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Work histories and provision of grandparental childcare among Italian older women

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Work histories and provision of grandparental childcare among Italian older women

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Abstract

While the literature has widely shown that the provision of childcare by grandparents is often crucial for young mothers' participation in the labour market, this work investigates the link between grandmothers' participation in the labour market during adult life (between ages 18-49) and their provision of grandparental childcare later in life. Two contrasting theoretical arguments are plausible in this respect. On the one hand, lifelong homemakers could be more family-oriented and more likely to provide grandchild care in later life. On the other hand, ever-employed grandmothers could be more likely to have employed daughters, and provide grandchild care to support their working careers.

With data from the Multipurpose surveys on Families and Social Subjects (2003, 2009, 2016), we estimate logistic regression models, considering various specifications of grandparental childcare, and measuring labour market attachment in three different ways (having ever worked, length of working career, employment interruptions for family reasons). Results show a positive association between grandmothers' labor market attachment and grandparental childcare provision. A strong dualism emerges between grandmothers who ever worked and those who never did, with the former more likely to provide grandparental childcare, especially when parents are at work. Grandmothers who worked only a few years are more similar, in terms of grandchild care provision, to those who worked throughout their life, than to lifelong homemakers. Comparing Italian macro-areas strengthens our conclusions: differences between ever- and never-employed grandmothers are present in whole the country, but this holds especially in Northern regions, where the higher female participation to the labour market amplifies the need for grandparental childcare. Overall, we showed that intergenerational family solidarity is activated throughout the country, but it is evident that in a context of growing female labour force participation, couples cannot continue to count only on grandmothers to juggle family and work.

Keywords: grandparents; childcare; female labour force participation; work histories.

Introduction

As a consequence of increased life expectancy coupled with fertility decline, horizontal family ties within generations have been decreasing, while the duration of vertical family ties that cross generations has been greatly increasing (Hagestad, 2006; Harper, 2005). In particular, nowadays, the lives of grandparents and those of their grandchildren overlap markedly, creating an unprecedented opportunity for the development of the grandparental role (Timonen & Arber, 2012). Today's grandparents are more likely to survive throughout their grandchildren childhood, being also on average healthier and having fewer grandchildren to support than in the past (Uhlenberg, 2005; Timonen & Arber, 2012). Against these demographic changes, it is not surprising that taking care of grandchildren is a common activity among older people, especially women, who hold the lion share of care responsibilities also in older age (Zamberletti, Cavrini & Tomassini, 2018).

Previous research has widely shown that provision of childcare by grandparents is often crucial for young mothers' participation in the labour market (e.g., Aassve, Arpino & Goisis, 2012). Instead, the focus of the present study is on grandmothers' participation in the labour market. More specifically, we investigate the relation between grandmothers' work history and the provision of grandparental childcare, in Italy. Grandparental childcare provision as a form of intergenerational transfer is profoundly bounded to women's employment patterns from a two generations perspective: that of grandmothers and that of their daughters (the latter also called "middle generation"). The rise of female labour market participation in the last decades has opened unprecedented needs for childcare with the difficulty to reconcile employment career with childrearing that is bounced from the middle generation to the grandmothers' one, who can however also experience work-family conflict in older age. The extent to which grandmothers are *needed* as care providers, therefore, has to do (among other factors) with female labour force participation rate and public childcare services availability – as grandparental childcare is often conceived as substituting or complementing them (Igel & Szydlik, 2011). At the same time, the extent to which grandmothers are engaged as care

providers depends (among other factors) on their current employment status (Lakomý & Kreidl, 2015) and, as we argue below, previous work history.

In terms of current employment status, several studies have shown that for a variety of European countries, women become first-time grandmothers when still in employment (Leopold & Skopek, 2015). This can lead to grandmothers' early labour market withdrawal to speed up retirement, to free up time for childcare (Van Bavel & De Winter, 2013; Lumsdaine & Vermeer, 2015). In Italy, however, given the high rate of lifelong homemakers and the late transition to grandmotherhood (Di Gessa, Bordone & Arpino, 2020), the work-family conflict in older ages is not so common (Floridi, 2020); this, coupled with generally good health conditions of grandparents (Tomassini, Zamberletti, Lallo & Cavrini, 2020), suggests that older Italian women have potentially time and energy to invest in grandchild care. Still, evidence that older women's retirement is positively related to their daughters' labour force participation due to grandmothers' availability for childcare (Arpino, Pronzato & Tavares, 2014; Bratti, Frattini, & Scervini, 2018) suggests that, at least for some older women, grandparental childcare provision can conflict with their own labour force participation in Italy too (Zanasi & Sieben, 2020).

The relation between grandmothers' provision of childcare and their employment history (including being a lifelong homemaker), independently of their current work status, has been overlooked in previous studies. According to the life course perspective, "*the later years of aging cannot be understood in depth without knowledge of the prior life course*" (Elder, 1994, p. 5). The way women have reconciled work and family throughout their life has implications on a number of late life outcomes, such as retirement timing (e.g. Finch, 2014). In addition, preferences and role patterns are quite stable throughout adulthood: decisions taken early in life (for example, whether to be full-time caregiver around motherhood) are generally reproduced later in life (Pienta, 1999; Pienta, Burr, & Mutchler, 1994). Thus, more family-oriented women might show a lower attachment to labour market during adulthood, and a higher likelihood of grandparental childcare provision later in life. In other words, work histories can be indirectly informative about grandmothers' preferences.

