Parent–Child Conflict During Homeschooling in Times of the COVID-19 Pandemic:

A key Role for Mothers' Self-Efficacy in Teaching

Peter F. de Jong^a, Bieke G. M. Scheurs^a, and Marjolein Zee^a

^a Research Institute of Child Development and Education, University of Amsterdam, The Netherlands

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Correspondence concerning this article should be addressed to Peter F. de Jong,
Research Institute of Child Development and Education, University of Amsterdam, PO box
15780, 1001 NG Amsterdam, The Netherlands. Email addresses: P.F.deJong@uva.nl

Abstract

To contain the COVID-19 pandemic schools have been closed in many countries. Children stayed at home and were assisted by their parents with their schoolwork. Evidently, homeschooling puts extra demands on parents. We presumed that parents' sense of self-efficacy in teaching would play a key role in how they cope with this extra task of homeschooling. In particular, we hypothesized that parental characteristics (social-economic status (SES) and Stress) and social-contextual factors (home chaos; school support) would contribute to parents' teaching self-efficacy and that, in turn, a lower efficacy would result in more parent-child conflicts during home schooling. Participants were 173 mothers of children in kindergarten or early elementary schools, who provided information for one of their children about interpersonal conflicts around schoolwork before and during school closure. Additionally, they reported on their self-efficacy in teaching, perceived stress during lockdown, home chaos, and school support. Path analyses indicated that mothers' perceived stress and household chaos were associated with a lower sense of self-efficacy in teaching, whereas school support, but not family SES, was related to a higher level of teaching self-efficacy. Higher levels of self-efficacy beliefs, in turn, were associated with a lower degree of parent-child conflict during schoolwork, even after controlling for prior levels of conflict. We discuss how the results of this study might be used to foster parents' self-efficacy in teaching and thereby decrease the amount of parent-child conflict during parents' support with schoolwork.

Keywords: Parental self-efficacy in teaching, homeschooling, parent-child conflict, COVID-19

Parent–Child Conflict During Homeschooling in Times of the COVID-19 Pandemic:**A key Role for Mothers' Self-Efficacy in Teaching**

The COVID-19 pandemic has led to temporary school closures in many countries around the world. As a result, hundreds of millions of children were forced to do their schoolwork at home for weeks in a row (Unesco, 2021). During this period, parents often had to assist their children with their schoolwork. This role as a part-time teacher put extra demands on parents, posing a number of additional problems for them (Chung et al., 2020). Due to stress or a lack of support some parents might have felt less able to teach their child at home. Furthermore, parents might have experienced difficulties regulating the behavioral problems of their child that can occur during their help with schoolwork. In the present study, we examined parent factors (i.e., SES and amount of stress) and social contextual factors (e.g., household chaos and school support) that may have contributed to parents' sense of self-efficacy in teaching young children during the COVID-19 pandemic as well as the extent to which these parental self-efficacy beliefs in teaching in turn contributed to parent–child conflict around schoolwork.

Self-efficacy generally pertains to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). In general, parental self-efficacy reflects parents’ beliefs about their ability to parent children successfully—to guide and support children such that it optimizes their development (Coleman & Karraker, 1998; Jones & Prinz, 2005). In the context of homeschooling, parental self-efficacy concerns parents’ self-referent judgments of their ability to adequately instruct, engage, and emotionally support their child in schoolwork. When parents believe their involvement will make a positive difference for their children’s schoolwork, they are more inclined to be involved in their children’s schoolwork (Hoover-Dempsey et al., 2001). In addition, a self-efficacious outlook on teaching may further help parents decide which

homeschooling activities to pursue and how they can emotionally support their children.

Lastly, parental self-efficacy may determine whether parents persist in the face of difficult situations and how they interpret the behaviors of their children during frequent and sometimes challenging interactions with them (Albanese et al., 2019; Bandura, 1997; Zee et al., 2017).

As yet, little is known about the specific relation between parents' sense of self-efficacy in teaching and parent-child conflict around schoolwork, especially in times of extra homeschooling. Evidence from research on parental self-efficacy shows, however, that a larger sense of parental efficacy increases the likelihood of success in parenting, resulting in better child development (Jones & Prinz, 2005). Relevant to homeschooling, a larger sense of parental self-efficacy is associated with less behavioral problems in children (Albanese et al., 2019), which might generalize to parent-child conflicts during parental help with schoolwork as well. Moreover, evidence on teacher self-efficacy suggests that teachers' capability beliefs may affect the quality of teacher-child relationships (e.g., Hamre et al., 2008; Jimmieson et al., 2010; Kunemund et al., 2020; Mashburn et al., 2006; Zee & Koomen, 2016). For example Hamre et al. (2008) found that teachers with generally low self-efficacy judgments experienced higher degrees of teacher-child conflict than would be expected based on their judgments of these children's problem behaviors. More recent results also concur with this idea, suggesting that teachers who feel less self-efficacious in managing individual children's behaviors in class generally experience more conflict with them (Kunemund et al., 2020; Zee et al., 2017). Thus, based on research on parental and teacher self-efficacy, it seems likely that parents who feel less efficacious in teaching their children will also experience more conflicts with their child during help with schoolwork.

