

## Parental relationship quality and children's behavioural problems: Childcare quality as a protective factor?

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### Abstract

**Objective:** This study investigates how changes in parental relationship quality relate to children's socio-emotional development during early childhood and whether high-quality early childcare arrangements may act as a protective factor in children's environments.

**Background:** We draw on family systems theory and the bioecological model of human development to conceptualise how different social environments may interact in their influences on children's socio-emotional development during early childhood and across the transition to primary school.

**Method:** Based on a pooled sample of 636 US-American children who took part in the longitudinal NICHD Study of Early Childcare and Youth Development (SECCYD), we applied fixed-effects panel models to three time points between age 3 and first grade.

**Results:** Whereas changes in parental relationships quality were not significant in predicting children's socio-emotional development from age 3 to 4.5 years, our results showed that a reduction in parental relationship quality was moderately associated with an increase in behaviour problems of children across the transition to first grade. We did not find any evidence of mitigating effects of the child-specific process quality of the ECEC arrangement, neither for informal nor formal care settings.

**Conclusion:** The results suggest that initiatives designed to improve a couple's relationship quality might also be an effective way to further their children's socio-emotional development.

**Key words:** Socio-emotional development, parental relationship quality, early childhood education and care, NICHD SECCYD, US



## 1. Introduction

Young children's socio-emotional development has far-reaching consequences for their immediate wellbeing and in the long term, e.g. for considering themselves to be part of a community (Løkken et al. 2018). People spend a considerable part of their lives in close relationships, and bonds within the family are possibly the strongest powers influencing an individual's life (Wilson & Gottman 2002).

One important characteristic of the family environment is parental relationship quality: several studies have uncovered that poor relationship quality gives rise to detrimental parenting behaviours, which in turn adversely affect the child's socio-emotional development (Tang et al. 2016; Baxter, Weston & Qu 2011). Most of what is known about this link is based on studies conducted in middle childhood. We aim to investigate the experiences of younger children, as a couple's relationship quality tends to deteriorate while children are young (Zemp et al. 2017; Twenge, Campbell & Foster 2003).

Furthermore, little is known about protective factors in children's environments that might mitigate the negative impact of poor parental relationship quality on children's wellbeing.

Early childhood education and care (ECEC) arrangements, more specifically their quality, might be one of these moderating influences. An increasing percentage of young children are placed in some form of formal or informal non-parental childcare across most Western countries (McCartney 2004; Belsky et al. 2007; Løkken et al. 2018), partly due to an increase in maternal employment and the expansion of affordable childcare (Broekhuizen et al. 2018). Considering this, it seems reasonable that the childcare arrangement might be another very influential environment for child development. Spending a considerable amount of time in an ECEC institution of high quality has shown especially high returns for children living in unfavourable circumstances (Cortázar 2015; Zachrisson & Dearing 2015; Torii, Fox & Cloney 2017), so it is plausible that children from families with poor parental relationship quality might particularly benefit from high quality childcare.

Based on 636 US-American children who took part in the longitudinal NICHD Study of Early Childcare and Youth Development (SECCYD), we applied fixed-effects models to examine how parental relationship quality and quality of the childcare arrangement relate to changes in children's socio-emotional development from age 3 to 4.5 years and across the transition to first grade.

## 2. Theoretical framework

### 2.1 *Parental relationship quality and socio-emotional development*

In line with Bronfenbrenner's bioecological model of human development (Bronfenbrenner & Morris 2006), the family is one of the most powerful microsystems influencing a child's development. Several studies have established the positive link between parental relationship quality and child development (Garriga, Martínez-Lucena & Moreno 2019; Goldberg & Carlson 2014; Davies & Cummings 1994; Masarik & Conger

2017). Proximal processes, such as the amount of support and conflict in the parents' relationship, seem to be especially influential when it comes to children's externalising (e.g. aggression) and internalising (e.g. anxiety) behaviour problems (Westrupp et al. 2018; Buehler & Gerard 2002; Zemp, Bodenmann & Cummings 2016).

To explore these associations, family systems theory (e.g. Broderick 1993) serves as a suitable framework. Guiding most of the research on parental relationship and parenting, it assumes that families consist of interdependent elements, i.e. individuals and the relationships between them, and have attributes that cannot be reduced to their separate parts (Grych 2002). As open systems affected by developments in their environment, families constantly have to adjust and evolve. According to Fink et al. (2019), family systems theory describes two contrasting processes: spillover and compensation.

Consistent with the family stress model (Conger et al. 1990; Masarik & Conger 2017), spillover refers to the transmission of the parents' relationship quality to parent-child interactions, suggesting that poor relationship quality gives rise to detrimental parenting behaviours, which in turn have adverse consequences for the child's development. This is particularly the case for the socio-emotional development (Tang et al. 2016). For example, parents might refrain from showing their child that he or she is loved and accepted, which can have dire implications for the child's self-esteem (DeHart, Pelham & Tennen 2006; Paczkowski & Baker 2007; Waldfogel, Craigie & Brooks-Gunn 2010) or even heighten the child's risk of suffering from psychological disorders (Patterson 2002). Other dysfunctional parenting behaviours include inconsistent parenting, unsupportive co-parenting, and intergenerational alliances within the family (Wilson & Gottman 2002). Grych (2002) follows Belsky (1984) and states that the parental relationship can either heighten or alleviate parenting stress. Stressed parents who are worrying about their relationship might not be as responsive to their children's needs and behave more hostile towards them (Belsky 1984; Conger et al. 2013). Emotional security theory (Davies & Cummings 1994) and the conflict hypothesis, both integrable into the spillover perspective, address this point. Grounded in attachment theory (Bowlby 1940; 1958), emotional security theory posits that experiencing or even knowing of parental conflict threatens the children's sense of emotional security and their perception of parents as sources of support, which increases their vulnerability to psychological and social problems (Garriga, Martínez-Lucena & Moreno 2019; Davies & Woitach 2008). Very similar to this, the conflict hypothesis suggests that discord between parents is a substantial source of stress for children (Amato & Keith 1991; Krishnakumar & Buehler 2000; Wilson & Gottman 2002). Subjected to sadness and uncertainty, then, children are limited in or even prevented from developing normally.

Additionally, drawing on assumptions of social learning theory (Bandura & Walters 1977), the frequent experience of conflicts may encourage children to engage in social interactions in a dysfunctional way (Waldfogel, Craigie & Brooks-Gunn 2010), imitating the destructive behaviour of their parents.

