



# Intergenerational Transmission of Trust in Criminal Justice Authorities Among Late Adolescents in the Netherlands

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## Abstract

Relationships with parents, teachers, and peers can expose youth to different types of authority and legal orientations. In particular, parents are expected to play a key role in shaping youth's perceptions of authority, as they are considered the primary agents of socialization throughout childhood and adolescence. However, few have directly assessed the intergenerational transmission of trust in authorities from parent to child and the mechanisms by which transmission is more or less effective. The current study assesses to what extent parental trust in criminal justice authorities (i.e., police and judges) is associated with trust in criminal justice authorities among a diverse sample of young adults in the Netherlands. Drawing from research on socialization and youth development, we also evaluate to what extent the quality of relationship with the parent conditions the degree of intergenerational transmission of trust in criminal justice authorities. Overall, we found that parental trust in criminal justice authorities measured when the youth were aged 19–20 was positively related to youth trust 1 year later. The quality of the relationship between parents and children was not directly related to youths' trust in authorities, and for the most part did not moderate the effect of parent trust on youth trust.

**Keywords** Trust · Police · Judges · Legal socialization · Parent-child relationships

## Introduction

There is increasing attention to the role of non-legal actors in shaping perceptions of trust and legitimacy of criminal justice authorities among youth (Cavanagh & Cauffman, 2015; Fine et al., 2016; Forrest, 2021; Nivette et al., 2020; Trinkner & Cohn, 2014; Wolfe et al., 2017). Relationships with parents, teachers, and peers can expose youth to different types of authority and legal orientations (Tyler & Trinkner,

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2018). Through these different social interactions, youth come to internalize societal laws and develop attitudes towards legal institutions and authorities, such as police and judges (Tapp & Levine, 1974). In particular, parents are expected to play a key role in shaping youth's perceptions of authority, as they are considered the primary agents of socialization throughout childhood and adolescence (Grusec, 2011; Smetana et al., 2014). However, much of the research on parental influences has focused on how parental bonds and involvement are associated with attitudinal outcomes with a focus on police (Nihart et al., 2005; Sargeant & Bond, 2015). Few studies have directly assessed the intergenerational transmission of trust from parent to child (Sindall et al., 2017), most of which used specific youth offender samples in the USA (Cavanagh & Cauffman, 2015; Wolfe et al., 2017). To our knowledge, none of these studies have examined the mechanisms by which parent attitudes are more or less likely to relate to youth attitudes. Furthermore, through an oversampling of second-generation immigrant youth, we are able to assess legal socialization among groups that were raised in different legal contexts than where they currently reside with their children. Particularly, the legal contexts of some of the origin countries could be considered (much) less fair than the context of the Netherlands.

In light of these gaps, the current study aims to examine processes of intergenerational transmission in legal socialization. Specifically, we assess to what extent parental trust in criminal justice authorities (i.e., police and judges) is associated with trust in criminal justice authorities among a diverse sample of young adults in the Netherlands. Drawing from research on socialization and youth development, we also evaluate to what extent the quality of relationship with the parent conditions the degree of intergenerational transmission of trust in criminal justice authorities.

## Legal Socialization in Adolescence

While the legal socialization process begins in childhood, the period of adolescence is particularly important as it is characterized by changes in moral reasoning, *cognitive development*, and exposure to new and different social interactions (Baz & Fernández-Molina, 2018; Granot & Tyler, 2019). In later stages of moral reasoning development, beginning in adolescence, moral reasoning is not autonomous and adolescents still depend on approval from others (Kohlberg, 1970). Only in mid- or late adolescence, when entering the fourth stage, awareness of legal authorities and the obligation to obey them emerge. Additionally, the need for external approval becomes smaller. Alongside these moral development processes, cognitive capacities and social interactions are changing during the transition from childhood to adolescence. Cognitive development during this period enables abstract thinking, questioning, and judgements about the fairness of authorities (Fine et al., 2019; Granot & Tyler, 2019). During adolescence, youth may also experience their first encounter with discrimination and unfair treatment by authorities such as teachers and police (Okonofua et al., 2016). During this time, youth are also more likely to be stopped and searched by the police (McAra & McVie, 2016; Sharp & Atherton, 2007). In particular, ethnic minority youth tend to be proactively stopped by the police more frequently (Svensson & Saharso, 2015) and often feel more discriminated by police

(Haller et al., 2020; Solhjell et al., 2019) and other authorities (e.g., teachers, van Bergen et al., 2021) based on ethnic background. These new and different social interactions can subsequently shape how youth view the police, as well as other legal authorities (Sindall et al., 2017).

While experiences with discrimination are important to legal socialization, this process typically begins well before youth have their first encounter with authorities other than their parents (Tyler & Trinkner, 2018). Youth are vicariously exposed to evaluations of the law and police through interactions with different social actors in their environment (Fine et al., 2016; McLean et al., 2019; Wolfe et al., 2017). Models of legal socialization have evaluated a wide variety of social influences, including parents (Cavanagh & Cauffman, 2015; Sargeant & Bond, 2015), teachers (Ferdik et al., 2014; Nivette et al., 2021; Trinkner & Cohn, 2014), and peers (Fine et al., 2016). Immigrant parents occupy a special position when socializing their children, as they themselves were raised in different contexts. The beliefs and practices that immigrant parents were socialized with are often carried on into the host society (Coopmans et al., 2016) and can thus be a counterforce to wider societal socialization. The current study elaborates particularly on the role of diverse parents and parent-child relationships in the socialization process.

It is important to note that the current study focuses specifically on trust in two criminal justice authorities, the police and judges. The correlation between trust in these two authorities tends to be relatively high (e.g.,  $r=0.68$  including all countries, European Social Survey, 2023). Trust reflects an internalized state and concerns expectations about future behavior (Bottoms & Tankebe, 2012) and is considered by some to be a core component of institutional legitimacy (Jackson & Gau, 2016; Sunshine & Tyler, 2003). Measures of trust tend to be correlated with other legal attitudes, such as procedural fairness, normative alignment, obligation to obey, trustworthiness, and cooperation (Gau, 2014; Hamm et al., 2017). Theoretically, the expectation is that perceptions of police and judges develop in a similar way through personal and vicarious experiences with fair treatment and decision-making (Tyler, 2001). However, there is some evidence that perceptions of police may be based more strongly on experiences, since the general public is more likely to encounter the police compared to judges (Röder & Mühlau, 2012). By contrast, individuals are less likely to interact with judges in their lifetime, and so perceptions may be based more generally on feelings about the quality of institutions, or other sources. Still, there is little research on youth perceptions of judges specifically (Cavanagh et al., 2021), although there is some evidence that parental supervision and procedural justice are correlated with a combined measure of police and court legitimacy (Fagan & Tyler, 2005). Our focus on trust in both police and judges allows us to explore to what extent there may be similarities and differences in the relationship between parent and youth attitudes.

## Parental Influence

In the early stages of the life course, parents are considered the primary source of socialization (Grusec, 2011), and their influence can extend into young adulthood

(Johnson et al., 2011). In relation to legal socialization, parents may directly communicate and reinforce certain values (April et al., 2022; Burt et al., 2012), but can also serve as a source of vicarious exposure to experiences with and evaluations of criminal justice authorities (Sindall et al., 2017). Children and adolescents may also adopt certain attitudes through observation and modeling of their parents' behaviors (Jennings & Niemi, 1968; Smetana et al., 2014; Wolfe et al., 2017).