At the same time, the study of grandmothers' work history in relation to childcare can be revealing in terms of intergenerational reproduction of work-family orientations and labour force participation (Aassve et al., 2012). In fact, grandmothers' employment history could be an indirect measure of mothers' employment history, having to do with their need of support for childcare. (Grand)mothers and daughters tend to have similar employment patterns (Morril & Morril, 2013), as they share similar opinions about work and family, and gender attitudes (Moen, Erickson & Dempster-McClain, 1997). Therefore, grandmothers who have been lifelong homemakers might be more likely to have daughters not working for pay, less in need for grandparental childcare.

The Italian case is particularly interesting because the generally limited availability of formal childcare services, and the low female labour market participation rate in this country make the role of informal childcare provided by grandmothers both limited in occurrence and high in intensity (Arpino et al., 2014; Bordone, Arpino & Aassve, 2017). In addition, Italy reports profound geographical differences in factors that may influence the role of grandparents as care providers, such as the demography of grandparenthood (Di Gessa, Bordone & Arpino, 2020), childcare services (Del Boca, Locatelli, & Vuri, 2005; Zollino, 2008) and female labour force participation (Chiuri, 2000), thus offering a sort of "natural laboratory" to explore contextual heterogeneities in the provision of grandparental childcare. Examining such an issue contributes to shedding more light on who provides childcare and contributes to understanding the lifelong "double burden" (i.e., related to paid and unpaid work) that often is on women's shoulders.

Background

Grandparental childcare and female employment in context: structural factors and family culture

Substantial transfers of resources from parents to their offspring take place across European countries (e.g., Attias-Donfut, Ogg, & Wolff, 2005; Albertini, 2016) and often occur in the form of childcare provided by grandparents. Most of the studies argue that this form of downward time transfer from

older to younger generations occurs predominantly because of a "need" which may derive from a range of factors, including financial difficulties (e.g., unaffordable private childcare). However, these needs may be moderated by the institutional settings where parents live, and by the characteristics of the grandparents themselves (i.e., age and health status). Europe represents a stimulating setting for the study of intergenerational relationships, especially because European countries differ in welfare provision, economic background, demographic behaviours, and family culture. Therefore, grandparenting is experienced differently in different European countries.

Previous research finds that on average, almost 60% of grandparents provide care to a grandchild aged 15 or younger in Europe, but a North-South gradient exists (Hank & Buber, 2009, Albertini 2016): in Italy and Spain, roughly 50% of the grandmothers provide childcare, against more than 65% in the Netherlands and Denmark, with continental countries in between. However, the situation is reversed when considering intensive care, conditional on providing any grandparental childcare. In this case, higher percentages are registered in the Mediterranean countries than in Northern Europe – for example, more than 40% of Italian grandmothers provide intensive childcare against 20% of their Scandinavian counterparts (Hank & Buber, 2009). Country specificities fuel these differences (Bordone et al., 2017; Di Gessa, Glaser, Price, Ribe, & Tinker, 2016). In Northern Europe, the extensive provision of public childcare services reduces the need for intensive grandparental childcare, even in presence of high participation rate of women to the labour market. On the contrary, the low female labour force participation in Southern Europe confines the need of support for childcare; but when both parents are employed, the shortage of public services in these context makes the intensive role of grandparental childcare especially crucial. Importantly, the lack of public childcare prevents, in turn, female employment rate to increase.

Herlofson and Hagestad (2012) argue that in the European context grandparents may act as "family savers" – when they primarily serve as back-ups in times of need – or "mother savers" – when they take care of grandchildren so that their daughters can be economically active. Specifically, grandparents are more likely to serve a "mother saver" function in societies with little public support

for parents of young children, whereas the role of "family saver" is more likely where public policies help reduce the work-family conflict. Consistently with this argument, Igel and Szydlik (2011) find that public expenditures for family policies "crowd in" the occurrence of grandchild care and "crowd out" its intensity. Along these lines, Bordone, Arpino and Aassve (2017) show that daily provision of grandchild care is more likely in countries with limited formal childcare services and parental leave benefits and characterized by strong legal intergenerational obligations. Weekly involvement is instead more common in countries such as the Netherlands, characterized by a high prevalence of part-time jobs.

Turning to the Italian context, and given its strong territorial heterogeneities, differences in grandparental childcare provision can be expected *within* Italy as well. Roughly 60% of women are employed in Northern regions (e.g., 58% in Piedmont, 61% in Trentino-South Tyrol) against less than 30% of women in Southern regions (e.g., 28% in Sicily, 29% in Calabria) (ISTAT data warehouse, 2016). For the whole Italian territory, available childcare services cover the 25% of children below the age of 3. Once again, the national average masks huge regional variation, from a coverage rate around 40% in the North (e.g., 46% in Aosta Valley, 39% in Emilia-Romagna) to 13% in the South (ISTAT, 2020). Consequently, even if empirical evidence is missing, it is likely that Northern Italian grandmothers provide childcare more often, but with lower intensity, than Southern Italian grandmothers.

