 3. Subgroup analyses of ethnic majority attitudes towards ethnic minorities on agents, norm content, norm type, and norm format by field of study, sample type, and outcome type.

	Agent				Norm content			Norm type			Norm format	
	Parent Est.	Peer Est.	Teacher Est.	Ingroup Est.	Contact Est.	Attitude Est.	Inclusivity Est.	Descriptive Est.	Injunctive Est.	Mixed Est.	Perceived Est.	Actual Est.
Unadjusted	.19***	.32***	.18***	.25***	.30***	.21***	.17***	.18***	.23***	.26***	.26***	.18***
Field of study												
Psychology	.18***	.31***	.18***	.27***	.31***	.21***	.15***	.17***	.23***	.26***	.26***	.17***
Other	.21***	.34***	.17***	.18**	.26***	.26***	.20***	.22***	.25***	.27***	.24***	.22***
Sample type												
Convenience	.19***	.32***	.18***	.23***	.30***	.22***	.15***	.18***	.23***	.26***	.26***	.18***
Representative	.19**	.27	.08	.38***	(–)[a]	.20***	.29**	.16	.29*	.25***	.26**	.17**
Outcome type												
Behaviours	**.09**^{*B}	**.27**^{***C}	.18***	.19***	.29***	**.11**^{**A}	**.08**^{C}	**.12**^{**C}	.19***	.22***	**.22**^{***C}	**.05**^{A}
Attitudes	**.20**^{***B}	**.35**^{***C}	.17***	.28***	.31***	**.25**^{***A}	**.18**^{***C}	**.21**^{***C}	.25***	.27***	**.28**^{***C}	**.20**^{***A}

t-test sig. levels: ***$p < .001$; **$p < .01$; *$p < .05$, two-sided. Omnibus F-test sig. levels: $^{A}p < .001$; $^{B}p < .01$; $^{C}p < .05$, two-sided.
[a]Not estimated due to zero effect sizes.

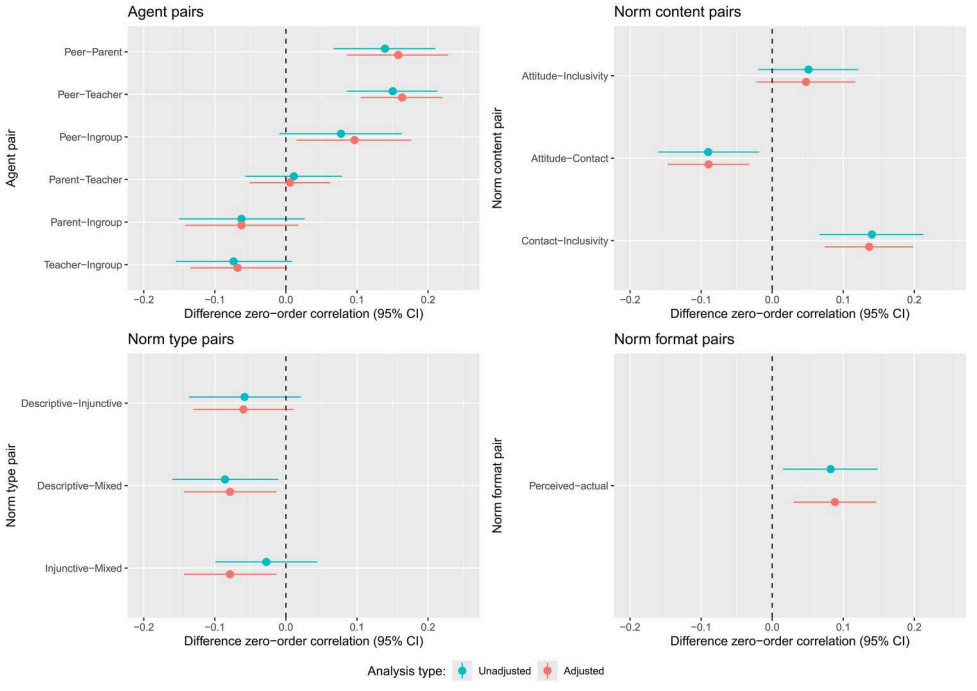

Figure 2. Wald tests of unadjusted and adjusted zero-order correlation differences of ethic majority attitudes towards ethnic minorities on agents, and norm content, norm type, and norm format.

The bottom-left panel in Figure 2 subsequently shows a significantly stronger unadjusted and adjusted association between mixed norms and ethnic majority outgroup attitudes compared to descriptive norms. It additionally shows a significantly stronger adjusted association for mixed norms relative to injunctive norms. These findings partially confirm our third hypothesis regarding the greater importance of mixed norms compared to injunctive and descriptive norms. However, no significant differences are observed between the associations of descriptive and injunctive norms, which is not in line with our hypothesis. The bottom-right panel of Figure 2 finally shows significantly stronger unadjusted and adjusted associations between the transmission of perceived norms and ethnic majority outgroup attitudes compared to actual norms, confirming our fourth hypothesis.

