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AID:A

Survey Report 4

Angelika Guglhör-Rudan*, Anja Linberg*, Sophia Chabursky, Alexandra Langmeyer, Hanna Maly-Motta, Thorsten Naab, Inga Simm & Susanne Kuger

The AID:A 2023 Child Interview

Expanding Direct Self-Reports to the 5–8 Age Cohort

*Both authors share first authorship.

Forschung zu Kindern, Jugendlichen und Familien an der Schnittstelle von Wissenschaft, Politik und Fachpraxis

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Deutsches Jugendinstitut
Außenstelle Halle
Franckeplatz 1, Haus 12/13
06110 Halle

Ansprechpartnerin:
Angelika Guglhör-Rudan
Anja Linberg
E-Mail guglhoer@dji.de
linberg@dji.de

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Abstract

Although children are increasingly recognized as competent informants about their lives, they remain underrepresented in large-scale social surveys. Surveying children below the age of eight poses particular methodological challenges, including limited reading skills, developmental differences in cognitive abilities, and the need for age-appropriate questionnaire design, response formats, and survey procedures.

Building on the German Youth Institute's longstanding experience with direct child surveys, the nationally representative multi-actor panel study *Growing Up in Germany* (AID:A), which examines living conditions, subjective experiences, and well-being across childhood, adolescence, and young adulthood, has progressively expanded the inclusion of children's own perspectives. In AID:A 2019, children aged 9 to 11 years participated in direct child interviews. The 2023 wave extended this approach to children aged 5 to 8 years through the development of a new interviewer-assisted child survey module using age-appropriate visual response scales. This survey report describes the conceptual development, implementation, and methodological evaluation of direct self-report interviews with children aged 5 to 8 years that were introduced in the AID:A 2023 wave. While previous waves relied on proxy reports for this age group, AID:A 2023 introduced Computer Assisted Personal Interviews (CAPI), assisted by an interviewer, using developmentally appropriate visual response scales (smiley-face, thumb, and frequency scales) and standardized interviewer guidance.

Based on a sample of n = 1,125 children, the report evaluates participation, survey implementation, response behavior, and indicators of data quality of these self-reports. Results indicate high levels of comprehension and low item non-response across all age groups, suggesting that children as young as five can be successfully and feasibly included in large-scale social surveys when provided with standardized visual support and professional interviewer guidance. The paper provides practical recommendations for the design of child-friendly survey instruments and contributes methodological evidence for the inclusion of young children's own perspectives in large-scale social surveys. It also highlights the need for further research.

Zusammenfassung

Obwohl Kinder zunehmend als kompetente Auskunftspersonen über ihre Lebenswelten anerkannt werden, sind sie in groß angelegten sozialwissenschaftlichen Befragungen nach wie vor unterrepräsentiert. Insbesondere die direkte Befragung von Kindern unter acht Jahren ist methodisch anspruchsvoll, da begrenzte Lesekompetenzen und entwicklungsbedingte Unterschiede in den kognitiven Fähigkeiten vorliegen und entsprechende altersgerechte Fragebogen-, Antwortformat- und Erhebungsdesigns erforderlich sind. Aufbauend auf der langjährigen Erfahrung des Deutschen Jugendinstituts (DJI) mit direkten Kinderbefragungen hat die bundesweit repräsentative Multi-Actor-Panelstudie „Aufwachsen in Deutschland: Alltagswelten“ (AID:A), die Lebensbedingungen, subjektive Erfahrungen und das Wohlbefinden von Menschen über verschiedene Lebensphasen hinweg untersucht, die direkte Einbeziehung kindlicher Perspektiven kontinuierlich erweitert. In AID:A 2019 wurden Kinder im Alter von 9 bis 11 Jahren direkt befragt. Mit der Erhebungswelle 2023 wurde dieser Ansatz auf Kinder im Alter von 5 bis 8 Jahren ausgeweitet. Hierfür wurde ein neues interviewergestütztes Befragungsmodul mit altersgerechten visuellen Antwortskalen entwickelt.

Dieser Surveybericht beschreibt die konzeptionelle Entwicklung, die Umsetzung sowie die methodische Evaluation der direkten Kinderbefragung von 5- bis 8-jährigen Kindern in der Erhebungswelle AID:A 2023. Während für diese Altersgruppe in früheren Wellen ausschließlich Elternauskünfte (Proxy-Berichte) herangezogen wurden, führte AID:A 2023 ergänzend interviewergestützte CAPI-Befragungen (Computer Assisted Personal Interview) mit altersgerechten visuellen Antwortskalen (Smiley-, Daumen- und Häufigkeitsskalen) sowie standardisierten Interviewerleitfäden ein. Auf Basis einer Stichprobe von n = 1.125 Kindern untersucht der Bericht die Teilnahmebereitschaft, die Durchführung der Interviews, das Antwortverhalten sowie Indikatoren der Datenqualität. Die Ergebnisse deuten auf ein hohes Verständnisniveau und geringe Antwortausfälle über alle Altersgruppen hin. Dies legt nahe, dass bereits Kinder ab fünf Jahren erfolgreich in groß angelegte Sozialsurveys einbezogen werden können, sofern eine standardisierte visuelle Unterstützung und professionelle Interviewerführung gewährleistet sind. Der Bericht liefert praxisnahe Empfehlungen für die Entwicklung kindgerechter Erhebungsinstrumente und trägt zur methodischen Weiterentwicklung der direkten Einbeziehung junger Kinder in groß angelegte sozialwissenschaftliche Befragungen bei. Darüber hinaus weist die Studie auf weiteren Forschungsbedarf in diesem Bereich hin.

1 Introduction and Objective

Large-scale social surveys increasingly seek to incorporate children's own perspectives. However, the direct inclusion of children below the age of eight remains uncommon because standardized survey methods must accommodate developmental differences in cognition, language, and response behavior. Consequently, methodological evidence on how to successfully implement direct self-report interviews with young children in nationally representative household surveys remains limited.

The aim of this paper is to describe the conceptual development, implementation, and initial methodological evaluation of a standardized interviewer-assisted survey module for children aged 5 to 8 years introduced in the 2023 wave of Growing Up in Germany (AID:A). The paper focuses on the development and implementation of the child survey module, whereas analyses comparing children's self-reports with parental proxy reports are presented in a companion paper (Linberg and colleagues forthcoming). Building on the German Youth Institute's longstanding experience with direct child surveys, beginning with the German Child Panel, AID:A continues this tradition within a nationally representative multi-actor household panel. While previous AID:A waves included direct interviews with children aged 9 to 11 years, the 2023 wave extended this approach to children aged 5 to 8 years through the development of age-appropriate survey instruments, visual response formats, and standardized interviewer procedures.

The paper first reviews the conceptual and methodological background of surveying young children and provides an overview of existing quantitative survey approaches (section 2). It then describes the development and implementation of the interviewer-assisted child survey module in AID:A 2023 (section 3) before presenting findings on participation, survey implementation, response behavior, and indicators of data quality (section 4). Finally, it discusses the methodological implications of these findings for the future development of child-friendly survey instruments and the inclusion of young children's perspectives in large-scale social surveys (section 5). The paper also provides a foundation for future research on standardized online survey instruments for young children. While the present study focuses on the interviewer-assisted approach, future work will examine the adaptation and implementation of digital survey instruments.