Family culture also accounts for variation in intergenerational relationships (Dykstra & Fokkema, 2011; Glaser & Tomassini, 2000). The traditional idea of familistic and individualistic cultures *à la* Reher (1998), with the juxtaposition of strong family ties in Southern European countries versus weak family ties in Northern Europe, has been often used as the main argument. Nevertheless, the North-South dichotomy appears to be more complex than initially argued, for several reasons. First, Reher's arguments were mostly based on patterns of intergenerational co-residence, but when looking at other indicators, the North-South gradient becomes less clear cut. Family regimes can be regarded as a construct of multiple dimensions of which one dimension may be classified as "weak"

while others can be "strong" for the same country (Mönkediek & Bras, 2014). Second, research has shown that latent family solidarity can be activated in times of need also in "weak" family ties countries (Albertini, Gähler & Härkönen, 2018). Third, differences between regions within a country may be even bigger than differences between countries. Jappens and Van Bavel (2012) highlight the importance to consider the regional level together with the country level when explaining variations in grandparental childcare across Europe, because family practices and prevailing norms may substantially vary also within the same country. This is indeed the case of Italy, where family life in the Northern regions of the country differs radically from that in the more familistic Southern part (Dalla Zuanna, 2001).

Grandparental childcare and grandmothers' employment

After delineating the context, it is important to take a step back towards the micro-level and elaborate upon the implications of the study of work history and grandparental childcare. Despite the massive increase of female labour market participation from the '70s and consequent cohort differences in employment behaviour (Scherer & Reyneri, 2008), Italy's extremely low female labour market participation rate still involves a high number of women who are lifelong homemakers, or who had very short working careers due to withdrawal after marriage or childbearing (Bratti, Del Bono & Vuri, 2005). Whether a woman remains economically inactive throughout life or has employment interruptions of different lengths in her working career, is often connected with care duties. In Italy, women's caregiver role is both rooted in culture and social norms (Jaumotte, 2003) and institutionalized by a *familistic* system characterized by the absence of family-friendly policies (Naldini, 2002; Saraceno & Keck, 2010).

Decisions around work and family are taken in early adulthood but have long-term consequences on several late life outcomes, as postulated by the life course perspective (Elder, 1994). Moreover, lives tend to follow a certain continuity due to the stability of preferences and role patterns throughout the life course (e.g. Finch, 2014; Hank, 2004; Hank & Korbmacher, 2013). Therefore,

older women's behaviours tend to reflect patterns established in their early years of adulthood (Pienta, 1999). Family and employment histories are an example of this. According to the so-called "attachment hypothesis" (Pienta, 1999; Pienta, Burr, & Mutchler, 1994), long years of employment interruptions for family reasons could display a weak attachment to the labour market, translating in anticipated withdrawal from employment in later life (e.g. Finch, 2014). Similarly, delaying childbearing could be a signal of strong labour market attachment, connected with longer working lives (Pienta, 1999; Hank & Korbmacher, 2013). Extending this idea to the realm of grandparenthood, a study on England finds that women who dropped employment around motherhood are more likely to do the same later in life, around grandmotherhood (Zanasi, Sieben, & Uunk, 2020). The attachment hypothesis could therefore be extended to the relation between employment history and grandparental childcare. We may therefore expect that grandmothers with a more discontinuous working career for family reasons, or those who never performed paid employment, are more willing to provide grandparental childcare later in life because of their lifelong family orientation.

We acknowledge that, at the same time, there might be reasons to argue for the contrary. Daughters' labour market commitment could mirror their mothers' employment history. Research offers evidence of intergenerational transmission of values (Farrè & Vella, 2013; Carlson & Knoester, 2011) and behaviours (Black & Devereux, 2010). The intergenerational cultural link implies that children's attitudes and behaviours are strongly shaped by those of parents (e.g., Min, Silverstein, Lendon 2012), and the intergenerational reproduction of work is no exception (Boyd, 1989): a woman's labour force participation is correlated with her mother's labour market attachment (Del Boca, Locatelli, & Pasqua, 2000). In other words, a woman tends to share similar opinions about work and family, and gender attitudes with her mother (Moen, Erickson & Dempster-McClain, 1997), but she also witnesses how combining family and occupational career can be a realistic life target (Testa, Bordone, Osiewalska, & Skirbekk, 2016). Therefore, a woman's employment is positively influenced by exposure to a working mother (Morril & Morril, 2013). A study from the Netherlands, a country with high female employment rate albeit mainly confined in part-time employment, did not

find any correlations between mothers' and daughters' employment *per se*, but it did in terms of hours worked (Van Putten, Dykstra & Schippers, 2008).

Applied to our study, grandmothers' work history could be considered as a proxy of their daughters' work commitment. Therefore, we could expect a grandmother who participated in the labour market to be more likely to provide grandchild care as she is more likely to have an employed daughter. Similarly, we could also speculate that a working grandmother is more eager to support a working daughter, well recognizing the difficulties to reconcile work with family life.