Conclusions & discussion

The objective of this systematic review with meta-analysis was to answer the following research question: What are the (relative) associations between the norms transmitted by different socialising agents (parents, peers, teacher, and the ethnic ingroup) and the content (intergroup attitude, intergroup contact, and inclusivity), type (descriptive, injunctive, or mixed) and format (perceived or actual) of these norms with ethnic majority attitudes towards ethnic minorities?

With respect to the marginal associations, we found significant positive associations for all independent variables, with small to medium effect sizes. These findings indicate

that norms transmitted by various agents (parents, peers, teachers, and the ethnic ingroup) and the norms' content (intergroup attitude, intergroup contact, and inclusivity), type (descriptive, injunctive, or mixed), and format (perceived or actual) correlates with improved ethnic majority attitudes towards ethnic minorities when norm content is positive, and with worsened attitudes when it is negative.

Our first hypothesis subsequently posited that norms transmitted by parents and peers would show significantly stronger associations with ethnic majority attitudes compared to those transmitted by teachers. This hypothesis was partially confirmed. Observed associations were stronger and more positive for peers as opposed to parents and teachers. They were not significantly different for parents as opposed to teachers, however. These findings suggest that norms that are transmitted by peers are easier and/or more desirable to conform to. Individuals may also possess a higher desire for social approval and fear more social costs from their peers.

Our second hypothesis expected the association of intergroup contact and intergroup attitude norms with ethnic majority attitudes to be stronger than that of inclusivity norms. This hypothesis also found partial confirmation. We found stronger positive associations for intergroup contact norms compared to intergroup attitude and inclusivity norms. However, we did not find stronger associations for intergroup attitude compared to inclusivity norms. This finding suggests that conforming to inclusivity and intergroup attitude norms is more complex and less relevant for reducing social uncertainty than intergroup contact norms.

We thirdly expected stronger associations for mixed norms compared to injunctive and descriptive norms, as well as for injunctive norms compared to descriptive norms. We found significantly stronger positive associations for mixed as opposed to descriptive and injunctive norms. This finding suggests that individuals are more likely to conform to normative cues when these consist of both descriptive and injunctive elements as opposed to just descriptive or injunctive elements. Our expectation was not confirmed for the injunctive and descriptive norm comparison.

Finally, we hypothesised stronger associations for perceived norms compared to actual norms. This hypothesis was confirmed. We found the association of norms that were perceived by the respondent to be significantly stronger and more positive than that of actual norms that were transmitted by socialising agents. This finding implies that individuals might indeed misperceive the normative cues that are transmitted to them, which would theoretically result in a stronger positive, but potentially false, social influence on their ethnic majority outgroup attitudes.

An additional important finding of this meta-analysis is the identification of significant effect size heterogeneity for each independent variable. Specifically, we showed that whether attitudes or behaviours were the outcome of interest was a significant determinant of this effect size heterogeneity for many independent variables, with effect sizes being larger for attitudes as opposed to behaviours. We furthermore provided a description of the literature under review and found that it was mostly situated within the field of (social) psychology, with relatively small sample sizes that are generally not representative of the population under study.

To conclude, this review has documented (differential) associations for various aspects of the socialisation process and ethnic majority attitudes towards ethnic minorities, pointing to the potential importance of this theoretical mechanism for explaining

variation in ethnic majority member's attitudes towards ethnic minorities. Future research can benefit from incorporating these distinctions into theory and measurement, specifically by accounting for the various facets of this process within their study context, such as the type of socialising agent and the characteristics of the transmitted norm under consideration. We have additionally established the existence of significant effect size heterogeneity. Further investigation of the factors that can account for this variability, along with their subsequent incorporation into theory and measurement, represents an important additional avenue for future research. Here, we expressly point to the importance of distinguishing between attitudes and behaviours, a finding which implies that social influence processes might be able to affect attitudes than behaviours more successfully. Future research should consider how and why these differences arise.

This review has several limitations. A first limitation is the exclusion of many relevant studies because they did not report zero-order correlations. While such studies could have been included by calculating partial correlation coefficients (Aloe and Thompson 2013), the inclusion of partial correlations was beyond the scope of this review. Our focus on zero-order correlations nonetheless provides a valuable baseline for understanding the direct, unadjusted associations between different aspects of the socialisation process and ethnic majority outgroup attitudes, offering a starting point for future meta-analytical research that may investigate more complex, controlled associations.

A second limitation is the lack of consideration for additional moderators that can explain effect size heterogeneity. In this review, we did not distinguish between any of the ethnic majority and minority groups under investigation. Neither group is homogeneous, and theoretically, socialisation influences are likely to differ depending on the specific ethnic majority and minority groups being considered (Priest et al. 2014). We were unable to incorporate subgroup analyses on these study characteristics due to methodological limitations, i.e. small sample sizes for specific ethnic majority groups and insufficient information provided in the studies about the nature of the ethnic minority groups (e.g. whether they constituted immigrant, ethnic, or racial outgroups). Nonetheless, differences in socialisation associations for specific combinations of ethnic majority and minority groups are likely and should be explored in future empirical and meta-analytic research.