Research examining the intergenerational transmission of legal attitudes has found strong correlations between parent and child measures of trust, police legitimacy, and obligation to obey (Cavanagh & Cauffman, 2015, 2019; Fine et al., 2020; Sindall et al., 2017; Wolfe et al., 2017). An age-graded legal socialization framework would expect that parental attitudes are more likely to influence youth attitudes earlier in the life course, particularly in childhood and early adolescence when parents are primarily responsible for the child's care and environment (Grusec, 2011). In adolescence, youth are increasingly exposed to different socialization agents, including teachers, peers, and police (Tyler & Trinkner, 2018). Sindall et al. (2017) found that adolescents whose parents held more positive views of the police tend to hold more positive views themselves and that this attitudinal alignment between adolescents and their parents was strongest for older adolescents (up to age 15). Similarly, Cavanagh and Cauffman (2015) showed that maternal attitudes towards the legal justice system were closely related to their sons' attitudes (aged 13 to 17). Likewise, Wolfe et al. (2017) evaluated to what extent parental legitimacy beliefs about the criminal justice system were associated with legitimacy beliefs held by their children (ages 14 to 17). The authors found that even when controlling for individual characteristics and experiences with the legal system, parental legitimacy remained an important predictor of adolescents' legitimacy beliefs (but see Cavanagh et al., 2022). Taken together, this suggests that the relationship between parental and youth attitudes can persist well into (later) adolescence, and so is not only relevant among children or early adolescents.

These studies suggest that parental attitudes play a central role in shaping the attitudes of their children, such as trust in the police, over and above their individual characteristics and experiences. Therefore, we expect that adolescents' level of trust in criminal justice authorities will be closely associated with their parents' trust in these authorities. Specifically, *we expect that adolescents whose parents have higher levels of trust in the police will have higher trust in the police themselves (H1a) and that adolescents whose parents have higher levels of trust in judges will have higher trust in judges themselves (H1b).*

### **The Importance of Quality of Parental Contact**

In addition to the transmission of attitudes from parents to children, parenting practices that establish good quality relationships, with consistent and fair treatment, can generate a broader sense of trustworthiness in authorities, including the police (Tyler & Trinkner, 2018). The quality of the parent-child relationship can be measured in a number of ways. Parent-child relationships that are characterized by warmth, acceptance, and involvement and that are emotionally supportive are considered beneficial to adolescent development and socialization (Steele &

McKinney, 2019). Poor quality parent-child relationships may also be characterized by the presence of conflict, including disagreement and hostility (Weymouth et al., 2016). While some conflict is also considered a normative and functional part of adolescent development (Branje, 2018; Smetana et al., 2014), reviews have shown that the presence of parent-child conflict is associated with greater maladjustment problems among adolescents (Laursen & DeLay, 2011; Weymouth et al., 2016). Conflict can also disrupt socialization processes, particularly among children of immigrants, which can result in problem behaviors (Choi et al., 2008; McQueen et al., 2003; Schofield et al., 2008; Stevens et al., 2007). Studies examining both parent-child attachment and conflict suggest that high levels of parent-child conflict are likely to coincide with low levels of parental-child warmth or bonds (Choi et al., 2008; Trentacosta et al., 2011). For these reasons, both parent-child bond and parent-child conflict may work to influence attitudes as well as the adoption of similar attitudes among youth.

Generally, legal socialization research has found that adolescents who report strong bonds with their parents are more likely to trust and support the police (Ferdik et al., 2014; McLean et al., 2019; Nivette et al., 2020; Sargeant & Bond, 2015; Trinkner & Cohn, 2014). For example, Nihart and colleagues (Nihart et al., 2005) examined adolescents' attitudes toward the police in the USA and found that those who held more positive feelings towards their parents and teachers also reported more positive feelings towards the police. Based on these findings, *we expect that adolescents who report higher quality relationships with their parents will have higher levels of trust in police (H2a)*, and *we expect that adolescents who report higher quality relationships with their parents will have higher levels of trust in judges (H2b)*.

The quality of the relationship between parents and children may also condition the transmission of attitudes from parent to child. Broader research on socialization and development suggests that the adoption of attitudes and behaviors from parents by children depends on the quality of the parent-child relationship (Grusec & Goodnow, 1994; Kochanska et al., 2019). Positive parent-child relationships are expected to promote conditions under which children are most willing to accept parental values (Grusec & Davidov, 2010; Tsai et al., 2015). Positive parent-child relationships, characterized by high attachment, responsiveness, and low conflict, work to promote clear communication about given values and a willingness to accept said values among children (Grusec & Goodnow, 1994). Children are willing to accept parents' values because they provide a sense of identity and a stable relationship with their parents (Tsai et al., 2015). Previous research has shown that positive parent-child relationships have been associated with greater intergenerational adoption of social, cultural, and political values among adolescents (Aggeborn & Nyman, 2021; Erzinger & Steiger, 2014; Kim-Spoon et al., 2012; Meeusen & Boonen, 2022; Quintelier, 2015; Rico & Jennings, 2016). To our knowledge, no study has yet examined this conditional effect on trust in criminal justice authorities. We therefore formulate the following hypotheses (H3a): *the quality of the parent-child relationship will moderate the effect of parent trust in police on the youth's trust in police, whereby for higher quality relationships, the strength of the association between parent and youth trust will be stronger compared to lower quality*

*relationships. Likewise, the quality of the parent-child relationship will moderate the effect of parent trust in judges on the youth's trust in judges (H3b).*

## Methods

This study's hypotheses, methods, and planned analyses were pre-registered on the Open Science Framework [OSF] on 8 December 2022 (see: <https://osf.io/usy8v/>). Any deviations from the original plan are noted below. This study has been approved by the Faculty Ethics Review Board of Utrecht University under number 22-0664. The data used in the current study are available from the third author upon request. The analytical code is available from OSF (<https://osf.io/usy8v/>).

The current study assesses these hypotheses using data collected as part of the Children of Immigrants Longitudinal Survey in the Netherlands (CILSNL, (Jaspers & van Tubergen, 2019a, b). Specifically, we use wave 6 (2016/ages 19–20), where both parents and children were interviewed about a range of social relationships and values, and wave 7 (2017, ages 20–21). The CILSNL is the follow-up study of a broader three-wave longitudinal study conducted in four European countries (i.e., the Netherlands, Germany, Sweden, England, CILS4EU), which aimed to examine the social integration of immigrant and non-immigrant children (Kalter et al., 2016) and which started in 2010.

The initial sample of the CILS4EU project was drawn via a three-stage sampling design with all individuals selected within some school classes and schools. The original 2010 sample consisted of a sample of schools stratified by education level and the percentage of non-western immigrants. Schools with a higher percentage of immigrants were oversampled. Schools were selected with a probability relative to their size, meaning that smaller schools were less likely to be sampled than larger schools. School level response was 34.9%. A number of Grade 9 classes in each school was selected (class-level response rate was 94.5%), and within each class, all pupils were invited to participate (pupil-level response rate in the first wave was 91.1%). Follow-up waves, from the third wave onwards, no longer took place in schools. In this paper, we primarily draw on waves 6 and 7 of the CILSNL (Jaspers & van Tubergen, 2019a, b).

The sampling procedure aimed to enable inferences for Dutch adolescents of one cohort of students from the same grade, at one point in time (Kalter et al., 2016). The data should not be interpreted as representative for the entire Dutch population of 14-year-olds in 2010, as its sampling frame was complex and purposefully oversampled certain schools. Furthermore, even though CILSNL maintained good response rates of over 50% until wave 7, attrition was not random. Males and participants with a minority background were more likely to attrite (Baalbergen & Jaspers, 2022).

