



HCEO WORKING PAPER SERIES

Working Paper



HUMAN CAPITAL AND
ECONOMIC OPPORTUNITY
GLOBAL WORKING GROUP

The University of Chicago
1126 E. 59th Street Box 107
Chicago IL 60637

www.hceconomics.org

How Parents' skills affect their time-use with children: Evidence from an RCT experiment in Italy¹

Daniela Del Boca (University of Turin and CCA), Chiara Daniela Pronzato (University of Turin and CCA), Lucia Schiavon (University of Turin and CHILD)

Nov 9th, 2020

Abstract

This paper investigates the impact of parenting courses on fragile families' time use with their children. Courses aimed at raising parental awareness of the importance of educational activities are offered in four Italian cities (Naples, Reggio Emilia, Teramo and Palermo) within the framework of the social program "FA.C.E. Farsi Comunità Educanti" and with the cooperation of the program "Con i Bambini"². To conduct the impact evaluation³, we designed a randomized controlled trial involving random assignment of the families (mostly mothers). At the end of the intervention, we administered an assessment questionnaire both to the treatment group, which took the course, and to the control group, which did not. Comparing the outcomes, we find attending the course increased families' awareness of the importance of educational activities for children, the frequency with which they read to the child, and their desire to spend more time with the child.

J.E.L: J13, D1, I26

Key words: parenting, use of time, randomized controlled trial

¹ We thank Chiara Baldelli and the rest of FA.C.E.'s team of Reggio Children Foundation for their support. We also thank Paola Battaglia for research assistance.

² Con i Bambini is a non-profit organization whose mission is to implement programs contrasting the educational poverty of children, funded by a Memorandum of Intent (Protocollo d'Intesa) signed between the Italian Ministry of Labor and the Association of Italian Banking Foundations.

³ Evaluation of FA.C.E. was carried out at the Impact Evaluation Institute (IEU) at Collegio Carlo Alberto, whose technical support is gratefully acknowledged.

1. Introduction and background

Supporting the development of parental skills and awareness has increasingly been on the agenda of policy makers in Europe since the 1990s (European Union 2013). Outreach to families is typically delivered through early childhood and family information centers that offer a wide range of community health and social services. Most programs include parenting courses designed for families with preschoolers, as interventions targeting this age group have proven the most cost-effective and efficient (Daly 2007, Moran et al. 2004). Several recent programs to increase parental awareness of the importance of parenting skills have been directed towards fragile families. Research evaluating these programs show that they have raised parental awareness, parenting skills and children's cognitive and socioemotional outcomes (Doyle et al. 2017, Doyle 2020, Wagner and Clayton 1999, Daly et al. 2014).

These programs are also backed up by a large body of literature known as the economics of skills formation, which analyzes the effect of parents' behavior on children's well-being. Several surveys have shown that parental time investments in their children have a powerful influence on child cognitive and non-cognitive outcomes, and that they are the most important input in the child development process (Carneiro and Heckman 2003, Del Boca 2015), outweighing the influence of non-parental time investments.

These studies have also compared the impact of mothers' and fathers' time with children. While the mother's time is widely recognized as a crucial input for a child's cognitive development, the father's time has been found to be equally productive, especially at some stages of a child's life. In recent decades, the amount of time fathers spend with their children has increased markedly, partly offsetting the decline in mothers' time. A study using time-use data finds that inputs provided by both parents are important for children's cognitive development, with impacts differing according to whether the parents are actively engaged with or merely passively present when spending time with the child. Active time is more "productive" than passive time (Del Boca et al 2014). Other studies confirm these results. Hsin (2009) defines different measures of maternal total time, engaged time and quality time, finding a positive and persistent effect of the total time spent by mothers with their children, but an even greater effect of time spent playing with them.

Recent studies have looked at different types of parental time activities (educational and non-educational), showing that the latter are the most important determinants of childhood development (Del Boca et al., 2017; Fiorini and Keane, 2014).

Inputs in the cognitive production function have a different effect at different stages of a child's life. The family's contribution to child development diminishes as the child grows older, suggesting that there is less room for policy interventions in late childhood and adolescence (Del Boca et al 2017). The early years represent an important phase for children's development, in which the returns of parental investments are larger (Heckman 2000, Guryan et al 2008, Campbell et al 2014). A recent area of research has also considered parenting style – such as how warm, strict, or communicative a parent is – as an important determinant of a child's skills (Doepke and Zilibotti, 2017).

Building on some of the main findings of this literature, we set out to analyze the impact of parental awareness of the importance of engaging in educational activities with children aged 0-6. We study the impact of a parenting course on parents' and children's time use by designing a randomized controlled trial: families were randomly invited to participate in the project, and the outcomes of those who attended the course were compared with those who did not. Our findings show that course attendance the participants' awareness of the importance of educational activities for children, the frequency with which they read to the child, and their desire to spend more time with the child.

2. The intervention and course description

“FA.C.E. Farsi Comunità Educanti” (“Becoming Educating Communities”) is a social program promoted by the institution “Con i Bambini”⁴ and implemented in four Italian cities: Napoli, Palermo, Reggio Emilia and Teramo. The aim of the program is to increase access to educational and care services for children aged 0-6 by promoting family engagement, particularly among the socially vulnerable. The main thrust of the project is to bring education to the front and center of the local public debate and involve local communities in the educational lives of their children; it supports the idea that education should not be left up to teachers and parents alone, but recognized as a community-based responsibility. The ultimate goal of FA.C.E. is that of reshaping educational policy in the territories involved. Participation thus becomes a powerful means for meeting the needs of the community and, at the same time, fosters a sense of community togetherness that may contribute to a culture of inclusion and solidarity. Collegio Carlo Alberto has been involved as an external partner in charge of impact evaluation since the program's outset.