Self-efficacy is shaped by mastery experiences (i.e., the extent to which parents experience themselves as supporting their children successfully) and emotional states, like

stress (Bandura, 1997; Morris et al., 2017). Similar to parenting behaviors (Belsky, 1984), parental self-efficacy seems to be influenced by factors in three domains: Personal characteristics of the parent, social contextual or family factors, and child characteristics (Sevigny & Loutzenhiser, 2010). Several of these factors provide information which might be used to develop a sense of self-efficacy.

With respect to parent characteristics, one of the factors that might act as a source of mastery experiences is parents' socioeconomic status (SES). There is abundant evidence that parents with a higher SES provide more favorable home learning environments (HLE) with richer and more elaborate language (Hoff, 2013), better instructional quality, and emotional support during joint book reading (Leseman & de Jong, 1998), and more literacy and numeracy related activities (e.g., Niklas & Schneider, 2017). In turn, a more favorable HLE has positive effects on early literacy and numeracy development (Kleemans et al., 2012; Sénéchal et al., 2017), an outcome that may provide parents with the type of mastery experiences needed to feel self-efficacious in teaching their child. However, whether parents with a higher SES also judge themselves as more capable to teach their child is largely unknown. An exception is a recent study of Dulay et al. (2018) among parents of 3- to 5-year-old Philippine children. This study showed that parents with a higher SES, and especially those of the younger children, felt more self-efficacious than those with a lower SES. However, self-efficacy in this study was mostly concerned with more general feelings about parenting ability and did hardly consider whether parents felt able to teach their child.

Parents may also use information about their own emotional states when judging what they can do to teach their children at home (Bandura, 1997). Perceived stress seems a particular relevant factor in times of the COVID-19 pandemic and school closure, as there are threats to financial security and health, as well as a continuous time pressure caused by job requirements and the demand to assist children with schoolwork (Coyne et al., 2020). Also in

normal times, however, stress is found to be moderately related to the broader concept of parenting efficacy (Sivigny & Louzenhiser, 2010; see Fang et al., 2021, for a review).

Furthermore, teachers tend to report a lower sense of self-efficacy when they experience more stress from their class (e.g., Klassen & Chiu, 2010). Hence, it seems apt to expect that more stress during school closure will be associated with a lower sense of self-efficacy in teaching.

A social contextual factor that might affect parents' mastery experiences is household chaos. Homeschooling will generally require regular help with schoolwork and parents have to (re)organize their household to fulfill this requirement. Some households, denoted as chaotic households, are characterized by high levels of disorganization as expressed by limited structure, a lack of daily routines, and elevated levels of noise (Matheny et al., 1995; Mills-Koonce et al., 2016). Young children growing up in a chaotic home environment tend to show more conduct problems and poorer cognitive and academic outcomes (Garrett-Peters et al., 2016; see Marsh et al., 2020, for a review). Household chaos might impose a challenge for parents to find a quiet place to attend to and support their child with schoolwork. As such experiences cannot be attributed to a lack of effort, they may seriously affect parents' sense of self-efficacy to help their child (cf., Bandura, 1997; Tschannen-Moran & McMaster, 2009). These effects are probably larger in lower SES families, who generally have smaller houses, less working space, and a lower number of devices that are fit for online learning (Bansak & Starr, 2021). Hence, the overall inability to organize an orderly household may serve as a source of failure that will probably lead to a lower sense of self-efficacy of a parent to help their child with schoolwork.

Support from children's schools might also help parents to develop and sustain a sense of self-efficacy in teaching. This is especially true in difficult times such as the COVID-19 lockdown (cf. Bandura, 1997, p. 101), which required from most parents to

swiftly take over the lessons planned by the school to guide their children. Higher levels of perceived school support, like clear instructions, access to the needed lesson content, and good working digital learning platform, may contribute to parents' sense of self-efficacy in teaching, as this type of support can ease parents' efforts in their homeschooling activities. Indeed, evidence from research on teachers' self-efficacy has shown that higher levels of perceived school support in terms of clear goal structures and appreciation are positively related to teachers' sense of self-efficacy (Calik et al., 2012; Fackler & Malmberg, 2016; Stipek, 2012). Furthermore, such external school support has been found to increase the degree of parental involvement in supporting their children during normal school times (Niehaus & Adelson, 2014).