### Adolescent Data Collection Waves 6 and 7

The aim of waves 6 and 7 was to have a well-balanced mix between questions that were already asked in previous waves and new questions in order to capture possible changes in the situation of the respondents and to cover contextual changes

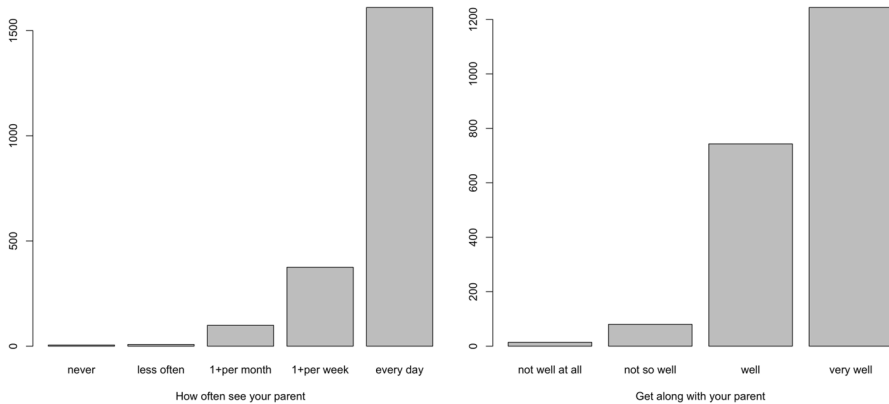
like the rise of online social media platforms. All Dutch youth who were ever approached to participate in waves 1, 2, or 3 of CILS4EU ( $N=7912$ ), excluding all youth who at one point in time refused future participation in the panel study ( $N=1255$ ), formed the target sample for the sixth wave of CILSNL ( $N=6657$ ). Youth were invited to complete the online self-administered questionnaire by postal mail and by e-mail and received a 10 euro gift certificate after completion of the questionnaire. After 6 weeks, all participants who had not yet responded were approached for a telephone interview. In total, 3541 respondents participated in wave 6, which is a gross response rate of 53.2%. The majority filled out the questionnaire online (90.6%), and some participated via telephone interviews (9.4%). For wave 7, a similar strategy was employed, resulting in the participation of 3561 respondents (gross response rate 56.6%), of which 86.7% participated in the online questionnaire and 13.3% participated via the telephone.

### **Parent Data Collection Wave 6**

For the first time since wave 1, parents of the youth target sample were surveyed. The parental target sample equals the number of youth respondents who are in the target sample ( $N=6657$ ), using contact information from the first and second waves. Also for parents, a mixed mode design was used, but unlike for their offspring, parents could not participate via an online questionnaire. A postal invitation was sent that contained the questionnaire and a prepaid return envelope. In the second stage, respondents who had not responded yet were approached by interviewers for a telephone interview. The parental questionnaire covered similar themes as the youth questionnaire: (1) participation in the labor market; (2) norms, values, lifestyle, and attitudes; and (3) social networks and social participation. A shortened version of the questionnaire was also developed. This short questionnaire was offered in telephone interviews to parents who were not willing to answer the main questionnaire. This questionnaire provides some information about contact with the participating child, general trust, political views, background characteristics, social contacts, and health. In total, the parents of 2402 respondents participated in wave 6, which is a gross response rate of 36.1%. The majority filled out the self-administered questionnaire (87.7%).

### **Dependent Variables**

The dependent variables used in the current study are child-reported trust in police and trust in judges. Both items are measured in wave 7 (ages 20–21) using two questions that ask how much trust the respondent has in the police and judges, respectively. Responses were measured on a scale from 1 to 10, where 1 reflects “no trust at all” and 10 reflects “a lot of trust.”



**Fig. 1** Frequency distributions for child-reported frequency of contact with parent and quality of relationship

## Independent Variables

The key independent variables used to assess the hypotheses include parent-reported trust in police and the quality of the parent-child relationship measured in wave 6 (ages 19–20). Parent trust in police is measured in the same way as child trust in police and judges, using a single item, respectively, with responses ranging from 1 “no trust at all” to 10 “a lot of trust.”

The quality of the parent-child relationship was measured in two ways. As outlined in the pre-registration, the original plan was to use measures of parent-reported relationship with their child at wave 6. However, the distributions of these variables were highly skewed such that there was little to no variation to evaluate (see distributions in Figure A1, Appendix A). Instead, we opted for two measures of youth-reported relationship and contact with their parents measured at wave 5 (ages 18–19). Items asked to what extent youth get along with each of their parents (mother and father) and how often they see each of their parents every day. Parent-child bond was measured using a 4-point Likert scale ranging from 1 “not well at all” to 4 “very well.” For contact, responses ranged from 1 “never” to 5 “every day.” Due to the skewed distribution of these two variables (see Fig. 1), we opted to dichotomize both variables for analyses. Parent-child bond was therefore dichotomized to reflect 0 “not well” and 1 “well,” and contact was dichotomized to reflect 0 “not every day” and 1 “every day.”<sup>1</sup> We matched the wave 5 item referring to mother or father with the gender of the parent who participated in wave 6. In this way, the quality of relationship most likely refers to the parent completing the survey.

<sup>1</sup> We also note that this is a deviation from our pre-registration, in which we were not aware of the extent to which the distributions were highly-skewed (see Fig. A1). Although dichotomization can come at a loss to information and variance, we argue that in this case, the division can facilitate estimation and interpretation. Specifically, we used the conceptual categories to dichotomize the variables. For parent-child bond, categories “not well at all” and “not so well” were combined into “not well,” and categories



The second scale measures the extent to which the parent has been in conflict with their child over eight issues in the past 3 months: money, house rules, other practical things, norms and values, (social) media use, their relationship with their child, their child's friends, and their child's partner. Parent respondents in wave 6 could answer either "yes" or "no" to each issue. We summed the responses to create a variety scale that reflects the degree to which there is greater conflict in different domains between parent and child.

## Controls

We controlled for a range of parent and child characteristics that are likely to influence child-reported trust in criminal justice authorities and therefore may confound the relationship between parent and child trust. Regarding child characteristics, victimization has been shown to be correlated with trust in criminal justice institutions, as victims of crime may develop more fear of crime, consequently worsening their views of the police and criminal justice authorities (Singer et al., 2019). Impulsivity and low self-control have been linked to perceptions of police, as individuals who are impulsive and seek immediate gratification are also likely to be involved in criminal behavior and avoid attachments to all institutions (Wolfe, 2011). Similarly, individuals involved in deviant or criminal behavior may be less likely to trust the police, as negative attitudes may be a by-product of antisocial norms and/or justification for rule-breaking (Ameri et al., 2019; Nivette et al., 2020; Wolfe et al., 2016). General trust has also been shown to be correlated with institutional trust, although there is a debate as to the causal order of this relationship (Daskalopoulou, 2019). We also include a measure of discrimination, which can lead to feelings of injustice and distrust in police, especially among ethnic minorities who are more likely to experience discrimination (Solhjell et al., 2019). In addition, we controlled for socio-demographic characteristics such as education level, sex, and age.