With the exception of Teramo, a critically vulnerable area in each city was selected as the target of intervention: i) in Palermo, this was the Sperone-Brancaccio-Settecannoli district in the southern outskirts, with its high crime and school dropout rates; ii) in Reggio Emilia, it was an area on the eastern outskirts near the train station, where families of different ethnic groups have settled in recent years and integration problems have arisen; iii) in Napoli, the eastern outskirts of Ponticelli were chosen, due to its high population density, shortage of services, and high crime rate. In Teramo, the whole city is considered a potential target of intervention, since families all over the city are still dealing with the aftermath of the earthquakes of 2016 and 2017, including condemned housing and a shortage of services.

The planning partnership involves 20 institutions, including the municipalities of the cities involved, schools, and other managing bodies under the supervision of the Reggio Children Foundation (the lead partner). The point of contact in each of the four cities is the participating local school. It was deemed that reliance on a previously established program of intervention would have not been in line with the core aim of the project. Therefore, a bottom-up approach was adopted in each city, and local community groups were invited to take part in the process of planning the interventions. In 2018, planning committees were set up with the communities living in the affected areas, and families and other stakeholders involved in the educational and care services specific to early childhood were invited to take part.

⁴ An Italian non-profit organization founded in 2016 with the aim of managing a fund established by banking foundations and the Italian government to reduce educational inequality in childhood.

After a year of open debate and constructive dialogue within and between each city as well as with the leading partner, by March 2019 the final interventions had been settled upon. Parenting courses based on participatory workshops involving children and one parent each were established for the school year 2019-20 and 2020-21 in all four cities. The courses are free of charge and mainly targeted at (but not limited to) fragile families.

Over the course of 9 meetings, parents are provided with information and ideas about how to improve the learning environment at home. They learn games to play and crafts to make with their children using simple and recycled materials like paper and cardboard. The child's cognitive and soft skills are improved through sensory experience and craft activities, musical and digital workshops, and storytelling, where the relationship between child and parent is especially close and collaborative. In particular, arts and crafts stimulate imagination and creativity through the use of different materials and artistic techniques, and help build the child's self-esteem. Storytelling and music workshops tend to increase the self-confidence of the parent as they learn to engage their child in new activities. Special attention is paid to the use of digital tools in the context of learning and discovery.

The program differs slightly from city to city, but the overall content remains the same. Separate workshops are offered for children aged 0-3 and those aged 3-6. Palermo and Teramo also offer courses for parents of children under one year of age. The latter were not considered in our study, due to their age-specific content and the limited size of the cohort.

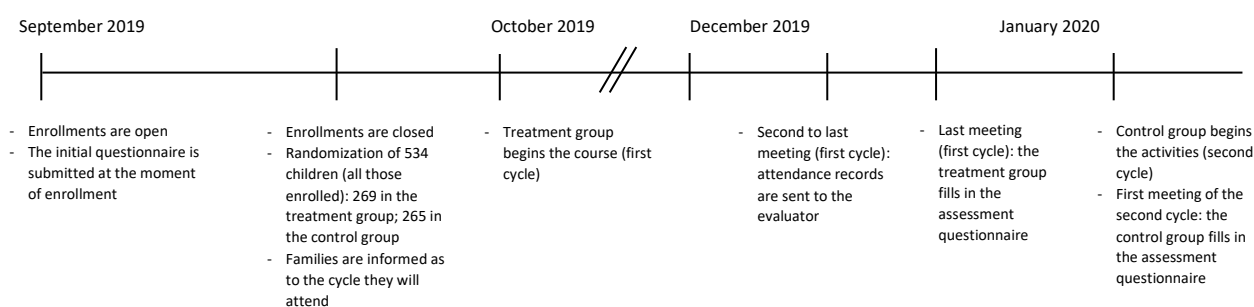
3. Experimental design and data collection

Once the interventions had been defined, the four cities were required to comply with a randomized controlled experiment based on a phase-in mechanism in the school year 2019-20. The parenting courses were planned to be held twice in the school year 2019-20, and families could apply to the program by the end of September 2019, although they could not decide which cycle to attend. After enrollments closed, we randomly assigned the families either to the treatment or to the control group. Due to budget constraints, 50 to 90 families were admitted per cycle⁵, and the remaining families were put on a waiting list in randomized order.

The treatment groups attended the course first, from October to December 2019 (to January 2020 in Teramo); the second groups attended the course from January to May 2020. The timeline of the intervention in the school year 2019-20 is illustrated in Figure 1.

⁵ There were 50 families per cycle in Palermo and Reggio-Emilia, 60 per cycle in Teramo, and 90 per cycle in Naples.

Figure 1: The timeline of the randomized controlled trial □



When enrolling in the program, all of the families (mostly mothers)⁶ answered a series of socio-demographic questions and completed a baseline questionnaire⁷ based on the course content. The treatment group then completed an assessment questionnaire⁸ at the end of the course and the same questionnaire was completed by the control group, almost at the same time, at the beginning of the course.

Both the baseline and the assessment questionnaires were organized into separate sections: i) the first concerned the use of time of parents and children together (reading, storytelling, singing, etc.), ii) the second concerned the child's use of technology and parents' opinions about it, iii) the third assessed whether parents can rely on a private network of social support. The assessment questionnaire also contained questions on parents' attitudes and beliefs about their offspring's education. In addition, the families in the treatment group provided feedback on course satisfaction.

Between the end of the first cycle and the beginning of the second cycle, we collected a total of 261 assessment questionnaires from the treatment and control groups in all four cities. The data collected from the assessment questionnaire was then used to assess the effectiveness of FA.C.E. on the outcomes of interest.