However, poor parental relationship quality might also influence their children's development via a different process: compensation. Previous research has found evidence for parents actively trying to make up for their poor relationship quality by focusing intensely on the parent-child bond (see Gomulak-Cavicchio 2010 or Grych 2002 for a review). Furthermore, parents feeling neglected by their partner might want to fulfil their need for affection and support by investing in the relationship with their children (Cohen

et al. 1984, cited in Krishnakumar & Buehler 2000). Given that such compensation processes might have other negative side effects such as less consistent parenting, on the whole we assume the negative effects of the spillover perspective to outweigh any compensatory positive effects of deteriorating parental relationship quality.

We hypothesise that declines in parental relationship quality are associated with greater behavioural problems of children during preschool years and across the transition to primary school (Hypothesis 1).

## *2.2 Quality of ECEC institutions and socio-emotional development*

Building again upon Bronfenbrenner's notion that human development is transactional in nature and that children's development is strongly affected by their interactions with different parts of their environment (Bronfenbrenner & Morris 2006), the ECEC context can be considered to be another important microsystem, as many children spend considerable amounts of time in childcare. Integrating ECEC quality into Bronfenbrenner's bioecological model of human development, next to the children's family, also allows for the examination of a mesosystem, as it is plausible that these microsystems do not exist detached from one another, but rather influence each other reciprocally.

Previous work on the effects of ECEC yields mixed findings, underlining the controversy of this research area. For the most part, studies focusing on early child development indicate that children benefit from high-quality formal education institutions in terms of cognitive and social abilities (e.g. Roßbach, Tietze & Grenner 2005; Del Boca 2015; NICHD Early Child Care Research Network 1998; Brownell, Burchinal & Caldwell 2003; Vandell et al. 2010; NICHD Early Child Care Research Network 2005a). However, several scholars could not detect any links between the quality of ECEC institutions and children's socio-emotional development (McCartney et al. 2010; NICHD Early Child Care Research Network 2005b; Stein et al. 2013), and some even found that extensive amounts of hours in early non-parental childcare relate to more frequent behavioural problems (Belsky et al. 2007; Huston, Bobbitt & Bentley 2015).

It has to be noted, though, that the extent of these associations varies with conceptualisations of both care quality and problematic behaviour, depending on whether mothers, fathers or educators rated child behaviour, and also by child age and other characteristics of the sample. Torii, Fox & Cloney (2017) argued that the positive influence of ECEC hinges on type and consistency of the caregiver-child interactions, as these interactions provide the foundation for improving children's communication skills, enhancing their thinking, and promoting their competence in handling their emotions and relationships.

The evaluation of these caregiver-child interactions and other daily interactional experiences (e.g. with peers or while engaging in educational games) is usually summarised under the concept "process quality", while structural quality encompasses aspects such as caregiver education, educator-child ratio, or the amount of learning materials (Black et al. 2017). As Janta, van Belle & Stewart (2016) remark, these two concepts are closely linked, and structural characteristics influence process quality. But although high structural quality is essential for high process quality, it does not guarantee it. As process quality is deemed the most important influence on (socio-emotional) development apart from the home

environment (Melhuish et al. 2015; Slot 2018), this is what we focus on and expect that increases in child-specific process quality are positively associated with improvements in children's socio-emotional development (Hypothesis 2).

As a multitude of studies suggested that high-quality early education is particularly beneficial for children in unfavourable circumstances (Torii, Fox & Cloney 2017; Cortázar 2015; Zachrisson & Dearing 2015; Heckman 2011), we explore whether children in higher quality non-parental care are less negatively affected by deteriorating parental relationship quality than those in lower-quality care. These children may disproportionately benefit from the safe, consistent and warm environment that high-quality institutions can offer them and that they may not experience as much at home (Currie & Almond 2011). Hence, there is reason to assume that the association between declines in parental relationship quality and adverse child development is moderated by the process quality of the ECEC institution the child attends, with a higher level of quality counterbalancing the negative impact of poorer parental relationship quality (Hypothesis 3).

Improvements in self-regulation skills and prosocial behaviour developed at ECEC settings may enable children to better cope with transitions to new school settings and with disruptions in family processes, such as conflicts and tensions in the parental relationship, over the longer term. A number of US and UK studies found positive long-term effects of higher process quality of ECEC settings on children's socio-emotional development up to ages 8 and 14 (Loeb et al. 2004; Peisner-Feinberg et al. 2001; Sammons et al. 2008; Sammons et al. 2011; Votruba-Drzal et al. 2010). A few studies, however, did not find any or only inconsistent associations of ECEC process quality with longer-term socio-emotional outcomes of school children (Chin-Quee & Scarr 1994; Wylie & Hodgen 2007). We will therefore examine whether higher process quality of ECEC settings may still have a protective effect when children experience declines in parental relationship quality across the transition to primary school.

### 2.3 *The present study*

Using a framework based on the bioecological model of human development and family systems theory and guided by research on childcare quality, our contribution to a more in-depth understanding of the importance of parental relationship processes and ECEC arrangements for children's socio-emotional development is fivefold: First, we specifically focus on young children, as infants as young as six to 14 months already react negatively to parental conflict (Du Rocher Schudlich et al. 2011), and couple's relationship quality tends to suffer while children are young (Zemp et al. 2017).

Second, as we analyse data that allow us to follow children from age three to about age seven years, we are able to examine the aforementioned associations in a very interesting and formative phase of life: the child's transition to elementary school. This experience entails numerous new demands to which the child has to adjust (Beyer et al. 2012), and studying parental and institutional influences during this important period is likely to be relevant new evidence.

Third, we use a global measure of parental relationship quality instead of focusing on only one dimension, such as conflict, as children's socio-emotional development is likely to

be influenced by other aspects of parental relationship quality as well, e.g. understanding, help with problems, and closeness.

Fourth, by considering process quality as a potential moderator of the association between parental relationship quality and children's socio-emotional development, we respond to the claim that main effect models are not sufficient for current developmental research and that scholars should acknowledge, and consequently examine, the role of moderating influences to uncover especially vulnerable groups (Garriga, Martínez-Lucena & Moreno 2019; Goodman et al. 2011).

Fifth, by applying fixed-effects models, our methodological approach reduces the risk of spurious relationships and other variables that may cause both poor parental relationship quality and children's developmental problems, e.g. parents' personality traits (Grych 2002).

The empirical analysis examines the following hypotheses:

Hypothesis 1: Declines in parental relationship quality are associated with greater behavioural problems of children during preschool years and across the transition to primary school.

Hypothesis 2: Increases in child-specific ECEC process quality are positively associated with improvements in children's socio-emotional development.