Impulsivity was measured in wave 6 using a single item that asks how often the statement "I act without thinking" is true of them. Responses include "often true," "sometimes true," "rarely true," and "never true." Responses were recoded so higher values equate to higher impulsivity. Victimization is measured in wave 6 using six items that ask whether or not the respondent has been a victim of a particular crime or harmful act in the past 12 months. This includes bullying on the internet, burglary, stolen bicycle, stolen mobile phone, laptop or tablet, physically attacked or threatened, and ripped off on the internet. Responses were summed to create a variety scale ranging from 0 to 6. Delinquency is measured in wave 6 using seven items that ask whether or not the respondent has engaged in a particular crime or deviant act in the past 12 months. This includes ordering illegal drugs on the internet, deliberately damaging things that were not theirs, stealing something from a shop/someone else,

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Footnote 1 (continued)

"well" and "very well" were combined into "well" For parent-child contact, the categories "never," "less often," "1 + per month," and "1 + per week" were combined into "not every day," and the category "every day" was kept as is.

carrying a knife or weapon, hitting or kicking someone, pretending to be someone else on the internet, and downloading illegal software, music, or movies. Responses were summed to create a variety scale of delinquency ranging from 0 to 7. General trust was measured in wave 6 using a single item that asks whether most people can be trusted or you can not be too careful dealing with people. Respondents could answer either “most people can be trusted” or “you can’t be too careful.”

Socio-economic status was measured using the parent-reported total household monthly income (in euros) at wave 6, after tax and compulsory deductions, from all sources. In order to capture feelings of discrimination that are likely to be experienced by ethnic minorities, we included four items measuring whether or not the youth has felt discriminated in the past 12 months in school or work, in public transportation, in shops, cafes, restaurants, nightclubs, or by police or security guards. Feelings of discrimination were measured at wave 3 (ages 16–17). We created a variety scale ranging from 0 to 4 to reflect different discrimination experiences by summing responses. The participant’s level of education was drawn from waves 1 and 2 (ages 14–16), when they were still enrolled in school. Possible responses were grouped into four ordinal levels: level 1 (vmbo basis/kader), level 2 (vmbo gt/t), level 3 (havo), and level 4 (atheneum/gymnasium). The Dutch school system is tracked, with students grouped in these levels by cognitive ability from the age of 12 onward. In addition, we include a measure indicating whether or not the child lives at home at wave 6. Specifically, the participant was asked who lives in their household other than themselves. Based on these responses, we created three categories: lives with both parents (i.e., biological, step, adopted, or foster parent), lives with one parent, and neither.

## Analyses

In order to test our hypotheses, we conducted three main analyses. First, in order to estimate the intergenerational transmission of trust from parent to child (H1a, H1b), we regressed child-reported trust in police on parent-reported trust in police. Second, we examined the direct association between parent-child relationship and child’s trust in police using measures of involvement and conflict (H2a, H2b). Finally, we evaluated the moderating effect of parent-child relationship on the association between parent and child trust in police (H3a, H3b). We evaluate the moderating effects of bond, contact, and conflict in separate models. Continuous variables included in the interaction were z-standardized with a mean of 0 in order to aid interpretation in the model. All models used ordinary least squared regression techniques and control for the set of covariates outlined above. In waves 6 and 7, participants are no longer in the original school settings and classrooms, and so it is unlikely that clustering from the original design should influence later waves. Nevertheless, because the original design sampled using clusters (i.e., schools, see Abadie et al., 2022), as an additional check, we estimate all models using standard errors clustered at the school level.

We use listwise deletion to account for missing observations in all models. Out of a maximum of 2402 possible observations based on parent participation, the largest

listwise sample is  $n=1306$ . The proportion of missingness is greatest for parent-reported household income (22.9%), discrimination experiences (22.2%), impulsivity (15.3%), and deviance (15.3%). Among parents, a number of questions were not asked in the short version, resulting in missing values (5.33%). Missingness from discrimination experiences, measured in wave 3, can be largely attributed to attrition between waves. In order to assess to what the exclusion of missing observations for household income affects the results, we conduct an additional analysis without this variable.

## Results

Descriptive statistics for all variables included in the analyses are reported in Table 1. On average, both parents and youth report relatively high trust in police and judges, scoring around 7 on a scale from 1 to 10. This is generally in line with national surveys of adults in the Netherlands and other Northern European countries, which show that roughly 85% and 78% of respondents in 2018 scored a 6 or higher when answering the question whether they trust the police or judges, respectively (0=no trust at all, 10=completely trust).<sup>2</sup> Youth-reported bond with parents is skewed, with 95% reporting that they get along well with the parent that completed the questionnaire. Overall, youth in the sample also report fairly low levels of deviance, victimization, and discrimination experiences.

Pairwise correlations are reported in Figure A2, Appendix A. The correlation between trust in criminal justice authorities between parents and youth is moderate ( $r_{\text{judges}}=0.21$ ,  $r_{\text{police}}=0.21$ ). The next strongest bivariate relationship with youth trust in criminal justice authorities is general trust ( $r_{\text{judges}}=0.24$ ,  $r_{\text{police}}=0.22$ ).

Table 2 provides the OLS regression results for youth trust in judges. Model 1 shows that controlling for relevant covariates, parent trust in judges is significantly associated with youth trust in judges ( $b=0.13$ , 95%CI=0.08, 0.19,  $B=0.14$ ), providing support for H1a. Regarding H2a, model 2 includes all parent-child relationship variables, none of which are significantly associated with youth trust in judges. Models 3–5 separately assess the moderating effect of parent-child relationship variables on parent-youth transmission of trust in judges. The results show that parent-child relationship does not moderate the relationship between parent and youth trust in judges (H3a). Youth who reported more general trust (i.e., “most people can be trusted”) were also more likely to trust judges (Model 1:  $b=0.48$ , 95%CI=0.31,0.65,  $B=0.15$ ). In addition, youth who reported having discrimination experiences in wave 3 (ages 16–17) showed lower trust in judges when controlling for parent-child relationship (Model 2:  $b=-0.13$ , 95%CI=  $-0.26$ ,  $-0.006$ ,  $B=-0.06$ ). Overall, the variables explained about 13% of the variance in trust in judges across models.

The results for trust in police are provided in Table 3. Similar to trust in judges, parent trust in police is significantly associated with youth trust in police (H1b)

<sup>2</sup> See <https://opendata.cbs.nl/#/CBS/en/dataset/80518ENG/table?dl=6A7CF>.

**Table 1** Descriptive statistics for variables included in the analyses

Characteristic	<i>N</i> (%)	Mean (SD)	Min	Max
Parent-reported <sup>a</sup>				
Trust in judges	2260	6.88 (1.62)	1	10
Trust in police	2263	6.87 (1.42)	1	10
Parent-child conflict	2073	1.10 (1.54)	0	8
Household income	1853	6.78 (2.74)	1	10
Youth-reported				
Trust in judges <sup>b</sup>	3532	7.04 (1.64)	1	10
Trust in police <sup>b</sup>	3532	6.85 (1.69)	1	10
Parent-child bond <sup>c</sup>				
Not well	94 (4.5%)			
Well	1987 (95%)			
Parent-child contact <sup>c</sup>				
Not every day	487 (23%)			
Every day	1610 (77%)			
Deviance <sup>a</sup>	3490	0.77 (0.85)	0	6
Victimization <sup>a</sup>	3490	0.47 (0.79)	0	5
Impulsivity <sup>a</sup>	3482	2.26 (0.89)	1	4
Discrimination experiences <sup>d</sup>	4130	0.31 (0.78)	0	4
Age <sup>a</sup>	3505	20.58 (0.73)	16	31
General trust <sup>a</sup>				
Can't be too careful	1826 (52%)			
Most people can be trusted	1715 (48%)			
Sex <sup>a</sup>				
Female	2095 (60%)			
Male	1411 (40%)			
Lives with parents <sup>a</sup>				
Both parents	1953 (56%)			
One parent	469 (13%)			
Neither	1068 (31%)			
Level of education <sup>e</sup>				
Level 1 (basis/kater)	1643 (23%)			
Level 2 (gt/t)	2231 (32%)			
Level 3 (havo)	1768 (25%)			
Level 4 (athen/gym)	1394 (20%)			

a. Wave 6 (youth aged 19–20)

b. Wave 7 (youth aged 20–21)

c. Wave 5 (youth aged 18–19)

d. Wave 3 (youth aged 16–17)

e. Waves 1 and 2 (youth aged 13–15)