2 Background

2.1 Children as Active Agents

Various disciplines within the field of new childhood studies recognize that children's statements can provide valuable insights (e.g., Heinzel/Kränzl-Nagl/Mierendorff 2012). There is growing attention to self-reports, despite the fact that the individuals involved might have not yet developed sufficient reading and writing skills or have not even begun to learn them (e.g., Lipski 2000; Vogl 2021a). Across disciplines, such as medicine, psychology, child protection, and legal contexts, researchers have developed methods to systematically elicit young children's perspectives. Childhood research emphasizes the importance of directly questioning children to better understand their living conditions (Ben-Arieh 2014). Contrary to the longstanding assumption that children's impressions are inherently unreliable, research indicates that children can provide valuable and meaningful insights into their own attitudes and perspectives when the methods used are adapted to their developmental abilities. Indeed, survey methodology demonstrates that adult proxy reports are frequently prone to their own biases and misperceptions regarding a child's subjective well-being (e.g., de Leeuw 2011). This highlights the importance of capturing children's perspectives directly rather than relying exclusively on adult proxies, because children's own accounts represent a distinct source of knowledge about their experiences that complements adult reports but cannot simply replace them (Punch 2002).

From a methodological perspective, research indicates that children from early school age can provide meaningful survey responses under appropriate conditions, particularly when instruments are adapted to their cognitive and linguistic abilities (Borgers/Hox/Sikkel 2003; de Leeuw/Borgers/Smits 2004). Engaging children in this way may also support their development of opinions and contribute to their self-confidence (Sinclair 2004).

Moreover, contemporary qualitative research increasingly recognizes young children not merely as passive subjects but as active contributors to the research process itself. Such participatory approaches have extended children's involvement to increasingly younger ages, with some studies including children from around the age of four (Kilgariff/Kervin/Mantei 2025).

Despite this growing consensus regarding the value of children's self-reports, their direct inclusion in large-scale surveys remains methodologically and institutionally challenging (Scott 2008). Age-appropriate instruments, careful ethical procedures, and navigating gatekeeping processes continue to limit participation, particularly among younger children (ADM 2021; Bell 2007).

Article 12 of the UN Convention on the Rights of the Child (UN 1989) establishes children's rights to express their views in matters affecting them (UN 2009). While

this rights-based framework provides an important rationale for including children in large-scale surveys, it does not replace the need for empirically robust and developmentally appropriate survey methods, as described above.

2.2 The Shift towards Early Childhood Self Report

Contemporary research increasingly recognizes children as knowledgeable respondents with agency (Honig 1999). This shift has also influenced the age at which children are included in longitudinal studies, although the lower age bound still depends strongly on the construct being measured and on instrument design (de Leeuw 2011; Scott 2008). While many large-scale assessments have traditionally begun surveying children at age eight or nine, recent international initiatives, including those of the OECD (2021a, 2021b), have extended data collection to younger primary-school children using brief, cognitively adapted instruments. The inclusion of younger children allows early childhood experiences and developmental trajectories to be examined from an earlier age and places AID:A alongside comparable international developments in survey methodology.

This development raises methodological questions regarding the measurement of self-assessments, subjective experiences, and children's perceptions. In addition, collecting information from both children and their parents allows comparisons between children's self-reports and adult proxy reports, making it possible to examine both similarities and differences (see Linberg and colleagues forthcoming).

Better integrating children's perspectives into policymaking and administrative processes requires suitable empirical data. Although progress has been made, children's viewpoints remain only partly reflected in political and administrative decision-making (e.g., UNICEF 2022). Further methodological work on quantitative child surveys—including studies of validity, the development of age-appropriate instruments, and mixed-informant designs—can contribute to strengthening the empirical basis for child-related policy.

2.3 Methodological Challenges

Surveying children poses unique methodological challenges. These stem from children's developmental stage, which requires survey instruments to be adapted to their specific knowledge, skills, and interests, as well as from the limitations of methodological research on direct quantitative measurement in younger children (Borgers/de Leeuw/Hox 2000; de Leeuw 2011; Flanagan/Greenfield/Coad/Nelson 2015; Scott 2008; Vogl 2021a, 2021b). Historically, children have often been represented indirectly in general-population surveys through proxy reports from parents or other adult respondents. More recent child-centered approaches, in line with the "New Sociology of Childhood", treat children as active participants in research and emphasize direct self-report surveys (for example, in AID:A) and child-

centered frameworks that consult children as active agents (James/Prout 1997; Goswami/Pollock, 2025).

To operationalize children's self-reports successfully, several concrete methodological and developmental factors must be considered. First, literacy levels among children vary considerably in this age range (e.g., de Leeuw/Borgers/Smits 2004). In Germany, many children have not yet acquired reading skills before entering elementary school around age six. Children aged six to eight are typically only beginning to develop reading proficiency. These differences should therefore be taken into account when conducting questionnaires, for example by providing interviewer assistance or audio support (Coombes et al., 2024; Borgers/de Leeuw/Hox, 2000). Careful pretesting of questionnaires for children and adolescents is especially important, because comprehension and response processes differ from those of adults (de Leeuw/Borgers/Smits 2004). Building on these general comprehension processes, children's developing understanding of time and temporal references also affects how they interpret questions referring to the past or the future (Harner, 1980; Scott, 1998). Questions requiring children to recall events over extended periods or to anticipate future circumstances may therefore be more cognitivly demanding to them. Compared with adults, children's abilities to remember past events and think about future events are still developing, particularly during early and middle childhood (Friedman/Lyon 2005; Ornstein/Haden/Elischberger 2006). Consequently, retrospective and prospective survey items may be more difficult for children to answer (Atance/O'Neill 2001; de Leeuw/Borgers/Smits 2004; Scott 2008). Obtaining meaningful responses therefore requires survey questions that build on children's recent experiences and familiar contexts, while avoiding long reference periods and abstract temporal concepts (Borgers/Hox/Sikkel 2003, 2004; de Leeuw/Borgers/Smits 2004; Scott 2008). Moreover, questions should be grounded in children's everyday experiences and familiar contexts (de Leeuw 2011; Punch 2008).

Overall, sustaining children's engagement requires careful consideration of both item wording and questionnaire design. This includes formulating questions in ways that capture children's interest and selecting content that is meaningful and relevant to them. Short, concrete, and engaging tasks may help maintain children's attention and reduce motivational disengagement during the survey (Scott 1997). Although developed in the field of child–computer interaction, the Fun Toolkit illustrates how visual and playful response formats can support children's engagement and reduce the risk that data collection is experienced as boring or test-like (Read/MacFarlane, 2006).

Closely tied to questionnaire design, the choice of response scales directly affects data quality. From a cognitive perspective, younger children exhibit distinct response tendencies, such as opting for scale extremes when evaluating emotional states (Chambers/Johnston 2002). Moreover, research suggests that combining verbal descriptors with visual aids (such as graphical rating scales) and incorporating explicit training or warm-up phases can help mitigate these response biases and guide children toward more accurate ratings (ibid.). In this regard, methodological

variations in scale layout and label direction have been shown to systematically alter children's ratings (Betts/Hartley 2012). To accommodate these cognitive and structural constraints, survey instruments commonly employ illustrated rating scales that are explicitly explained and tested during a warm-up phase (de Leeuw/Borgers/Smits 2004; Scott 1997).

From a developmental perspective, children in early and middle childhood are still navigating cognitive stages in which abstract reasoning, metacognitive monitoring, and reliable long-term memory recall are not yet fully consolidated (de Leeuw 2011; Vogl 2021b). Methodological research suggests that school-age children can provide acceptable and consistent survey responses when instruments are closely adapted to their cognitive levels (Borgers/Hox/Sikkel 2003; de Leeuw/Borgers/Smits 2004). This developmental transition is also noted in broader literature on response scales in other disciplines: while concrete, graphical, or pictorial formats are highly recommended for younger cohorts, a gradual developmental transition occurs around age seven or eight, where abstract verbal Likert-type scales increasingly become viable as cognitive capacities mature (de Leeuw/Borgers/Smits 2004; Scott 1997).

