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Social Capital and Prosocial Behavior among German Children

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Abstract: A robust literature connects children's and adolescents' social capital to a range of desirable outcomes, including increased academic achievement and decreased delinquency. We extend this research by extending possible associations with child social capital to positive behaviors, measured here as prosocial behaviors. We examine data on 6th graders in Germany. We select the German context in part because one important source of child social capital, participation in religious congregations, is not as prevalent in modern Germany as in the US samples from which many social capital studies are derived. We use data from the German National Educational Panel Study (NEPS) and measures of child social capital, including parent–child interactions, family activities, and religious participation, to predict prosocial behavior. Results indicate that social capital in the form of parent-child interactions in the home and child religiosity is associated weakly with greater prosocial behavior. These results suggest that adults can help children develop stronger prosocial norms by increasing interaction with their children and by exposing their children to network ties in religious settings, but also that social capital can be derived different ways in different contexts.

Keywords: social capital; prosocial behavior; children; behavioral outcomes; Germany

1. Introduction

A robust literature connects children's and adolescents' social capital, or the resources youths can access through their social connections and relationships, to a range of desirable outcomes, including increased academic achievement and decreased delinquency. When examining behaviors, however, most research has examined connections between negative behaviors such as petty criminal activities, fighting, or substance use. We extend research on children's social capital by exploring possible associations between children's social capital and positive behaviors, measured here as prosocial behaviors. In addition, most of what we know about links between youth social capital and desirable outcomes has been derived from data drawn from the United States; we know little about how child social capital might operate in other settings that have different social structures or safety nets. As a test case, we examine data on 6th graders in Germany. We select the German context in part because one important source of child social capital, participation in religious congregations, is not as prevalent in modern Germany. We use data from the German National Education Panel Study (NEPS) and measures of child social capital, including parent-child interactions, family activities, and religious participation, to predict prosocial behavior.

1.1. What Is Prosocial Behavior?

The term prosocial behavior refers to positive forms of social behavior such as volunteering, comforting others, and sharing with others (Bar-Tal 1976). While some more recent studies have suggested that actors might engage in prosocial acts strategically (Warneken 2013), a key component of

conceptualizing prosocial behavior is the idea that is it made up of acts meant to benefit others rather than oneself (Martin and Olson 2015). Children who embrace prosocial behaviors often do so out of concern for others (Jackson and Tisak 2001). Prosocial behavior is associated with both positive developmental outcomes, such as greater empathy (Penner et al. 2005), and positive social outcomes, such as stronger peer groups (Layous et al. 2012).

While prosocial behavior is desirable on its own merits, some research has shown that prosocial behavior can also have a protective effect against undesirable behavior. Youths who demonstrate prosocial behavior toward family and strangers are less likely to have problems with aggression and delinquency (Padilla-Walker et al. 2015). Following the same group of children across eight years, Flynn et al. (2015) found that those who scored higher on measures of prosocial behavior scored lower on externalizing behavior scales, and prosocial orientations were also associated with lower internalizing behavior problems for girls. Other studies suggest that prosocial behavior in adolescence can protect against substance use later in life (Carlo et al. 2011).

We can make some assumptions about potential relationships between social capital and prosocial behavior based on such studies. For example, the idea that youths may engage in prosocial behavior out of concern for others (Jackson and Tisak 2001) relates to the embedded nature of networks in social capital theory: children who are more connected to other actors through more and stronger social ties will be more likely to develop the concern for others that may drive prosocial acts. Similarly, children who are surrounded by supportive family members may learn to adopt prosocial behavior through the transmission of norms; their family members model these actions, and children copy the behavior. Padilla-Walker et al. (2016) found that in adolescence maternal warmth was related to prosocial behavior toward family and that paternal warmth was related to prosocial behavior toward friends.

