Luciana Taddei
Mario Paolucci *Editors*

Longitudinal Data Infrastructures in Europe

Tools for Open Science in Social Science Research

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To those we have inadvertently overlooked, we ask for understanding—and to the readers of this volume, we ask for the same patience and generosity we have tried to embody in the work presented here.

Introduction

Mario Paolucci and Luciana Taddei

It's not rocket science. This is how we used to introduce the subject of the longitudinal data infrastructures in Europe from the point of view of the National Research Council (CNR) of Italy. Our institution, among other roles, serves as an interface between funders and the broader academic community. For this reason, we often seek to communicate both the benefits and potential risks of building data infrastructures to a variety of audiences.

Building data infrastructures for the social sciences is not necessarily rocket science, but it is certainly a complex undertaking. Establishing a longitudinal panel involves engaging with regulatory agencies and navigating privacy legislation; negotiating the often treacherous waters of national statistical systems; and, last but not least, performing the ongoing care work required to ensure the panel's long-term sustainability.

Compared with our sibling data infrastructures in the hard sciences, those in the social sciences do not typically exhibit large-scale data flow problems—at least not in the same way. While there isn't a need to think about high-throughput data pipelines designed for consistent, automated collection (e.g., sensors, lab instruments, satellites), social sciences data infrastructures must grapple with human variability, privacy concerns, and fragmented regulatory frameworks.

As C.P. Snow (2012) famously observed in The Two Cultures, the divide between the sciences and the humanities is not merely epistemological but also infrastructural. In this sense, infrastructure in the social sciences is not just a technical backbone but also a site of negotiation, trust-building, and long-term stewardship. Social science infrastructures must build for durability, consent, and adaptability—qualities that are often invisible, but essential.

Within the social sciences, a research infrastructure represents a leap in both scale and organizational effort when compared to standard research endeavors. In the European context, local projects may range from individual efforts to small collaborative groups, occasionally extending to EU-funded consortia, usually comprising three to seven institutions. Infrastructures, by contrast, are long-term undertakings that demand not only significantly higher levels of funding but also

continuity in that funding—a characteristic that distinguishes them from the more episodic nature of conventional research projects.

What makes social science infrastructures demanding is their hybrid nature: they are at once technical systems, organizational frameworks, and social contracts. Social science infrastructures must deal with and accommodate evolving legal norms, ethical standards, and shifting societal expectations.

This raises the brutal question: do we really need to invest in research infrastructures, particularly in the social sciences? The question is not whether a given infrastructure produces valuable outcomes within its domain—this is generally not in dispute. Rather, the issue is in the opportunity cost: are infrastructures the best use of limited public funds? Could similar resources yield greater impact if directed toward smaller, more agile projects or immediate policy needs? Could we just—be better doing something else? A tricky, self-defeating question.

In this context, we should avoid treating funding as a zero-sum game. Research infrastructures are not only scientific tools—they are political instruments. European infrastructures, by their very design, serve to reinforce transnational cooperation and institutional alignment. As noted in the Council Conclusions on Research Infrastructures (2022), they are seen as "cornerstones of the European Research Area" and as vehicles for "cohesion, resilience, and openness." At a time when European integration faces internal and external challenges, infrastructures represent a long-term investment in unity, interoperability, and shared capacity.

Furthermore, infrastructures support foundational EU values, including the free circulation of knowledge, researchers, services, and capital, as outlined in both the Horizon Europe legal framework and ESFRI Roadmaps. They also help bridge the digital and data divides between member states—especially important for the social sciences, which must contend with fragmented statistical systems and uneven regulatory practices.

Rather than a luxury or a drain, well-designed infrastructures serve as platforms for collective intelligence. Failing to build and sustain them means not only falling behind in scientific capacity but also weakening the institutional scaffolding of the EU itself.

European research infrastructures, by their very nature, reinforce connections among member states. At a time when cohesion within the Union is fragile, these infrastructures help sustain what remains a historically unique experiment in shared sovereignty—a careful balancing act between national priorities and collective European interests. In this light, the promotion of common infrastructures holds strategic value beyond the scientific domain: they support the free movement of people, goods, capital, and services and provide tangible mechanisms for integration and cooperation.