At the same time, methodological research on questioning younger children who are not yet fully literate in the context of large survey projects, particularly regarding the most appropriate methods for data collection, remains limited. Although literacy-independent tools such as audio-CAPI, pictorial scales, or forced-choice vignettes show promise, systematic validation studies remain scarce among children under the age of eight (e.g., Borgers/Hox 2001). Only a few studies focus on children prior to third grade, when reading skills begin to enable them to respond to a small range of questions presented in a child-friendly, adapted version of a typical questionnaire format. In response to this research gap, recent methodological evaluations emphasize that instead of a single settled method, successful data collection benefits from highly age-tailored, engaging, or mixed-informant designs to effectively navigate measurement constraints in under-8 cohorts (for trauma-informed research, see McCarthy/Rudolph/Fry/Monks/Pacella/Meinck 2025).

2.4 Overview of Quantitative Child Surveys

To provide a structured overview of quantitative surveys directly involving children in the German-speaking context, we compiled studies with international and national relevance. Table 1 shows the most important large-scale, repeated, and/or longitudinal studies as well as single or short-term studies, and also examples of non-representative/local studies.

We focus on the part of each study in which children aged 5 to 12 are surveyed directly. Depending on the study, this may comprise the entire study or a specific survey module focusing on children. Survey modules in which only parents or teachers provide information about children are not considered in this overview.

For each study, key characteristics are presented, including the age range, topics covered, sampling design, and survey mode. In most of the studies presented, reading comprehension is required.

Readers interested in how studies involving children have been conducted can explore these examples in more detail.

Table 1: Survey Designs for Child Self-Report Questionnaire in Representative Large-Scale, Repeated/Longitudinal Studies, Age 5-12

Study	Age	Main Topics	Survey mode	Adapted design	Year
AID:A	5–8 (since 2023), 9-12*	Well-being, family, friends	CAPI / face-to-face	*See this paper*	2019, 2023
AWO-ISS	8-11	School, social relationships, well-being, poverty	Non-representative; quantitative & qualitative	Age-adapted interviews and questionnaires	2000 - 2005
Children's World+	8 , 10, 12 *	Life satisfaction, school, friends	Repr. schools; CASI	Age adapted versions and scales; focus groups	2017-2018
COCON (CH)	6	Family, school, friends	Representative panel; CAPI	Child interview; age-appropriate instruments	2006
Demokratie Leben Lernen (Mannheim)	6–10	Political knowledge, democracy, participation	Local; panel; written standardized questionnaire	Pictografical child questionnaire	2004–2008
DKHW	10–12*	Children's rights, participation, well-being	Nationally; online	Age-adapted wording	2024+
EDUCARE	Primary school	School, learning and social behavior	Regional; self-administered paper questionnaire	Age adapted items;	2012/ 2013
EriK	4–7	Social relationships, social incusion, participation	National; face-to-face interview	Age-appropriate playful child interview	2022
KiGGS (incl. Modules)	11, 12*	Mental / physical health, activities	Nat. repr.; written self-report	Age-differentiated questionnaires	2003-2006
LBS-Kinderbarometer	9–12*	Wellbeing (family/school/friends, School, leisure, media	Nat. repr.; PAPI	Pretested: comprehensibility, completion time; Adapted scales	2009 +
NEPS (Starting Cohort 2; Wave 6-11)	9-12*	School, education, well-being	Nat. repr.; PAPI	Age-appropriate child / student questionnaires; Competency testing	2010+
Participation (CH)	5-6	Educational provison, participation, social network	PAPI	Age adapted interview	2010
Pairfam	8–12*	Social interaction, friends, leisure	Nat. repr.; CAPI/ sensitive parts: self-administered CASI	Age-appropriate child interview	2008-2022
World Vision	6–11	School, family, friends	Repeated cross-sectional; CAPI	Child-oriented standardized interview/questionnaire	2007, 2010, 2013, 2018

Source: Own overview, based on research by Maly-Motta (2024, unpublished); authors' illustration

Notes: "Study" refers to the specific study context or module in which the child interviews were conducted. "Age" refers to the age range of children participating in direct self-report interviews. *) The module also included children older than 12; these are not included in this table. "Topics" refers to the core thematic focus of the child interview modules. "Survey mode" refers to the questionnaire or data collection mode, e.g., PAPI: Paper-and-Pencil Interview; CAPI: Computer-Assisted Personal Interview; CAWI: Computer-Assisted Web Interview; or other methods. "Adapted design" refers to adaptations of the study design, questionnaire, or interview procedure to the age and developmental characteristics of children. "Year" refers to the year of the child module.
Information about studies: Bischoff/de Moll/Pardo-Puhlmann/Betz 2016; Children's Worlds n.d.; Deutsches Kinderhilfswerk n.d.; Huinink and colleagues 2011; Institut für Sozialarbeit und Sozialpädagogik n.d.; Jacobs Center for Productive Youth Development n.d.; Kuger/Walper/Rauschenbach 2021; Kuger et al. 2024; Leibniz Institute for Educational Trajectories (LifBi) n.d.; Molina Ramirez/Rahmann/Klug/Kuger 2024; Müller-Kuhn/Herzig/Häbig/Zala-Mezö 2021; Prokids n.d.; Robert-Koch-Institut (RKI) 2026; Sommer-Himmel/Tietze/Imhof 2016; Universität Gießen n.d.; World Vision n.d.

The overview of the research landscape (Tables 1) shows that larger child surveys such as World Vision and NEPS typically target children from third grade onwards, corresponding to a level of literacy that allows for self-completion. Other studies use semi-structured interviews, which are better suited to younger children but involve smaller sample sizes. For younger children, such as those in preschool or early primary school, survey designs require specific methodological adaptations.

2.5 Methodological Implications for Survey Design

The review of existing surveys reveals different ways of surveying young children. Drawing on further methodological research, several principles emerge as particularly relevant for the design of survey instruments for young children.

Very often, instruments use illustrated rating scales (e.g., smiley faces) as response instruments, which are explained at the beginning of the survey to familiarize respondents with the function of the scale. Such approaches are used in many of the studies shown in Table 1. Visual aids, such as icons or other pictorial scales, are commonly used for subjective items like life satisfaction (see e.g., Ravens-Sieberer and colleagues 2014; Chambers/Johnston 2002). Previous research emphasizes that instructions should be brief and the cognitive load minimized by focusing on current behavior rather than long-term retrospective recall (Friedman 2003; Scott 2008). A key methodological challenge relates more to the wording of the questions and scales than to the order of the questions, since children tend to give their answers in individual, sequential steps.

When designing questionnaires for children, literature recommends avoiding negatively worded, hypothetical, or indirect questions, minimizing generalizations, and focusing on current behavior or experiences to reduce cognitive load from retrospective recall (Friedman 2003; Scott 2008). Similarly, open-ended questions are typically used sparingly in large-scale surveys, as they easily overwhelm younger respondents (Borgers/de Leeuw/Hox 2000). Finally, minimizing variation in response options and providing an age-appropriate number of categories can support data quality (Borgers/Sikkel/Hox 2004).