However, few studies explicitly examine the connection between social capital and prosocial behavior, leaving untapped the potential to leverage the power of social capital theory to explain the mechanisms between social connections and prosocial behavior. Only a handful of articles explicitly look at the relationship between social capital and prosocial behavior, and most of these use macro-level social capital variables such as country-level voting patterns (Lenzi et al. 2012; Brooks 2005). Even fewer look at adolescent or child social capital as opposed to adult social capital. One study that did focus on adolescent social capital found that youths who have high levels of social capital in the form of friend and teacher support and involvement in religious organizations are more likely to engage in prosocial bystander behavior (intervening in a bullying situation) than youth with low levels of social capital (Evans and Smokowski 2015).

1.2. Connections between Child and Adolescent Social Capital and Other Desirable Outcomes

When examining social capital children are able to build and exchange, Coleman's (1990) theories concerning resources that exist in the relationships between and among individuals that facilitate different social outcomes are particularly useful. Coleman (1990, 1988) described social capital as a reserve of resources that can be mobilized by or across social networks. While Coleman's ideas are applicable to all kinds of actors, social capital theory is especially attractive to explaining child development. The resources Coleman described as making up social capital (norms, information, and obligations) help children internalize desirable behaviors they observe in adult role models. Social capital is not merely another name for observation; however, social capital theory implies purposeful investment by adults in much the same way financial or human capital grow.

Following findings making initial connections between youth social capital and prosocial behavior (Evans and Smokowski 2015), we focus on elements of family social capital and religious social capital. By family social capital, we mean the bonds parents build with their children through purposeful investments of time, personal interactions, and role modeling that promote child socialization. Examples of family social capital might include time parents spend discussing their children's lives with them, activities that include not only personal monitoring of their children but investing in additional social networks with children's friends and those friends' parents, and interactions with

other actors designed both to promote their children's well-being and to model interactions with others to their children (see Dufur et al. 2013a, 2013b for information on potential social capital concepts and measurement approaches). The investments parents make in creating social capital in their homes create a greater sense of belonging that encourages children to internalize the norms their parents model (Coleman 1988), but they are also shaped in ways that should promote prosocial behavior. Many of the activities parents do to build social capital in the family meet the definition of prosocial behavior, as they are directed toward helping and investing in children as opposed to using the time and energy required for those investments on themselves. This specific role modeling of prosocial behavior also becomes a form of social capital in that it conveys information and norms about desirable behavior to offspring.

Family social capital represents more than physical or legal connections to children: parents must purposefully design interactions that develop the bonds along which information, obligations, and norms can pass. Examples of these interactions include creating discussion spaces in which offspring can use this social capital to request aid and in which parents and children can exchange expectations and norms (Crosnoe 2004; Parcel and Dufur 2001), as well as concerted cultivation (Lareau 2011), where parents invest considerable time and effort in creating joint activities with their children that pass information about what parents find valuable or desirable. Such investments also build trust between parents and children, an aspect of social capital that helps to transmit parent-favored norms about behavior and attainment. Parents help create additional social capital for youth when they build relationships with their children's friends and those friends' parents, allowing for joint transmission of prosocial norms (Crosnoe 2004; Dufur et al. 2015). These kinds of "bridging" social capital (Putnam 2000) efforts might be especially important in creating social capital for children, and perhaps even for promoting prosocial behavior as adolescents become more enmeshed in peer groups and start to distinguish themselves from family groups as they age.

Because social capital addresses relationships among multiple actors creating social resources, other actors at both micro and macro levels outside of the family may also be generators of social capital for children (Coleman 1988). In addition to social capital created within families, social capital is generated by the social ties that parents and children share with other adults interested in investing in young people, including teachers and coaches, co-congregants, neighbors, friends, and work colleagues (Crosnoe 2004; Dufur et al. 2015; Dufur et al. 2008; Hoffmann and Dufur 2008; Johnson et al. 2001; Parcel and Dufur 2001). Following Evans and Smokowski (2015), we examine another potential source of child social capital that might be associated with prosocial behavior: the creation of social capital through religious involvement or church attendance. Religious communities are a source of social bonds, meaning that people more involved in religious communities have more opportunities to build social capital; in addition, religious communities are explicitly organized to teach and transmit prosocial norms. Indeed, research examining the religious context has found that religiously active youth have higher levels of social capital (Ebstyne King and Furrow 2008).