4. Data and attrition analysis

In September 2019, 534 children were enrolled in the FA.C.E. course. A randomization algorithm was employed⁹, and 269 children to the treatment group and 265 to the control group. As shown in Table 1, the randomization was balanced according to: the gender of the youngest participating child within the family unit, the presence of siblings (and whether the information about siblings was missing), if parents were cohabiting, as well as if the mother was the participating parent.

⁶ Among participating families, 88% of the participants were mothers 3% were both parents, and 6% were fathers.

⁷ The baseline questionnaire and answers are provided in the Appendix.

⁸ The assessment questionnaire is provided in the Appendix.

⁹ If several children from the same family were enrolled in the program, they were all allocated either to the treatment or to the control group.

Table 1: Comparison between treated and controlled after randomization

VARIABLES	CONTROLLED	TREATED	T-test
	Mean	Mean	p-value
Female	0.498	0.435	0.144
No siblings	0.158	0.175	0.616
Siblings missing ¹	0.336	0.279	0.154
Cohabiting parents	0.925	0.937	0.577
Mother	0.864	0.896	0.259
Naples	0.249	0.275	0.495
Palermo	0.196	0.167	0.387
Reggio Emilia	0.260	0.260	0.997
Teramo	0.294	0.297	0.938

Note: ¹ Dummy which takes value equal to 1 if the information about siblings was missing.

At the end of the first cycle, which overlapped with the beginning of the second cycle, we checked whether the children who had already participated (the treatment group), and those who were about to start (the control group), were statistically different from those who had decided not to attend or later dropped out. Attrition analysis showed that those who enrolled at Reggio Emilia and Naples were more likely to leave the program, or not to start the activities, but no other characteristics of the family were associated with the likelihood of leaving the program (Table 2 reports the estimated marginal effects from the logit model). Table 3 shows that once we have restricted the sample to those who remained, the treatment and control groups are still balanced in terms of gender and family characteristics. Conversely, the proportion of children across the four different municipalities varied dramatically in the control group. In particular, the proportion of children participating in Naples decreased significantly from 20.5% to 9.4%.

Table 2: Attrition analysis (Logit estimation model)

VARIABLES	Marginal	p-value	Significance
	Effects		Level
Female	0.039	0.404	
No siblings	-0.025	0.712	
Siblings missing ¹	0.005	0.920	
Cohabiting parents	-0.082	0.375	
Mother	-0.026	0.715	
Reggio Emilia	0.261	0.000	***
Naples	0.375	0.000	***
Palermo	-0.020	0.771	

Note: ¹ Dummy which takes value equal to 1 if the information about siblings was missing. Teramo is omitted. Significance levels *** 0.01, ** 0.05, * 0.1

Table 3: Comparison between treatment and control group at the end of the first cycle

VARIABILI	CONTROLLED Mean	TREATED mean	T-test p-value	Significance Level
Female	0.462	0.402	0.342	
No siblings	0.154	0.197	0.375	
Siblings missing ¹	0.333	0.273	0.300	
Cohabiting parents	0.940	0.924	0.621	
Mother	0.846	0.894	0.263	
Reggio Emilia	0.231	0.182	0.341	
Naples	0.094	0.205	0.015	**
Palermo	0.265	0.235	0.585	
Teramo	0.410	0.379	0.614	
N	117	132		

Note: ¹ Dummy which takes value equal to 1 if the information about siblings was missing. Significance levels *** 0.01, ** 0.05, * 0.1

5. Empirical Strategy

The empirical strategy relies on the implementation of a randomized controlled trial, where all eligible families were assigned into two groups (treatment and control group) in order to decide who was going to participate in the intervention first. The random allocation of the “treatment” (participating in the intervention first) allow us to make the treatment independent from potential outcomes, solving any problem of selection bias. Therefore, by comparing the difference in outcomes between the treatment and control groups (measured before the control group attended the course), we are able to identify the average causal effect of FA.C.E. We can express this comparison in terms of potential outcomes, with the following equation:

$$E[Y_{1i}|D_i = 1] - E[Y_{0i}|D_i = 0] = E[Y_{1i} - Y_{0i}|D_i = 1]$$

where $E[Y_{1i}|D_i = 1]$ is the analyzed potential outcome of those children i who attended FA.C.E. first ($D_i = 1$, the treatment), while $E[Y_{0i}|D_i = 0]$ is the analyzed potential outcome of those children i who did not attend FA.C.E. during the first cycle. The second term $E[Y_{1i} - Y_{0i}|D_i = 1]$ identifies the average causal effect of FA.C.E. (the effect of treatment on the treated).

As detailed in section 3, the outcomes of the children and/or of their parents, were assessed by means of a questionnaire completed by the treatment group at the end of the first cycle, and by the control group at the beginning of the second cycle.

6. Results

Table 4 reports the comparison of a selected set of outcomes for the treatment and control groups, most of which prove to be statistically significant. Families in the treatment group showed greater

awareness of the importance of educational activities for the development of their offspring. At the same time, the treatment group recognized the importance of cultural sites in improving one's life. However, no difference between groups emerges from the importance attributed to the comparison with other parents on offspring's education

Table 4: Outcomes comparison between controlled and treatment group at the end of the first cycle