Beyond response formats, temporal and retrospective reasoning constitute another relevant cognitive dimension in child surveys, reflecting specific developmental constraints rather than a fundamental inability to recall events (Friedman/Lyon 2005;

Ornstein/Haden/Elischberger 2006). Given children's shorter attention spans, interviews or questionnaires must remain concise, typically not exceeding 30 minutes, although this may vary with context. Researchers should define time frames explicitly (e.g., "How often have you watched television in the last seven days?") and provide clearly differentiated response options, as young children rely heavily on event-based anchors rather than abstract linear timelines. Yes/no answers are suitable for younger children, while fully verbalized response categories, read aloud step-by-step by an interviewer alongside visual aids, are preferred over scales that only label the endpoints. Primacy effects in self-administered formats and recency effects when questions are read aloud by the interviewer must be taken into account; these can be addressed through suitable means, such as item rotation (see de Leeuw/Borgers/Smits 2004; de Leeuw 2011). Finally, dealing with "Don't know" options is a challenge and some authors argue that they should be limited to situations where they are necessary, as they tend to increase item non-response (Kondo 2002) or are susceptible to interviewer and format effects (Waterman/Blades/Spencer 2010).

Overall, these design principles (concise wording, visual aids, age-appropriate response formats, and careful consideration of children's attention span) were taken into account in the development of the AID:A interviewer-assisted child survey module, supporting the children from age five and older in completing the questionnaires.

Methodological recommendations:

- Ambiguity Reduction: Response categories should be clearly distinguishable for young children, as vague categories such as "sometimes" and "often" may be difficult to differentiate (e.g., de Leeuw 2011).
- Scale Consistency: Maintaining consistent scale gradation and direction throughout the interview can reduce cognitive demands associated with changes in response formats (e.g., de Leeuw and colleagues 2008).
- Use of visual aids: Visual aids can support children in processing and differentiating response options (e.g., Chambers/Johnston 2002).
- Mitigating Response Order Effects: Accounting for both primacy and recency biases by avoiding purely auditory or purely visual delivery and stabilizing children's short-term memory by pairing fully verbalized response options (read aloud by the interviewer) with corresponding visual anchors (smileys/thumbs) (e.g., de Leeuw and colleagues 2008, Borgers and colleagues 2000).
- Thematic Grouping: Organizing items into short, coherent blocks to sustain engagement and accommodate shorter attention spans (e.g., de Leeuw and colleagues 2008).
- Use of "Don't Know" Options: Using these options sparingly to minimize item non-response while ensuring children do not feel pressured to provide an answer " (e.g., de Leeuw 2011).

3 Implementation in AID:A 2023

Growing Up in Germany (AID:A) is a large-scale, multi-actor survey designed to collect comprehensive data on living conditions, subjective experiences, and well-being across childhood, adolescence, and young adulthood (Kuger and colleagues 2021). From its inception, the study has emphasized the importance of incorporating children's perspectives as a central element of social research. At the same time, proxy interviews with parents have consistently formed an integral part of the study design across all child age groups, ensuring the availability of contextual and observational information provided by parents or legal guardians. In AID:A 2019, direct self-report interviews were introduced for children aged 9 years and older, while younger children continued to be represented primarily through proxy reports. With AID:A 2023, the design of the child survey module was fundamentally extended to enable the direct participation of younger children. Using age-appropriate instruments with visual response formats, children as young as five years participated in direct child interviews.

3.1 Framework and Ethical Considerations

In the AID:A study, children are conceptualized as active, autonomous agents, a perspective extensively discussed in theoretical contexts (e.g., James/Prout 1997), yet rarely implemented in large-scale survey research. Growing Up in Germany (AID:A), based on the former "Kinderpanel" (Alt 2007), is distinctive in that it has incorporated children's perspectives since 2002. As a large-scale, multi-actor survey, it collects comprehensive data on living conditions, subjective experiences, and well-being (Kuger and colleagues 2021). While proxy interviews with parents ensure contextual information across all age groups, the 2023 wave fundamentally extended this tradition by lowering the age threshold for direct participation to five years. Previously, direct self-reports were restricted to children aged nine and older; this expansion aligns with international trends toward earlier inclusion in large-scale assessments, provided instruments are cognitively adapted (OECD 2021a).

The implementation of the child survey module in AID:A 2023 followed established ethical and methodological standards for surveying minors in social research (ADM 2021) and adheres to general quality criteria for survey data collection (DGOF n.d.). Central to the design was the principle of informed and voluntary participation. This required prior informed consent from legal guardians as well as the children's own explicit assent, which corresponds to current ethical standards that emphasize both parental consent and the child's own assent (e.g., Gross-Manos and colleagues 2021). Children were informed that they could refuse participation or terminate the interview at any time without consequences.

To balance protection with autonomy, a legal guardian was required to be present in the household, although the child decided whether the guardian remained in the same room during the interview.

3.2 Design and Development of the Instruments

3.2.1 Design

Due to the young age of the 5- to 8-year-old respondents, the interview was conducted exclusively as a personal face-to-face interview (using CAPI). Three different graphic response scales were used to support comprehension and responding; these were presented physically by the interviewer during the interview.

The selection of questionnaire content was guided by three main considerations:

- Relevance to children's everyday lives, including family, kindergarten or school, siblings, friends, and leisure activities.
- Children's subjective perspectives, focusing on aspects that children themselves can assess more accurately than parents (e.g., feelings of well-being, relationships, emotional support).
- Continuity with existing AID:A child instruments, particularly the survey module for children aged 9–11 years, to ensure comparability.

All questions were adapted to younger children by using child-appropriate wording, avoiding abstract concepts, and minimizing references to specific time periods. Response scales were kept consistent across the questionnaire to reduce cognitive load. The number of scale types was deliberately limited.

One open-ended question ("wish from a good fairy") was included to allow children to express individual priorities beyond predefined categories.

The questionnaire structure was designed to avoid frequent changes in scale formats and to group thematically related questions together.

3.2.2 Content of Scales

The child survey covered children's well-being and self-esteem, experiences in kindergarten or school, family relationships and family climate, as well as leisure activities and friendships. Before addressing substantive questions, the interview included a structured warm-up phase during which the response scales were explained and practiced.

Table 2 (Scales) gives an overview of the scales in the questionnaire.

Table 2: Scales

Construct	Variable Name	Scale: Type	No. Items
Well-being (KINDL-R*)	v32205_1-_4	Frequency	5
Self-esteem (KINDL-R*)	v32206	Frequency	1
School experience	v32001_1; _6	Agreement	3
Class climate	v32001_7; _10; _11	Agreement	3
Childcare attendance	Not included in SUF	Yes/No	1
Childcare experience	v32002_1; _6;_11	Agreement	3
Childcare climate	v32002_7; _10	Agreement	2
Relationship quality: mother / step-mother/ adoptive mother / social mother	v32207_1/ _1a_1/ _1a_2/ _1a_3	Rating	1
Relationship quality: father / step-father/ adoptive father / social father	v32207_2 / _2a_1 _2a_2 / _2a_3	Rating	1
Relationship quality: external mother	v32207_3	Rating	1
Relationship quality: external father	v32207_4	Rating	1
Relationship quality: each sibling	v32207_x_1 -_6	Rating	1
Intimacy realtionship: parents	v32208_1-_2	Frequency	2
Family climate	v32209_1-_5	Agreement	5
Friend: first name	v32210	Open (Anonymized in SUF)	1
Friend: gender	v32210	Male – female	1
Friend: school	v32212	Yes/No	1
Friend: frequency of contact (face to face)	v32213	Frequency	1
Friend: social support (emotional)	v32214	Frequency	1
Fairy wishes	v32215 (Not included in SUF)	Open	1