Additionally, we did not examine the role of other key demographic characteristics, particularly age. Most of the samples in the included studies focused on children and adolescents, with far fewer focusing on adults, limiting the generalizability of our findings. We did not conduct subgroup analyses for age due to small sample sizes for specific combinations of agent and age, as well as the arbitrary age brackets that would result from coding the sample means of ages reported in the studies. This predominant focus on children and represents a clear limitation in current research, which future empirical and meta-analytic studies should address by examining if and how socialisation processes influence ethnic outgroup attitudes in older age groups.

We subsequently turn to the issue of causality. Since most studies that we identified used a cross-sectional design instead of a longitudinal one, we opted for analyzing cross-sectional zero-order associations for purposes of comparability. We therefore cannot rule out the existence of bidirectional associations or account for confounding variables, e.g. shared environmental influences or genetic heritability. The observed association of parents might, for example, be an artifact of shared genetic factors (e.g. Stößel, Kämpfe, and Riemann 2006). Concerning peers, studies have shown that xenophobia and tolerance towards immigrants

in adolescence is determined by both selection and influence processes (e.g. Van Zalk et al. 2013). In short, an individual's attitudes might be more similar to their peers because they self-select into such friendships based on that similarity. Some of the strength of the observed association for peers is likely attributable to such selection effects. More generally, the predominance of cross-sectional studies in this field limits causal interpretations. This review points to an ongoing need for longitudinal and experimental research to address the issue of causality and clarify the direction and nature of the associations observed.

This review also has several strengths. Its primary conceptual strength is that it identified and evaluated a sociologically oriented theoretical framework on the differential associations of different components of the socialisation process on ethnic majority attitudes towards ethnic minorities. The methodological strengths of this review are the search procedure and the stepwise reviewing approach that were used to obtain relevant articles. Generally, systematic reviews with a meta-analysis do not quantify and evaluate the bias that might be induced by decisions made during the literature search (Crocetti et al. 2021; Degner and Dalege 2013; Hsieh, Faulkner, and Wickes 2022; Ülger et al. 2018; Windisch et al. 2022). We provide a template for doing so and recommend that future reviewers quantify the uncertainty associated with their search.

This review finally has important implications for the sociological study of interethnic relations. We have shown that much of the research on the relationship between socialisation and ethnic majority group attitudes towards ethnic minorities is limited to the field of (social) psychology. It additionally consists primarily of cross-sectional studies with relatively small sample sizes that are not representative of the population of interest. The field of sociology could contribute to this research field in terms of theory and methods, e.g. by applying social network and large-scale survey methods. However, until now, sociological inquiry into the question of what determines the attitudes of ethnic majorities towards ethnic minorities has mostly ignored the role of the socialisation process, concentrating on such factors as intergroup threat (Riek, Mania, and Gaertner 2006) and media (Imperato et al. 2021), instead. Somewhat curiously, although the role of socialisation is considered in other sociological subfields, such as gender (Carter 2014) and religion (Klingenberg and Sjö 2019), it is less so for interethnic attitudes. Although the socialisation concept has been criticised as functionalist, we see no reason why sociologists cannot adopt a post-functionalist view of socialisation (Guhin, Calarco, and Miller-Idriss 2021) and apply socialisation theory to the burgeoning subfield of interethnic relations. As a first step in this direction, in this article, we have shown that this subject can fruitfully be examined through the lens of sociological theory and constitutes a worthwhile direction for future sociological inquiry.

Notes

1. This systematic review focuses on attitudes of ethnic majority populations towards the full spectrum of minority groups – racial (e.g. Black Americans), ethnic (e.g. Romani), immigrant (e.g. Moroccan Dutch), and refugee groups (e.g. Syrians fleeing war to Europe) – which we collectively refer to as 'ethnic minorities'.
2. This systematic review is part of a larger effort to systematize evidence on the determinants of attitudes of ethnic majorities towards ethnic minorities. A pre-registered PRISMA protocol for this larger review project is available on the Open Science Framework (OSF) platform: https://osf.io/hcdkf/.

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Author contributions

CRediT statement: Jan-Willem Simons: Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Data curation, Writing – Original draft, Writing – Review & Editing, Visualization. **Eva Jaspers**: Conceptualization, Methodology, Investigation, Writing – Original draft, Writing – Review & Editing, Supervision, Funding acquisition. **Frank van Tubergen**: Conceptualization, Methodology, Investigation, Writing – Original draft, Writing – Review & Editing, Supervision.

Data availability statement

The data and computer code that support the findings of this study are available on the Open Science Framework: https://osf.io/hcdkf/

Disclosure statement

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