In addition to the specific ways family and religious social capital might be connected to encouraging prosocial behavior, we also might expect to uncover such a connection because of the rich literature demonstrating links between social capital and other desirable child outcomes. For example, social capital appears to protect youth against participation in delinquent activities (Hoffmann and Dufur 2018; Han and Grogan-Kaylor 2015; Dufur et al. 2015). Similarly, Wright and Fitzpatrick (2006) found that family social capital had a significant negative relationship with aggression, fighting, and weapon use. Other studies, such as Crosby et al. (2003), have shown that social capital has a negative impact on adolescent risk-taking behaviors such as an early sexual debut. Family social capital also has a protective effect against alcohol and marijuana use (Dufur et al. 2013a), as well as tobacco use and smoking (Pérez et al. 2018; Thorlindsson et al. 2012). In addition, social capital can facilitate positive outcomes like academic achievement (Dufur et al. 2013b). Given both extant research that ties child and adolescent social capital to desirable outcomes and the specific prosocial nature of

adult investment in children required to build social capital with them, it seems logical that greater stores of social capital should be associated with more prosocial behavior.

1.3. Why Germany?

Most research that has connected youth social capital to positive outcomes such as academic growth and lower delinquency is generated from data looking at children and adolescents in the United States. However, it is reasonable to believe that social capital might operate differently in other settings or contexts. For example, family social capital might be less powerful in societies that have stronger social safety nets than the United States, as there would be no need for children to turn to social capital in lieu of financial capital. Some research supports this idea; Kääriäinen and Lehtonen (2006) found that family ties are stronger in welfare states with smaller social security systems. On the other hand, social capital might exert even more powerful effects in more collectivist societies. Coleman (1988) suggested this pattern in his original work on social capital when using the example of South Korean student groups, and some recent research has found evidence for strong bonding ties in South Korea (Jarvis et al. 2020). On the other hand, it is possible social capital behaves in similar ways across contexts, as adults across societies are interested in helping children develop into happy, productive adults. In addition, Parcel and Dufur (2001) found little evidence that social capital could substitute for financial and human capital in preventing behavior problems among children, even when children had lower than average financial or human capital resources. The lack of theoretical or empirical consensus on how social capital might operate in different contexts suggests a need for more cross-contextual research.

In this study, we focus on the German context. Although both the United States and Germany are wealthy western democracies, there are significant differences between the two nations. One major difference between the two is that the social safety net that exists in Germany (as in many European countries) is more substantial than that of the United States. Private health expenditure makes up around thirty percent more of total social health expenditure in the United States than in Germany (Alber 2010). In the German context, children may have more access to financial capital because of these social safety nets, and social capital may not be as necessary or as operative.

In addition to Americans having to rely more on their employers than the government for healthcare, about forty percent of the total social pension expenditure in the United States is private pension expenditure, compared to around seven percent in Germany (Alber 2010). There are also differences when it comes to the family leave that citizens of the two countries can rely upon to be available, with German parents having access to substantially higher resources in terms of both time and governmental financial expenditures (Federal Office for Migration and Refugees 2011). More generous parental leave programs might mean that German families have more opportunities to build social capital than families in the United States.

There are other socio-demographic and cultural components to Germany that suggest social capital might operate differently than it does in the United States. In Germany, sixty-three percent of mothers with children under eighteen years of age are employed, with more than half working part-time (Dotti Sani and Scherer 2018). In contrast, in the United States this figure is around seventy percent, three-quarters of whom work full-time (U.S. Department of Labor 2017). The fact that fewer mothers in Germany work—and that substantially fewer mothers who do work do so full-time—means that these mothers have much more time to spend with their children, thereby offering them more opportunities to build social capital. Similarly, 17 percent of German minors lived in single-parent households in 2016 (Family Report 2017), while in the United States, 27 percent of children did (Pew Research Center 2015). Children living in a household with two parents may have more opportunities to build social capital than children living in a single-parent household because there are more adults to spend time with. This means that children in Germany, who are more likely to live in a two-parent household, might have higher levels of social capital.