Hypothesis 3: Higher levels of child-specific ECEC process quality attenuate the association between declines in parental relationship quality and adverse child development.

### 3. Data and method

#### 3.1 Data set

We used restricted data from the Study of Early Childcare and Youth Development (SECCYD)<sup>1</sup>, which have been provided by the Eunice Kennedy Shriver National Institute of Child Health and Development (NICHD). SECCYD (now complete) was a comprehensive four-phase, multi-site, prospective, longitudinal study, funded by the United States Department of Health and Human Services, the National Institutes of Health, and the NICHD.

The study provides a lot of in-depth information on childcare characteristics, family environments and children's developmental outcomes which makes it particularly suitable for the research question at hand. Furthermore, it is characterised by a large sample size and ethnic, economic, and geographical variation. The sample consists of healthy, full-term infants whose mothers gave birth in selected hospitals at ten locations all over the United States during predetermined 24-hour periods between January and November 1991. A more detailed description of the sampling procedure and exclusion criteria can be found in

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<sup>1</sup> United States Department of Health and Human Services. National Institutes of Health. Eunice Kennedy Shriver National Institute of Child Health and Human Development. NICHD Study of Early Childcare and Youth Development: Phase I, 1991-1995 [United States]. ICPSR21940-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2010-01-08. <http://doi.org/10.3886/ICPSR21940.v1>

NICHD Early Child Care Research Network (2005a). It should be noted that, due to the non-random selection of the ten catchment areas, the data are not representative of the US.

1,364 mothers participated in the one-month home interview. The study tracked various aspects of their new-borns' development (e.g. cognitive, social, or emotional) since they were one month of age and followed up on them until the children turned 15. For the analyses presented in this paper, we only used phase I (one month to three years) and phase II (54 months through first grade).

### 3.2 Estimation approach

For the analysis of children's socio-emotional development, we calculated two sets of fixed-effects panel models for two time periods. The first set was based on data from month 36 and month 54, and the second set included data from month 54 and first grade. By choosing fixed-effects models, we isolated within-family variation and were able to reduce the risk of bias due to time-constant unobserved influences on children's development (Allison 2009). These models estimate whether changes in parental relationship quality correlate significantly with the change in children's socioemotional development over time. We started with a model that only included parental relationship quality, child-specific process quality of the ECEC arrangement and a set of control variables (see eq. 1). For the second time period, child-specific process quality at 54 months is considered as a time-constant variable, as the process quality of the school is not available after children transition to first grade.

$$Y_{it} = \beta_{1t} + \beta_2 r_{it} + \beta_3 p_{it} + \beta_4 X_{it} + \alpha_i + \varepsilon_{it} \quad (1)$$

Subscripts  $i$  and  $t$  represent the child and time point, respectively;  $Y$  denotes children's socio-emotional development,  $r$  is the parental relationship quality,  $p$  represents the child-specific process quality of the ECEC arrangement, and  $\alpha_i$  and  $\varepsilon_{it}$  are the individual-specific intercepts and the error term, respectively.  $X_{it}$  indicates the vector of control variables.

In the second modelling step we included an interaction term,  $r_{it} * p_{it}$  (see eq. 2) to test whether the association of parental relationship quality with the children's socio-emotional development was moderated by the child-specific process quality of the ECEC institution. For interactions in fixed-effects panel models, one should note that these take into account cases that experienced some change on either of the two variables included in the interaction even if the value of the other variable remained unchanged between two periods. In other words, when estimating interaction terms, all children with variation in either of the two interacted variables are included. To disentangle time-variant and time-invariant parts of a significant interaction effect, one can apply a decomposition technique (Giesselmann & Schmidt-Catran 2018). Due to lack of statistical significance, we did not apply this decomposition technique.

For the first period from 36 to 54 months, we included a main effect and an interaction effect of parental relationship quality with child-specific ECEC process quality to capture effects of changes in child-specific ECEC process quality on children's development as well as possible moderating effects of higher process quality on the association of relationship quality with behavioural problems of children. In addition, we also tested interactions with the time-invariant within-person mean of experienced ECEC process quality at 36 and 54

months that would only capture moderating effects of higher levels of quality. For the models based on month 54 and first grade, we included just the interaction effect with a time-constant variable of child-specific process quality measured at month 54 to examine the moderating effect of the process quality experienced by the child before transition to primary school. In this case the models do not include any main effect of the process quality experienced by the child because time-constant variables automatically drop out of fixed-effects panel models except if considered as part of an interaction with a time-varying variable.

$$Y_{it} = \beta_{1t} + \beta_2 r_{it} + \beta_3 p_{it} + \beta_4 r_{it} * p_{it} + \beta_5 X_{it} + \alpha_i + \varepsilon_{it} \quad (2)$$

As the results did not differ significantly between the models with and without the interaction term, only the former are shown.

We applied robust standard errors at the individual level in every model. In a third step, we furthermore restricted the sample to children in formal care settings to examine whether the associations varied from those for the whole sample who used a broader range of childcare arrangements.

### 3.3 Sample selection

After merging all of the relevant information on parental relationship quality and childcare arrangements, 1,058 of 1,364 children remained (306 children were lost due to wave non-response). As we estimated fixed-effects models, we needed valid observations for at least two of the relevant time points, either at month 36 and 54 or at month 54 and first grade. Consequently, we lost 398 cases. As we cannot test our hypotheses regarding experienced child-specific ECEC process quality with children that did not attend ECEC arrangements, we also excluded 24 children who were cared for only by their parents at both time points. The pooled sample consisted of 636 families. However, largely due to missing childcare ratings and to a lesser extent due to item non-response, the final model sets for month 36 to 54 and for month 54 to first grade were based on 422<sup>2</sup> and 591<sup>3</sup> children, respectively.

The pooled sample included about 10 % of mothers who were in a relationship but possibly did not live together with their partners at some time points. Still, a large majority of mothers lived with the child's biological father. At month 36, 93.08 % of mothers lived together with their child's biological father, 3.30 % lived together with another partner, and 3.46 % did not live with the partner. By the first grade interview, the percentage of mothers living with the child's biological father had decreased to 87.28 %, whereas mothers in each of the other two categories had increased to close to 7 and 6 %.

Regarding time-invariant socio-economic characteristics, 90 % of mothers in our final sample classified themselves as White. The second largest ethnic group were Afro-Americans (6 %), followed by Asian or Pacific Islander (2 %). Mothers were disproportionately highly educated: only 3.46 % did not have a High School Diploma, 49.21

<sup>2</sup> 195 children had to be excluded because the childcare arrangements had not been rated sufficiently often; 19 children were lost due to item nonresponse on one of the other key variables.