**Table 2** Ordinary least squares regression results for youth trust in judges at ages 20–21

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
(Intercept)	7.00 (1.38)*** [4.29, 9.71]	6.23 (1.51)*** [3.27, 9.20]	7.18 (1.50)*** [4.24, 10.11]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]	7.20 (1.50)*** [4.27, 10.14]
Trust in judges (parent)	0.13 (0.03)*** [0.08, 0.19]	0.14 (0.03)*** [0.08, 0.19]	0.14 (0.10)* [0.01, 0.41]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]	0.13 (0.22) [-0.35, 0.50]
Deviance	0.06 (0.05) [-0.04, 0.17]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]	0.03 (0.06) [-0.05, 0.18]
Victimization	-0.12 (0.06) [-0.23, 0.002]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.009]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]	-0.05 (0.07) [-0.25, 0.008]
Impulsivity	-0.02 (0.05) [-0.11, 0.07]	-0.01 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]	-0.03 (0.05) [-0.14, 0.05]
Most people can be trusted (ref: can't be too careful)	0.48 (0.09)*** [0.31, 0.65]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]	0.15 (0.09)*** [0.28, 0.64]
Discrimination experiences	-0.11 (0.06) [-0.23, 0.007]	-0.05 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]	-0.06 (0.06)* [-0.26, -0.006]
Male	0.24 (0.09)** [0.07, 0.41]	0.08 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]	0.07 (0.09)* [0.05, 0.41]
Age	-0.08 (0.07) [-0.21, 0.05]	-0.03 (0.09) [-0.18, 0.09]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]	-0.02 (0.07) [-0.18, 0.10]
Household income	0.01 (0.02) [-0.02, 0.04]	0.02 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]	0.03 (0.02) [-0.02, 0.05]
Education (ref: level 1)	0.43 (0.15)**	0.13 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**	0.12 (0.16)**
Education: level 2										

Table 2 (continued)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
Education: level 3	[0.15, 0.72] 0.60 (0.15)***	0.17	[0.10, 0.72] 0.52 (0.16)**	0.15	[0.10, 0.72] 0.52 (0.16)**	0.15	[0.10, 0.72] 0.51 (0.16)**	0.15	[0.10, 0.72] 0.52 (0.16)**	0.15
Education: level 4	[0.31, 0.90] 0.80 (0.15)***	0.25	[0.20, 0.83] 0.75 (0.16)***	0.23	[0.20, 0.83] 0.75 (0.16)***	0.23	[0.20, 0.83] 0.74 (0.16)***	0.23	[0.20, 0.83] 0.75 (0.16)***	0.23
Living situation (ref: both parents)	[0.50, 1.10]		[0.43, 1.07]		[0.43, 1.07]		[0.42, 1.07]		[0.43, 1.07]	
Lives w/ one parent	-0.10 (0.14) [-0.37, 0.17]	-0.02	-0.08 (0.15) [-0.37, 0.21]	-0.02	-0.08 (0.15) [-0.37, 0.20]	-0.02	-0.09 (0.15) [-0.38, 0.20]	-0.02	-0.08 (0.15) [-0.37, 0.21]	-0.02
Lives w/ neither parent	0.06 (0.09) [-0.12, 0.24]	0.02	0.02 (0.10) [-0.19, 0.22]	0.005	0.02 (0.10) [-0.19, 0.22]	0.005	0.02 (0.10) [-0.19, 0.22]	0.006	0.02 (0.10) [-0.18, 0.22]	0.006
Parent-child contact every day (ref: not every day)			-0.16 (0.11) [-0.37, 0.06]	-0.04	-0.16 (0.11) [-0.38, 0.06]	-0.04	-0.15 (0.11) [-0.36, 0.06]	-0.04	-0.16 (0.11) [-0.37, 0.05]	-0.04
Parent-child bond "get along well" (ref: not so well)			0.24 (0.21) [-0.17, 0.66]	0.03	0.25 (0.21) [-0.17, 0.67]	0.03	0.26 (0.21) [-0.16, 0.68]	0.03	0.24 (0.21) [-0.17, 0.66]	0.03
Parent-child conflict			-0.02 (0.03) [-0.07, 0.04]	-0.02	-0.02 (0.03) [-0.08, 0.04]	-0.02	-0.02 (0.03) [-0.08, 0.04]	-0.02	-0.02 (0.03) [-0.08, 0.04]	-0.02
Contact*Parent trust in judges			0.02 (0.11) [-0.20, 0.24]	0.01	0.02 (0.11) [-0.20, 0.24]	0.01				
Bond*Parent trust in judges							0.16 (0.22) [-0.28, 0.60]	0.10		
Conflict*Parent trust in judges									0.02 (0.03)	0.02

Table 2 (continued)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
Num.Obs	1304		1156		1156		1156		1156	
<i>R</i> <sup>2</sup>	0.129		0.13		0.13		0.13		0.13	
<i>R</i> <sup>2</sup> Adj	0.119		0.117		0.116		0.117		0.116	