Present Study

The aims of the present study were to advance our understanding of 1) parent characteristics and social contextual factors that affect parents' teaching self-efficacy; 2) the relation between parents' teaching self-efficacy and parent-child conflicts during parents' help with schoolwork; 3) the extent to which parents' sense of teaching self-efficacy mediates the relation of parent and social contextual characteristics with parent-child conflict during homeschooling. The relationships among the variables included in this study are depicted in Figure 1.

The main parent characteristics were SES, approximated by the education of the parents, and stress during school closure. In assessing their relationships with self-efficacy in teaching we controlled for the number of working hours of the parents and whether they worked at home. Social contextual characteristics involved household chaos and perceived support by the school. In addition, the number of rooms, workplaces (desks), and devices (computers and tablets) in parents' houses were registered as these might be confounded with household chaos. We also controlled for the gender and grade of the child. More importantly,

we controlled for the level of parent–child conflict during parents' help with schoolwork before school closure and for parent–child closeness as an overall index of parent–child relationship quality. The latter allowed us to test whether school closure affected the overall parent–child relationship or parent–child conflict during schoolwork in particular. As shown in Figure 1, our main hypothesis was that the relations of parent and family characteristics with parent-child conflict around schoolwork during school closure are mediated by parents' sense of teaching self-efficacy.

Figure 1

Predictors of Parents' Teaching Self-Efficacy and Conflict Around Schoolwork During School Closure

Method

Participants

Participants were 173 mothers with children from 23 schools in a rural area in the Netherlands. Mothers had a mean age of 37.50 years ($SD = 4.41$). Each mother was asked to report on one particular child about her conflicts around schoolwork. Some mothers had children who participated in a prevention program for dyslexia (see below). These mothers were asked to report on this particular child. The other mothers were asked to select a child in kindergarten or first or second grade, but preferably a child in the latter two grades. This resulted in 173 mother–child dyads. Of the 173 children, 65 were in kindergarten (30 boys, 35 girls) with a mean age of 5 years 8 months ($SD = 5.5$ months), 75 in Grade 1 (46 boys, 29 girls) with a mean age of 6 years 9 months ($SD = 4.44$ months), and 33 in Grade 2 (17 boys, 16 girls) with a mean age of 7 years 10 month ($SD = 7.4$ months).

The 23 schools came from a group of 54 schools that took part in a research project on the effects of a prevention program for dyslexia. All schools were asked to email a link to a questionnaire to the parents of children in kindergarten and in first and second grade. Parents from 272 children agreed to participate. Of these parents, 70 were ultimately removed. Of these, 60 parents completed less than 66.7% of the questions and therefore essential information was missing. In one school, 10 participants gave information about the same two children and were therefore removed as well. The remaining 228 participants consisted of 195 mothers, 25 fathers, and 4 persons without information about their gender. Of the fathers, 13 reported about the same child as one of the mothers. Therefore, we decided to restrict the study to mothers.

In this sample, the number of mothers with college was higher than the average in the Netherlands (56.6% versus 41%; Social Cultural Institute, 2020), but ranged from the lower educational tracks to PhD-level. The education level of the fathers was somewhat higher than average (44.6% versus 41% in the total population), but with a similar variation as the mothers. The mothers worked less hours per week than average (22.5 versus 28), but varied

from no work to 40 hours a week. Thus, although the response rate was low and the sample might not be fully representative, variation in scores on key variables of interest for this study was large.

Measures

Background Measures

Working hours. Mothers were asked to report on the number of paid hours and whether they worked outside the home (yes or no) during the lockdown.

SES. In this study, the level of education of the mother and the father, measured on a scale ranging from 1 (*only primary education*) to 9 (*PhD or equivalent*), served as a proxy for SES. The mothers indicated their own level of education as well as the educational level of their partners. SES was the mean of both scores. If the educational level of the partner was not indicated (8.1%), SES was based on the level of education of the mother only.

Perceived Stress. The Dutch version of the short form of the Perceived Stress Scale (PSS) was administered (Cohen et al., 1983; Korten et al., 2017). The PSS is generally regarded as a measure of global levels of stress. On each item, participants had to report on a scale ranging from 1 (*never*) to 5 (*very often*) about feelings of helplessness, loss of control, and general self-efficacy. For this particular study, we asked about these feelings during the lockdown. An example of an item is: "When the schools were closed, how often have you been upset because of something that happened unexpectedly?". The scale consisted of 10 items. A mean score over the 10 items was computed. Cronbach's α of the scale was .91.

Help with schoolwork. Mothers indicated how often they and their partner helped their child with their schoolwork before and during school closure. Before the schools were closed, the frequency was rated on a scale from 1 (*not at all*) to 4 (*four or more times a week*). During school closure mothers rated the help of their partners on the same scale. However, mothers were expected to give far more help during school closure than the fathers

and therefore the scale of the mothers had extra alternatives, 5 (*two or three times a day*) and 6 (*four or more times a day*). Both types of scales were put on a scale ranging from 1 (not at all) to 6 (four or more times a day).