In general, Americans are much more religious than Germans. Fifty-three percent of Americans say religion is very important in their lives, while only 11 percent of Germans say the same. Nine percent of Germans report praying daily; in contrast, 65 percent of adults in America pray every day (The United States Census Bureau 2018; Evans and Baronavski 2018). While German children might have more opportunities to build social capital in the family than US youth do because of differences in family structure and parental work hours, German youths may have fewer opportunities to build religion-based social capital outside of the family than US children do.

Formal education structures also differ across the two country contexts. Because the German education system includes early tracking into professional or college prep tracks, it is possible that German children will create more social capital because they spend more time with other young people who share common interests, norms, and goals. On the other hand, some research suggests that participation in saturated networks can increase certain kinds of social capital but decrease other important types of social capital, such as the information needed to acquire a job (Granovetter 1983).

1.4. Germany and Social Capital

While there are good reasons to explore how children's social capital operates in Germany, we know little about children's social capital in Germany. In the small literature that does exist, social capital appears to operate for children and youth in Germany in similar ways as it does in other western democracies. For example, children in Germany with high levels of social capital are more likely to achieve academic success, a finding that is mirrored in many studies performed in the United States (Schmitt and Kleine 2010). However, even within the small literature on social capital in Germany, most of what we know concerns adults. Of the seventeen articles related to social capital in Germany that we examined, all but four consider adults.

One intriguing finding suggests a possible link between social capital and prosocial behavior among German youths. Hagan et al. (1995) examined association with extreme right-wing behavior among German youths and found that members of extremist groups who had more social connections were more likely to abandon extremist views and embrace more positive views of society. Although this article looked at an extreme form of behavior and a narrow measure of social capital, the promising findings are suggestive of a link among German children between social capital and desirable prosocial outcomes.

1.5. The Current Study

To examine whether the effects of social capital can be extended to both prosocial behavior and to a non-U.S. context, we model whether social capital generated by parental activities and religious activity are connected with higher levels of prosocial behavior among German children. We hypothesize that children who have more social capital will score higher on a prosocial scale.

2. Materials and Methods

Our analyses draw upon a sample of children from the National Education Panel Study (NEPS). From 2008 to 2013, NEPS data were collected as part of the Framework Program for the Promotion of Empirical Educational Research funded by the German Federal Ministry of Education and Research (BMBF). As of 2014, NEPS is managed by the Leibniz Institute for Educational Trajectories (LIfBi) at the University of Bamberg in cooperation with a nationwide network. The study consists of six cohorts beginning at different stages of the educational pathway ranging from birth to adulthood; we use data from the cohort beginning in the fifth grade. We draw upon data from the second wave of data collection, collected from October 2011 to January 2012, when students were in sixth grade for our analyses. The study utilized a multi-stage stratified cluster sampling strategy to obtain a nationally representative set of fifth-grade students. To account for this complex sampling design, we employ the cross-sectional sampling weights provided by the study in all our analyses. As such, our analytic sample consists only of those children for whom a valid sampling weight was available (n = 3522).

2.1. Measures

2.1.1. Dependent Variable

We assess child prosocial behavior through the prosocial behavior sub-scale of the Strengths and Difficulties Questionnaire (SDQ), which was administered to the parents of children during the second wave of data collection. The SDQ is a questionnaire which is often used to measure various psychological characteristics in children (Goodman et al. 2010). Of particular note, the questionnaire exhibits strong psychometric properties among German samples (DeVries et al. 2017). The prosocial behaviors sub-scale consists of five items including whether the target child is kind to younger children, considerate, and voluntarily helps others. Parents were asked to assess how well each item applied to their child over the previous six months. Each item is scored from zero (not applicable) to two (clearly applicable). Responses to these five items were then summed to create a scale ranging from zero to ten, with higher numbers indicating higher levels of prosocial behavior.