VARIABLES	CONTROLLED		TREATED		T-test p-value	Significance Level
	N	Mean	N	mean		
Importance of education activities for children (1 min – 10 max)	123	9.236	135	9.504	0.005	***
Importance of cultural sites to improve one's life (1 min – 10 max)	123	9.163	134	9.425	0.004	***
Activity in the last week: read to the child	120	0.792	123	0.870	0.028	**
Activity in the last month: going to the library, playroom	121	0.397	117	0.265	0.054	*
Children use of technological devices: listening of music	92	0.250	98	0.337	0.089	*
Children use of technological devices: using Whatsapp	93	0.0323	97	0	0.094	*
Television use: Never	121	0.099	133	0.150	0.105	
Cumulative television use: Never or less than 30 minutes a day	121	0.264	133	0.368	0.03	**
Cumulative other technological devices use: Never	122	0.336	133	0.406	0.148	
Unsatisfaction about the time spent with the child	116	0.0259	131	0.0611	0.257	
Light satisfaction about the time spent with the child, s/he would like more time together	116	0.155	131	0.260	0.028	**
Satisfaction about the time spent with the child, s/he would like more time for her/him-self	116	0.362	131	0.282	0.129	

Note: N stands for the number of valid answers to the question per treatment/control group. In the estimates of the p-value of the T-test, we control for Naples.

Significance levels *** 0.01, ** 0.05, * 0.1

As regards the use of the time parents and children spend together, the treatment group reported spending more time reading to their children. Conversely, the control group reported more frequent visits to the library or a play group. This significant difference may be due to the fact that the treatment group was already participating in the interventions at that time, so it had less time to visit a library or a play group. No other difference appears from the frequency of other activities engaged

in by the parent and child together, such as drawing, singing, playing outdoors or indoors, or searching on the internet for activities to do with the child. However, small sample size may influence the statistical power of our estimations.

The proportion of children in the treatment group who watch television up to 30 minutes a day is higher in the treatment group. Conversely, in the control group, a higher proportion of children watch television for more than 30 minutes a day and use other digital devices than in the treatment group. However, the opinions of both groups on the use of digital devices does not differ significantly (whether it affects children's eyes, provides opportunities for learning, etc.).

In terms of parent satisfaction about the time they spend with their offspring, the treatment group reported feeling generally satisfied but had a higher desire to spend more time with their children than the control group. After the intervention, parents in the treatment group reported the desire to be more involved in encouraging their child's development.

7. Conclusions

Using randomized controlled trials to examine the effects of public policies to contrast parent and child educational poverty has been a growing area of interest in economics over the last few decades. The purpose of the present study was to assess the impact of parenting courses mainly targeting fragile families in order to raise parental awareness and to improve the amount and quality of time parents and children spend together.

This research uses data from the Italian social program FA.C.E, supported by the institution "Con i Bambini" and implemented in four Italian cities: Naples, Palermo, Reggio Emilia and Teramo. Its aim is to improve access to educational and care services of children aged 0-6 by promoting the participation of fragile families.

In order to perform the analysis, we use a randomized controlled trial. By comparing the answers of the questionnaires completed by the treated group at the end of the first cycle and those completed by the control group at the beginning of the second cycle, we find that attending the FA.C.E. parenting course increased the participants' awareness of the importance of educational activities for children, the frequency with which they read to their child, and their desire to spend more time with their child. Our results confirm previous studies' outcomes and contributes to the literature on the importance of programs aimed at improving parenting.

REFERENCES

- Campbell F., Conti G., Heckman J. J., Moon S. H., Pinto, R., Pungello E. and Pan Y. (2014). “Early childhood investments substantially boost adult health.” *Science* 343, (6178), 1478- 1485. 10.1126/science.1248429
- Carneiro P.M. and Heckman J.J. (2003). “Human Capital Policy” IZA WP. 821
- Daly M. (ed.) (2007), *Parenting in contemporary Europe: a positive approach*, Strasbourg: Council of Europe.
- Daly M., Delaney L., Doyle O., Fitzpatrick N., O’ Farrelly C. “Can early intervention policies improve wellbeing? Evidence from a randomized controlled trial” WP. 201410, University College Dublin 2014
- Del Boca D., Monfardini C. and Nicoletti C. (2017). “Parental and child time and cognitive development of adolescents”, *Journal of Labor Economics* 35(2): 565-608, April
- Del Boca D. (2015). “Child care Choices and Child Outcomes”, *IZA World of Labor* , Number 134, March.
- Del Boca D., Flinn C., and Wiswall M. (2014). “Household Choices and Child Development”, *The Review of Economic Studies*, Volume 81, Issue 1, January 2014, Pages 137–185.
- Doepke M. and Zilibotti F. (2017). “Parenting With Style: Altruism and Paternalism in Intergenerational Preference Transmission”, *Econometrica*, 85: 1331-1371
- Doyle O., Harmon C., Heckman J.J., Logue C., Moon S.H. (2017). “Early skill formation and the efficiency of parental investment: a randomized controlled trial of home visiting”, *Labour Economics* 45, 40-58
- Doyle O. (2020). “The First 2,000 Days and Child Skills”, *Journal of Political Economy*, University of Chicago Press, vol. 128(6):2067-2122.
- European Union (2013). “Involving Parents in the Education of their Children”. http://europa.eu/epic/practices-that-work/practice-user-registry/practices/involving-parents-children-education_en.htm
- Fiorini M. and Keane M. (2014). “How the Allocation of Children’s Time Affects Cognitive and Noncognitive Development”, *Journal of Labor Economics*, 32:4, 787-836
- Guryan J., Hurst E. and Kearney M. (2008). “Parental education and Child Outcomes”, *Journal of economic Perspectives* vol 22:3
- Heckman J.J. (2000). “Policies to foster human capital” *Research in Economics* vol 54:1, 3-56
- Hsin A. (2009). “Parent’s Time with Children: Does Time Matter for Children’s Cognitive Achievement?” *Social Indicators Research* 93, 123–126
- Moran P., Ghate D. and Van der Merwe A. (2004). “What works in parenting support? A review of the international evidence”, *Policy Research Bureau, Research report* No 574, p.129. 35
- Wagner M.M., Clayton S.L. (1999). “The Parents as Teachers Program: Results from two demonstrations”, *The Future of Children*, 9 (1), 91-115. 10.2307/1602723