Note. The parent trust in judges variable in Models 3–5 has been z-transformed

**Table 3** Ordinary least squares regression results for youth trust in police at ages 20–21

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
(Intercept)	7.68 (1.38)*** [4.96, 10.40]		7.47 (1.51)*** [4.52, 10.43]		8.70 (1.49)*** [5.78, 11.61]		8.61 (1.48)*** [5.70, 11.52]		8.70 (1.49)*** [5.78, 11.62]	
Trust in police (parent)	0.17 (0.03)*** [0.11, 0.23]	0.15	0.17 (0.03)*** [0.11, 0.24]	0.16	0.15 (0.10) [-0.04, 0.34]	0.10	-0.12 (0.19) [-0.50, 0.26]	-0.08	0.23 (0.06)*** [0.12, 0.34]	0.15
Deviance	-0.02 (0.05) [-0.12, 0.09]	-0.01	-0.01 (0.06) [-0.13, 0.10]	-0.006	-0.01 (0.06) [-0.13, 0.10]	-0.007	-0.006 (0.06) [-0.12, 0.11]	-0.003	-0.01 (0.06) [-0.13, 0.11]	-0.005
Victimization	-0.17 (0.06)** [-0.29, -0.05]	-0.08	-0.18 (0.06)** [-0.31, -0.05]	-0.08	-0.18 (0.06)** [-0.30, -0.05]	-0.08	-0.17 (0.06)** [-0.30, -0.05]	-0.08	-0.18 (0.06)** [-0.31, -0.05]	-0.08
Impulsivity	0.02 (0.05) [-0.08, 0.11]	0.009	-0.005 (0.05) [-0.10, 0.09]	-0.003	-0.004 (0.05) [-0.10, 0.09]	-0.003	-0.003 (0.05) [-0.10, 0.09]	-0.002	-0.005 (0.05) [-0.10, 0.09]	-0.003
Most people can be trusted (ref: can't be too careful)	0.44 (0.09)*** [0.27, 0.61]	0.14	0.46 (0.09)*** [0.28, 0.64]	0.15	0.46 (0.09)*** [0.28, 0.64]	0.15	0.46 (0.09)*** [0.28, 0.64]	0.15	0.46 (0.09)*** [0.28, 0.64]	0.15
Discrimination experiences	-0.16 (0.06)** [-0.28, -0.04]	-0.07	-0.15 (0.06)* [-0.27, -0.02]	-0.07	-0.14 (0.06)* [-0.27, -0.02]	-0.07	-0.15 (0.06)* [-0.27, -0.02]	-0.07	-0.15 (0.06)* [-0.27, -0.02]	-0.07
Male	-0.08 (0.09) [-0.25, 0.09]	-0.03	-0.12 (0.09) [-0.30, 0.07]	-0.04	-0.12 (0.09) [-0.30, 0.06]	-0.04	-0.13 (0.09) [-0.31, 0.05]	-0.04	-0.12 (0.09) [-0.30, 0.07]	-0.04
Age	-0.11 (0.06) [-0.24, 0.02]	-0.05	-0.10 (0.07) [-0.24, 0.03]	-0.04	-0.11 (0.07) [-0.24, 0.03]	-0.04	-0.10 (0.07) [-0.24, 0.03]	-0.04	-0.11 (0.07) [-0.24, 0.03]	-0.04
Household income	0.02 (0.02) [-0.01, 0.06]	0.04	0.02 (0.02) [-0.01, 0.06]	0.04	0.02 (0.02) [-0.01, 0.06]	0.04	0.02 (0.02) [-0.01, 0.06]	0.04	0.02 (0.02) [-0.01, 0.06]	0.04
Education (ref: level 1)										
Education: level 2	0.23 (0.15)	0.07	0.22 (0.16)	0.07	0.22 (0.16)	0.06	0.21 (0.16)	0.06	0.22 (0.16)	0.07



Table 3 (continued)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	b (SE)	$\beta$	b (SE)	$\beta$	b (SE)	$\beta$	b (SE)	$\beta$	b (SE)	$\beta$
Education: level 3	[-0.06, 0.52] 0.39 (0.15)**	0.12	[-0.09, 0.53] 0.38 (0.16)*	0.11	[-0.09, 0.52] 0.38 (0.16)*	0.11	[-0.10, 0.52] 0.36 (0.16)*	0.11	[-0.09, 0.53] 0.38 (0.16)*	0.11
Education: level 4	[0.10, 0.69] 0.25 (0.15)	0.08	[0.06, 0.69] 0.22 (0.16)	0.07	[0.07, 0.70] 0.23 (0.16)	0.07	[0.05, 0.68] 0.21 (0.16)	0.07	[0.06, 0.69] 0.22 (0.16)	0.07
Living situation (ref: both parents)	[-0.05, 0.55]		[-0.10, 0.54]		[-0.09, 0.54]		[-0.11, 0.53]		[-0.10, 0.54]	
Lives w/ one parent	-0.08 (0.14)	-0.02	-0.03 (0.15)	-0.007	-0.03 (0.15)	-0.007	-0.04 (0.15)	-0.008	-0.03 (0.15)	-0.007
Lives w/ neither parent	[-0.34, 0.19] 0.06 (0.09)	0.02	[-0.32, 0.26] 0.04 (0.10)	0.01	[-0.32, 0.25] 0.04 (0.10)	0.01	[-0.33, 0.25] 0.04 (0.10)	0.01	[-0.32, 0.26] 0.04 (0.10)	0.01
Parent-child contact every day (ref: not every day)	[-0.12, 0.23] -0.09 (0.11)	-0.02	[-0.16, 0.24] -0.09 (0.11)	-0.02	[-0.17, 0.24] -0.10 (0.11)	-0.03	[-0.16, 0.24] -0.08 (0.11)	-0.02	[-0.16, 0.24] -0.09 (0.11)	-0.02
Parent-child bond "get along well" (ref: not so well)	[-0.30, 0.12] 0.20 (0.21)	0.03	[-0.30, 0.12] 0.20 (0.21)	0.03	[-0.31, 0.11] 0.22 (0.21)	0.03	[-0.29, 0.13] 0.27 (0.21)	0.04	[-0.30, 0.12] 0.21 (0.21)	0.03
Parent-child conflict	[-0.21, 0.62] -0.02 (0.03)	-0.02	[-0.21, 0.62] -0.02 (0.03)	-0.02	[-0.20, 0.63] -0.02 (0.03)	-0.02	[-0.15, 0.69] -0.01 (0.03)	-0.01	[-0.21, 0.62] -0.01 (0.03)	-0.01
Contact*Parent trust in police	[-0.07, 0.04]		[-0.07, 0.04]		[-0.08, 0.04] 0.13 (0.11)	0.07	[-0.07, 0.04]		[-0.07, 0.04]	
Bond*Parent trust in police					[-0.08, 0.34]					
Conflict*Parent trust in police							0.39 (0.20)	0.24		
							[-0.001, 0.78]		0.02 (0.03)	0.02

Table 3 (continued)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5	
	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
Num.Obs	1306		1157		1157		1157		1157	
$R^2$	0.100		0.106		0.107		0.109		0.106	
$R^2$ Adj	0.09		0.092		0.092		0.094		0.092	

Note. The parent trust in police variable in Models 3 – 5 has been z-transformed

across Models 1 and 2 (Model 1:  $b=0.17$ , 95%CI=0.11, 0.23,  $B=0.15$ ). Parent-child relationship variables are not significantly related to youth trust in police (H2b). Again, the quality of the parent-child relationship does not moderate the effect of parent trust on youth trust in police (H3b). Aside from the main explanatory variables, it is notable that generalized trust (Model 1:  $b=0.44$ , 95%CI=0.27, 0.61,  $B=0.14$ ), discrimination experiences (Model 1:  $b=-0.16$ , 95%CI=-0.28, -0.04,  $B=-0.07$ ), and victimization (Model 1:  $b=-0.17$ , 95%CI=-0.29, -0.05,  $B=-0.08$ ) were consistently related to youth trust in police. The proportion of variance explained was slightly lower across trust in police models (about 10%) compared to trust in judges. In order to investigate to what extent discrimination experiences with specific actors drove this relationship, we conducted additional exploratory analyses using the disaggregated discrimination items. The results presented in Table B1 (Appendix B) show that it is primarily discriminatory experiences with the police and security guards that are associated with trust in police ( $b=-0.79$ , 95%CI=-1.21, -0.37) and judges ( $b=-0.68$ , 95%CI=-1.10, -0.26). However, experiences in shops and nightlife are also significantly negatively related to trust in police ( $b=-0.37$ , 95%CI=-0.70, -0.04).