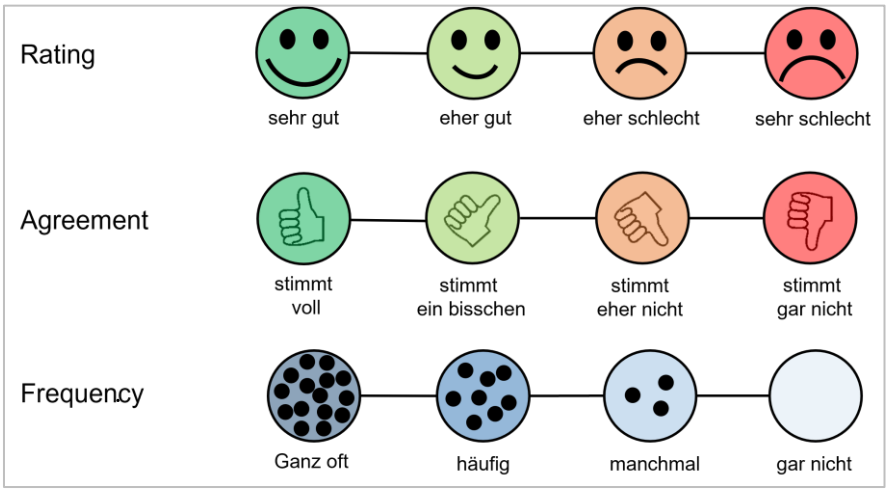
Note: Well-being and self-esteem scales are derived from the KINDL-R questionnaire (Ravens-Sieberer/Bullinger 1998). *) The KINDL-R is a validated, generic instrument for assessing health-related quality of life in children aged 3-17 years with demonstrated reliability (Cronbach's α = 0.70-0.85) and validity across multiple studies (Ravens-Sieberer/Herdman/Devine/Otto/Bullinger/Rose/Klasen 2014).

3.2.3 Response Scales

The AID:A child survey uses three standardized established visual rating scales: a smiley-based rating scale, a thumb-based agreement scale and a pictorial frequency scale (Figure 1). Such formats are widely used in surveys with young children and are supported by empirical findings which indicate that visualized scales enhance comprehension in early childhood (see chapter 2).

The scale formats were informed by findings from previous child surveys, including the ERIK study (Molina Ramirez and colleagues 2024). Depending on age, only a limited set of response scales was used, reflecting evidence that fewer and visually supported categories are more suitable for younger children (see Figure).

Figure 1: Visualization of the three Response Scales



Source: Source: Rawpixel (Openverse), “Thumbs clipart vector”, CC0 1.0

Each scale was introduced during the warm-up phase. The interviewer read the question aloud and presented the scale visually, pointing to each symbol while reading the response options. After the response, the scale was removed before the next question.

3.2.4 Instrument Development

The questionnaire development followed an iterative process consisting of three distinct stages:

- Cognitive interviews and qualitative testing: Initial testing with a very small number of children in familiar settings to adapt wording and ensure the age-appropriateness of response formats
- Formal pretest: Following the qualitative phase, the instrument underwent systematic field testing conducted by Infas to evaluate the survey flow and interviewer handling

– Refinement and finalization: Based on the pretest results, the instrument was further adapted, resulting in the final survey version used in the main fieldwork

3.3 Interviewer Training and Data Collection

Interviewers received specific training addressing the special requirements of interviewing young children, including communication strategies, handling uncertainty, and maintaining standardization while responding sensitively to children's needs. This ensured a standardized survey procedure while allowing for age-appropriate interaction.

Prior to the interview, families received written study information materials, including flyers explaining the study in accessible language. Children were addressed directly in child-appropriate formats. Consent forms were obtained from parents, and children's assent was explicitly sought before the interview began.

Interviewers participated in dedicated training sessions, including detailed instructions for conducting child interviews, explaining response scales, and managing the interview setting. This training was documented in written materials used during both the pretest and the main fieldwork (von der Burg and colleagues 2025).

Before starting the interview, interviewers ensured that the interview setting was appropriate, calm, and free from unnecessary distractions. Interviewers followed standardized introductory questions and procedures.

The interview began with warm-up questions, focusing on familiar and simple topics. During this phase, the response scales were introduced and practiced to ensure comprehension.

Throughout the interview, interviewers followed standardized question wording and scale presentation procedures. Questions were read aloud, and visual scales were presented simultaneously. After each question, the scale was removed to avoid confusion with subsequent items.

4 Results

The following sections present some basic empirical findings along with key aspects of the data collection process. Analyses comparing children's self-reports with parental proxy reports are beyond the scope of this paper and are reported separately (Linberg and colleagues, forthcoming). The analyses draw on the Scientific Use File (Kuger and colleagues 2024), complemented by raw survey data and methodological process data. The results are structured along key analytical dimensions. First, findings related to participation are reported. Second, aspects of survey implementation and interview settings are described. Third, survey content and response behavior are examined. Finally, interviewer assessments of children's comprehension are presented, including a more detailed analysis of practice items. Together, these results provide a comprehensive overview of participation patterns, fieldwork conditions, response processes, and indicators of data quality.

4.1 Participation and Socio-demographic Composition

Considering participation, of the 2,085 children aged 5-8 years identified in the AID:A sampling frame, 1,627 parent interviews (78%) were completed. Of these 1,627 completed parent interviews, 1,125 children (54%) participated in the child interview.

Table 3: Availability of Child vs. Proxy Interviews by Age

Age	Child interview available	Child interview not available, but proxy parent interview available*	Total
5 years	59.9% (n = 272)	40.1% (n = 182)	100% (n = 454)
6 years	65.7% (n = 270)	34.3% (n = 141)	100% (n = 411)
7 years	61.1% (n = 269)	38.9% (n = 171)	100% (n = 440)
8 years	68.9% (n = 314)	31.1% (n = 142)	100% (n = 456)

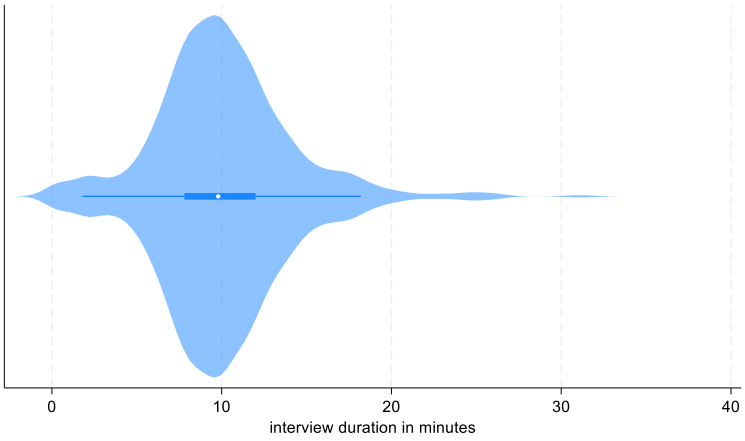
Note: n = 1,761 children; own calculations based on AID:A 2023 (Kuger et al. 2024) * indicated by availability of long version of the proxy interview

Among the interviewed children, 50.8% were male and 49.2% female. 26.2% lived in households affected by financial deprivation (defined as at least one affirmative response to the deprivation indicators), and 28.3% have a migration background (first or second generation). Information about age distribution is presented in Table 3.

4.2 Duration, Consent, and Social Context

The child interview lasted on average 10 minutes (M=10.05; SD = 4.0; min = 0; max = 31.6, see **Fehler! Verweisquelle konnte nicht gefunden werden.**) while children answered approximately four items per minute.