Given the existence of competing mechanisms on the relationship between grandmothers' work histories and their childcare provision, we do not formulate specific hypotheses. In light of the abovementioned striking contextual differences across different areas of Italy, we also explore heterogeneities in the relationship between work histories and grandmothers' childcare provision across macro-regions.

Data, Variables and Method

Data and Sample

The present study employs data from the ISTAT Multipurpose surveys on Families and Social Subjects (FSS) collected in 2003, 2009, and 2016 on national representative samples. They represent the main data source on family structures and socio-economic characteristics of households and individuals available for Italy. The first two were household surveys and relied each on a sample of roughly 24,000 households (for about 50,000 individuals), while the most recent one was an individual survey and sampled about 32,000 individuals aged 18 years and older. Despite this difference, the three surveys are comparable, and representative of the Italian population aged 18 and older.

For the purpose of our study, we selected women aged between 50 and 75 at the time of the interview (and born after 1930), because after that age the probability of providing childcare substantially falls, and who have at least one non-cohabiting grandchild younger than 13 years old,

those who answer questions on grandchild care. Our analytical sample amounts to 7,601 individuals (3,241 for 2003; 2,815 for 2009; 1,545 for 2016).

Variables

The outcome variables relate to grandparental childcare, in three different specifications according to the available data. Respondents were first asked if they look (*Yes*/*No*) after their grandchildren in general. Then, they were asked if they engage in grandchild care under specific circumstances, that is when parents work, during occasional parental appointments, when parents need free time, during holydays, when the grandchild is sick, or in case of emergency. The questions were posed for a maximum of three grandchildren, asking to refer to those living closest in case of more than three grandchildren. Therefore, our first outcome variable considered grandchild care *tout court*, taking value 1 if the respondent reports to provide grandparental childcare to at least one grandchild regardless of the circumstance (*Any care*), and 0 when no grandchild care is provided. In order to get more insights into the frequency and the intensity of care activities, we then focused on the two items regarding grandparental childcare when parents are at work, and during occasional appointments of the parents. Our second and third outcomes (*Care when parents work* and *Occasional care*) equal to 1 if grandparental childcare in the considered circumstance is reported for at least one grandchild, 0 otherwise. The other circumstances of grandparental childcare investigated in the questionnaire were only seldom indicated (from 5 to 25%), and since preliminary analyses did not prove meaningful differences depending on grandmothers' work histories (results not shown but available upon request), we decided to discard them from the analysis.

We built three main independent variables resuming grandmothers' previous work history, to approximate to various extents work attachment. The survey includes retrospective information on respondents' employment history (up to 5 employment spells for the FSS-2003, and up to 11 for the FSS 2009 and 2016), and for each employment spell (if any) the starting and ending dates are provided. In case of career interruptions, respondents were also asked for the reason of such break(s).

Our first independent variable indicates whether the respondent has ever performed paid work during her adult life (i.e., between 18 and 49 years old), regardless of episode duration, taking value 0 for those who never worked and value 1 for those who reported at least one job episode. Secondly, to refine our work attachment measure and account for the time spent in paid work, we created a categorical variable indicating the percentage of time worked during adult life (again, between 18 and 49 years old): *Never worked* (the same group identified above); *Worked for 1-25% of their adult life*; *26-50%*; *51-75%*; or *76-100%*. Finally, a third specification aimed at capturing whether the respondent ever had interruptions in her working career (between 18 and 49 years old) for family related reasons, namely after marriage, childbirths, and other family reasons. It thus considered the length of work interruptions for family reasons, contrasting grandmothers who *never worked* (again, the same group as before), with those who have worked and had *short* interruptions (i.e., <10 years), those who had *long* interruptions (i.e., 11-31 years), and those who never stopped working due to family related reasons (*No interruptions*). Several specifications for these variables were tested – e.g., changing the cut-off points between the categories, considering time spent working in number of years – and all proved to be robust, sustaining our idea to contrast different levels of work attachment.

Finally, to account for the demographic and socio-economic composition of the sample, we also included a set of control variables: age at interview and its squared term; occupational status at the time of interview (contrasting *Employed vs. Unemployed, housewife, sick/disabled, other*); birth cohort (*1930-1939*; *1940-1947*; *1948-1966*); educational level (*No education*; *Primary*; *Lower Secondary*; *Upper Secondary and higher*); area of residence at interview (*North-West*; *North-East*; *Centre*; *South and Islands*). [1] Main characteristics of the sample according to demographic and social characteristics considered in the analysis are reported in Table 1.

[1] These macro-areas are identified by ISTAT and are formed as follows: North-West comprises Liguria, Lombardy, Piedmont, and Aosta Valley; North-East comprises Emilia-Romagna, Friuli-Venezia Giulia, Trentino-South Tyrol, and Veneto. Center is composed by the regions of Lazio, Marche, Tuscany, and Umbria. South and Islands include Abruzzo, Basilicata, Calabria, Campania, Molise, Apulia, Sardinia and Sicily. In the remaining of the manuscript, we refer to the latter macro-area simply as "South".