<sup>3</sup> 45 children were lost due to item non-response on one of the key variables.



% were High School Graduates or had even attended some college and 47.33 % had attained a college degree.

## 4. Measures

### 4.1 *Dependent variable*

To assess children's socio-emotional development, we used standardised values of the Total Problems scale of the Child Behavior Checklist (CBCL) (Achenbach 1991a) at three time points: month 36, month 54, and first grade. The CBCL scales are based on mothers' responses to a list of 100 items that describe children and that focus on several behaviour problems, such as anxiety, aggression, and withdrawal. For each item, the mother was asked to indicate how well that item characterised her child's behaviour. Her answer options were: (2) very true or often true, (1) somewhat or sometimes true, or (0) not true (as far as you know). The Total Problem scale is the sum of all items. We used a standardised version of the variable, the T Score, which ranges from 0 to 100 with higher scores indicating more severe behavioural problems. In line with standard conventions for the CBCL, only children with less than 25 % missing data have non-missing scale scores (NICHD Early Child Care Research Network 1996).

### 4.2 *Independent variables*

*Parental relationship quality.* We used an overall measure of parental relationship quality, a composite variable depicting the average of the responses to six items that were answered by the mother at all three time points. She was asked to express her agreement with statements such as *My (spouse/partner) listens to me when I need someone to talk to*, *I often feel distant from my (spouse/partner)*, and *My (spouse/partner) can really understand my hurts and joys* according to a 5-point Likert scale, with responses ranging from 1=Strongly Disagree to 5=Strongly Agree. Three of the variables were reverse coded before calculating the average, so that higher scores represented better mother-partner relationships. We standardised the parental relationship quality variable with the mean and standard deviation of the month 36 values. This variable has high internal reliability (Cronbach's alpha = 0.86 in month 36 and 54, and 0.88 in first grade).

Unfortunately, we were not able to also include the answers provided by the mother's partner, as in months 1-36, the partner's evaluation of relationship quality was only assessed for four to six of the study sites, which resulted in over 60 % of missing information in our sample.

*Process quality child experienced at ECEC arrangement.* We only considered the main childcare arrangement, which was defined as the arrangement the child spent the most time in, and that the child attended for at least ten hours per week. We tested two different measures. The first one was a single item, a global rating of the child's experience at the childcare arrangement that observers provided after having conducted the Observational

Record of the Caregiving Environment (ORCE). This rating was given on a 5-point Likert scale from (1) terrible to (5) excellent. It was based on the observer's impression of the quality of the child's experience, the caregiving, and the overall atmosphere of the setting, taking into account what happened to other children during the observation (NICHD Early Child Care Research Network 1994). The second measure was the ORCE A Priori Qualitative Composite, which was the mean of five quality dimensions<sup>4</sup> rated by an observer on 4-point-scales from (1) not at all characteristic to (4) highly characteristic. This is also not a measure for quality in ECEC settings in general, but a child-specific quality measure. For the sake of readability, we refer to the process quality that the child experienced at the ECE arrangement as "child-specific process quality" throughout this study. The unstandardised ORCE quality measures showed medians between 3.5 and 4 for the different time points suggesting medium to high levels of child-specific quality. According to NICHD Early Child Care Research Network & Duncan (2003), an ORCE score below 2 can be considered low quality. Based on both measures, only 3.63 and 1.10 percent of children experienced low levels of child-specific quality of less than 2.

Vandell (1996) has suggested that the ORCE instrument is also suitable for informal care arrangements, and thus, various types of arrangements were assessed, including parental care. We used the quality variables at month 36 and 54 and standardised them with the mean and standard deviation of month 36. For the models based on month 54 and first grade, we included the child-specific process quality variables measured at month 54 as time-constant values also in first grade to be able to include an interaction with the process quality experienced by the child before the transition to primary school.

### 4.3 Control variables

*Home learning environment.* As previous research provided evidence of the importance of the home learning environment (Pfeiffer et al. 2013; Rodriguez & Tamis-LeMonda 2011; Rijlaarsdam et al. 2013), and to control for some aspects of parenting quality, we included the Total HOME Inventory Score. It was computed as the sum of 55 items, with higher values indicating higher levels of child stimulation and support. It was based on mothers' responses to a home toy questionnaire (which describes the types of toys and games available to the child), and the interviewer's completion of the HOME inventory score sheet (which focuses on specific behaviours, such as praising or caressing the child). This variable was measured in months 36 and 54. We standardised it with the mean and standard deviation of month 36.

*Type of care.* To investigate whether the type of care arrangement the child attended mattered for the relationship between child-specific process quality and socio-emotional development, we created a variable that depicted whether the child was cared for by (1) the parents, defined as mother or her partner (not necessarily the biological father of the child), (2) in In-Home care, defined by any person other than the parents in either the child's or somebody else's home, (3) in family day care, or (4) in a childcare centre. This variable was available for month 36 and 54. The distribution differed greatly across measurement points:

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<sup>4</sup> Sensitivity to child's distress, stimulation of child's development, positive regard for child, detachment from child (reflected), and flatness of affect with child (reflected).

while in month 36, 61.22 % of children were cared for in In-Home Care and only 0.82 % attended a childcare centre, in month 54, 82.39 % of children were cared for in childcare centres, and only 5.97 % were in the category In-Home care (see Table 1). The percentage of children who were cared for by their parents also decreased over time, from 13.47 % in month 36 to 4.09 % in month 54. It is important to note that the children who were cared for by their parents in month 36 and month 54 are different groups: we excluded all children who were in parental care at both time points.

*Table 1: Descriptive statistics*

	Month 36			Month 54		
	Mean / Percentage	Standard deviation	Range	Mean / Percentage	Standard deviation	Range
Child Behavior Checklist T-score	50.73	8.57	29 – 78	50.08	9.29	24 – 77
Parental relationship quality	3.84	0.87	1 – 5	3.81	0.90	1 – 5
Child-specific global process quality rating	3.52	0.94	1 – 5	3.55	0.85	1 – 5
Child-specific process quality composite	2.85	0.47	1.57 – 3.89	3.03	0.54	1.5 – 4
Quality of home learning environment	43.22	6.44	9 – 54	47.21	4.59	18 – 55
<i>Childcare type</i>						
Parent	13.47			4.09		
In-Home care	61.22	-	1 – 4	5.97	-	1 – 4
Family day care	24.49			7.55		
Centre care	0.82			82.39		
Hours in childcare arrangement	33.06	12.72	10 - 80	25.09	14.07	10 – 68
Total household income (in 1000\$)	65.32	47.56	2.5 – 400	66.90	54.62	5 – 856
<i>Family composition change</i>						
No	100	-	0 – 2	92.45	-	0 – 2
Yes	0			3.14		
Status unknown	0			4.40		

*Table 1: Descriptive statistics (continued)*

	First Grade		
	Mean / Percentage	Standard deviation	Range
Child Behavior Checklist T-score	47.60	9.86	24 – 78
Parental relationship quality	3.90	0.91	1 – 5
Total household income (in 1000\$)	79.42	54.64	2.5 – 300
<i>Family composition change</i>			
No			
Yes	88.99	-	0 – 2
Status unknown	7.86		
	3.14		

*Note.* NICHD SECCYD Study. Data on household level.  $N = 636$ . Based on listwise deletion.