Social contextual factors

Physical characteristics of the home. Questions were asked about the number of rooms in the house (not counting bathrooms and kitchen), the number of places with desks or tables, and the number of devices (computers and tablets).

Household chaos. We selected seven, mostly positively worded, items from the Chaos, Hubbub, and Order Scale (items 1, 4, 7, 8, 12, 14, 15; see Matheny et al., 1995) because not all items of the original scale seemed to fit the Dutch situation. We added two more items: “We always eat at the same times” and “We have a well-organized household”. Mothers had to indicate the extent to which a statement fitted their household on a scale from 1 (*certainly not*) to 5 (*fits certainly*). A mean score across the nine items was computed. Cronbach’s alpha of the scale was .78, which is virtually equal to the reliability of the original scale (Matheny et al., 1995).

School support. Parents were asked to evaluate the quality of the support received from the school during the lockdown. Support of parents by the school concerned, for example, the quality of instruction about how to tutor their children at home, the quality of the learning materials offered during the lockdown, the digital learning environment, and the accessibility of the teacher and the principal. Parents were asked to rate the quality of school support on a scale ranging from no support” (0), “poor” (1) to “very good” (10). The scale consisted of 9 items. Cronbach’s alpha of the scale was .86.

Outcome Measures

Parent teaching self-efficacy. Three scales of the short form of the Student-Specific Teacher Self-efficacy Scale (Zee et al., 2016; Zee et al., 2018) were used to measure mothers’

self-efficacy beliefs in helping their child with schoolwork. The scale Instructional Strategies consisted of four items about whether mothers felt able to give their children instruction. An example is the item "To what extent can you provide an alternative explanation or example when your child is confused?". The four items of the scale Engagement enquired to what extent mothers felt able to motivate their children for schoolwork. An example is the item "To what extent can you motivate your child for his/her schoolwork?". The scale Emotional support included four items and concerned mothers' perceived ability to give positive feedback, provide support at the right moment, and create settings in which their children feel free to explore and learn. An example of an item is "How well can you respond positively and sincerely to your child during your help with schoolwork?". A few questions had to be slightly adapted to the situation of mothers' help with schoolwork. For example, the last question was originally "How well can you respond positively and sincerely to this student in the classroom?". Each item was rated on a seven-point scale, ranging from "not at all" (1) to "a great deal" (7). The items of the three scales were added to one sum score indicating mothers' teaching self-efficacy. Cronbach's alpha of the full scale was .94.

Mother-child conflict. Three items that could be adapted to the situation of homeschooling were selected from the short form of the Dutch authorized version of the Student-Teacher Relationship Scale (STRS; Koomen et al., 2012). Two more items were taken from the short English and long version of the Child Parent Relationship Scale (CPRS, Driscoll & Pianta, 2011). Each item concerned a statement about the amount of conflict in the parent-child relationship. The items were adapted to the situation in which the mother assists the child with homework. For example, the item 'Dealing with my child drains my energy' was changed to 'Dealing with my child drains my energy when I have to help with schoolwork'. Each of the five items had to be rated on a five-point scale from "definitely does not apply" (1) to "definitely applies" (5). Mothers were asked to rate the items first in

retrospect, that is before closure of the school, and then after the schools were closed. The reliability of the scale (Cronbach's alpha) was .90 when rated before school closure and .91 during school closure.

Mother-child closeness. Mothers' perceptions of the degree of closeness (i.e., warmth and open communication) in the relationship with their children were measured using the Dutch short version of the STRS (Koomen et al., 2012; Zee et al., 2013). We used four of the five items of this version and slightly adapted each item (i.e., "this student" was changed into "my child") to the context of parenting. An example item is: "I share a warm and affectionate relationship with my child". Each item had to be rated on a five-point scale from "definitely does not apply" (1) to "definitely applies"(5). Mothers were asked to rate the items first in retrospect, that is before closure of the school, and then when the school were closed. The reliability of the scale (Cronbach's alpha) was .77, both before and during school closure.

Procedure

The study was conducted during or immediately after the 8-week school closure in the spring of the year 2020. Parents were sent an email through the school of their children to inform them about the study and privacy conditions, and to invite them to participate. If they were interested, they could click on a link that led them to a website on which they were informed about the privacy regulations prescribed by the Ethics Committee of the University of XXX (blinded for review) and could provide informed consent. Only after active consent was given, participating parents could fill out the questionnaire. The questionnaire started with questions about background characteristics such as gender, age, and educational level, and continued with questions about the amount of help provided before and during school closure, about mothers' perceptions of conflict, closeness, and teaching self-efficacy in

relation to their child, household chaos, perceived stress, and support by school. The questionnaire took on average 30-45 minutes to complete.