The control variables included in our models reflect a parsimony criterion, but results are robust to other specifications that include controls for chronic conditions at interview, survey year instead of cohort, age categories instead of age and age squared, marital status, and residential distance from the closest grandchild.

Table 1 Descriptive statistics, by employment history, absolute and percentage values

	Never Worked		Ever Worked		Total	
	N	%	N	%	N	%
Any care (Yes)	2,100	81.8	4,330	86.0	6,430	84.6
Care when parents work (Yes)	787	30.6	2,069	41.1	2,856	37.6
Occasional Care (Yes)	903	35.2	1,821	36.2	2,724	35.8
Percentage of Life worked						
Never worked	2568	100.0	n.a.	n.a.	2,568	33.8
1-25%	n.a.	n.a.	1,049	20.8	1,049	13.8
26-50%	n.a.	n.a.	925	18.4	925	12.2
51-75%	n.a.	n.a.	1,037	20.6	1,037	13.6
76-100%	n.a.	n.a.	2,022	40.2	2,022	26.6
Interruptions for family reasons						
Never worked	2,568	100.0	n.a.	n.a.	2,568	33.8
Short interruptions for family reasons	n.a.	n.a.	527	10.5	527	6.9
Long interruptions for family reasons	n.a.	n.a.	1,171	23.3	1,171	15.4
No interruptions for family reasons	n.a.	n.a.	3,335	66.6	3,335	43.9
Macro-area of residence						
North-West	345	13.4	1,248	24.8	1,593	20.9
North-East	222	8.64	1,383	27.5	1,605	21.1
Center	430	16.7	1,020	20.8	1,450	19.1
South & Islands	1,571	61.2	1,382	27.5	2,953	38.8
Employment status at interview						
Not Employed (vs Employed)	2,537	98.8	4,086	81.2	6,623	87.1
Educational level						
No education	343	13.4	377	7.5	720	9.5
Primary	1436	55.9	2,291	45.5	3,727	49.0
Lower Secondary	578	22.5	1,168	23.2	1,746	22.9
Upper Secondary and higher	211	8.2	1,197	23.8	1,408	18.5
Birth Cohort						
1930-1939	784	30.5	1,350	26.8	2,134	28.1
1940-1947	900	35.1	1,887	37.5	2,787	36.7
1948-1966	884	34.4	1,796	35.7	2,680	35.3
Age (mean, SD)	63.3	6.5	63.2	6.3	63.23	6.4
N	2,568	33.8	5,033	66.2	7,601	100.0

Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Method

Given that our outcome variables in the three specifications considered – *any care*; *care when parents work*; *occasional care* – are all dichotomous, we estimated a set of separate logistic regression models including the control variables described above and, one at a time, the independent variables synthetizing the individual work history (Ever worked, Percentage of Life worked, Interruptions for family related reasons). To help with interpretation and comparison across model specifications, we present results in terms of predicted probabilities. Tables with full estimates are included in the Appendix.

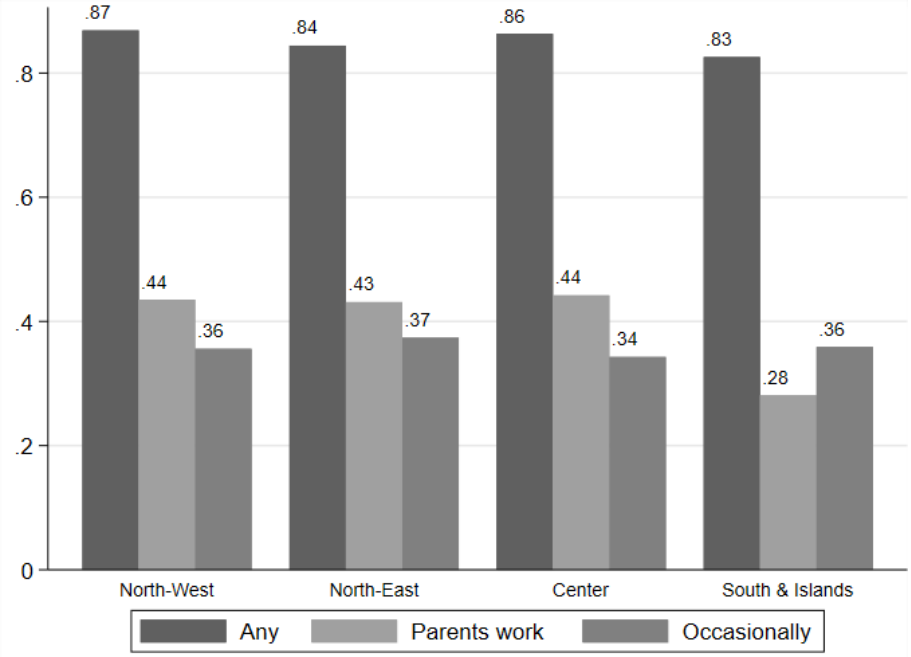
Results

Grandparental childcare in Italy at a glance

According to our data, most grandmothers declare to provide some sort of grandparental childcare, without substantial differences between Italian territories (e.g., 87% in the North *vs* 83% in the South, Figure 1). It should be noted that the percentage of grandmothers involved in grandchild care is prominent, especially if compared to estimates reported in previous studies (see Background section). This is probably due to the fact that we only selected grandmothers younger than 76 years old and who have at least one grandchild younger than 13.