*Hours in care arrangement.* As some researchers have reported an association between an extensive amount of hours spent in non-parental childcare and behaviour problems (Belsky et al., 2007; Huston, Bobbitt & Bentley 2015), we considered how many hours per week the children spent in their childcare arrangements. In line with the approach used for the operationalisation of child-specific process quality, we focused on the main arrangement.

*Total household income.* To control for external shocks resulting in changes in the family's financial situation, which could also influence the child's socio-emotional development, we included the annual family income in 1000\$, which comprised mother's income, other sources of income, and the partner's income if he lived at home.

*Change in family composition.* We added a variable indicating whether the mother and her partner separated or whether a partner left the family household between the time points we investigated to control for disruptions in the family composition. The resulting categories were (0) No, (1) Yes, and (2) Status unknown, for those with some missing values on the variables used to create this indicator.

## 5. Results

### 5.1 Descriptive results

In a first step, we analysed the bivariate correlations of the main variables. Table 2 shows explorative between-person correlations for two sets of pooled samples, month 36 to 54 and month 54 to first grade. To compute the correlations, two observations per child and set are taken into account, if (s)he has no missing values on the respective variable. We combine two measurement points for each of the two sets for the sake of comparability: the bivariate correlations are based on the same data as the subsequent fixed-effects models. For each of the sets, higher parental relationship quality was related to lower scores on the CBCL, and thus to less frequent behaviour problems (significant at the 1 %-level). Similarly, across both periods, home learning environments of higher quality were correlated with lower scores on the CBCL.

Surprisingly, the same did not hold true for the process quality a child experienced at the ECEC arrangement, which did not correlate significantly with the CBCL score, regardless of the operationalisation.

Table 2: Bivariate correlations of main variables

	(1)	(2)	(3)	(4)	(5)
Month 36 – 54	(1) Child Behavior Checklist score	1.00			
	(2) Parental relationship quality	-0.22***	1.00		
	(3) Child-specific process quality rating (global)	-0.04	0.07*	1.00	
	(4) Child-specific process quality (composite)	-0.01	0.05	0.70***	1.00
	(5) Quality of home learning environment	-0.17***	0.12***	0.18***	0.20***
Month 54 – First Grade	(1) Child Behavior Checklist score	1.00			
	(2) Parental relationship quality	-0.26***	1.00		
	(3) Child-specific process quality rating (global)	-0.04	0.02	1.00	
	(4) Child-specific process quality (composite)	-0.03	0.03	0.66***	1.00
	(5) Quality of home learning environment	-0.21***	0.11***	0.09**	0.10***

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Note. NICHD SECCYD Study. Explorative between-person correlations for two sets of pooled samples, month 36 to 54 and month 54 to first grade.

Additionally, we examined individual-specific changes in the key variables. For all of the descriptions below, we subtracted the values from the previous measurement point from the more current one (e.g.  $X_{\text{month 54}} - X_{\text{month 36}}$ ). If the difference was larger than zero, it was defined as an increase; if it was smaller than zero, it was counted as a decline. We did not specify any thresholds, as we were interested in declines and increases in general and assumed measurement errors that were relatively constant within individuals over time periods to cancel out in the fixed-effects panel models.

Furthermore, for each of the key variables, we explored the demographic characteristics of the participants who showed declines, no changes and increases. There were no substantial differences regarding mothers' education, mothers' ethnicity, the family's annual household income, and whether the mother lived together with the child's biological father.

*Changes in the Child Behavior Checklist score.* From month 36 to 54, 50 % of the children experienced a decrease in their CBCL score, which signifies a lower frequency of behaviour problems. In 6 % of cases, the score did not change and 44 % had a higher CBCL score in month 54 than in month 36, indicating a higher frequency of behaviour problems. The mean of individual changes in the CBCL scores from month 36 to 54 was -0.64. Children whose behaviour deteriorated on average showed changes of +5.87, whereas improvements on average amounted to -6.45.

From month 54 to first grade, a higher percentage of children (60 %) experienced a decrease in their CBCL score. For 7 %, the score did not change and 33 % had a higher CBCL score in first grade than in month 54. The mean of individual changes in the CBCL scores from month 54 to first grade was -2.43. Children with an increase in behaviour

problems on average showed changes of +5.67 points; improvements amounted to -7.19 points on average.

*Changes in parental relationship quality.* From month 36 to 54, relationship quality deteriorated for 44 % of mothers, and 42 % reported a higher relationship quality in month 54 than in month 36. For 28 % of these mothers, this increase was smaller than one unit of the 5-point scale. The mean of individual changes in parental relationship quality from month 36 to 54 was -0.03. Mothers who reported declines in relationship quality on average showed changes of -0.80, whereas improvements in relationship quality on average amounted to +0.75.

From month 54 to first grade, parental relationship quality decreased for 37 % of mothers, and it increased for 47 %. This increase was smaller than one unit for 36 % of mothers.

The mean of individual changes in parental relationship quality from month 54 to first grade amounted to +0.06. Mothers whose relationship quality declined showed changes of -0.78 units on average, whereas the average improvement was +0.76 units.

*Changes in child-specific process quality.* Using the ORCE global rating to operationalise the process quality experienced at the ECEC arrangement, the quality deteriorated between month 36 and month 54 for 42 % of children. 36 % experienced an improvement, and for 22 % the level of quality was stable. The mean of individual changes was -0.05. For children whose experienced process quality deteriorated, the average changes were -1.20 units; increases amounted to +1.23 units on average.

The ORCE A Priori Qualitative Composite revealed a similar picture: for 42 % of children the quality decreased. However, with 57 %, the proportion of children being subjected to improvements in experienced process quality between months 36 and 54 was considerably higher. Analysing this difference in more detail showed that for most children, these improvements were rather small: 25 % experienced an improvement by less than 0.5 units.