This becomes even more relevant in the wake of geopolitical and structural shocks. The European Union appeared unprepared in the face of a cascading series of crises: the rupture of Brexit, the disruptions of the COVID-19 pandemic, and the rise of new digital oligarchies, fueled by monopolistic practices and by the enshittification (Birch, 2023) of digital platforms. These events have not only challenged Europe's political resilience, but also exposed its vulnerability

to technological and infrastructural dependencies. In this context, investing in robust, federated, and publicly accountable infrastructures—especially in the social sciences—is not just a matter of research policy, but of democratic sovereignty.

Attempts to strengthen and integrate European self-awareness through research have long been challenged by a divide that recalls the tension between Snow's "two cultures" of science and the humanities. An illustration of this can be found in the European Commission's only large-scale experiment in catalyzing visionary, "moonshot" research through the FET Flagship program. Among the six finalist proposals, only one—FuturICT (Helbing et al., 2012) —was led by the social sciences, proposing a global observatory to model and simulate (Paolucci et al., 2012) complex socio-technical systems and support evidence-based policymaking. In the end, however, the two selected Flagships focused on hard sciences. The exclusion of a social science-based initiative like FuturICT reflected not just scientific preferences, but deeper structural biases in how transformative research is imagined and funded in Europe.

The missed opportunity also signaled a lack of institutional imagination at a time when anticipatory governance, systemic foresight, and digital democracy were emerging as urgent priorities. As Europe now faces challenges of planetary scale—from algorithmic governance to geopolitical fragmentation—the need for infrastructures that can help integrate human and social dimensions of change is more pressing than ever.

This book, by contrast, has been made possible thanks to an opportunity that was not missed—namely, the decision to channel Recovery and Resilience Facility resources toward a specific and timely objective: the development of infrastructures for high-quality longitudinal data. Here, we bring together experiences, practices, and methodological reflections aimed at building and sustaining one particular kind of infrastructure: probabilistic longitudinal panels. This work has been enabled through the support of the FOSSR infrastructure (*Fostering Open Science in Social Research*), funded under the Italian National Recovery and Resilience Plan (NRRP). FOSSR has provided not only financial support, but also an institutional framework that foregrounds openness, interoperability, and scientific collaboration across disciplines and national borders.

We hope you will find value in the content presented here, and we would like to express our sincere thanks to all the contributors to this volume for their insight, expertise, and commitment.

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Chapter 9
GUIDE: Innovations and Challenges to Survey Child Well-Being in Italy

Emilio Maria Colella, Giulio Ecchia, Dario Germani, Ilaria Primerano, Michele Santurro, Francesca Tosi, Massimo Ventrucci, and Matthew John Wakefield

9.1 Introduction

Children's well-being is recognised as central for individuals' sustainable development: secure relationships, good health, and stimulating environments in early life lay the foundations for educational attainment, labour-market success, and intergenerational mobility (Rees et al., 2012; Goswami et al., 2016; Statham & Chase, 2010). Because children's own assessments of their lives often diverge from the judgments of adults, contemporary scholarship increasingly insists on child-centred measurement that blends subjective experience with objective conditions (Pollock et al., 2021). Understanding the factors that foster or hinder well-being is a prerequisite for effective policy—yet the childhood conditions across Europe and the world are evolving at speed.

Public debate is currently concerned about children's well-being and the implications of their attitude towards digital devices. Recently, the OECD released a report entitled "How's life for children in the digital age?" (OECD, 2025), as today's young

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people are growing up in a rapidly evolving digital world, where digital media plays an increasing important role in their daily lives. Across the OECD, 70% of 10-year-olds already possess a smartphone, and by age 15 at least half devote 30 hours or more each week to connected devices (OECD, 2025). Early and intensive exposure can enrich learning, creativity, and social connection, but it also risks crowding out sleep and physical activity, deepening social comparison, and exposing children to cyberbullying or harmful content. As the diffusion of digital media and devices is becoming more and more widespread across the world, there is a need for solid data-based knowledge in order to understand how digitalisation affects child well-being and to characterise childhood conditions with a holistic and comprehensive approach.