2.1.2. Key Independent Variables

Given that social capital is a complex concept and difficult to directly measure, we focus on several indicators of social capital for our analyses. We draw our measures from previous research on child and youth social capital (Dufur et al. 2008). One of the most salient indicators of social capital is related to parent–child interaction; the more parents and children interact—whether inside or outside the home—the greater the opportunity for the transmission of norms, obligations, and information and thus the building of social capital. With this in mind, our first measure of social capital consists of two scales, each measuring a dimension of parent–child interaction. The first scale measures the level of parent–child interaction inside the home and consists of four items representing how often a parent participated in each of the following activities with their child over the previous twelve months: having long talks, listening to music, making music, and playing games. The second scale assesses parent–child interaction outside the home and consists of responses to how frequently the parent engaged with their child in the following activities: attending classical concerts, attending pop concerts, going to the theater, visiting a museum, and going on an excursion. For both of the scales, each of these items was scored on a 7-point Likert scale ranging from 1 (Never) to 7 (Frequently); responses for each scale were summed and then divided by the number of items in the scale so that the overall scale maintained the item-scaling. As a result, each scale has a range from 1 to 7.

The second measure of social capital that we employ stems from Muller and Ellison's (2001) work that found that religious activity is associated with various forms of social capital and Evans and Smokowski's (2015) work that found an association between religious social capital and prosocial behavior. Accordingly, we include a number of measures of both child and parental religiosity. Child and parental religiosity are each assessed via two items. The first variable indicates the individuals' self-reported religiosity; we measure this for both the parent and the child. Responses to the item consisted of a four-point Likert scale ranging from "not at all religious," through "rather non-religious," and "rather religious," to "very religious." The second item is a dichotomous measure of whether the individual considers themselves an active member of a religious community; 1 = yes, 0 = no. As above, we measure this for both the parent and the child.

Finally, we include a number of measures that indicate the presence of social capital in the home and the ability of parents to transmit that social capital. We include two measures of educational aspirations held by the parent for their child—the first indicating their ideal aspirations, and the second indicating their realistic expectations. These variables represent attempts to pass educational norms across social capital ties. Each of these items is measured on a three-point scale with the following categories: leaving certificate from Hauptschule or less, leaving certificate of the Realschule, and arbitur. Finally, as noted by Coleman (1988), when parents spend a greater amount of time working outside the home, they are less available to build and transmit social capital to their children. As such, we include

a measure indicating the number of hours that the parent who works the most outside of the home works in a typical week.

2.1.3. Controls

We also include a number of socio-demographic variables in our analyses. At the family level, we include a logged measure of monthly household income. We include a variable indicating the marital status of the parents, which includes three categories: married or in a civil partnership, formerly married (divorced or widowed), and single. We also include the number of siblings living in the household, which is a count variable ranging from 1 to 10. The final family-level variable we include is the highest level of education achieved by either parent (vocational qualification or higher education qualification). At the child level, we control for the biological sex (male = 1, female = 2) and the immigration generation status of the child (no migrant background, first-generation migrant, second-or-more-generation migrant).

2.1.4. Missing Data

Data were missing on a number of variables included in our analyses. We assessed data for systematic patterns of missingness; Little's test for covariate dependent missingness indicated that the data were Missing Completely At Random. As such, variables that were missing on fewer than three percent of cases were treated with listwise deletion (n = 89), while variables missing between three and fifty percent of cases were treated with multiple imputation using chained equations in Stata15 (StataCorp LLC, College Station, TX, USA). A total of twenty complete imputed datasets were created with a burn-in period of 500 iterations between imputations. We assessed these imputed datasets for consistency with the original data and found no apparent issues apparent. Our final analytic sample consists of 3433 sixth graders.

2.1.5. Analytic Strategy

In order to assess the relationship between social capital and child prosocial behaviors, we estimate a series of Ordinary Least Squares regression models. In our first model, we directly assess the relationship of interest by regressing prosocial behaviors on all of the social capital indicators. In our second model, we separately assess the association between prosocial behaviors and all of our control variables. In our final model, we assess the relationship between social capital and prosocial behaviors in the presence of our controls to see if any of the relationships experience attenuation.