### Additional Analyses

As pre-registered, we re-estimated all models using cluster robust standard errors at the school level. The results remained the same, with one notable exception (for full results, see Tables B2 and B3 in Appendix B). In Table B3 Model 4, parent-child bond significantly moderated the relationship between parent and youth trust in police ( $b=0.39$ , 95%CI=0.07, 0.71), which is nearly identical to what is reported in the main analyses. To visualize this moderation, we plotted predicted values of trust in police by parent-child bond and parent trust in police ( $z$ -standardized, with a mean of 0). Figure B1 in Appendix B shows that for youth who reported that they do not get along well with their parent, the relationship between parent and youth trust in police is negative, such that higher parent trust is associated with lower youth trust. For youth who reported that they get along well with police, the relationship is positive, i.e., higher parent trust is associated with higher youth trust in police. It is important to note that this is based on a small number of observations in the “not well” category ( $n=51$ ).

We also re-analyzed all models excluding the variable with the highest proportion of missing values: parent-reported household income (not pre-registered). The results remain substantively similar, with again the exception that parent-child bond moderated the relationship between parent and youth trust in police (see Tables B4 and B5 in Appendix B). However, again this is based on a relatively small number of observations in the “not well” category ( $n=62$ ).

As requested by reviewers, we conducted a number of further analyses. First, we ran two additional analyses controlling for youth trust measured at wave 6 (ages 19–20). However, we note that including this variable introduces indirect pathways from parent to youth trust at wave 7 (ages 20–21), whereby parent trust may also be related to youth trust at wave 6, which subsequently influences youth trust at wave

7. In addition, it is likely that youth trust at wave 6 will mediate the relationship between variables measured at earlier waves (i.e., discrimination experiences) and youth trust at wave 7. For these reasons, we present two models: first, we estimated the relationship between parent and youth trust at wave 6, and second, we estimated the relationship between parent and youth trust at wave 7, controlling for youth trust at wave 6 as suggested. The results for the first set of models were in line with the main analyses. The results for the second set of models showed that controlling for youth trust at wave 6, parent trust is still significantly related to youth trust at wave 7, although the size of the coefficient is relatively smaller. Including prior youth trust indeed seems to fully mediate the relationship between earlier discrimination and youth trust at wave 7. The full results can be found in Tables C1–C4 in Appendix C.

Second, in response to concerns about the skewed parent-child bond and contact variables, we searched for alternative available measures of parent-child relationship to test the hypotheses. We found three items in wave 3 (ages 16–17) that capture aspects of parental involvement, a concept closely related to parent-child bond and support (Gault-Sherman, 2012). The three items ask youth to what extent they agree or disagree on a 5-point Likert-type scale that their parents say they must tell them everything that they do, tell them where and what they are doing if not home, and that their parents know the people they hang out with. These items were fairly normally distributed, although the mean scale was not strongly reliable ( $\alpha = 0.53$ ).<sup>3</sup> The results are substantively similar to those presented in the main analyses, with again one exception (for full results, see Tables D1–D2, Appendix D). Parental involvement significantly moderated the relationship between parent and youth trust, whereby the relationship is stronger for youth who report higher levels of parental involvement (see Fig. D1, Appendix D).

Third, we included two additional control variables that theoretically may also relate to trust in police: religiosity (i.e., how important religion is to the respondent) and national identity (i.e., how strongly they feel Dutch) (Roché et al., 2017). Including these variables does not alter the original findings. Notably, youth who identify strongly as Dutch have higher trust in both judges and police (for full results, see Tables E1–E2, Appendix E).

## Discussion

This study aimed to assess the intergenerational transmission of trust in criminal justice authorities from parents to children and to what extent the quality of the parent-child relationship plays a role in this process. Overall, we found that parental trust in criminal justice authorities measured when the youth was 19–20 was positively related to youth trust 1 year later. The quality of the relationship between parents and children was not directly related to youths' trust in authorities, and for the most part did not moderate the effect of parent trust on youth trust. However, there was

<sup>3</sup> We also estimated the same models using a 2-item version of the scale, which has slightly better reliability ( $\alpha = .62$ ). The results remained the same (see Tables D3–D4).

some tentative evidence that parent-child bond conditioned the relationship between parent and youth trust, whereby among youth who did not get along well with their parents, higher parental trust was associated with lower youth trust in authorities. In the following discussion, we outline three findings that have implications for research on legal socialization and trust in criminal justice authorities.

First, our results suggest that trust in authorities is transmitted from parents to children. Even at ages 20–21, when many youth had left their parents' home, we found a robust positive relationship between parent and youth trust in judges and police. This is in line with previous research on intergenerational transmission of perceptions of police (Cavanagh & Cauffman, 2015; Wolfe et al., 2016), lending further support to the notion that attitudes towards criminal justice authorities are in part shaped by non-legal actors early in the life course (Nagin & Telep, 2020; Trinkner & Cohn, 2014; Tyler & Trinkner, 2018). This transmission process may operate through a number of mechanisms, including directly through socialization, modeling, genes, and operant/classical conditioning, and indirectly through inherited social status (Meeusen & Boonen, 2022; Min et al., 2012; Sturgis et al., 2010). Parents may communicate with their children directly about the trustworthiness of criminal justice authorities. For example, in research on parental ethnic socialization in the Netherlands, parents used different strategies to communicate information about intergroup relations, including promoting egalitarianism, emphasizing societal biases, inequality, and mistrust of out-groups (van Bergen et al., 2021).

Given that much of the research on trust in criminal justice authorities is focused on the role of direct experiences in shaping perceptions of authorities (in particular the police; see Mazerolle et al., 2013; Nagin & Telep, 2020), more research is needed to examine to what extent trust in police and judges is an extension of parental trust and to what extent it can be shaped by subsequent experiences throughout the life course.

It is also possible that there is a reciprocal relationship between parent and child attitudes, as research shows that youth can also play an active role in shaping parental and family values (e.g., Perez-Brena et al., 2015). Youth may influence parental attitudes in a number of ways (Knafo & Galansky, 2008). For example, youth may actively change parents' views about trustworthiness of criminal justice authorities through sharing their (positive or negative) personal experiences, or parents may adapt their perceptions in line with changing attitudes among their children. Alternatively, parent and youth attitudes may more passively diverge as youth encounter new and different socialization agents throughout adolescence and early adulthood. This divergence may be more salient among children of immigrants, whose parents maintain a dual frame of reference regarding legal socialization and experiences with authorities from their countries of origin and destination (Perez-Brena et al., 2015; Umaña-Taylor et al., 2013).

Our results suggest that trust is influenced by some combination of both intergenerational and experiential inputs, since we found that individual feelings of discrimination were also related to trust in criminal justice authorities. Specifically, youth who reported feelings of discrimination by police and security guards during adolescence (ages 16–17) reported lower trust in police and judges at ages 20–21. This suggests that these feelings were relatively persistent into young adulthood.

Youth who reported feeling discriminated in shops, restaurants, or nightlife venues also reported lower trust in police. These discrimination experiences may overlap, as experiences in shops, for example, may involve contact with security guards or the police (Saarikkomäki, 2016; Saarikkomäki & Alvesalo-Kuusi, 2020).

Second, aside from parent trust, youths' general trust was strongly associated with their trust in judges and police. Empirical research on political and social trust suggests that the two are intertwined (Newton & Zmerli, 2011); however, the causal direction is less clear and the relationship may be reciprocal (Newton et al., 2018). People's willingness to trust institutions and in general may depend on their "winning" or "losing" positions in society (Zmerli & Newton, 2011). Indeed, our results show that respondents who were enrolled in "higher" educational tracks (levels 3 and 4) that prepare for polytechnic or scientific tertiary education report generally higher trust in criminal justice institutions. Alternatively, Rothstein and Stolle (2008) argue that institutional trust, particularly of "street-level" law and order institutions, creates conditions for citizens to feel that "most people can be trusted" by effectively and fairly punishing those who do not cooperate and break the law. This relationship may be stronger in societies characterized by stable democratic institutions and low levels of crime and corruption, such as the Netherlands (Delhey & Newton, 2005). Future research on trust in criminal justice authorities should evaluate to what extent generalized and institutional trust (co-)develop over the life course and whether these attitudes simply co-vary or mutually reinforce each other over time.