Progress has been made, yet critical data gaps remain. Cross-national surveys such as Children's Worlds, Health Behaviour in School-Aged Children (HBSC) and OECD's Programme for International Student Assessment (PISA) provide information about certain stages and domains of children's lives, while EU-level instruments derived from EU Statistics on Income and Living Conditions (EU-SILC) underpin indicators like material and social deprivation and the at-risk-of-poverty-or-social-exclusion rate (AROPE). These tools, however, offer only fragments of a larger picture and often reflect adult perspectives. EU policy initiatives such as the 2021 European Child Guarantee underscore the need for richer evidence that can detect emerging vulnerabilities early and evaluate multidimensional interventions spanning income support, schooling, health care, and social participation.

Several countries have launched national surveys of children, but many European countries still lack coherent monitoring systems, Italy among them. The National Institute of Statistics' (Istat) occasional studies—including the 2018 survey on second-generation integration (Istat, 2020), the 2024 survey on minors' living conditions (Istat, 2025), and the 2023 survey on children's behaviours and aspirations (Istat, 2024)—provide valuable snapshots, while academic endeavours such as the DORA (Data Integration for Acknowledging Risks and Protecting Children from Violence) project catalogue administrative data on violence against minors.[1] Yet Italy, like many peers, has no longitudinal, internationally comparable source that captures children's perceptions, evaluations, and aspirations over time and provides evidence on their digital behaviour.

The Growing Up In Digital Europe (GUIDE) study has its focus on child-centred well-being measurement, observation of family and school environments, and of digital habits. With the ex-ante harmonisation of questionnaires—which ensures cross-country comparisons—GUIDE offers a strategic response to the evidence gap in longitudinal data on children and young people in Europe and—especially—in Italy.

The chapter is structured as follows. In Sect. 9.2 we provide an overview of data on children that is available in Italy. Section 9.3 describes the details of the GUIDE project in the European framework. In Sect. 9.4 we explain how the GUIDE pilot survey has been designed in Italy, focusing on sampling design and operational

[1] https://ares20.it/dora/.

issues around privacy and data flow, and on innovations with regard to interview modes. A final section concludes.

9.2 Child Well-Being in Italy: A Brief Review

Theoretical studies have long highlighted that child well-being is shaped by a combination of individual and contextual factors, including family resources, social policies, the level of community cohesion, and access to public services such as healthcare and education (Reynolds et al., 2017; Hertzman & Wiens, 1996). These factors interact throughout the life course, laying the foundation for future health, educational attainment, and social inclusion (Currie & Rossin-Slater, 2015; Joshi, 2020).

Among individual-level determinants, parental involvement in cognitively stimulating activities is especially important for children's intellectual development (Del Boca et al., 2017), while proper nutrition in early life stages strongly influences both cognitive and physical outcomes (Tosi & Rettaroli, 2022). Disability, on the other hand, represents a significant risk factor: children with disabilities often encounter barriers to healthcare, education, and social integration, which exacerbate inequalities in both health and educational outcomes (Balbo & Bolano, 2024). At the community level, access to services such as quality childcare and early education programs has proven effective in supporting cognitive and social development, particularly in disadvantaged contexts. Early childhood education, in particular, fosters both academic achievements and social cohesion, helping reduce long-term disparities (Brilli et al., 2016).

Social stratification also plays a role in determining child well-being. Children with a migration background or those who belong to ethnic minorities face additional structural disadvantages, including limited access to quality education and reduced opportunities for social mobility (Giovinazzi & Cocchi, 2021). These vulnerabilities were exacerbated during the COVID-19 pandemic, which disrupted schooling, healthcare, and other support systems, leading to increased developmental delays and psychological distress (Cusinato et al., 2020).