Looking at grandparental childcare when parents are at work, clear differences by geographic areas emerge: about 44% of grandmothers living in the North or Centre of Italy look after their grandchildren in this case, while the corresponding percentage declines to 28% among Southern grandmothers. No substantial territorial differences are instead present for occasional grandchild care, an activity declared by more than one out of three grandmothers in our sample.

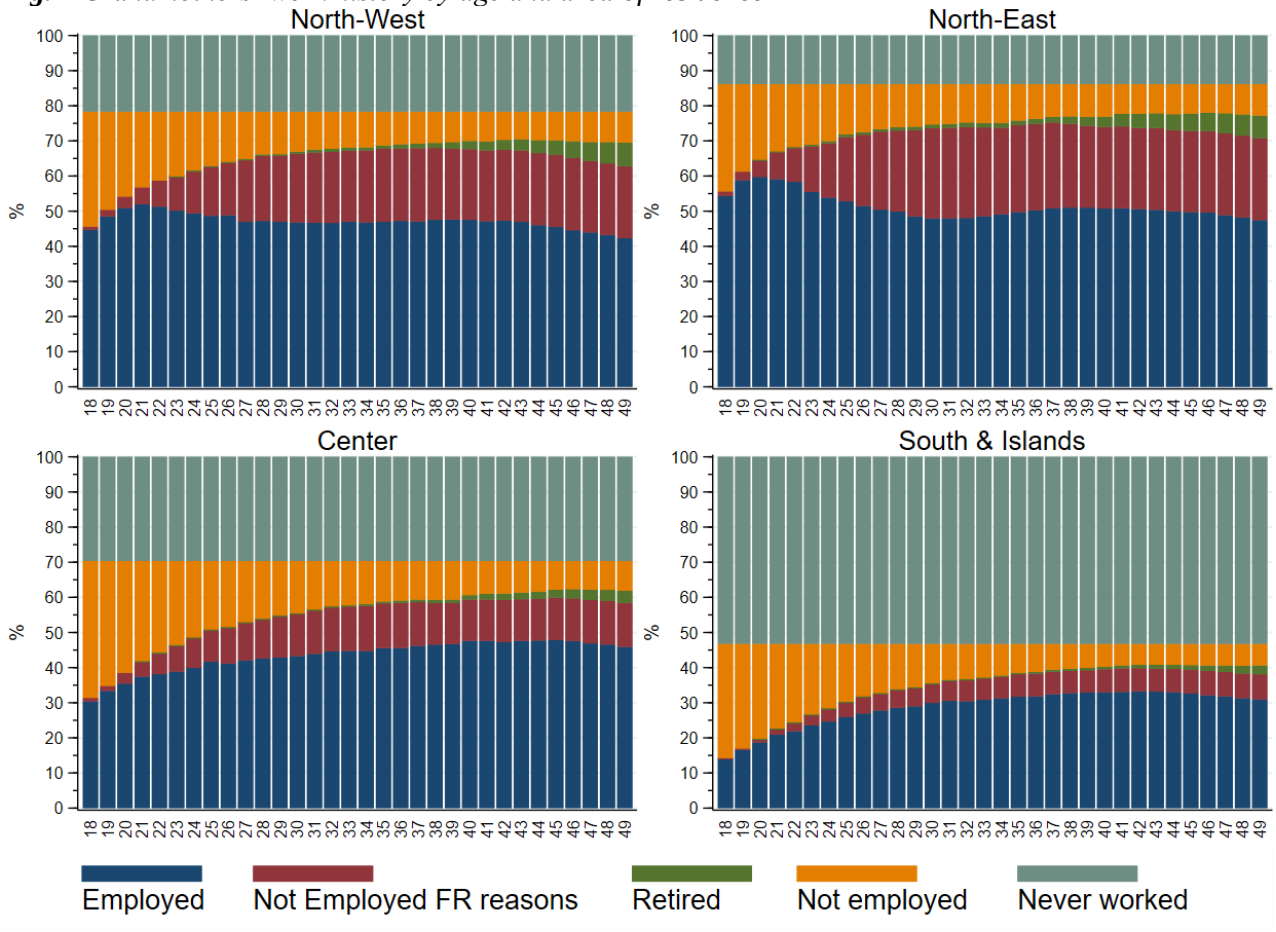
Fig. 1 *Proportion of grandmothers providing childcare under different circumstances, by area of residence*



Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Figure 2 provides a description of Italian grandmothers' work history (between ages 18-49), showing the percentage of women in a certain state at each age. It is evident that the percentage of grandmothers who are employed is almost constant throughout the life course. Only in the first phase of life here considered – between 18 years old and the early 20s – there are some differences (see for example the orange part referring to "Not employed" women) – likely due to permanence in education. Differences between the North and the South of the country are again remarkable. While in the Northern regions roughly 20% of grandmothers never performed paid work, the corresponding rate in the South approximates 60%. Taken together, Figures 1 and 2 might provide evidence that grandmothers' employment resembles their daughters': less grandparental childcare *when parents work* is provided in the South, where less women are in employment indeed.