Figure 2: Duration of the Interviews (in Minutes)



Note: Violin plot; y-axis represents the kernel density of observation; n = 1,125; own calculations based on AID:A 2023 (Kuger and colleagues 2024)

Most children agreed to participate immediately (n = 1,102; 98.0%). Only a very small number refused (n = 13; 1.2%), were undecided (n = 4; 0.4%), or did not want to answer (n = 3; 0.3%). After the interview had started, only two children discontinued participation (n = 2; 0.2%), and one interview could not be started due to technical problems. Further analyses will examine patterns of non-response and attrition in greater detail.

During the interviews, other household members were usually present in the same room, most often parents or siblings (see Table 4).

Table 4: Persons Present During the Interview (Multiple-response)

Person	Present during interview
Mother	82.3% (n = 925)
Father	40.0% (n = 450)
Siblings	27.5% (n = 309)
Other household members	1.5% (n = 17)
Non-household persons	1.5% (n = 17)
Only child present	2.5% (n = 28)

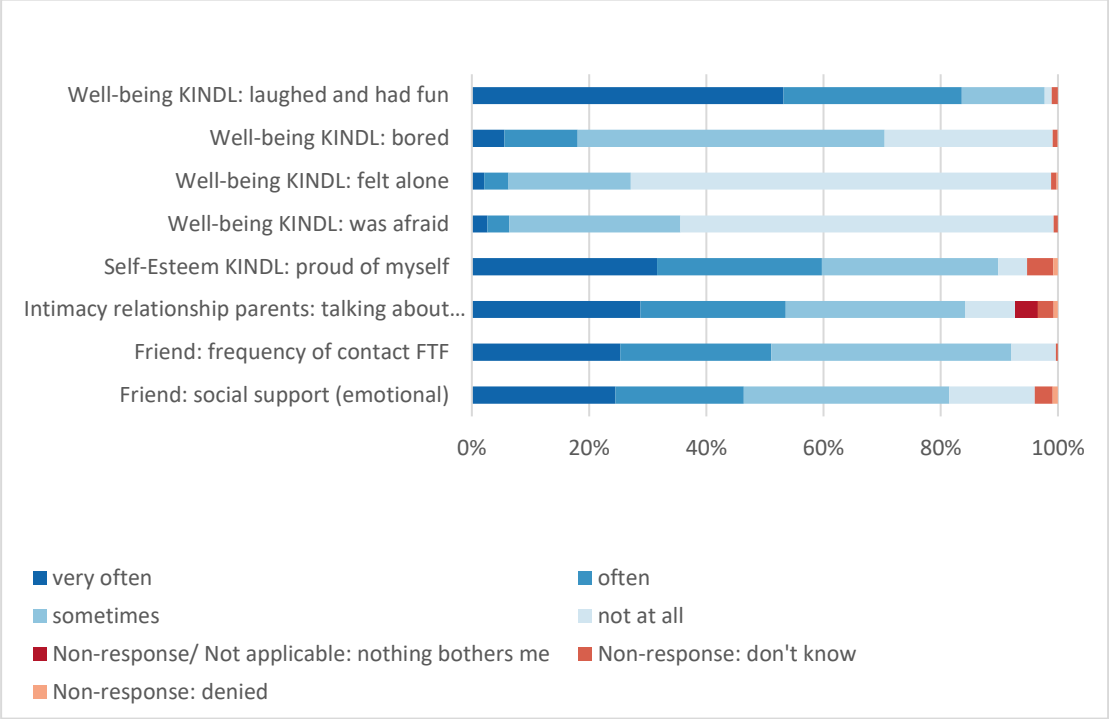
Note: n = 1,124; own calculations based on AID:A 2023 (Kuger and colleagues 2024)

The presence of family is typical for this age group, and the interviewers' open-ended comments indicated that there were only a few instances of outside influences: 15 children were distracted by siblings, and two children felt uncomfortable answering questions about family climate in the presence of others (based on coding of the raw data).

4.3 Survey Content and Response Behavior

The survey covered a broad range of topics while employing a limited set of response scales (frequency, rating, agreement). Overall, scale non-response ("don't know" or "does not apply") was generally low across all instruments. Among the valid responses, the distributions for most items appeared to be reasonably balanced, although some items showed slight skewness.

Figure 3: Frequency Scales

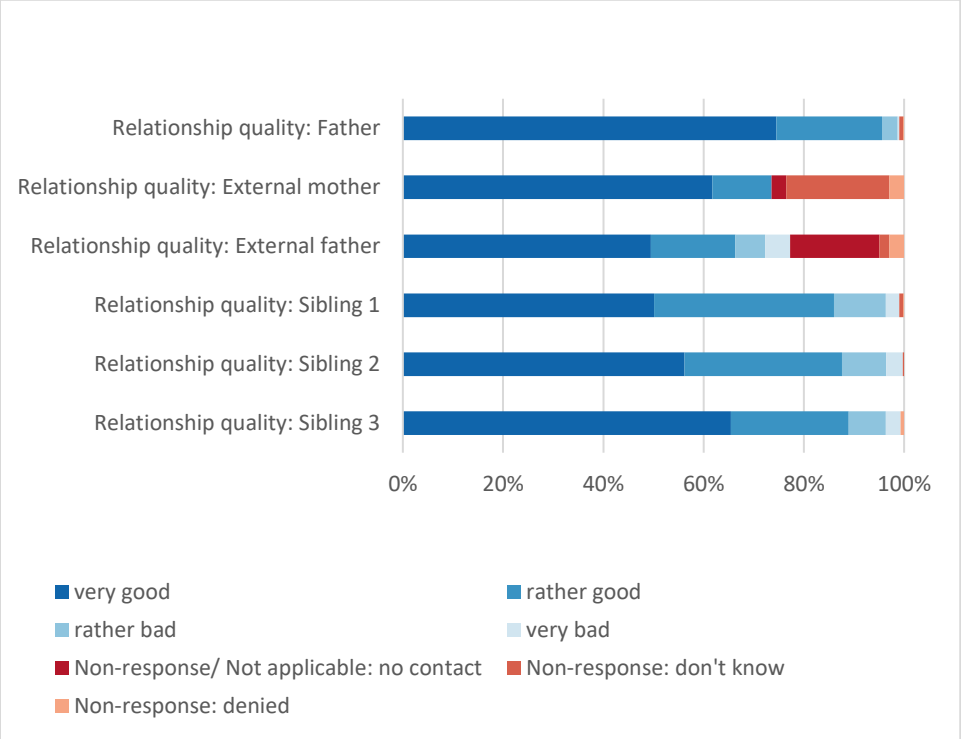


Source: Own calculations based on AID:A 2023 (Kuger and colleagues 2024)

All frequency scales were displayed using graded response options and a visualization in the form of varying numbers of dots. As shown in Figure 3, Item non-response ranged between 0.4% and 3.9% (see Figure 3). The most frequently selected non-response category was "don't know", occurring primarily for rather abstract items such as the Self-Esteem (KINDL) item: "Proud of myself" ("don't know" responses: n = 49) and talking about stress with parents ("don't know" responses: n = 30). Among valid responses (96.1% - 99.6%), most items showed reasonably balanced distributions, although some items exhibited slight skewness. No systematic tendency toward the exclusive use of negative extreme response categories was observed.

For the rating scales (Figure 4), which were presented using smiley-based visual anchors, higher levels of item non-response were observed for the items assessing relationship quality with an external mother or external father, reaching up to 20%. This pattern is likely attributable more to the content of the item (i.e. the absence of a relationship or contact and the fact that the item is not applicable) than to the response format itself. All other relationship quality assessments showed very low non-response rates (< 1%). With regard to the valid responses in particular, there was a clear trend toward positive responses ("very good" and "rather good"). In survey methodology, positive skewness is a well-documented phenomenon that often reflects a combination of acquiescence bias and ceiling effects in younger cohorts rather than a flaw in the scale design (see Borgers/de Leeuw/Hox 2000).