Recent data (Eurostat, 2025) underscore the extent of child poverty and inequality in Europe: in 2024, 24.2% of children under 18 are at risk of poverty or social exclusion—four percentage points higher than the adult rate (20.3%). Regional disparities are also marked: countries such as Bulgaria, Spain, and Romania report child poverty rates above 30%, whereas Slovenia, Cyprus, Czechia, and the Netherlands show significantly lower rates (below 16%). With 27.1% of minors affected in 2024 and an average of 29.6% over the past decade, Italy consistently ranks among the countries with the highest levels of child deprivation in the European Union. In fact, the well-being of children living in Italy is characterized by clear regional disparities and specific vulnerability factors. According to the latest Istat survey on the living conditions of minors (Istat, 2025), 26.7% of children under 16 are at risk of poverty or social exclusion, compared to 23.1% of the general

population. The burden is especially severe in the South, where 43.6% of children experience deprivation, compared to 26.2% in the Centre and 14.3% in the North. Additionally, children with migratory background face heightened vulnerability: the risk of poverty and social exclusion reaches 43.6% for foreign minors living in Italy, with peaks in the South (78.2%), compared to a national average of 40.9% for their Italian peers. In the North, the gap is less pronounced but still significant, with 33.9% of foreign children at risk compared to 9.3% of their Italian peers.

Family structure also plays a significant role. Children living in single-parent households face higher deprivation rates (38.3%), particularly when the head of household is a single mother (48.4%). Large families are also more exposed to economic vulnerability, as are those facing housing costs: 22.7% live in homes with mortgages and 23.6% in rented accommodations, with even higher burdens among single-mother families (31.8%). In terms of material deprivation, data specifically collected to assess critical situations among minors under 16 indicate that, in 2024, 11.7% of children experienced at least three indicators of deprivation from a list of 17 (Guio et al., 2012). The most common forms include living in households unable to replace damaged furniture (88.6%), not being able to go on vacation (85.4%), and lacking access to recreational activities (67.5%). Food deprivation remains a concern: 4.9% of minors lacked access to necessary food, with the figure rising to 8.9% in the South. Additionally, 2.3% were unable to consume a protein-rich meal daily due to economic constraints.

Further insights on the Italian context come from the 2024 Istat study “Children and young people: behaviour, attitudes, and future projects”, which surveyed over 39,000 youths aged 11–19. The study highlighted demographic decline and increasing cultural diversity among the youngsters in Italy (9.7% with a migration background). In this target group, digital habits are widespread: 79% completed the survey via smartphones or tablets, and 85% have a social media profile (97% among 17–19-year-olds). Gender differences also emerged: girls are more active in online communication; boys more in face-to-face interactions.

Educational aspirations vary strongly by socioeconomic status and migration background. While 60.3% of students from affluent families plan to attend an academic-stream high school, only 34.8% of those from less secure backgrounds do the same. Disadvantaged youth more frequently choose vocational tracks (15.6%) or remain undecided (34.5%). A gender gap is evident in university aspirations (67.4% of girls vs. 46.4% of boys), as is a migration gap (44.5% of foreign-born vs. 57.8% of Italian-born students). Notably, 32.3% of youth report anxiety about the future, with girls more affected (42%) than boys (23.1%).

Additional data from Istat and other national institutions underscore the challenges faced by second-generation youth in education. The 2018 Istat study on migrant integration found that students with a migration background are more likely to experience late school enrolment and underperformance. Complementary contributions from academic centres (e.g., CHILD at the University of Turin, UNICEF Innocenti) and NGOs (e.g., Save the Children, Fondazione Con i Bambini) have enriched the understanding of child well-being, especially for marginalized groups.

Despite the availability of multiple data sources on children's well-being in Italy, significant limitations remain, particularly the lack of longitudinal studies. Most existing surveys (such as EU-SILC and the Istat multipurpose family survey "Family, Social Subjects, and Childhood Condition") are cross-sectional and fail to capture the long-term dynamics of child development. In contrast, countries like the UK, France, Norway, and Germany conduct cohort studies that follow children from early childhood through adulthood, providing invaluable insights into the trajectories of education, health, and social integration (Pollock et al., 2021).

Finally, in Italy, surveys often focus on fragmented age groups (e.g., under-16 or over-25), neglecting key life transitions such as adolescence or early adulthood. This hampers a comprehensive understanding of how individual experiences and contexts evolve and interact over time. To fill this gap, experts recommend the development of a nationally coordinated longitudinal monitoring system that integrates multiple dimensions of child and youth well-being. Such an initiative would enable evidence-based policymaking and align Italy with European best practices and would be even more valuable if data collection were coordinated with other (European) countries.