APPENDIX

BASELINE QUESTIONNAIRE

1. Child tax code _____

2. Participating caregiver relationship with the child
 - Mother
 - Father
 - Grandparent
 - Uncle/aunt
 - Cousin
 - Friend
 - Other _____ (please specify)

3. Are you employed at the moment?
 - Employed
 - Not employed

4. Has the child siblings?
 - Yes
 - No

5. Who does the child spend time with, on top of parents? (other adults)

- No one else	<input type="checkbox"/> yes	<input type="checkbox"/> no
- Grandparents	<input type="checkbox"/> yes	<input type="checkbox"/> no
- Uncles/aunts	<input type="checkbox"/> yes	<input type="checkbox"/> no
- Cousins	<input type="checkbox"/> yes	<input type="checkbox"/> no
- Friends	<input type="checkbox"/> yes	<input type="checkbox"/> no

6. If child spends time with other adults, is it with or without parents?
 - Together with parents
 - Even without parents

7. Does the child spend time with other children?
 - Several times a week
 - Once a week
 - Less than once a week
 - Never

8. Do you feel self-confident in...?:

- Alimentation/weaning yes no
- Organizing the day yes no
- Housekeeping yes no
- Managing child sleep routine yes no
- Hygiene and care of the child yes no
- Dealing with child health diseases yes no
- Communication and relationship with the child yes no
- Playing with the child yes no

9. In which of the listed situations, do you feel most in trouble?

- Never yes no
- Post partum/breastfeeding yes no
- Alimentation/weaning yes no
- Organizing the day yes no
- Housekeeping yes no
- Managing child sleep routine yes no
- Hygiene and care of the child yes no
- Child health diseases yes no
- Communication and relationship with the child yes no
- Playing with the child yes no

10. When in trouble, do you ask for help?

- Yes
- No
- Not much

11. Do you talk with others about your experience of parent/grandparent...?

- Yes
- No
- Not much

12. Which is the typical day of the child?

- Attend formal childcare yes no
- Stay home yes no
- Play in the yard yes no
- Play at the park yes no

13. What do you do in your free time with the child?

- Stay home yes no
- Play in the yard yes no
- Play at the park yes no
- Visit relatives yes no
- Visit friends yes no
- Visit friends with children yes no
- Visit local association yes no

- Go to the library/playground yes no
- Go to the shopping mall yes no
- Go to the sport center yes no

14. Which are child's favorite toys/game?

- Ball yes no
- Building blocks yes no
- Various characters (superhero, dolls, animals) yes no
- Musical toys/instrumentals yes no
- Little cars yes no
- Board games yes no
- Everyday objects yes no
- Not toys but playing outside yes no
- Not toys but watching television/videos online yes no

15. Do you read to your child?

- Several times a week
- Once a week
- Less than once a week
- Never

16. When you are at home, do you listen to music, sing songs/nursery rhymes with your child?

- Several times a week
- Once a week
- Less than once a week
- Never

17. Do you tell story invented by you (or from tradition) at your child?

- Several times a week
- Once a week
- Less than once a week
- Never

18. Do you do activities with your child (a drawing, building blocks, etc.)?

- Several times a week
- Once a week
- Less than once a week
- Never

19. How long does the child usually watch television a day?

- S/he does not watch television
- Up to 1 hour
- Longer than an hour, less than 3 hours
- Longer than 3 hours

20. How long does the child usually watch online videos a day?

- S/he does not watch online videos
- Up to 1 hour
- Longer than an hour, less than 3 hours
- Longer than 3 hours

21. According to you, what does it mean “Well-being” for a family and a child?

- | | | |
|---|------------------------------|-----------------------------|
| - Physical health | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Psychological health and well-being | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Spiritual well-being | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Good relationship | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Economic security | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Have a (good) job | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Access to culture | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Living in an appropriate and comfortable house | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Living in an area which offers opportunities (es. services, transportations, schools, etc.) | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Living in an environmental-friendly area | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Being well-included in the community | <input type="checkbox"/> yes | <input type="checkbox"/> no |