Data Analysis

We conducted path analysis to examine the mediating role of mother's sense of self-efficacy in the relation between various parental and social contextual factors and mother-child conflict when mothers helped with homework during the school closure (see Figure 1). Our main interest was in full mediation, but we also examined whether this model could be improved by allowing some direct effects of parent and social contextual factors on conflict around homework. We tested a model with and without an autoregressor, that is with and without controlling for conflicts during homework in the period before school closure.

Models were estimated in *Mplus* version 7.11 (Muthén & Muthén, 1998-2013) with full information maximum likelihood estimation. Model fit was evaluated using the chi-square statistic of overall goodness of fit, the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). A chi-square *p*-value larger than .05 indicates exact fit (Hayduk, 1996). A CFI larger than .95 is considered a good fit (Hu & Bentler, 1999). Values of the RMSEA below .05 were taken as close fit, below .08 satisfactory fit, and values over .10 indicate poor fit (Browne & Cudeck, 1993).

Results

Descriptive Statistics

Data were checked for missing values and outliers. On Closeness, both before and during the period of homeschooling, three scores were identified as outliers. These scores were more than three standard deviations below the group mean and coded as missing. On the variables Perceived Stress, Household Chaos, and School Support, nine mothers had a missing score. These mothers had terminated the questionnaire before the end was reached.

Descriptive statistics of the variables are presented in Table 1. With one exception, the distributions of all variables are approximately normal. Only the distribution of the amount of help with homework by the father before school closure was skewed and had a high kurtosis.

Table 1*Descriptive Statistics of the Main Variables*

Variable	<i>N</i>	Max.	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
Help with homework						
Mother before closure	173	6	1.93	1.12	.69	-1.08
Mother during closure	173	6	4.83	1.28	-.89	.00
Father before closure	173	6	1.39	.77	2.00	2.96
Father during closure	173	6	2.91	1.18	.05	-.93
Parent characteristics						
Hours of work	173	-	22.58	9.89	-.87	.57
SES	173	9	5.69	1.56	-.12	-.67
Perceived stress	164	5	2.23	.78	.67	.24
Social contextual factors						
Number of rooms	173	-	5.25	1.17	.70	1.60
Number of places to work	173	-	4.11	1.36	.82	1.04
Number of devices	173	-	4.60	1.67	.16	-.42
Household chaos	164	5	1.90	.57	.55	-.35
School support	164	10	7.87	1.80	-.59	.25
Mother's teaching self-efficacy	173	7	5.44	1.03	-.50	-.14
Conflict						
Before closure	173	5	2.09	1.03	1.01	.20
During closure	173	5	2.49	1.16	.50	-.88
Closeness						
Before closure	170	5	4.61	.41	-1.10	.51
During closure	170	5	4.58	.47	-1.14	.71

A number of descriptive findings are particularly relevant for the study purposes.

First, as expected, frequency of helping children with their schoolwork by both mothers and fathers increased substantially after school closure, $t(172) = 26.11, p < .001, d = 2.07$, and $t(172) = 16.61, p < .001, d = 1.57$, respectively. For mothers, the frequency of help increased from approximately once a week to about two to three times a day. The help of fathers, as

rated by the mothers, increased from hardly ever to about two to three times a week. Second, the average Stress levels during the period of homeschooling was below the mean of the scale. Importantly, however, there was considerable variation in perceived Stress and around 15% of the mothers experienced levels of stress that exceeded the midpoint of the scale. Third, the amount of conflict during help with schoolwork was larger when schools were closed than before school closure, $t(172) = 7.51, p < .001, d = .37$. Closeness in the relation between mother and child did not differ significantly before and after school closure, $t(168) = 1.88, p = .061, d = .07$, and was, in absolute terms, high in both periods.

Next, we computed correlations of the parent and the social contextual characteristics with the outcome variables Mothers' Teaching Self-Efficacy (MTSE) and mother-child Conflict during home teaching. The relationships of some of the characteristics of the parent and family with the outcome variables were not significant. In particular, the correlations of number of working hours, numbers of rooms, working places and devices in the home with the outcomes were close to zero. However, the latter variables were, as expected, related to SES. Families with a higher SES had more rooms ($r = .33, p < .01$), more working places ($r = .24, p < .01$), and more devices ($r = .32, p < .01$). Also, Age and Gender of the child and whether the mother worked at home did not have any effect on the amount of Conflict during help with schoolwork. Therefore, all these variables were dropped in further analyses.

In Table 2, the correlations among the parent, family characteristics, and outcome variables are presented. The correlations of SES with the other variables were small or not significant. Mothers with a higher SES reported less Stress and had a somewhat larger MTSE. The relations of Perceived Stress and Household Chaos with MTSE were moderate. There was also a small relation between the amount of School Support and MTSE. More stress and a larger degree of Household Chaos were associated with lower MTSE, whereas additional School Support was related to higher MTSE. In turn, a higher MTSE was strongly

associated with less Conflict. Interestingly, the correlation of MTSE and Conflict was lower before than during the school closure, when the amount of home schooling had increased substantially.