9.3 GUIDE: European Framework

The GUIDE project[2] seeks to create the first harmonised, continent-wide birth-cohort study able to track children's lives from infancy to early adulthood and, in doing so, to supply robust longitudinal evidence for social-policy debates. By collecting comparable data across European societies—including Italy, where no national cohort study of this breadth yet exists—GUIDE promises both to close a gap in child-well-being statistics and to enable meaningful cross-national comparisons.

The study is designed with an "accelerated" longitudinal structure built around two overlapping samples. A child cohort will start with roughly 8-year-olds and their caregivers, while an infant cohort will begin with 1-year-olds. Data collection is envisaged every three years, alternating between cohorts and leaving a gap year for preparation. Children are followed into their early twenties, hence the fieldwork calendar will extend into the mid-2050s. Each first-wave sample is planned at no fewer than 10,000 families for the infants and 8000 for the 8-year-olds (smaller states can halve these targets), giving the scale needed for reliable national and cross-national inference.

Pilot studies already completed in Croatia, Finland, France, Ireland and Slovenia have demonstrated the feasibility of the design. Using convenience samples, national teams tested both instruments and field procedures with three respondent groups: caregivers of 8-year-olds, the 8-year-olds themselves, and caregivers of

[2] GUIDE was added to the ESFRI (European Strategy Forum on Research Infrastructures) roadmap in 2021.

newborns. The pilots not only evaluated questionnaire clarity but also offered laboratories for experimenting with sampling frames, incentive schemes and interview modes—from classic face-to-face CAPI (Computer Assisted Personal Interview) to video-based CAVI in Finland. Their collective experience now guides the remaining national teams as they prepare for full-scale launch.

The experience will bring both operational and conceptual insights. The questionnaires deliberately measure well-being from multiple angles. Hedonic well-being is tapped through indicators of happiness and affect balance (the balance between positive and negative emotions), whereas eudaimonic well-being is captured via items on purpose, personal growth and goal attainment. Modules on health, education, material resources and neighbourhood context provide the socioeconomic backdrop against which these subjective outcomes can be interpreted. The result is a multidimensional portrait that links children's experiences, resources and aspirations over time.

Cross-national comparability is safeguarded through rigorous translation and adaptation protocols. GUIDE adopts the TRAPD approach—translation, review, adjudication, pre-testing and documentation—so that each language version aligns conceptually while remaining culturally intelligible. Youth advisory boards have been involved from the outset, ensuring that question wording resonates with children rather than merely reflecting adult perspectives. Such participatory design should enhance both data quality and respondent engagement across diverse settings.

Italy's forthcoming pilot illustrates how national teams adapt the common blueprint to local realities. Drawing on earlier pilots, the Italian committee is fine-tuning recruitment strategies, interviewer training and incentive structures within budgetary constraints. Its feedback will feed into the transnational scientific panel, where representatives from all participant countries weigh cumulative evidence and decide on any final revisions to instruments or procedures before Wave 1. By doing so, the Italian case will enrich the shared methodological knowledge base while simultaneously building domestic capacity for large-scale panel research.

Beyond methodological dividends, the consortium's collaborative process offers a model for efficiently allocating resources in ambitious social surveys. Early, low-cost pilots surface translation glitches, logistical bottlenecks and cost drivers, allowing corrective action long before full implementation. The strategic alternation of cohorts spreads fieldwork costs, while the large starting samples future-proof the study against attrition. Together, these design features position GUIDE to deliver high-quality, policy-relevant insights for decades.

In sum, GUIDE represents an unprecedented European investment in understanding childhood and youth trajectories. By uniting rigorous longitudinal methodology, child-centred measurement and cross-national collaboration, it stands to generate evidence capable of informing policies on education, health, inequality and well-being—and, crucially, to fill the evidence gap that has long hampered Italian research on younger generations.

9.4 GUIDE: Italian Pilot Fieldwork

Fieldwork for the GUIDE pilot survey in Italy began in the central months of 2025. Families with children aged around 1-year (the "infant" cohort) and of 8-year-old children (the "child" cohort) are to be surveyed. The survey aims to collect high-quality data through a well-structured sampling design and participant recruitment process, in full compliance with current data protection regulations, and also to provide new evidence regarding the mode of data collection. We comment on each of these elements in turn.