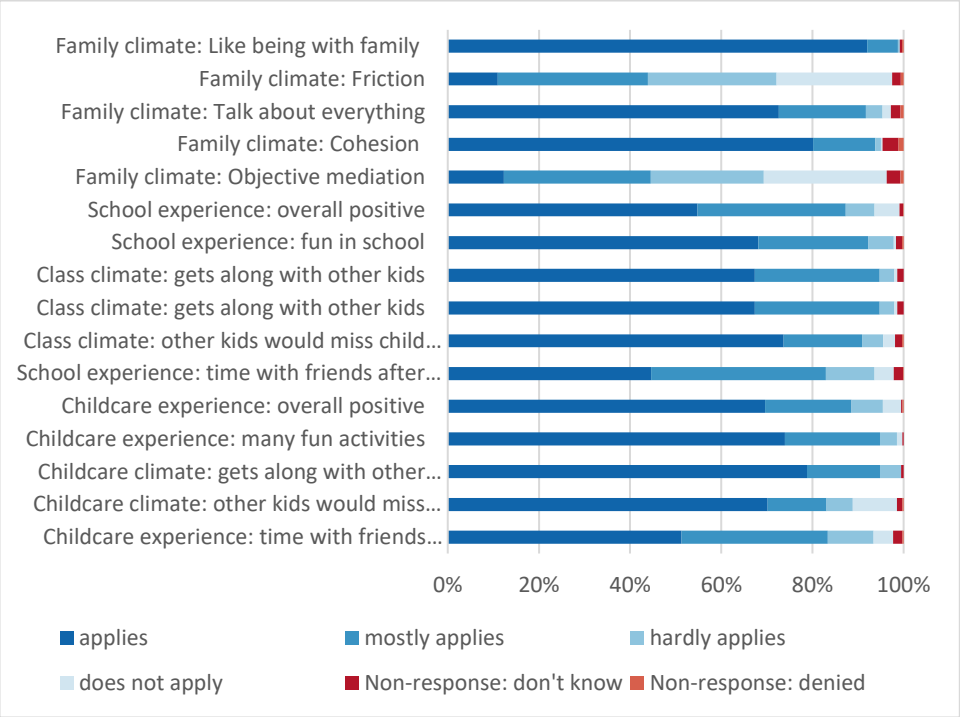
Figure 4: Rating Scales



Source: Own calculations based on AID:A 2023 (Kuger and colleagues 2024)

Regarding the agreement scales (see Figure 5), which were displayed using a thumb-based visual indicator, item non-response ranged between 0% and 4.6% and appeared to depend strongly on item content. Items related to family climate showed comparatively higher non-response rates, including family cohesion ("There is strong cohesion in your family") ("don't know" responses: n = 39). Overall, a tendency toward positive response options was also observed among the valid answers on these scales, although this pattern was not consistent across all items.

Figure 5: Agreement Scales



Source: Own calculations based on AID:A 2023 (Kuger and colleagues 2024)

4.4 Interviewer Assessment of Children's Comprehension

The interviewers assessed children's comprehension during two phases of the interview: during the warm-up phase and after the interview was completed.

4.4.1 Comprehension of Practice Items

To assess the children's understanding of the scales, the interviewers observed children during the warm-up phase while they completed practice items for the three main scales (rating, frequency, and agreement). This interviewer-based observation provides an external indicator of whether children became sufficiently familiar with the formats before the substantive interview began.

Overall, these assessments indicate a very high level of comprehension across all age groups and scale types. As shown in Table 5 (Share of children who understood the practice items, by age group and scale type), more than 97% of children in each age group were seen as having understood each of the three practice items. Even among the youngest respondents (five-year-olds), comprehension rates exceeded 97% for all scale types.

Table 5: Share of children who Understood the Practice Items, by Age Group and Scale Type (Interviewer Assessment)

	5 years	6 years	7 years	8 years
Rating Scale	98.1% (n = 262)	99.2% (n = 263)	100.0% (n = 266)	99.0 % (n = 297)
Frequency Scale	97.4% (n = 262)	98.1% (n = 260)	99.6% (n = 264)	99.0 % (n = 296)
Agreement Scale	98.5% (n = 266)	100.0% (n = 263)	99.6% (n = 264)	99.7 % (n = 298)

Source: Own calculations based on AID:A 2023 (Kuger and colleagues 2024)

These results suggest that the visualized response scales and the standardized explanation procedure were appropriate even for the youngest respondents.

To examine whether difficulties with one practice item were associated with broader comprehension problems, a cumulative indicator was constructed. This indicator counts the number of practice items that were not understood by a child (ranging from 0 to 3).

Table 6 presents the cumulative distribution by age group. The vast majority of children in all age groups were assessed as having understood all three practice items. Cases in which children did not understand more than one practice item were rare.

Table 6: Number of Practiced Items Understood (n = 3), by Age Group (Interviewer Assessment)

	0 Items	1 Item	2 Items	3 Items
5 years	0.4%	1.5%	3.3%	94.8%
6 years	0.8%	0.0%	1.1%	98.1%
7 years	0.0%	0.0%	1.5%	98.5%
8 years	0.0%	0.3%	2.3%	97.3%

Source: Own calculations based on AID:A 2023 (Kuger and colleagues 2024)

Even among five-year-olds, about 95% were assessed by the interviewers as having understood all three items, and only 5% were assessed as having difficulties with one or more of the practice items. No systematic increase in comprehension problems was observed among younger children.

4.4.2 Overall Comprehension of the Interview

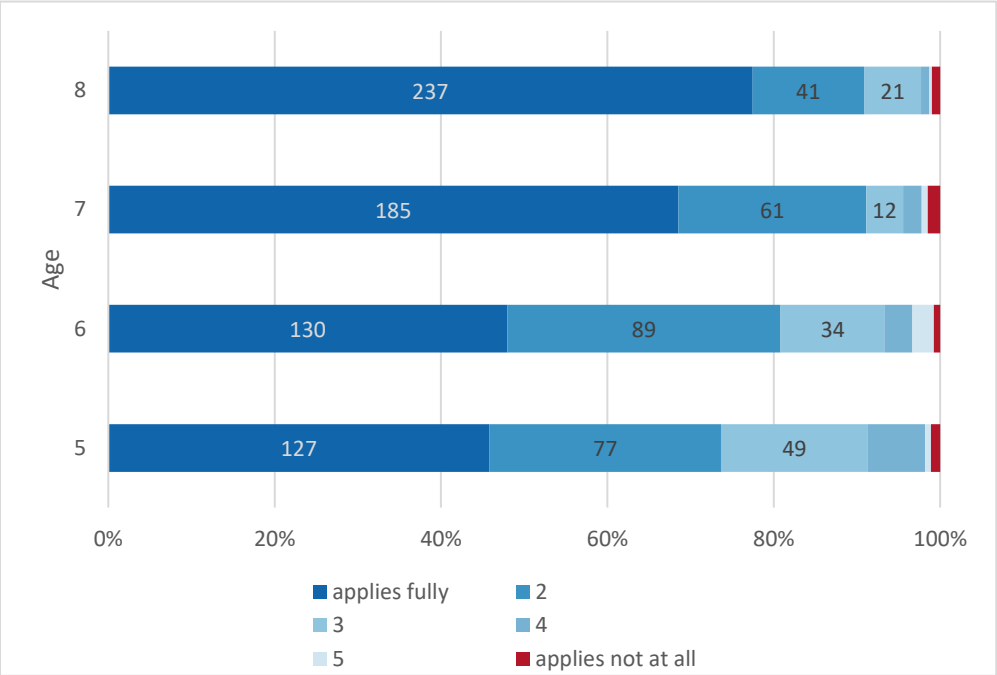
After completion of the interview, interviewers provided a global evaluation of the children's comprehension of the interview as a whole and were given the opportunity to add open-ended comments. In addition to this evaluation, they documented the presence of other persons during the interview, potential disturbances and were given the opportunity to provide other comments.