For the ORCE A Priori Qualitative Composite, the mean of individual changes was +0.30. The average change for children with a decline in experienced process quality operationalised by this measure was -1.10 units, while the average improvement amounted to +1.34 units.

## 5.2 Multivariable analyses

Tables 3 and 4 present the results of the fixed-effects panel regressions including the global rating of child-specific process quality and the process quality composite, respectively. In each table, Model 1 refers to changes across ages 36 to 54 months for the whole sample and Model 2 to the time period 54 months to first grade for the whole sample. Models 3 and 4 analyse the two time periods for the subsample of children who attend formal ECEC institutions. Hypothesis 1 assumed that a reduction in parental relationship quality was related to worse socio-emotional development of children during preschool and at the beginning of primary school. All fixed-effects models for the whole sample showed that, indeed, there was a negative association between parental relationship quality and children's socio-emotional development, as measured by the CBCL (see Tables 3 and 4, columns 1 and 2). However, this association was only significant for the models based on

data from month 54 and first grade: There, a standard deviation decrease in relationship quality was linked to an increase in the CBCL score by 1.32 or 1.18 units ( $p < 0.001$  and  $p < 0.01$ ) in Table 3 and 4, respectively. As higher scores on the CBCL indicate a higher frequency of behaviour problems, this supports Hypothesis 1 for the period 54 months to first grade. The effect size seems rather small compared to a standard deviation of 10 units in the normative sample. However, it was about half the size of the average within-individual change in the CBCL score between these two time points, which amounted to about 2.43 units.

None of the coefficients of the childcare-related variables reached statistical significance in Model 1, irrespective of whether the global rating (Table 3) or the composite of child-specific process quality (Table 4) was used. In contrary to Hypothesis 2, we did not find a positive association of improvements in the process quality a child experienced at the ECEC arrangement between age 36 to 54 months. Also changes in the main type of care and hours of this care which the child experienced were not significantly correlated with variations in children's CBCL scores for this age period.

Our findings did not support Hypothesis 3, which proposed that adverse consequences of declining parental relationship quality for child development may be extenuated by higher process quality experienced by the child at the childcare setting. We tested this hypothesis by including an interaction effect between parental relationship quality and the child-specific process quality measures, which proved to be nonsignificant in all models for both time periods and irrespective of the child-specific process quality measure used.

In order to examine whether the associations with the process quality experienced by the child may vary depending on the type of childcare used, we re-ran the analyses for a subsample of children in formal care arrangements, defined as family day care or childcare centres (see Models 3 and 4 in Tables 3 and 4). The results showed a very similar pattern to the whole sample in terms of statistical significance and strength of the relationships: across all models, there was a negative association between parental relationship quality and the CBCL score, which was only significant for the models for the period from month 54 and first grade ( $-1.18$ ,  $p < 0.01$  in Table 3 and  $-0.92$ ,  $p < 0.05$  in Table 4). These results therefore provide again partial support for Hypothesis 1 only with respect to the period covering the transition to primary school.

*Table 3: Fixed-effects models of child behavior checklist scores, month 36 through first grade, with child-specific process quality rating (global)*

	Whole Sample			
	Model 1		Model 2	
	Month 36 and Month 54		Month 54 and First Grade	
	<i>B</i>	<i>RSE</i>	<i>B</i>	<i>RSE</i>
Parental relationship quality	-0.51	0.40	-1.32***	0.34
Child-specific process quality rating (global)	0.09	0.30		
Parental relationship quality X child-specific process quality	0.01	0.29	-0.10	0.35
Quality of home learning environment	0.37	0.44		
<i>Childcare type (Ref. Parent)</i>				
In-Home care	0.67	1.08		
Family day care	0.91	1.18		
Centre care	0.29	1.05		
Hours in childcare arrangement	0.04	0.03		
Total household income (in 1000\$)	-0.01	0.01	-0.03 <sup>+</sup>	0.02
<i>Disruption / Change (Ref. No)</i>				
Yes	-2.11 <sup>+</sup>	1.10	1.42	1.44
Status unknown	-1.83	1.94	-1.69	1.38
Constant	49.00***	1.52	50.96***	1.19
<i>R<sup>2</sup></i>				
Within		0.02		0.05
Between		0.02		0.09
Overall		0.02		0.08
<i>N</i>				
Observations		844		1,182
Groups		422		591



*Table 3: Fixed-effects models of child behavior checklist scores, month 36 through first grade, with child-specific process quality rating (global) (continued)*

	Subsample Formal Care			
	Model 3		Model 4	
	Month 36 and Month 54		Month 54 and First Grade	
	<i>B</i>	<i>RSE</i>	<i>B</i>	<i>RSE</i>
Parental relationship quality	-0.38	0.41	-1.18**	0.35
Child-specific process quality rating (global)	0.15	0.30		
Parental relationship quality X child-specific process quality	-0.20	0.30	-0.15	0.35
Quality of home learning environment	0.07	0.41		
<i>Childcare type (Ref. Parent)</i>				
In-Home care				
Family day care				
Centre care				
Hours in childcare arrangement	0.04	0.03		
Total household income (in 1000\$)	-0.01	0.01	-0.03 <sup>+</sup>	0.02
<i>Disruption / Change (Ref. No)</i>				
Yes	-2.32	1.47	1.76	1.61
Status unknown	-1.85	2.37	-0.92	1.23
Constant	49.78***	1.05	50.92	1.19
<i>R<sup>2</sup></i>				
Within		0.02		0.04
Between		0.03		0.08
Overall		0.03		0.08
<i>N</i>				
Observations		774		1,064
Groups		387		532

+  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

*Note.* NICHD SECCYD Study. Based on information provided in month 36, month 54, and first grade. RSE = Robust standard error of coefficient.

The coefficient for changes in child-specific process quality from age 36 to 54 months was not significant; neither when the ORCE global rating was used (Model 3 in Table 3), nor based on the ORCE composite measure of child-specific process quality (Model 3 in Table 4). Hypothesis 2 therefore was not supported. The interaction effect between parental relationship quality and ECEC process quality experienced by the child was never statistically significant at the 5-percent level. Based on the composite measure of child-specific process quality for the transition to primary school (Model 4 in Table 4), this

interaction effect was significant at the 10-percent level but pointed in the opposite direction of Hypothesis 3. Declines in parental relationship quality seemed to be associated with more negative behavioural consequences for children who experienced higher levels of process quality before transitioning to primary school. Given the lack of statistical significance at the conventional levels and as similar patterns were not found in any of the other model specifications, we interpret this finding rather cautiously. On the whole, we therefore did not find any evidence that higher process quality experienced by the child in the formal childcare setting partly compensated for the negative impact of a decline in parental relationship quality across the transition to first grade.