9.4.1 Sampling Design

The aim for the pilot survey is to sample slightly more than 600 families with children in each cohort. These families will be distributed across four regions: Lombardy, Emilia-Romagna, Campania, and Apulia. In order to find the families and to ensure some diversity in their demographic characteristics, a non-probability two-stage sampling design has been chosen. Specifically, the primary sampling units, which are the same for both cohorts, are Italian municipalities divided into two categories: (1) regional capital municipalities (one for each region, i.e. Milan, Bologna, Naples, Bari); and, (2) provincial municipalities, defined as those municipalities with more than 30,000 inhabitants that are located in the province of the regional capital. Regarding the second category, a total of 10 municipalities from each province have been selected. For Bologna and Bari, ten municipalities are not available and so neighboring areas have been considered: specifically, these are all municipalities with a resident population greater than 30,000 and belonging to provinces neighboring the province of the regional capital (for Bologna: Modena, Ferrara, and Ravenna; and, for Bari: Taranto, Brindisi, and Barletta-Andria-Trani). In this way, a total of 44 municipalities have been sampled across the four regions, as shown in Fig. 9.1.

Regarding the child cohort, a key part of the second-stage sampling is based on primary schools. In Italy, the majority of children turn eight during the calendar year in which they begin the third year of primary school. This part of the sampling is therefore based on the geographic spread of primary school "comprehensive institutes" ("istituti comprensivi", hereafter "institutes", each of which may include more than one school). More specifically, the second step is to map the institutes located in the selected municipalities, from which the schools to be included in the sample can subsequently be drawn. The selection is based on the total number of students enrolled in the 2022/2023 academic year. Starting from the 44 selected municipalities, a sampling list of 862 institutes has been created. From this list, the top institutes have been selected based on the number of students in the cohort. The purposive sampling strategy adopted for selecting schools has two advantages. First, the spatial distribution of the sampled schools broadly reflects the density of

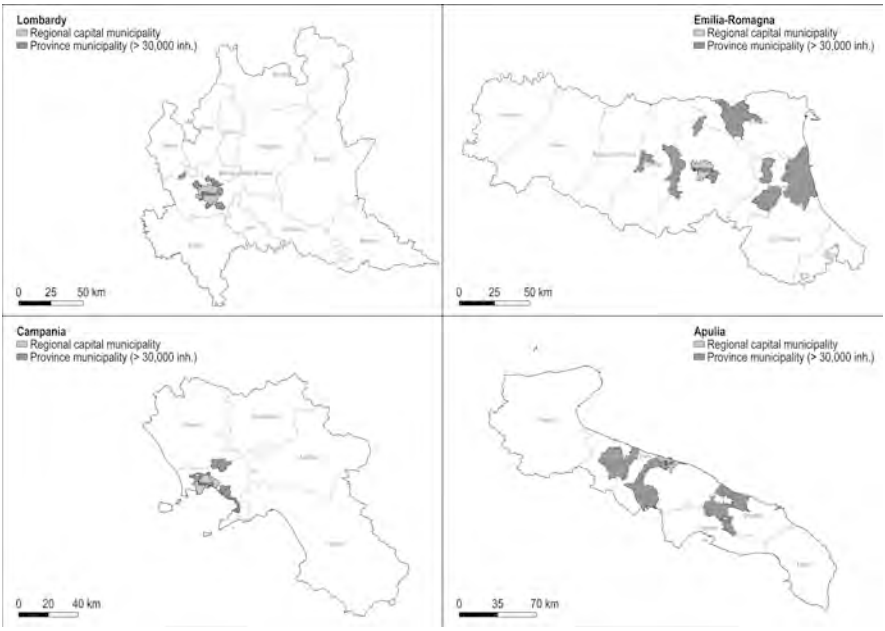

Fig. 9.1 Italian municipalities sampled for GUIDE. Source: own work

Table 9.1 Joint distribution of the sampled schools, by region and municipality type

Region\Municipality type	Regional capital municipalities	Province municipalities	Total
Lombardy	103	45	148
Emilia-Romagna	42	60	102
Apulia	24	38	62
Campania	25	21	46
Total	**194**	**164**	**358**

the population underlying the selected municipalities, as desired. At the same time, this strategy helps minimize the effort required in contacting a sufficient number of comprehensive institutes to cover the desired number of interviews. This is because it uses the cohort population size within institutes as the main eligibility criterion, thereby ensuring a higher coverage of the target population.