3. Results

Table 1 presents a brief description of each variable included in the analyses and the appropriate descriptive statistics. In general, the children in our sample exhibit a large number of prosocial behaviors, averaging a score of 8.616 out of 10 on the prosocial behavior scale. In terms of social capital, parents appear to engage in more social capital building activities inside the home than they do outside the home, with average scores on the respective scales of 5.5 and 2.7 on the two activities scales. A little over half of the children and parents identify as at least somewhat religious while relatively fewer identify as an active member of a religious community. In general, parents both ideally and realistically expect that their children will finish with an Arbitur degree. Working parents typically averaged 33.6 h of work outside the home each week. Other socio-demographic factors were consistent with expectations of a nationally representative sample of German youths; the sample was approximately half female, came more often from homes with married parents, generally were not from immigrant backgrounds, and had between one and two siblings.

Table 1. Descriptives of Variables Included in Analyses, National Educational Panel Study (NEPS) Data.

Variable	Description	Range	Mean/Proportion	SD
Dependent Variable				
SDQ-Scale Prosocial Behavior		1–10	8.616	1.358
Key Independent Variables				
Home Activity Scale		1–7	5.518	0.989
Excursions Scale		1–7	2.657	0.739
Religiosity of Target	How religious targets report being	1–4		
Not at All Religious			0.19	
Rather Non-Religious			0.2833	
Rather Religious			0.4235	
Very Religious			0.1032	
Religious Activity of Target	If target is an active member of a religious community	0–1		
No			0.7126	
Yes			0.2874	
Religiosity of Parent	How religious parents report being	1–4		
Not at All Religious			0.1757	
Rather Non-Religious			0.2663	
Rather Religious			0.4676	
Very Religious			0.0904	
Religious Activity of Parent	If parent is an active member of a religious community	0–1		
No			0.7399	
Yes			0.2601	
Ideal Education Aspiration		1–3		
Leave school without any qualification/ Leaving certificate from the Hauptschule			0.0229	
Leaving certificate of the Realschule/ certificate of intermediate secondary education			0.3137	
Abitur			0.6634	
Realistic Educational Aspiration		1–3		
Leave school without any qualification/ Leaving certificate from the Hauptschule			0.0762	
Leaving certificate of the Realschule/ certificate of intermediate secondary education			0.364	
Abitur			0.5598	
Hours Parent or Parent's Partner Works	How many hours the parent or parent's partner works each week on average	0–95	33.58	9.781
Controls				
Income (logged)	Monthly household income of all household members	5–12	8.056	0.504
Marital Status	Parent's marital status	1–3		
Married or in Civil Partnership			0.8187	

Table 1. *Cont.*

Variable	Description	Range	Mean/Proportion	SD
Formerly Married (Divorced or Widowed)			0.1207	
Single			0.0606	
Number of Siblings	Auxiliary number of siblings in the household	1–10	1.122	0.927
Highest Education Achieved by Parent or Parent's Partner	The highest level of education attained by the target's parent or parent's partner	1–2		
Vocational Qualification			0.8793	
Higher Education Qualification			0.1207	
Sex		1–2		
Male			0.4993	
Female			0.5006	
Immigration Generation Status	Immigration generation status of targets.	1–3		
No Migrant Background			0.8014	
1st Generation Migrant			0.0272	
2nd or More Generation Migrant			0.1715	

Results from regression models are presented in Table 2. Our first model regressed prosocial behavior on our measures of social capital. Results from this model indicate that social capital building within the home is positively associated with child prosocial behavior such that a one-point increase in the parent–child interaction within the home scale is associated with a 0.1337-point increase on the prosocial behavior scale ($p < 0.001$). The model also indicates that higher levels of youth religiosity are associated with more prosocial behaviors when compared to very non-religious children ($p < 0.01$). Additional analyses (not shown, available upon request) indicated that no statistical difference existed among the other three levels of youth religiosity in terms of their effect on prosocial behaviors. Interestingly, while a lack of social capital in the form of low religiosity was negatively associated with prosocial behavior, being currently affiliated with a religious community had no relationship with prosocial behavior. No other statistically significant associations were detected in our first model.

Table 2. Ordinary Least Squares Regression Coefficients for Strengths and Difficulties Questionnaire (SDQ)-Scale for Prosocial Behavior regressed on Social Capital and Socio-Demographic Characteristics.