*Table 4: Fixed-effects models of child behavior checklist scores, month 36 through first grade, with ORCE A Priori Qualitative Composite of Process Quality*

	Whole Sample			
	Model 1		Model 2	
	Month 36 and Month 54		Month 54 and First Grade	
	<i>B</i>	<i>RSE</i>	<i>B</i>	<i>RSE</i>
Parental relationship quality	-0.47	0.41	-1.15**	0.38
Child-specific process quality (composite)	-0.13	0.24		
Parental relationship quality X child-specific process quality	-0.18	0.22	-0.35	0.30
Quality of home learning environment	0.39	0.44		
<i>Childcare type (Ref. Parent)</i>				
In-Home care	0.56	1.05		
Family day care	0.74	1.16		
Centre care	0.22	1.02		
Hours in childcare arrangement	0.04	0.03		
Total household income (in 1000\$)	-0.01	0.01	-0.03 <sup>+</sup>	0.02
<i>Disruption / Change (Ref. No)</i>				
Yes	-2.27 <sup>+</sup>	1.17	1.28	1.44
Status unknown	-1.81	1.93	-1.70	1.38
Constant	49.14***	1.49	51.00***	1.19
<i>R<sup>2</sup></i>				
Within	0.02		0.05	
Between	0.02		0.09	
Overall	0.02		0.08	
<i>N</i>				
Observations	844		1,182	
Groups	422		591	

*Table 4: Fixed-effects models of child behavior checklist scores, month 36 through first grade, with ORCE A Priori Qualitative Composite of Process Quality (continued)*

	Subsample Formal Care			
	Model 3		Model 4	
	Month 36 and Month 54		Month 54 and First Grade	
	<i>B</i>	<i>RSE</i>	<i>B</i>	<i>RSE</i>
Parental relationship quality	-0.34	0.42	-0.92*	0.37
Child-specific process quality (composite)	-0.18	0.26		
Parental relationship quality X child-specific process quality	-0.27	0.25	-0.49 <sup>+</sup>	0.29
Quality of home learning environment	0.12	0.42		
<i>Childcare type (Ref. Parent)</i>				
In-Home care				
Family day care				
Centre care				
Hours in childcare arrangement	0.03	0.03		
Total household income (in 1000\$)	-0.01 <sup>+</sup>	0.01	-0.03 <sup>+</sup>	0.02
<i>Disruption / Change (Ref. No)</i>				
Yes	-2.52 <sup>+</sup>	1.46	1.64	1.59
Status unknown	-1.83	2.42	-0.90	1.21
Constant	49.89***	1.05	50.99***	1.20
<i>R<sup>2</sup></i>				
Within		0.02		0.05
Between		0.03		0.08
Overall		0.03		0.08
<i>N</i>				
Observations		774		1,064
Groups		387		532

+  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

*Note.* NICHD SECCYD Study. Based on information provided in month 36, month 54, and first grade. RSE = Robust standard error of coefficient.

To determine the robustness of the results described thus far, we conducted several sensitivity analyses (available upon request from the authors). To clarify the interpretation of the interaction term in our models, we tested an interaction of parental relationship quality with a time-invariant within-person mean of experienced ECEC process quality for the models based on data from month 36 and 54. The results did not change substantially, regardless of the operationalisation used for experienced ECEC process quality.

We tested adding an interaction of type of care and hours spent in care as a control variable, which did not prove significant. To see whether the stronger and more significant associations with changes in parental relationship quality across the transition to primary school may be due to fewer controls being included, we re-ran the models for the age period 36 to 54 month without controlling for the home learning environment and found substantively unchanged results. As previous studies suggested that the consistency in ECEC process quality over time may matter for child development, we included the sum of the ECEC process quality levels experienced by the child at months 36 and 54 as part of the interaction effect with parental relationships quality in Models 2 and 4. The interaction effects in these models showed substantively the same results as before. Lastly, we re-ran the analyses with the raw scores of the CBCL instead of using the (standardised) T Scores. However, this did not change the results substantially.

## 6. Discussion

In this study, we investigated the associations between parental relationship quality and children's socio-emotional development, as measured by the CBCL, and the potentially moderating effect of the process quality a child experienced at his or her ECEC arrangement. We extend the very limited number of studies that analyse the joint effects of parental relationship quality and child-specific process quality.

The fixed-effects regression models showed a moderately strong negative association of a reduction in parental relationship quality with an increase in behaviour problems of children only during the period when children transitioned to primary school. These associations did not reach statistical significance during preschool years. Moreover, we did not find a moderating effect of the experienced process quality.

Our findings are only partly consistent with both the assumptions of the family stress model and the spillover hypothesis, which presume that parents' positive and negative emotions are transmitted to the interactions with their children. They are in line with Garriga, Martínez-Lucena & Moreno (2019), who based on the UK Millennium Cohort Study and lagged dependent variables models found that parents' relationship quality at age 3 was associated with children's externalising problems at age 5 years when most British children also entered primary school. For the US American context, Goldberg & Carlson (2014) reported partly similar results: they analysed data of the Fragile Families and Child Wellbeing Study with fixed-effects models and structural equation models over child ages 3 through 9, and showed that greater supportiveness in the parental relationship was associated with children's reduced externalising and internalising behaviour problems. In contrast to our results, they did not find stronger associations with changes in parental supportiveness across child age 5 to 9 years compared to earlier years when children were 3 to 5 years old. Given the less disadvantaged composition of our sample, our results strengthen the existing evidence base that deteriorating parental relationship quality may adversely affect children's socio-emotional development across the transition to primary school.

Improvements and declines in parental relationship quality were not statistically significant during preschool years between months 36 and 54. This may be due to the limited within-person variation in CBCL scores and child-specific process quality during this period. However, it may also indicate that parental relationship quality might be more influential for children's socio-emotional development during a transition phase. Leaving childcare and entering school is without doubt a formative experience for every child, and brings with it numerous new demands in terms of social behaviour, cognitive performance, focusing, and attention, to which the child has to adjust (Beyer et al. 2012). It seems reasonable that, in this challenging time, a child relies even more on the emotional support of his or her parents. If (s)he feels safe and is certain that the family environment is a reliable shelter, (s)he might be better equipped to handle the challenges and stress that are associated with these transitions.