Table 2

Correlations Among Parent Characteristics, Home Characteristics, Teaching Self-Efficacy and Conflict

Variable	1	2	3	4	5	6
1. SES	-					
2. Perceived Stress	-.23**	-				
3. Household Chaos	.13	-.56**	-			
4. School sup.	.02	-.10	.01	-		
5. MTSE	.17*	-.46**	-.44**	.22**	-	
6. Conflict BC	-.14	.40**	.42**	-.150	-.52**	-
7. Conflict DC	-.07	.45**	.41**	-.16*	-.63**	.80**

Note. MTSE = Mother's Teaching Self-Efficacy; BC = Before Closure; DC = During Closure.

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

Path Analyses

We conducted path analyses to examine the relations among the variables as depicted in Figure 1. Two models were specified. In the first model, we tested whether the paths from SES, Perceived Stress, Household Chaos, and School Support to Conflict during school closure were fully mediated by MTSE. In this model, the autoregressive path of Conflict, that is, mother-child conflict during homework before school closure, was not included. This full mediation model did not fit the data, $\chi^2(4) = 12.52$, $p = .014$, RMSEA = .111 (90% CI [.045-

.183]), CFI = .961, SRMR = .042. However, after adding a direct path of Perceived Stress to Conflict, the model fitted the data satisfactory, $\chi^2(3) = 3.51$, $p = .319$, RMSEA = .031 (90% CI [.000-.136]), CFI = 1.00, SRMR = .019. The standardized regression parameters of this model are presented in Table 3.

Table 3

Results of Path Analyses: Standardized Coefficients of Paths to MTSE and Conflict

Variable	Model without auto-regressor		Model with auto-regressor	
	MSTE	Conflict DC	MSTE	Conflict DC
SES	.06		.05	
Perceived Stress	-.30**	.21**	-.21**	
Household Chaos	-.28**		-.18*	
School Support	.19**		.15*	
MTSE		-.53**		-.29**
Conflict BC			-.33**	.65**
R^2	.31	.42	.39	.70

Note. BC = Before Closure; DC = During Closure.

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

The model parameters show that Perceived Stress, Household Chaos, and School Support had independent significant effects on MSTSE. The path of SES was not significant. The paths from Household Chaos and School Support to Conflict during school closure were fully mediated by the significant and strong negative effect of MTSE on Conflict. The Perceived Stress pathway was only partially mediated by MTSE. There was also a statistically significant direct path from Perceived Stress to Conflict.

The second model included the autoregressive path of Conflict. This full mediation model had an acceptable fit, $\chi^2(4) = 6.87$, $p = .143$, RMSEA = .064 (90% CI [.000-.144]),

CFI = .99, SRMR = .015. In this model, the path of Conflict during help with schoolwork before school closure had a moderate effect on MTSE and a large effect on Conflict during school closure. The other effects were similar, although lower in magnitude than in the model without the auto-regressor. Importantly, the effect of MTSE on Conflict during school closure remained significant after the auto-regressive effect was controlled. Put differently, MTSE appeared to be related to the increase in mother-child conflicts during schoolwork since the schools were closed.

Discussion

The COVID-19 pandemic has led to school closures worldwide and a demand for parents to support their children with schoolwork. Apart from the stress and family disruptions it might create (e.g., Brown et al., 2020; Chung et al., 2020; Prime et al., 2020), this demand may also place an additional burden on parents' ability to teach their children and maintain positive interactions with them. This study examined the extent to which a number of parent and social contextual factors predict how efficacious parents feel in homeschooling their children, and, in turn, whether higher parental self-efficacy in teaching is associated with lower levels of parent-child conflict during parental support with schoolwork

Mothers reported a substantial increase in the time spent helping children with schoolwork, amounting to an average of two to three times a day. As expected, this increase during school closure was accompanied by more conflict between mother and child during mothers' assistance with schoolwork. Interestingly, however, homeschooling did not affect the overall level of closeness or warmth in the relationship between mother and child, as this aspect of mother-child relationship quality did not differ between the period before and during school closure. This is a notable finding, given that recent cross-sectional results from Chung and colleagues (2020) suggest that the degree of parent-child closeness is likely to

decrease as a result of the impact of COVID-19. Possibly, the stable patterns of closeness before and after school closure in our study can be explained by the way closeness was conceptualized and measured. Whereas mothers' perceptions of conflict with their child were tailored to *specific interactions* that occurred during help with schoolwork, their reports of closeness reflected a part of the attachment relationship with their child. Throughout childhood, such attachment relationships have been found to be moderately to highly stable (e.g., Fraley, 2002; Vondra et al., 2001). As such, they may be less dynamic than mothers' day-to-day interactions with their children. This may also explain why our results are somewhat different from those of Chung et al. (2020), which focused on the degree of parent–child closeness during a couple of weeks.