Figure 5 displays interviewers' assessments of how well the survey questions were understood by children across age groups. Overall, the ratings indicate that the questions were perceived as largely comprehensible. Across all age groups, the majority of children were rated by the interviewers as having fully understood the questions ("applies completely"), while only a small proportion were judged as experiencing limited comprehension.

Although the quantitative ratings suggest generally high levels of comprehensibility, interviewers' open-ended comments provide additional nuance. Comprehension difficulties were reported in a limited number of cases (total n = 22). Reported challenges primarily related to language difficulties (n = 9), issues associated with item wording (n = 3), and problems specific to understanding the response scale format (n = 2).

Beyond question-related factors, interviewers also noted several child-related situational characteristics that may have affected comprehension. These included shyness (n = 4), distractibility (n = 8), restlessness (n = 1), and hearing difficulties (n = 1). Taken together, these findings suggest that while the survey questions were generally well understood, occasional comprehension difficulties were mainly linked to language barriers and situational child characteristics rather than systematic problems with the instrument.

Figure 6: Interviewer Ratings of Children's Question Comprehension Across Age Groups



Note: Question: Please assess how well the questions were understood by the child; n = 1,124

5 Conclusion and Discussion

This paper set out to examine the feasibility and methodological implications of directly surveying children aged five to eight years within a large-scale, standardized household survey. Building on existing research suggesting that children can provide meaningful self-reports when instruments are developmentally appropriate, the AID:A 2023 study extends prior survey practice by systematically including younger children than in previous waves.

5.1 Feasibility of Standardized Surveys with Young Children

The results indicate that standardized face-to-face interviews with children aged five to eight years are feasible under clearly defined conditions. Participation rates among eligible children were high, interview durations were short, and break-offs during the interview were rare. These findings suggest that concerns about limited attention spans or general survey fatigue among young children may not apply when interviews are well structured, visually supported, and conducted by trained interviewers. Interviewer assessments further indicate that children across all age groups were largely able to understand the response formats after a standardized warm-up phase. Difficulties in comprehension occurred only sporadically and did not systematically cluster among younger children. Taken together, these findings suggest that age-appropriate survey instruments may facilitate reliable and high-quality self-reports even before children have fully developed reading skills.

5.2 Methodological Implications for Questionnaire Design

From a methodological perspective, the study underscores the importance of several design features. First, the exclusive use of CAPI interviews, combined with visualized response scales and interviewer guidance, appears to be a key prerequisite for surveying children who cannot yet read independently. Second, maintaining consistency in scale formats and minimizing cognitive demands, for example by avoiding retrospective time frames or complex wording, contributes to children's engagement. However, while high comprehension and low non-response rates were observed, these did not entirely preclude systematic response biases, such as the observed acquiescence and ceiling effects. The findings are consistent with existing recommendations that emphasize the use of short questionnaires, thematically coherent blocks, and clearly defined reference periods. Given the low rate of "don't know" responses and interview dropouts, the balance between standardization and flexibility appears to have worked well for this age group.

5.3 Limitations and Critical Considerations

Despite these encouraging results, several limitations should be acknowledged.

First, interviewer assessments of comprehension represent an external judgment and may be influenced by interviewer expectations or interaction dynamics. Furthermore, interviewers are also evaluating their own interview performance, so this cannot be considered an independent assessment. This issue could be addressed by recording the interview or having an external observer present. However, while interviewers and external observers can provide valuable information about the interview process, they cannot fully substitute for independent measures of children's understanding.

Second, the frequent presence of parents or siblings highlights a fundamental methodological trade-off in early childhood research. For younger respondents, particularly those in early childhood, the proximity of a primary caregiver may help establish trust, reduce situational anxiety, and support overall participation. However, from a psychometric perspective, this presence structurally limits complete privacy within household settings. This may challenge construct validity, as the presence of other household members could contribute to social desirability or other response effects. The positive skewness of the family climate items is consistent with this possibility, although the present data do not allow these effects to be attributed to third-party presence. Consequently, future research should consider third-party presence as a relevant contextual variable. The AID:A design addressed this by including a post-interview assessment in which interviewers documented the presence of other household members, as described above.

Third, it must be emphasized that this study focuses on the general population and the basic feasibility of the survey format. This paper does not address special research questions or the performance of the instrument among specific subgroups, such as children with physical or cognitive disabilities or other support needs. Since these groups were not the focus of the current investigation, the findings cannot be generalized to children with such needs or characteristics.

Fourth, while the study demonstrates feasibility, it does not address measurement equivalence across age groups in depth. Whether constructs such as well-being or self-esteem are interpreted in comparable ways by five-year-olds and older children remains an open empirical question and requires further psychometric investigation.

Finally, given the very small number of children who were assessed as not understanding the practice items, further detailed subgroup analyses of these cases remain limited in their interpretability.

5.4 Outlook and Future Research Directions

The inclusion of children aged five to eight years in AID:A 2023 represents an important step toward more comprehensive data on children's subjective perspectives. The methodological experiences from this wave also provide a basis for further refining age-appropriate survey instruments and procedures. The design principles discussed above were incorporated where they were appropriate to the requirements of individual items and sections of the questionnaire. Future waves can build on these experiences by refining instruments, testing alternative visual scales, and systematically examining age-related differences in response behavior and measurement quality.

Complementing the methodological focus of the present paper, a companion paper examines agreement between children's self-reports and parental proxy reports across selected constructs (Linberg and colleagues, forthcoming). Together, these studies address complementary aspects of the newly developed survey module, focusing on its methodological implementation and the relationship between child self-reports and parental assessments.

In addition, further methodological research is needed to compare interviewer-assisted modes with emerging digital or mixed-mode approaches for young children (Weis and colleagues 2026). Longitudinal analyses will also be crucial to assess the stability of self-reports across waves and developmental stages. Taken together, these findings demonstrate the feasibility of integrating young children into large-scale social surveys and provide a promising foundation for further advancing age-appropriate survey methods. Future waves will offer valuable opportunities to build on these findings and further strengthen our understanding of young children's self-reports in longitudinal research.

6 Author Contributions

Angelika Guglhör-Rudan: Writing - Original Draft; Writing - Review & Editing; Conceptualization (Instruments); Methodology; Data Curation.

Anja Linberg: Writing - Original Draft; Writing - Review & Editing; Formal Analysis; Conceptualization (Instruments, Lead); Methodology (Lead); Project Administration (Lead); Supervision (Lead); Validation (Instruments).

Sophia Chabursky, Alexandra Langmeyer, Hanna Maly-Motta, Thorsten Naab, Inga Simm: Conceptualization (Instruments); Methodology; Validation (Testing and Validation of Scales/Items); Data Curation.

Susanne Kuger: Funding Acquisition (Lead); Resources (Lead); Project Administration (Lead); Supervision (Lead).

All authors reviewed and edited the manuscript versions and approved the final version of the report.

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