Numerous but not all previous early education studies (for reviews, see Slot 2018; Melhuish et al. 2015) have pointed to ECEC process quality as the most consistent predictor of child development apart from family processes. We neither found a bivariate correlation between experienced process quality and CBCL score, nor a consistent significant relationship between improvements in experienced process quality and in socio-emotional development. This is surprising, as scholars who also worked with the NICHD SECCYD data have reported that, for 2 and 3 year-olds, childcare quality was a consistent, yet moderate, predictor of a child's socio-emotional development, with higher quality linked to greater social competence and less frequent behaviour problems (NICHD Early Child Care Research Network 1998). It has to be noted though, that they applied OLS regression models and therefore estimated between-family rather than within-family effects. Even then, childcare quality only explained a moderate amount of between-family variance. Alternatively, they might have found larger effects of childcare quality because their sample included 2-year-olds, for whom it might be more influential than for older children. Consistent with our results, they, however, also concluded that family processes appear more important in explaining children's early social and emotional development than aspects of the non-parental childcare setting.

Given the relatively weak relationship of experienced ECEC process quality with changes in children's behavioural problems in our data, it is not surprising that our findings did not support the assumption of high-quality ECEC acting as a protective factor for children who experience increased conflict and tension in their parents' relationship either during preschool years or across the transition to primary school. In many countries, ECEC quality varies significantly between children of different socio-economic backgrounds (Dowsett et al. 2008; Stahl, Schober & Spiess 2018). As some previous studies (Zachrisson & Dearing 2015; Heckman 2011) pointed to protective or compensatory effects of ECEC quality in particular for deprived children, the socio-economically more privileged NICHD SECCYD sample and the positive correlation of ECEC process quality and home learning environment in this sample may make it very difficult to identify such subgroup effects. Future research should therefore seek to examine the interdependency of parental relationship processes and high ECEC process quality in particular for the socio-emotional development of children from more disadvantaged backgrounds.

## 7. Limitations, suggestions for future research and implications

Despite the contributions our study makes, several limitations have to be kept in mind. First, due to the non-representative sample, inferences to other samples should only be drawn with caution. Second, for the measures of relationship quality and child development, we had to rely on maternal reports. It is possible that both assessments were influenced by changes in mothers' wellbeing leading to upward or downward bias. For example, relationship conflicts among parents might have impacted mothers' perceptions of child behaviour, leading mothers to rate their children as more demanding and trying, yielding a negative bias in mothers' reports. However, if mothers' biased reports contain a time-constant component, such as social desirability bias more generally, this is controlled for by applying fixed-effects models. Third, despite these methodological precautions, we cannot exclude potential bias as a result of unobserved changes in parental behaviour, e.g. to compensate relationship conflicts by dedicating more time and attention to their children.

From a family systems perspective, parental relationship quality is only one element of a larger system. The lack of a significant association between declines in parental relationship quality with children's behaviour problems between age 36 and 54 months may therefore be due to other unobserved protective processes within this system that might provide relative stability and even counterbalance disruptions to some extent, e.g. the quality of the relationship between parent and child and compensating behaviours of the parents. This is undoubtedly an interesting area for future research.

This study provides new evidence that declines in parental relationship quality are related to an increase in children's behaviour problems across the transition to primary school, whereas improvements in mothers' perceived relationship quality appear to benefit children's socio-emotional development. The process quality experienced at earlier childcare arrangements does not moderate this association. However, it has to be noted that, due to the more privileged nature of our sample, it contains very few children, especially from deprived groups, experiencing low quality. As low experienced ECEC process quality might be an additional risk factor, especially for children from families with low parental relationship quality, examining this question more closely with an adequate sample seems a worthwhile endeavour.

If replicated, the results of this study do not only enrich our understanding of the way social inequalities emerge during early childhood, but also support the development of clinical interventions ensuring healthy child development. The results suggest that initiatives designed to improve a couple's relationship quality might also be an effective way to further their child's socio-emotional development across the transition to primary school. If parents are enabled to resolve their differences more peacefully or at least neutrally, they provide positive role models for their children and negative consequences for their parenting style can be avoided (Krishnakumar & Buehler 2000), which is crucial for healthy child development. Thus, an interesting venue for future research could be to explore whether interventions aimed at improving children's socio-emotional development status, such as programs that help children deal with Adjustment Disorder, might be even more effective if the parents' relationship is taken into account as well.

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## Information in German

### Deutscher Titel

Elterliche Beziehungsqualität und Verhaltensprobleme bei Kindern: Qualität der Kinderbetreuungseinrichtung als schützender Faktor?

### Zusammenfassung

**Fragestellung:** In dieser Studie wird untersucht, wie Veränderungen in der elterlichen Beziehungsqualität mit der sozio-emotionalen Entwicklung der Kinder in der frühen Kindheit zusammenhängen und ob hochqualitative Kinderbetreuungseinrichtungen als Schutzfaktor agieren können.

**Hintergrund:** Wir beziehen uns auf die Familien-System-Theorie sowie den ökosystemischen Ansatz nach Bronfenbrenner, um zu untersuchen, wie verschiedene soziale Umfelder interagieren und die sozio-emotionale Entwicklung sowohl in der frühen Kindheit als auch während des Übergangs in die Grundschule beeinflussen können.

**Methode:** Basierend auf einer gepoolten Stichprobe von 636 US-amerikanischen Kindern, welche an der Längsschnittstudie NICHD Study of Early Childcare and Youth Development (SECCYD) teilnahmen, berechneten wir Fixed-Effects-Modelle zu drei Zeitpunkten zwischen dem dritten Lebensjahr und der ersten Klasse.

**Ergebnisse:** Die Zusammenhänge zwischen Veränderungen in der elterlichen Beziehungsqualität und der sozio-emotionalen Entwicklung der Kinder im Alter von drei bis viereinhalb Jahren waren nicht signifikant. Jedoch zeigten unsere Ergebnisse, dass eine Verschlechterung der elterlichen Beziehungsqualität während des Übergangs zur ersten Klasse mit einem moderaten Anstieg in kindlichen Verhaltensproblemen einherging. Wir fanden keine mildernden Effekte der kindsspezifischen Prozessqualität der Kinderbetreuungseinrichtungen, weder im formellen noch im informellen Kontext.

**Schlussfolgerung:** Die Ergebnisse legen nahe, dass Initiativen, welche die Beziehungsqualität eines Paares verbessern sollen, ebenfalls die sozio-emotionale Entwicklung ihres Kindes positiv beeinflussen könnten.

**Schlagwörter:** Sozio-emotionale Entwicklung, elterliche Beziehungsqualität, frühkindliche Erziehung und Betreuung, NICHD SECCYD, Vereinigte Staaten von Amerika

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