In addition to these descriptive findings, several key results emerged from our path-analytic models. The first main finding concerned the central role of mothers' sense of self-efficacy in teaching for the degree of conflict during help with homework. In keeping with Bandura's (1997) social-cognitive assertions, mothers who felt less efficacious in providing instructional and affective support to their children were more likely to engage in conflicts with them during schoolwork. To some degree, these findings substantiate recent work in the field of teacher self-efficacy, suggesting that teachers' lack of confidence and willingness to take risks in the face of challenges caused by COVID-19 may create feelings of hopelessness and guilt toward their students (Anderson et al., 2021) and affect their commitment as well (Baloran et al., 2020). Accordingly, it is possible that mothers who do not believe they can muster whatever it takes to support their child find it more difficult to remain patient and supportive and to feel positive energy when dealing with their child during homeschooling activities.

The relation between mothers' teaching self-efficacy and amount of conflict during school closure existed above and beyond pre-lockdown levels of parent–child conflict during

assistance with schoolwork. In line with evidence that self-efficacy directly shapes parent–child interactions (Mouton & Roskam, 2015), this indicates that conflicts during school closure increased more specifically when mothers had a lower sense of self-efficacy in teaching. Importantly, the finding that the self-efficacy beliefs of mothers remain to have an effect after controlling for the amount of conflict during schoolwork before school closure lends some support for a causal interpretation of the effect of self-efficacy on conflict during schoolwork (Gollob & Reichardt, 1987).

The central role of mothers' sense of teaching self-efficacy is further supported by the finding that it mediated the relation between social contextual factors and parent–child conflict during assistance with school work. The factors that are likely to be the most important for mothers' teaching self-efficacy were household chaos, perceived stress, and support by school. More specifically, mothers felt more self-efficacious in teaching when they reported less stress, had a more orderly household, and felt supported by their children's school. These higher levels of teaching self-efficacy, in turn, translated into fewer conflicts with their children during assistance with school work.

That stress and household chaos contribute to mothers' feelings of teaching self-efficacy is perhaps not surprising. During the COVID-19 pandemic, many parents are faced with difficult and stressful situations, as they have to simultaneously work remotely from home and meet the needs of their employers, and have to care for and teach their school-going children (Chung et al., 2020). Such a collision of roles and responsibilities may not only lead to uncertainty, stress, and chaos (Brown et al., 2020; Coyne et al., 2020), but may also pave the way for family violence and poorer parent–child relationships (Campbell, 2020; Chung et al., 2020), especially when there is less social contact and support.

Next to perceived stress and household chaos, the modest role of support by children's schools fits reasonably well with prior empirical research on teachers' self-efficacy

beliefs, indicating that perceived support from school administrators or colleagues may contribute to a healthy sense of self-efficacy (Capa Aydin & Woolfolk Hoy, 2005; Woolfolk Hoy & Burke-Spero, 2005). Such supports and evaluations have been shown to be particularly relevant for teachers when they are early in their career and have little experience with teaching (Milner & Woolfolk Hoy, 2003; Morris & Usher, 2011). Because parents, to some extent, can be considered novice teachers during the COVID-19 pandemic and may have to resolve uncomfortable tensions about how their role has shifted from a caring parent to a sometimes more strict teacher, support from schools seems especially relevant (cf. Hanna et al., 2019). Together, these findings show that established antecedents of parental self-efficacy (e.g., stress and social support; Crnic & Ross, 2017; Razurel et al., 2017) hold in extreme circumstances, such as homeschooling children during a pandemic.

Socioeconomic status, as indicated by the education of mother and father, only had a small positive relation with teaching self-efficacy and did not contribute independently to mothers' teaching self-efficacy when household chaos, perceived stress, and school support were controlled. This relatively small contribution of SES is in line with the finding of Dulay et al. (2018) that parents with a higher SES seem to feel hardly more competent in supporting their child than those with a lower SES. It is also consistent with the idea that SES, as a potential factor influencing parents' mastery experiences, may inform their teaching self-efficacy only to the extent to which they judge them to be in line with the task of teaching their child at home (cf. Morris et al., 2017). Recent results show that during the pandemic, SES is unrelated to the amount of help parents provide with schoolwork (Bansak & Starr, 2021). Possibly, SES may play a more indirect role in parents' capability to teach by affecting the quality of resources and language spoken at home (e.g., Hoff, 2013). As such, this factor in itself may not be very informative for parents' judgments of efficacy in

teaching, but may rather act as a gateway for interpreting other sources of self-efficacy information.