Third, our results show that the quality of the relationship between parents and children, as measured by bonds, contact, and conflict, was not directly associated with trust in authorities. While the relationships were for the most part in the expected direction, none of the estimates were statistically significant. This is not in line with previous research that finds that parental involvement and attachment are significantly positively associated with perceptions of police legitimacy and trust (e.g., Sargeant & Bond, 2015; Sindall et al., 2017). While our measures provided some variability in the quality of relationship, we note that these measures were largely skewed towards positive relationships. This may reflect a more general issue with parental non-response in the wave 6 survey. It may be that parents with very poor relationships with their children chose not to participate in the survey. The parent sample and results may therefore be biased towards youth with more positive familial relationships. However, it is important to note that the results were similar when using less skewed measures of parent-child conflict and parental involvement (used in the robustness checks). This suggests that the null result may not be entirely dependent on measurement issues.

Alternatively, the direct effect of the quality of the parent-child relationship may be age-graded, whereby parents play a stronger role in directly shaping attitudes earlier in childhood and adolescence (McLean et al., 2019). Parents may also indirectly influence youth attitudes by shaping how they understand and interpret their own experiences with the police. By adolescence, youth are spending more time outside of the home at school and with peers. During this stage, they are also more susceptible to social influences (Granot & Tyler, 2019), and research has shown that youth who have delinquent peers tend to have more negative attitudes towards the police

(Fine et al., 2016; Kaiser & Reisig, 2019; Nivette et al., 2020; Wolfe et al., 2016). More research is needed to examine how parents and the quality of the parent-child relationship work to shape child attitudes in the earlier stages of the life course compared to other socialization agents, such as peers and teachers.

Relatedly, we do not find consistent evidence that the relationship between parents and their children moderates the association between parent and youth trust. We hesitate to draw strong conclusions from this finding, since the number of observations in one category was relatively small and the significance of the findings was inconsistent across different measures of relationship quality. However, given the importance of parent-child relationship in the adoption of values within broader socialization research, we instead call for more theoretical development and research on the different ways in which parents can influence the adoption (or rejection) of similar values. For example, research on political socialization suggests that deviations from parental attitudes are the likely result of new environmental inputs and peers (Dinas, 2014), which may be more likely and more frequent when the parent-child relationship is more fractious. Alternatively, the socialization processes may vary with immigrant status and the countries of origin of parents in our study. Parents were not always themselves raised in the Dutch legal context; moreover, immigrant parents were purposefully oversampled. Analyzing the congruence between the legal systems of origin countries and the Dutch case is beyond the scope of this paper, especially given the very low prevalence of some immigrants in our data. More research is needed to better understand under what circumstances parent and child legal attitudes converge and/or diverge over the life course.

## Limitations and Conclusions

There are limitations to the current study that are important to consider. First, the sample was restricted to youth who participated in multiple waves and whose parents also participated in the sixth wave. Parents with more positive relationships with their children may have been more likely to participate. Indeed, the parental and youth measures of parent-child relationship and conflict were skewed towards those with less conflict, more contact, and more positive relationships (i.e., most youth got along well with their parents). In addition, it is notable that more mothers participated in the parent wave 6 survey, who are considered to play a larger role in moral socialization compared to fathers who tend to socialize outdoor behaviors (Hallers-Haalboom et al., 2016; Volling et al., 2009). This means that our results are likely biased towards those with positive parent-child relationships, particularly mothers, and may also be a reason why we did not find any clear association between relationship quality and trust in police. The initial response bias of the survey is—as always—a concern when studying topics related to trust in authorities. However, at the individual level, response at wave 1 was over 90%, reducing the bias at least to some extent. Furthermore, although the youth panel saw some systematic attrition of especially male and ethnic minority youth, the attrition did not seem to be dependent on the level of parent-child attachment.

Second, the measurement of several key variables was less than ideal. For example, previous studies have measured the quality of relationships using items reflecting dimensions of attachment, involvement, and adverse parenting practices (Fagan & Tyler, 2005; Nivette et al., 2020; Sargeant & Bond, 2015). It may be that our measures of quality did not fully capture the parenting practices and emotional attachments that can influence youths' perceptions of authorities and facilitate intergenerational transmission of values. More research is needed to evaluate the direct and conditional effects of parental influence across different dimensions of parenting practices, relationship quality, and family structure. In addition, trust in police and judges was measured using one item each. While single items are limited in internal reliability, measures of trust tend to correlate strongly with other related constructs such as normative alignment, procedural justice, and general willingness to cooperate (Hamm et al., 2017). Nevertheless, future research should examine to what extent parents influence their children's views on different dimensions of trust in authorities (e.g., trust in effectiveness, trust in fair treatment) and related concepts such as legitimacy.

Third, our measures of trust in criminal justice agents were measured during late adolescence or early adulthood, a period in which the influence of parents is declining. While the majority of our youth sample still reported seeing their parents every day, during this life stage, youth are nevertheless increasingly exposed to more and different socialization agents outside the home, including at school, work, or among peers. This may explain the relatively small association between parent and youth trust in authorities, although these effect sizes are generally in line with previous research among adolescents (Cavanagh & Cauffman, 2015; Wolfe et al., 2016). Still, these studies on intergenerational transmission of legal attitudes rely on samples of during mid-adolescence. More research is needed to understand how parents and other socialization agents (e.g., school, peers) influence legal attitudes in early childhood and pre-adolescence. Furthermore, while the current study provides a new context and diverse sample in which to examine parent and child trust, we acknowledge that the Netherlands is a "high trust" society, with relatively lower rates of police contact and violence compared to other countries such as the USA (Pierson et al., 2020). As such, the ways in which parents and youth are encountering and learning about police may differ within this context of policing. More research is needed to explore socialization processes in different institutional and societal contexts (e.g., authoritarian, low/high corruption, low/high violence societies), particularly outside the USA. This would allow us to better evaluate the shared or unique processes by which children learn and adopt attitudes towards criminal justice authorities and to what extent these views persist over the life course.

In addition, it is important to investigate the underlying mechanisms of transmission. In research on intergenerational transmission of crime, some argue that the association between parent and child outcomes may simply be spurious (Besemer et al., 2017). In this case, both parent and child trust in criminal justice authorities would be accounted for by some third common explanation in their shared background and environment. For example, both parents and children may have similar levels of exposure to criminal justice authorities, particularly the police. Family members may therefore be exposed to the same sources of discrimination and



treatment by criminal justice authorities, which in turn shapes their respective feelings of trust.

Taken together, our study shows that youths' trust in police and judges may in part stem from their parents' views on these authorities. This study contributes to research on legal socialization that suggests that attitudes towards criminal justice authorities are not only influenced by experiences with authorities, but develop throughout the life course through relationships and interactions with different agents across multiple social domains (Forrest, 2021; Trinkner & Reisig, 2021; Tyler & Trinkner, 2018).

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## Declarations

**Conflict of Interest** The authors declare no competing interests.

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