The selection of institutes results in the following distribution: 86 institutes in the regional capital municipalities, encompassing 194 schools; and 75 institutes in the provincial municipalities, encompassing 164 schools. Finally, considering the 358 schools belonging to the 161 selected institutes, the joint distribution by region and municipality type is reported in Table 9.1.

Designing a similar second-stage strategy for the infant cohort is more challenging as it would require finding institutions that the vast majority of families with infant children are attached to. Vaccination centres or other medical services

could be a possibility in some contexts, although contacts with individuals accessing health-care must be handled with great delicacy and attention to issues around privacy.

Instead, for the infant cohort and to top up numbers in the child cohort, within the selected municipalities, the survey agency will implement a snowball sampling strategy. This strategy will start from key community spaces where families with young children typically gather—such as nurseries, early childhood education services, and summer camps. These settings have been identified as particularly effective for initiating participant recruitment, as they offer access to the social networks of parents and caregivers. The sampling strategy also includes outreach via targeted online platforms commonly used by parents of eligible children, with the dual aim of raising awareness of the survey and encouraging participation. This entire phase has been outsourced to an external agency, which is responsible for both the design and implementation of the recruitment process.

9.4.2 Fieldwork Implementation, Privacy and Data Flows

The operational procedures designed to manage fieldwork and data-flow for each cohort (D'Ambrosio et al., 2025), have been designed within the broader "Fostering Open Science in Social Science Research" (FOSSR—https://www.fossr.eu/) project funded by the National Recovery and Resilience Plan (NRRP).[3]

The process defined for the child cohort involves the participation of the primary schools sampled. Principals of the selected schools are to be contacted through a formal certified email ("Posta Elettronica Certificata"—PEC) sent by the survey agency. This email includes an invitation letter to participate in the survey, detailing the participation procedures and providing a link to the enrollment form, which also contains the privacy notice and the request for informed consent for data processing. Additionally, a follow-up telephone plan has been scheduled to reach those schools that do not complete the online form.

Participating schools will collaborate with the institutions that have been involved in implementing the important GUIDE pilot survey within FOSSR.[4] The role of the participating schools will be limited to sending the initial (electronic) communication to the families of the children in the target population, to enable these families to participate in the GUIDE pilot survey. The content of this communication will be agreed by the FOSSR research team and provided by CNR-IRPPS. The families of the target students will thus receive an email communication sent directly by their child's school, in which they will find the link to join the survey.

[3] Both the GUIDE and FOSSR projects are committed to providing data according to the FAIR (Findable, Accessible, Interoperable, Reusable) principles.

[4] These are CNR-IRPPS, and the Department of Statistical Sciences "Paolo Fortunati" and the Department of Economics at the University of Bologna.

For families that are not contacted via schools—including families of children in the infant cohort—the process of managing recruitment will be implemented by the above mentioned external agency. For families in both cohorts, the materials related to recruitment have been developed in compliance with the ethical and legal obligations established by the GDPR (EU Regulation 2016/679), with the aim of fostering informed, transparent, and accountable communication with participants. These materials include:

- Privacy notice, developed in compliance with Article 13 of the GDPR, which clearly outlines the purpose and legal basis of data processing, data retention periods, contact points, participants' rights, as well as information on the data controller and the entities responsible for the implementation of the survey. This material also includes a comprehensive overview of the questionnaire's main sections to ensure that respondents are fully informed about the nature of the questions posed in each part of the survey;
- Invitation letters, written in accessible language to ensure comprehensibility across the general population, explaining the objectives of the survey, the voluntary nature of participation, and the safeguards in place to ensure data confidentiality;
- Informed consent forms, through which participants confirm that they have read the privacy notice and provide their consent to the processing of their personal data, thereby formally agreeing to take part in the survey.