Taken together, findings from the present study are fairly consistent with the social-cognitive premise that parents' beliefs in their self-efficacy in teaching are shaped by multiple sources of information (Bandura, 1997). Furthermore, the more such sources are deemed to be aligned with the task of teaching at home, the more informative they are for parents' judgments of teaching efficacy.

Strengths, Limitations, and Future Directions

Our study has several strengths. First, we asked mothers about their teaching self-efficacy and conflicts with respect to one child in a specific situation (i.e., home schooling during lockdown). This approach fits with an increasing emphasis on specifications of self-efficacy that adequately match with the realms of activity, situational demands, and (characteristics of) persons toward whom a person's behaviors and actions are directed (e.g., Zee et al., 2016, 2018). We did not include a measure of parenting self-efficacy, but parents' sense of self-efficacy in teaching is probably related to their overall sense of self-efficacy. It seems an important topic for further research to examine the similarities and differences between these types of parental self-efficacy. Moreover, it seems interesting, such as in recent research on teacher self-efficacy (Zee et al., 2018), to examine parenting self-efficacy both in a general sense and with respect to a particular child.

Second, we inquired about the key role of self-efficacy in rather extreme circumstances. Interestingly, however, most of our findings seem similar to those of studies conducted in more normal circumstances (see Morris et al., 2017, for a review). Specifically, the results of our study lend some support for the social-cognitive idea that many different sources of capability-related information, including an orderly household or a high family SES, may generate the type of mastery experiences that persuade mothers of their teaching

capabilities (Bandura, 1997). Furthermore, although we did not account for whether or not mothers believed these general factors were actually relevant, they were appraised in the specific context of school closures during the COVID-19 pandemic. As such, mothers were possibly able to weigh the importance of these information sources against the relevance for their self-efficacy prior to the corona outbreak.

However, we also should mention a number of limitations. First, we have to acknowledge that the current results only provide scant evidence for a causal relation of self-efficacy in teaching and conflicts around schoolwork. Conflicts before school closure were reported in retrospect. Thus, it is unclear what mothers would have reported when they were asked about conflicts during their help with schoolwork if they were asked in the period before school closure. However, asking for a retrospective report on conflict could also have been an advantage if response shift has occurred (Howard et al., 1979; Nimon & Allen, 2007). That is, mothers might view the amount of conflict during schoolwork before school closure differently after the conflicts that they have experienced during school closure. In that case, the retrospective report on conflict seems more valid. However, we cannot be sure that response shift has occurred, and therefore our result can only be regarded as a first step in support of a causal interpretation of the relation between mothers' self-efficacy in teaching and conflict during schoolwork.

As a further limitation, we should acknowledge that we focused on mother's sense of self-efficacy in teaching. Unfortunately, the number of fathers who were willing to participate was too small. It remains to be seen whether the findings on the key role of teaching self-efficacy is similar for fathers. However, it should be noted that the focus on mothers does not undermine the relevance of our findings. The mothers of the families involved in this study provided far more assistance with schoolwork than the fathers.

A final limitation is that the current study involved only children in kindergarten and in the early grades of elementary school. Evidently, young children are relatively dependent on the help of their parents. Accordingly young children will often get instruction during various joint daily activities, such as joint book reading or numeracy related activities (e.g., Kleemans et al., 2012). As children grow older the active involvement of parents in learning, as well as support with schoolwork, will decrease and the extra help with schoolwork during school closure might be more impactful. Parents might also feel less self-efficacious because they are probably less familiar with subjects that older children have to learn in school. It is yet unclear how these differences affect the role of parents' teaching self-efficacy during help with schoolwork.

This study shows that parents who are uncertain about their ability to support their child with schoolwork experience more conflicts with their child. The results suggest at least two possibilities to enhance parents' teaching self-efficacy. Firstly, schools might guide parents in how to instruct their children. Concrete tips for parents on how to foster a child's engagement for schoolwork, provide feedback and cope with conflicts, as well as on specific information on how to instruct certain school subjects, can empower parents in their role as teacher of their child (e.g., Dulay et al., 2019). Second, parents might be advised and supported to organize an orderly household. A well-organized household in which help with schoolwork is a part of the daily routine may foster parents' self-efficacy in general and also increase the effectiveness of their help.

Conclusion

To the best of our knowledge, this is the first study about the antecedents and consequences of parents' sense of self-efficacy in assisting their children with schoolwork. The study was done during the COVID-19 pandemic when schools were closed for many weeks in a row and parents had to provide more support than usual. Our findings show that

parental self-efficacy explains increases in parent–child conflict during homeschooling, suggesting that parental self-efficacy plays a key role in maintaining low levels of parent–child conflict during this exceptional and stressful situation for parents and children. Parental self-efficacy therefore seems a promising target for initiatives to support family well-being and children's academic development during lockdown. It remains to be seen whether the results will generalize to more normal situations of parental help with schoolwork.

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