22. Do you want to enroll your child to formal childcare in s.y. 2020/21?

- Yes
- No
- S/he has been already enrolled in s.y. 2019/20

Table A1: Answers to baseline questionnaire

VARIABLES	All municipalities		Naples		Palermo		Reggio Emilia		Teramo	
	(1) N	(2) mean	(3) N	(4) mean	(5) N	(6) mean	(7) N	(8) mean	(9) N	(10) mean
Participating caregiver: mother	451	0.900	144	0.882	87	0.839	97	0.969	123	0.911
Expected child enrolment in formal childcare in s.y. 2020/21	450	0.402	144	0.465	88	0.386	97	0.495	121	0.264
Child enrolment in formal childcare in s.y. 2019/20	450	0.522	144	0.465	88	0.580	97	0.371	121	0.669
Participating caregiver is employed	451	0.488	144	0.354	88	0.295	97	0.546	122	0.738
Presence of siblings	451	0.550	144	0.764	88	0.545	97	0.340	122	0.467
Child spends time only with parents, no other adult	419	0.162	143	0.147	85	0.0941	94	0.298	97	0.113
Child spends time with grandparents, in addition to parents	450	0.873	144	0.847	88	0.932	96	0.760	122	0.951
Child spends time with uncles/aunts, in addition to parents	443	0.641	143	0.566	88	0.659	95	0.547	117	0.795
Child spends time with cousins (adults), in addition to parents	436	0.528	144	0.528	88	0.591	93	0.441	111	0.550
Child spends time with friends (adults), in addition to parents	441	0.612	143	0.441	88	0.580	93	0.677	117	0.795
Self-confident in: alimentation	452	0.715	144	0.646	88	0.784	97	0.680	123	0.772
Self-confident in: organizing the day	451	0.752	144	0.674	88	0.875	97	0.742	122	0.762
Self-confident in: housekeeping	450	0.687	144	0.674	88	0.830	97	0.588	121	0.678
Self-confident in: managing child sleep routine	451	0.696	144	0.667	88	0.795	97	0.608	122	0.730
Self-confident in: hygiene and care of the child	452	0.896	144	0.806	88	0.966	97	0.897	123	0.951
Self-confident in: child health diseases	450	0.524	144	0.549	88	0.795	97	0.320	121	0.463
Self-confident in: relationship with the child	451	0.789	144	0.701	88	0.886	97	0.742	122	0.861
Self-confident in: playing with the child	451	0.827	144	0.743	88	0.955	97	0.711	122	0.926
Difficulties reported in: nothing	433	0.289	144	0.451	86	0.360	95	0.105	108	0.176
Difficulties reported in: postpartum/breastfeeding	439	0.305	143	0.238	87	0.310	96	0.365	113	0.336
Difficulties reported in: alimentation	439	0.223	143	0.133	86	0.198	97	0.361	113	0.239
Difficulties reported in: organizing the day	436	0.218	143	0.168	85	0.176	97	0.237	111	0.297
Difficulties reported in: housekeeping	438	0.251	143	0.133	85	0.188	97	0.330	113	0.381
Difficulties reported in: managing child sleep routine	437	0.247	143	0.203	85	0.165	97	0.330	112	0.295
Difficulties reported in: hygiene and care of the child	436	0.0573	143	0.0979	85	0.0588	97	0.0206	111	0.0360
Difficulties reported in: child health diseases	440	0.432	143	0.273	86	0.233	97	0.619	114	0.623
Difficulties reported in: relationship with the child	437	0.190	143	0.238	85	0.153	97	0.196	112	0.152
Difficulties reported in: playing with the child	437	0.137	143	0.147	85	0.106	97	0.216	112	0.0804
Child's typical day: attend formal childcare	447	0.615	144	0.569	87	0.713	96	0.375	120	0.792
Child's typical day: stay home	441	0.565	143	0.427	85	0.753	97	0.660	116	0.517
Child's typical day: play in the yard	437	0.412	143	0.385	85	0.353	96	0.438	113	0.469
Child's typical day: play at the park	442	0.733	143	0.629	86	0.674	97	0.804	116	0.845

VARIABLES	All municipalities		Naples		Palermo		Reggio Emilia		Teramo	
	(1) N	(2) mean	(3) N	(4) mean	(5) N	(6) mean	(7) N	(8) mean	(9) N	(10) mean
Free time (child with parent): stay home	443	0.542	143	0.329	87	0.667	96	0.667	117	0.607
Free time (child with parent): play in the yard	441	0.435	143	0.406	86	0.337	97	0.454	115	0.530
Free time (child with parent): play at the park	447	0.823	143	0.762	88	0.818	97	0.835	119	0.891
Free time (child with parent): visit relatives	445	0.809	144	0.764	87	0.931	97	0.732	117	0.838
Free time (child with parent): visit friends	448	0.725	143	0.552	87	0.736	97	0.784	121	0.876
Free time (child with parent): visit friends with children	448	0.750	144	0.632	87	0.782	97	0.784	120	0.842
Free time (child with parent): visit local associations	443	0.244	143	0.231	86	0.233	97	0.299	117	0.222
Free time (child with parent): go to library/playroom	442	0.278	143	0.161	86	0.186	97	0.474	116	0.328
Free time (child with parent): go to shopping malls	444	0.628	143	0.580	86	0.907	97	0.464	118	0.619
Free time (child with parent): go to sports center	444	0.300	144	0.236	86	0.267	97	0.299	117	0.402
Favourite toys/game: ball	447	0.720	143	0.685	87	0.816	97	0.691	120	0.717
Favourite toys/game: building blocks	445	0.676	143	0.601	87	0.782	96	0.583	119	0.765
Favourite toys/game: various characters	447	0.685	144	0.722	87	0.862	97	0.454	119	0.697
Favourite toys/game: musical instruments	445	0.708	143	0.510	87	0.724	97	0.825	118	0.839
Favourite toys/game: little cars	445	0.528	143	0.413	88	0.727	97	0.423	117	0.607
Favourite toys/game: board games	443	0.433	144	0.403	86	0.558	97	0.258	116	0.526
Favourite toys/game: everyday objects	447	0.676	144	0.431	87	0.770	97	0.742	119	0.849
Favourite toys/game: play outside	444	0.662	143	0.420	86	0.860	97	0.670	118	0.805
Favourite toys/game: watching television	442	0.475	144	0.417	86	0.779	97	0.237	115	0.522
Well-being is: physical health	446	0.937	144	0.854	88	0.989	97	0.969	117	0.974
Well-being is: psychological well-being	448	0.975	144	0.958	88	0.989	97	0.959	119	1
Well-being is: spiritual well-being	443	0.797	144	0.694	86	0.953	97	0.763	116	0.836
Well-being is: good relationships	446	0.913	143	0.846	86	0.977	97	0.907	120	0.950
Well-being: economic security	443	0.797	143	0.692	86	0.860	97	0.814	117	0.863
Well-being is: having a job	445	0.789	144	0.674	87	0.943	97	0.814	117	0.795
Well-being is: access to culture	444	0.865	144	0.722	86	0.907	97	0.918	117	0.966
Well-being is: appropriate and comfortable house	444	0.883	144	0.792	86	0.977	97	0.928	117	0.889
Well-being is: living in an area which offers opportunities	444	0.813	144	0.833	86	0.907	97	0.763	117	0.761
Well-being is: environment-friendly area	442	0.778	143	0.629	86	0.895	97	0.825	116	0.836
Well-being is: being well integrated in the community	444	0.831	144	0.757	86	0.953	97	0.773	117	0.880
If child spends time with other adults, it is also without parents	438	0.694	144	0.625	87	0.759	87	0.598	120	0.800
If child spends time with other adults, it is only together with parents	438	0.306	144	0.375	87	0.241	87	0.402	120	0.200