Only those families who complete the recruitment participation form, provide contact information, and authorize data processing, can be contacted for interviews.

9.4.3 Interviews and Interview Modes

The questionnaires for the GUIDE pilot in Italy are ex-ante harmonized with those used in the national pilots that have already been completed, and have already been adapted to the Italian setting and pre-tested by researchers at the University of Bologna. The questionnaires for the parents/carers of both cohorts are expected to take approximately 60 minutes and aim to collect the following information: socio-demographic data; employment and socio-economic conditions; housing, neighborhood, and community; pregnancy and birth; child health and well-being; and parental health. Eight-year-old children will also be interviewed and the questionnaire for them is expected to take approximately 30 minutes and covers the following areas: well-being; physical development; emotional development; social development; school environment; family environment; friendships; bullying; leisure time; level of digital engagement; family financial situation; neighborhood and community. In the pilot, there will also be space for questionnaire feedback and interviewer observations.

For all families in the child cohort (where children and adults are interviewed), and half of those in the infant cohort (only adult interviews), interviews will be

completed face-to-face using the Computer Assisted Personal Interview (CAPI) mode. For the remaining families in the infant cohort, the Italian GUIDE pilot will trial Computer Assisted Web Interviews (CAWI). CAWI interviews are largely self-completed by the interviewee. The software that will facilitate the interviews has been developed in conjunction with Centerdata.

Families recruited to the Italian GUIDE pilot will provide contact details and initial consent in the recruitment phase. Those families interviewed using the CAPI mode will then be contacted by an interviewer to establish an appointment for the interviews. Safeguards in the software used by interviewers will ensure that interviews can be realized only after the reading of the privacy notice on personal data processing and the collection of informed consent (duplicated as necessary for cases in which both parents/tutors must provide consent for data to be collected from children) for participation in the survey. Families from the infant cohort surveyed using the CAWI mode, will instead receive an email containing the link to the online questionnaire. This questionnaire will only be accessible once the adult interviewee has read the privacy notice and provided appropriate informed consent.

The innovation of using the CAWI interview mode will be invaluable for the future development of GUIDE—and potentially other surveys—as researchers think about a "push to web" as a potentially cost-effective way of conducting survey-based research. The Italian GUIDE pilot (and the FOSSR project more broadly) is also already providing insights on how best to find a sample of families, and about best practice with regard to data-flows and privacy, when conducting survey-based research with families with children.

9.5 Conclusion

Italy's capacity to craft and evaluate child-centred policies is hampered by a conspicuous lack of longitudinal, survey-based evidence on children and young people. Whereas several European neighbours benefit from long-running cohort studies, Italy still leans on a fragmented set of cross-sectional datasets that cannot robustly prove how social, educational, digital and economic contexts shape outcomes over time. Given that well-being spans intertwined physical, emotional, material and social dimensions, only a longitudinal design can trace these dynamics accurately.

The GUIDE project offers a decisive step forward. Conceived as a harmonised, Europe-wide panel, GUIDE combines objective markers—income, health, schooling and digital use—with children's own hedonic and eudaimonic assessments, thereby capturing both circumstances and lived experience. Its child-centric approach matches today's policy emphasis on including young voices and, crucially, enables life-course analyses that current Italian data cannot support.

Participation in a synchronised European framework will allow Italy to benchmark its performance, learn from countries with more established support systems and adapt best practices to domestic conditions. GUIDE's commitment to common instruments—tested and refined across cultures—will upgrade Italian survey

practice, supplying validated metrics that work nationally and regionally. The first Italian pilot, scheduled for 2025, is testing questionnaire content, mixed-mode interviewing (including CAWI) and large-scale sampling, laying the groundwork for a full national panel. Furthermore, Italian experience in piloting GUIDE will produce valuable insights on survey implementation, giving feedback to European scientific groups.

In sum, as Italy strives to harmonise its child-well-being agenda with broader European standards and to bridge persistent territorial disparities, GUIDE provides the essential framework for ensuring that children's and adolescents' perspectives inform policy—consistently, rigorously and over the long term.

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