Fig. 2 *Grandmothers' work history by age and area of residence*



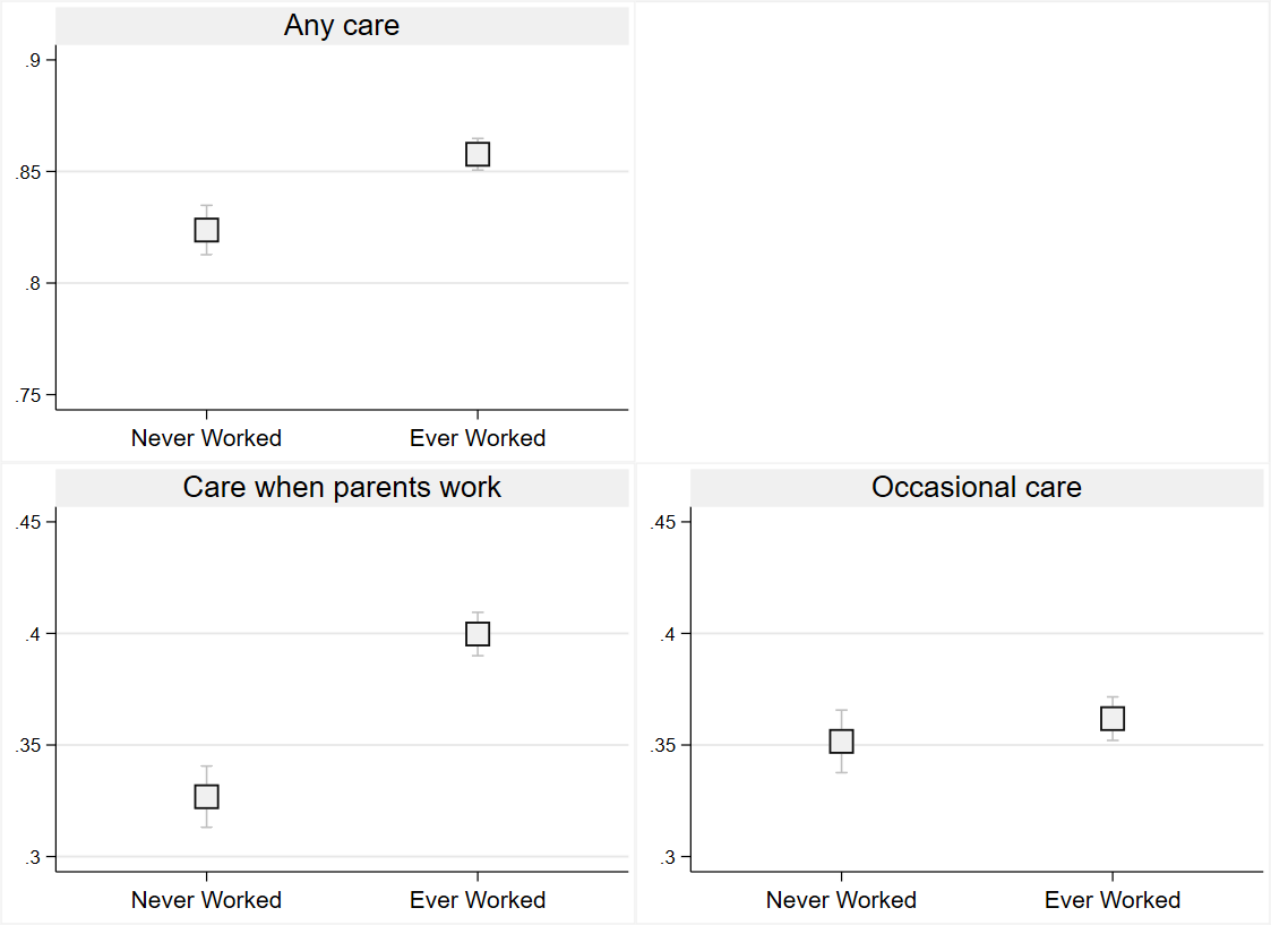
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Results from regression models

Grandparental childcare: the role of grandmothers' employment

Figure 3 shows the estimated probabilities to provide *any care*, *care when parents work*, and *occasional care*, depending on whether grandmothers have ever been in paid work (between ages 18-49; regardless of its duration) – our first specification of work history.