Variable	Social Capital Variables	Control Variables	All Variables
	Model One	Model Two	Model Three
Home Activity Scale	0.1337 ***		0.1206 **
	(0.0381)		(0.038)
Excursions Scale	0.0293		0.0084
	(0.0462)		(0.0471)
Religiosity of Target			
Rather Non-Religious	0.297 **		0.2291 *
	(0.1012)		(0.099)
Rather Religious	0.4209 ***		0.3646 **
	(0.1065)		(0.1063)
Very Religious	0.3705 **		0.3339 *
	(0.1496)		(0.1485)

Table 2. *Cont.*

Variable	Social Capital Variables	Control Variables	All Variables
Religious Activity of Target			
Yes	−0.0491 (0.0869)		−0.0889 (0.0874)
Religiosity of Parent			
Rather Non-Religious	−0.087 (0.1056)		−0.0597 (0.1026)
Rather Religious	0.1109 (0.1039)		0.1352 (0.1025)
Very Religious	0.1876 (0.1563)		0.2712 (0.1519)
Religious Activity of Parent			
Yes	−0.125 (0.0881)		−0.1409 (0.0877)
Ideal Education Aspiration			
Leaving certificate of the Realschule/certificate of intermediate secondary education	0.0199 (0.2624)		0.0447 (0.2666)
Abitur	0.0322 (0.2781)		0.0773 (0.2832)
Realistic Educational Aspiration			
Leaving certificate of the Realschule/certificate of intermediate secondary education	0.1386 (0.152)		0.0745 (0.1515)
Abitur	0.2325 (0.1812)		0.164 (0.1774)
Hours Worked	0.0011 (0.3045)		0.0021 (0.0039)
Income		0.0813 (0.0772)	0.0033 (0.0783)
Marital Status			
Formerly Married		−0.0302 (0.0997)	0.0043 (0.097)
Single		−0.335 * (0.1392)	−0.3341 * (0.1419)
Number of Siblings		−0.0068 (0.0332)	−0.0015 (0.0332)
Education Level of Parent or Parent's Partner			
Higher Education Qualification		0.0539 (0.097)	0.0175 (0.0955)
Sex			
Female		0.47 *** (0.0643)	0.4377 *** (0.0646)
Immigration Generation Status			
1st Generation Migrant		−0.857 *** (0.2318)	−0.7963 ** (0.2337)
2nd Generation Migrant		−0.1383 (0.0944)	−0.166 (0.096)
Constant	7.393	7.538	6.992

Note: $N = 3433$; standard errors in parentheses. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Our second model assessed the relationships between our included socio-demographic controls and prosocial behavior. The model indicates that children from single-parent homes exhibited fewer prosocial behaviors on average than did their peers from married parent homes (−0.335, $p < 0.05$). Additionally, children who were first generation immigrants scored on average 0.857 points lower on the prosocial behaviors scale than did youth with no immigrant background ($p < 0.001$). The model also indicated that girls scored an average of 0.470 points higher on the prosocial behavior scale than

did their male counterparts ($p < 0.001$). However, no statistical differences were observed based on household income levels, parental education levels, or number of siblings in the home.

Our final model estimated the effects of social capital on prosocial behaviors in the presence of socio-demographic controls. The model indicated that the statistically significant effects observed in Model 1 were still present in the presence of socio-demographic controls; however, all the effects were attenuated slightly both in terms of effect size and statistical significance. Family social capital in the form of home activities is associated with higher prosocial scores and describing oneself as participating in any kind of religious behavior is associated with more prosocial behavior than describing oneself as not being religious at all. Again, by contrast, current participation in a religious community was not associated with prosocial behavior. While these findings provide some support for our hypothesis that social capital would be associated with prosocial behavior among German children, the lack of significant findings concerning other measures of social capital means this evidence is somewhat mixed.

4. Discussion

The aim of this paper was to assess the relationship between social capital and prosocial behaviors among children and to extend knowledge about connections between child social capital and positive outcomes to a non-US context, in this case Germany. A handful of studies have suggested that certain family dynamics that are typically understood as indicators of social capital are associated with various prosocial behaviors. However, these studies have largely ignored potential associations among children and youth. This association is important to understand because children's prosocial behavior, in addition to being a valuable part of development, is associated with avoiding risky behaviors and developing greater empathy (Padilla-Walker et al. 2015; Carlo et al. 2011). Our study makes a number of important contributions to this discussion.