VARIABLES	All municipalities		Naples		Palermo		Reggio Emilia		Teramo	
	(1) N	(2) mean	(3) N	(4) mean	(5) N	(6) mean	(7) N	(8) mean	(9) N	(10) mean
When in trouble, I ask for help: no	452	0.117	144	0.194	88	0.205	97	0.0412	123	0.0244
When in trouble, I ask for help: not much	452	0.290	144	0.326	88	0.216	97	0.268	123	0.317
When in trouble, I ask for help: yes	452	0.593	144	0.479	88	0.580	97	0.691	123	0.659
I talk with others of my experience as parent: no	452	0.0686	144	0.111	88	0.136	97	0.0103	123	0.0163
I talk with others of my experience as parent: not much	452	0.137	144	0.194	88	0.125	97	0.0825	123	0.122
I talk with others of my experience as parent: yes	452	0.794	144	0.694	88	0.739	97	0.907	123	0.862
When in troubles, I ask for help: no, or not much	452	0.407	144	0.521	88	0.420	97	0.309	123	0.341
I talk with others of my experience as parent: no, or not much	452	0.206	144	0.306	88	0.261	97	0.0928	123	0.138
Time spent with other children: never	451	0.0488	144	0.0486	88	0	97	0.113	122	0.0328
Time spent with other children: less than once a week	451	0.109	144	0.0764	88	0.114	97	0.165	122	0.0984
Time spent with other children: once a week	451	0.133	144	0.0972	88	0.227	97	0.155	122	0.0902
Time spent with other children: several times a week	451	0.710	144	0.778	88	0.659	97	0.567	122	0.779
Time spent with other children: never or less than once a week	451	0.157	144	0.125	88	0.114	97	0.278	122	0.131
Time spent with other children: never or up to once a week	451	0.290	144	0.222	88	0.341	97	0.433	122	0.221
Reading to the child: never	450	0.156	143	0.266	88	0.227	97	0.0722	122	0.0410
Reading to the child: less than once a week	450	0.176	143	0.154	88	0.295	97	0.165	122	0.123
Reading to the child: once a week	450	0.164	143	0.259	88	0.193	97	0.0619	122	0.115
Reading to the child: several times a week	450	0.504	143	0.322	88	0.284	97	0.701	122	0.721
Reading to the child: never or less than once a week	450	0.331	143	0.420	88	0.523	97	0.237	122	0.164
Reading to the child: never or up to once a week	450	0.496	143	0.678	88	0.716	97	0.299	122	0.279
Singing to the child: never	452	0.0243	144	0.0486	88	0.0114	97	0.0309	123	0
Singing to the child: less than once a week	452	0.0642	144	0.0625	88	0.114	97	0.0619	123	0.0325
Singing to the child: once a week	452	0.0774	144	0.0972	88	0.125	97	0.0619	123	0.0325
Singing to the child: several times a week	452	0.834	144	0.792	88	0.750	97	0.845	123	0.935
Singing to the child: never or less than once a week	452	0.0885	144	0.111	88	0.125	97	0.0928	123	0.0325
Singing to the child: never or up to once a week	452	0.166	144	0.208	88	0.250	97	0.155	123	0.0650
Storytelling: never	451	0.146	143	0.105	88	0.284	97	0.175	123	0.0732
Storytelling: less than once a week	451	0.175	143	0.196	88	0.182	97	0.155	123	0.163
Storytelling: once a week	451	0.171	143	0.175	88	0.182	97	0.175	123	0.154
Storytelling: several times a week	451	0.508	143	0.524	88	0.352	97	0.495	123	0.610
Storytelling: never or less than once a week	451	0.322	143	0.301	88	0.466	97	0.330	123	0.236
Storytelling: never or up to once a week	451	0.492	143	0.476	88	0.648	97	0.505	123	0.390

VARIABLES	All municipalities		Naples		Palermo		Reggio Emilia		Teramo	
	(1) N	(2) mean	(3) N	(4) mean	(5) N	(6) mean	(7) N	(8) mean	(9) N	(10) mean
Activities together with the child (drawing, building blocks, etc): never	452	0.0664	144	0.0278	88	0.0341	97	0.175	123	0.0488
Activities together with the child (drawing, building blocks, etc): less than once a week	452	0.0642	144	0.0417	88	0.114	97	0.0928	123	0.0325
Activities together with the child (drawing, building blocks, etc): once a week	452	0.128	144	0.236	88	0.125	97	0.0515	123	0.0650
Activities together with the child (drawing, building blocks, etc): several times a week	452	0.741	144	0.694	88	0.727	97	0.680	123	0.854
Activities together with the child (drawing, building blocks, etc): never or less than once a week	452	0.131	144	0.0694	88	0.148	97	0.268	123	0.0813
Activities together with the child (drawing, building blocks, etc): never or up to once a week	452	0.259	144	0.306	88	0.273	97	0.320	123	0.146
Watching television: never	342	0	127	0	76	0	44	0	95	0
Watching television: never or up to 1 hour	342	0.424	127	0.323	76	0.474	44	0.614	95	0.432
Watching television: never or up to 3 hours	342	0.921	127	0.898	76	0.908	44	0.932	95	0.958
Watching videos online: never	286	0	114	0	73	0	27	0	72	0
Watching videos online: never or up to 1 hour	286	0.640	114	0.447	73	0.589	27	0.741	72	0.958
Watching videos online: never or up to 3 hours	286	0.916	114	0.868	73	0.890	27	0.963	72	1

