NEPS
National Educational Panel Study

Research Data

Information on Direct Measures

NEPS Starting Cohort 1 — Newborns

Education From the Very Beginning

Wave 3: 26 months

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Direct measures (observations and test observation)					
Test situation	Two-year-old children were observed individually in their homes in the presence of the anchor person and the interviewer.				
Sequence of tests/observations	Parent-Child-Interaction was administered as a direct measure (Linberg, A., Mann, D., Attig, M., Vogel, F., Weinert, S., & Roßbach, H.-G. (2019). *Assessment of interactions with the macro-analytic ratings system of parent-child-interactions in the NEPS at the child's age of 7, 17, and 26 months* (NEPS Survey Paper No. 51). Bamberg: Leibniz-Institute for Educational Trajectories, National Educational Panel.) The direct measure was recorded on video and coded afterwards.				
Duration of observations/tests (excluding setup)	approx. 10 minutes				
Information about the administered direct measure					
Construct	Number of tasks	Duration	Mode of administration	Number of coded items	Next assessment
Parent-Child-Interaction	-	approx. 10 minutes	observed interaction behavior (standardized tasks)	20	-

Preface

The development of the individual tests is based on framework concepts. They are overarching concepts on the basis of which education-relevant competences are to be shown consistently and coherently over the entire personal history. Therefore, the following framework concepts, which served as a basis for the development of the test tools to measure the above-mentioned constructs, are identical in the different studies.

In addition to the competence measures, which are coherently assessed across the lifespan, stage-specific measures are assessed at specific points in time at which these measures are especially meaningful (cf. Berendes, Weinert, Zimmermann, & Artelt, 2013[1]). Usually, these assessments are not repeated.

[1] Berendes, K., Weinert, S., Zimmermann, S., & Artelt, C. (2013). Assessing language indicators across the lifespan within the German National Educational Panel Study (NEPS). *Journal for Educational Research Online/Journal für Bildungsforschung Online*, *5*(2), 15–49.

Parent-Child-Interaction

From the beginning of a child's life, the home learning environment is important for child development and later educational trajectories (Bronfenbrenner & Morris, 2006; Linberg et al., 2019). Thus, the quality of early interactional behaviors in parent-child dyads affects several domains of child development, such as socio-emotional, cognitive, and language development (Newton et al., 2014; Tamis-LeMonda et al., 2001; Tamis-LeMonda et al., 1996; Tamis-LeMonda et al., 1998).

Various theories and empirical studies have emphasized the specific role of different dimensions of parental interaction behaviors, sometimes focusing on specific developmental domains (e.g., Ainsworth et al., 1974; Blomeyer et al., 2010; Linberg, 2018; Newton et al., 2014; NICHD Early Child Care Research Network, 1998; Wood et al., 1976). These dimensions include supportive and sensitive behavior as well as stimulating interactional behavior, emotionally positive and negative regard, parental intrusiveness, or detachment. The quality of parental interaction behavior can be operationalized in a variety of ways, either as a single specific rating or as a global indicator that encompasses multiple facets of parental interaction behavior (e.g., Linberg et al., 2017; NICHD Early Child Care Research, 2005).

Both interaction partners (Rogoff, 1990) mutually influence interactional behavior in parent-child dyads (Bornstein et al., 2008; Kochanska & Aksan, 2004; Masur & Turner, 2001). The child's characteristics and behaviors affect his or her interaction partner and are simultaneously influenced by his or her interaction partner's behavior.

To assess the quality of parent-child interaction in the Newborn Cohort of the German National Educational Panel Study (NEPS SC1), an adapted version of the NICHD-SECCYD study instrument was used (NICHD Early Child Care Research Network, 1991; 1992a; 1992b; see Sommer et al., 2016). Parent-child interactions were observed in a semi-standardized setting in the family home during the first three survey waves, at a time when the children were on average 7, 17, and 26 months old. The interactions were videotaped and subsequently rated off-line by trained observers (Linberg et al., 2019). More detailed information on the household setting, the coding instrument, coding instructions, and coder consistency can be found in Linberg et al. (2019) for all three waves.

The following aspects were standardized: the general setup, the playtime, and the play materials. The parents were asked to behave as they always do when spending time with their child and to play with their child as usual. In most cases, the mother acted as the child's interaction partner, and in rare cases the father. The survey used different toys that can elicit different responses in children, for example, by means of a sudden discrete effect, an action with continuous effect, state-related goals, pretend play, and joint attention (for a detailed description of the play materials, see Sommer et al., 2016). The data on all German-language interaction situations are available in the scientific use file (SUF).

Procedure in Wave 3 (children on average 26 months old)

In Wave 3, the overall procedure was similar to in Wave 1 and identical to in Wave 2. In line with the NICHD-SECCYD study (NICHD Early Child Care Research Network, 2005), the NEPS toys were given to the parents in three bags, which were to be used in a predetermined order. The parents were asked to use all three bags sequentially and at their own pace, starting with Bag 1 and ending with Bag 3. The interaction situation lasted 10 minutes.

In Wave 3, two additional rating scales were used compared to in the previous two waves. The coding procedure was similar but adapted to the age of the children. Level changes in the data may therefore

also be due to differences in coding. The rating scales used to code parental interaction behavior included: sensitivity to distress and non-distress, cognitive-linguistic stimulation, emotionality, positive and negative regard, intrusiveness, and detachment. In Wave 3, numeracy and language stimulation were coded in addition to the global rating of cognitive stimulation. The rating scales for the child's interactive behavior included: positive and negative mood, activity level, non-social sustained attention, and child social engagement. Each rating scale comprised five qualitatively defined levels, ranging from 1 "not at all characteristic" to 5 "very characteristic".

In addition to the ten ratings of parental interaction behavior and the five ratings of child interaction behavior, the SUF contains variables with information on whether data on parent-child interaction are available, which coder rated the interaction, whether the interaction language was German, whether there were deviations from the standardized setting, and whether the parent spoke to the child during the interaction. In Wave 3, only the anchor person could participate in the parent-child-interaction.

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