The positive effects of social capital have been well documented across a number of child and youth outcomes ranging from promoting academic achievement and growth, to protecting against various delinquent behaviors. Given this robust body of literature, we anticipated that similar effects would be observed for promoting prosocial behaviors. However, our results generally indicate that social capital has few statistically significant associations with prosocial behaviors, and the associations that do exist indicate only small differences. While we did find that parent–child interaction in the home was associated with a higher level of prosocial behavior among the German children we study here, the effect was negligible in terms of the size of the scale. Additionally, although youth religiosity was associated with prosocial behaviors, the lack of an association between any of the other measures of religiosity at the parent or child levels seems to indicate that the idea of social capital in the form of social closure among a religious community is not operative among our sample. Taken together, the evidence from this study suggests that social capital, conceptualized as the intentional social investment of parents in their children consistent with Coleman's (1988) theory, has much weaker associations with the prosocial behaviors that children and youth adopt than it does with many other child and youth outcomes.

The lack of a statistical association between social capital and prosocial behaviors in our sample is unexpected. However, the significant associations we did observe suggest some avenues for additional research concerning how social capital is formed and how it might operate as a mechanism across different kinds of outcomes. Most conceptualizations of social capital, particularly Coleman's (1988), depict the child as an inanimate object akin to a sponge, simply soaking up the social capital that parents and other adults pour onto them. However, when it comes to developing positive behaviors such as those captured by the SDQ subscale of prosocial behaviors, it may be that the child must play an important active role in taking upon themselves the pertinent norms, information, and obligations. Since prosocial behaviors by definition require children to choose others over themselves, children's agency is a crucial component to consider. As such, future research should examine how the active participation of children and adolescents in social capital building activities may affect their ability to

build, store, and leverage social capital, as well as how social capital provided for children rather than built with them might be more effective in promoting some positive outcomes than others.

We were also interested in extending research concerning child and youth social capital to additional contexts beyond the United States, including contexts with sufficient similarities and differences to the US to help tease out when social capital is more and less useful. We may have been more successful in this effort, as evidenced by the lack of associations between religious social capital and prosocial behavior in the findings we report here. Because religious communities are both good at building social capital and are explicitly organized to teach prosocial norms, we expected to find an association between religious social capital and child prosocial behavior here similar to previous research using US samples. The lack of similar associations in this German sample, representing a country where citizens report substantially less formal religious involvement than US citizens do, underscores the importance of considering context. Our findings emphasize the need for more research looking at and across new contexts to better determine how social capital is derived in different contexts and where it is more or less useful.

Our study is not without limitations. Previous studies have demonstrated that the relationship quality between the parent and the child is an important component in the formation of social capital. Adequate measures of the quality of the parent–child relationship were not available in this wave of the NEPS, thus limiting our ability to measure social capital within the home. Additionally, while the measures we employ as indicators of social capital have theoretical underpinnings, it is entirely possible that the measures are simply inadequate to accurately capture the social capital that individuals possess. Despite these limitations, our study suggests that there are still important implications for social capital theory which have yet to be explored.

Still, the models we employ here could be used to examine the efficacy of religious social capital in settings both more and less religious than the US, as well as to look at additional outcomes beyond the academic and delinquency outcomes typically used in youth social capital research. While our findings concerning the effects of child social capital on prosocial behavior were mixed, the significant findings concerning family social capital are suggestive that such social capital is important for children across many contexts. In addition, we are hopeful that our results will encourage more research on the potential connections between youth social capital and other positive outcomes. For example, while not available in these data, researchers may be able to explore whether social capital is associated, in ways similar to what we discover here, to volunteering, altruistic actions, and charitable donations. We hope for future research with additional indicators of social capital, including those tailored to specific contexts, that can examine the extent to which social capital is efficacious in promoting a variety of indicators of healthy development.

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