ASSESSMENT QUESTIONNAIRE

1. Child tax code _____

2. Participating caregiver relationship with the child

- Mother
- Father
- Grandparent
- Uncle/aunt
- Cousin
- Friend
- Babysitter
- Other _____ (please specify)

3. Are you employed at the moment?

- Yes, part-time
- Yes, full-time
- No

4. In last week, apart from FACE course, have you ... ?

- | | | |
|--|------------------------------|-----------------------------|
| - Made a drawing with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Read a book to the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Watched a cartoon with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Danced with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Sung with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Played with the child (ball, building blocks, puzzle, etc.) | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Played outside with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Looked for information about educational activities to do with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |

5. In the last month, apart from FACE course, have you ... ?

- | | | |
|---|------------------------------|-----------------------------|
| - Been to a movie theatre with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Participated to a workshop at the museum/local association | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Visited a library/playground | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Attended a public event together with the child (e.g. children's choir) | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Organized a lunch/dinner with other families | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Talk with other adults about children's education | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Visited local associations/groups with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Visited worship with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Been to a shopping mall with the child | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| - Been to a sportive centre | <input type="checkbox"/> yes | <input type="checkbox"/> no |

6. Are you satisfied with the time you spend with your child?

(please tick the answer that best describes how you feel)

- I am happy that we spend (almost) the whole day together, but I would like to have more time to play with him / her than to take care of daily tasks and family in general
- I'm sorry that I do not see him / her for many hours during the day (either because s/he is in kindergarten or due to my work commitments, etc.), but I am happy to be able to find some minutes to play with him / her at the end of the day
- I am not happy: I have little free time in general, and I cannot use it as I would like with my child
- I am happy with the time I spend with him / her and how we use it

7. On a scale of 1 (not confident at all) to 10 (completely confident), indicate how confident you feel in the following situations/topics.

Alimentation

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Not confident at all Completely confident

Organizing the day

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Not confident at all Completely confident

In the communication and the relationship with the child

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Not confident at all Completely confident

In playing with the child

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Not confident at all Completely confident

In sharing with other parents/adults

1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>	10 <input type="checkbox"/>
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Not confident at all Completely confident

8. How long does the child usually watch television a day?

- S/he does not watch television
- Less than 30 minutes
- Longer than 30 minutes, less than 1 hour
- Longer than 1 hour

9. How long does the child usually watch online videos a day?

- S/he does not watch television
- Less than 30 minutes
- Longer than 30 minutes, less than 1 hour
- Longer than 1 hour

10. If the child uses either a tablet or a mobile phone, for what purposes?

(please tick at most TWO answers)

- Watch videos on youtube
- Play games
- See/take pictures
- Listen to music
- Use whatsapp
- Other _____

11. Beyond time, what do you think about using:

Television

(mark all the answers you agree with)

- It calms the child when s/he is nervous
- It gives the parent, or other adult, the opportunity to complete a task
- It hurts the child (sight, makes her/him nervous, etc.)
- It is possible to learn new stuff

Tablet

(mark all the answers you agree with)

- It calms the child when s/he is nervous
- It gives the parent, or other adult, the opportunity to complete a task
- It hurts the child (sight, makes her/him nervous, etc.)
- It is possible to learn new stuff

Mobile phone

(mark all the answers you agree with)

- It calms the child when s/he is nervous
- It gives the parent, or other adult, the opportunity to complete a task
- It hurts the child (sight, makes her/him nervous, etc.)
- It is possible to learn new stuff

12. On a scale of 1 to 10, where 1 indicates "not at all" and 10 "very much", how important do you think it is to talk/discuss with other parents / adults to deal with the child's development / educational path?

1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	6	<input type="checkbox"/>	7	<input type="checkbox"/>	8	<input type="checkbox"/>	9	<input type="checkbox"/>	10	<input type="checkbox"/>
Not at all																		Very much	

13. On a scale of 1 to 10, where 1 indicates "not at all" and 10 "very much", how important do you think it is to participate in children educational activities to deal with child's development / educational path?

1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	6	<input type="checkbox"/>	7	<input type="checkbox"/>	8	<input type="checkbox"/>	9	<input type="checkbox"/>	10	<input type="checkbox"/>
Not at all																		Very much	

14. On a scale of 1 to 10, where 1 indicates "not at all" and 10 "very much", how important do you think are cultural places for education to improve people's life?

1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	6	<input type="checkbox"/>	7	<input type="checkbox"/>	8	<input type="checkbox"/>	9	<input type="checkbox"/>	10	<input type="checkbox"/>
Not at all																		Very much	

COURSE'S SATISFACTORY QUESTIONS

15. In which aspects of daily life do you think FA.C.E. course has been useful?

- Relationship with the child
- Alimentation
- Organizing the day
- Playing with the child
- Other _____

16. On a scale of 1 to 10, where 1 indicates "not at all" and 10 "very much", how much did you like the course attended?

1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>	6	<input type="checkbox"/>	7	<input type="checkbox"/>	8	<input type="checkbox"/>	9	<input type="checkbox"/>	10	<input type="checkbox"/>
Not at all																		Very much	