Fig. 3 *Predicted probabilities (y-axis) to perform grandparental childcare under different circumstances, by grandmothers' work history: Having ever worked (No/Yes)*



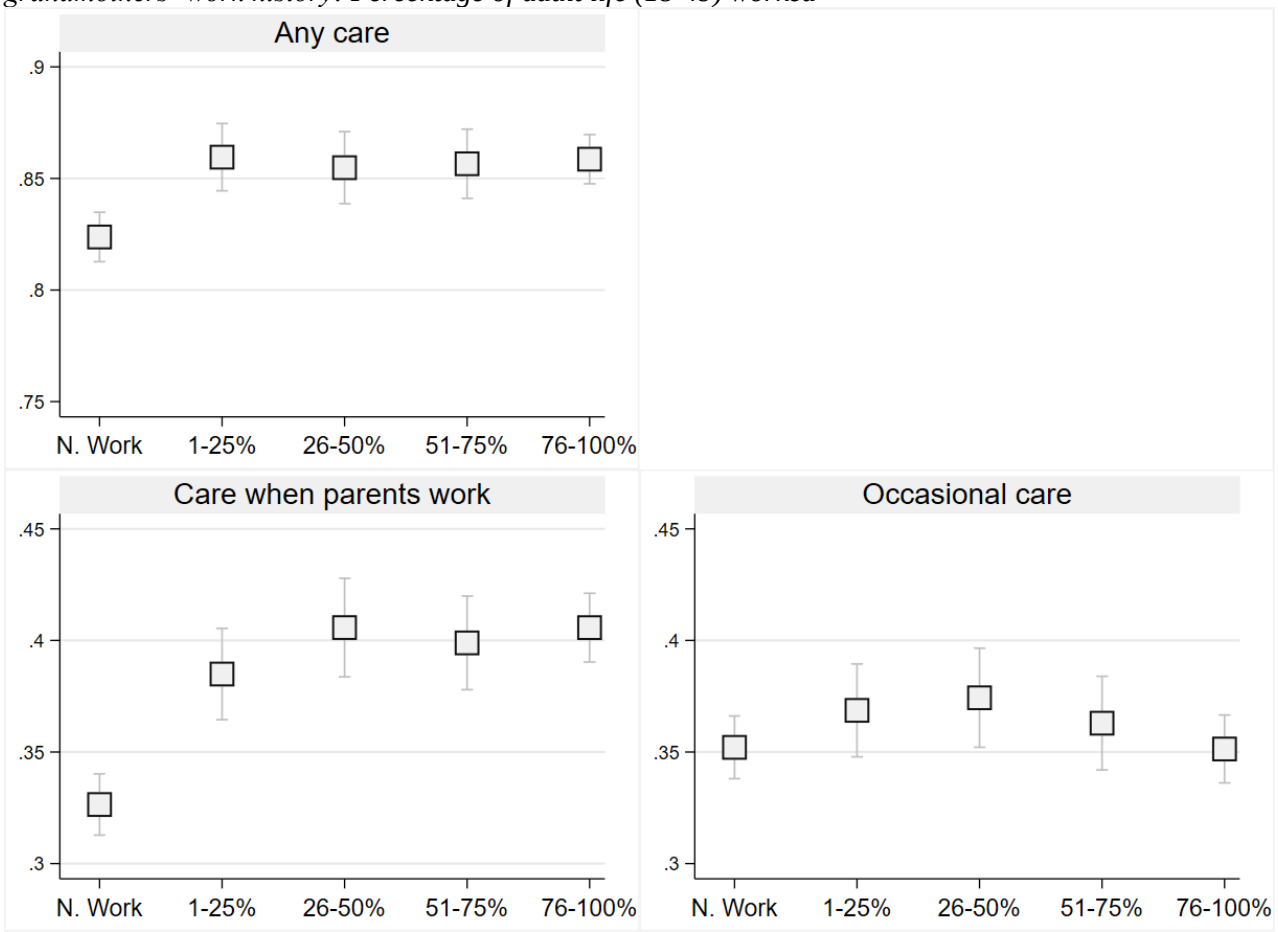
Note: Results from logistic regression models, control variables included: age; occupational status; birth cohort; educational level; area of residence. CI for approximate 5% significance level for the comparison of pairs of predicted probabilities.
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

When considering grandchild care of *any* sort (*Any care*, upper left panel), grandmothers who worked in their adult life display only a slightly higher probability to perform grandchild care than their counterparts who never worked (0.86 against 0.83). Larger differences appear instead when considering the provision of childcare *when parents are at work* (bottom left panel): women who worked in their adult life have a probability of 0.40 to provide grandchild care, which significantly reduces to 0.33 for their counterparts who never did. Considering *occasional care* (bottom right panel), no significant differences emerge based on grandmothers' work history. These results thus suggest that differences in grandparental childcare are mainly driven by childcare provided while parents are at work.

A closer look at grandmothers' work attachment: percentage of life worked

The second key independent variable we considered breaks down grandmothers' labour market participation according to the percentage of adult life spent in employment (Figure 4), to finer quantify the labour market attachment. Surprisingly, we found that the duration of the stay in the labour market does not matter so much for grandparental childcare, and the most important differences are between women who never worked and those who did work, independently of the time spent in paid work.

Fig. 4 *Predicted probabilities to perform grandparental childcare under different circumstances, by grandmothers' work history: Percentage of adult life (18-49) worked*



Note: Results from logistic regression models, control variables included: age; occupational status; birth cohort; educational level; area of residence. N. Work = Never Worked. CI for approximate 5% significance level for the comparison of pairs of predicted probabilities.
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

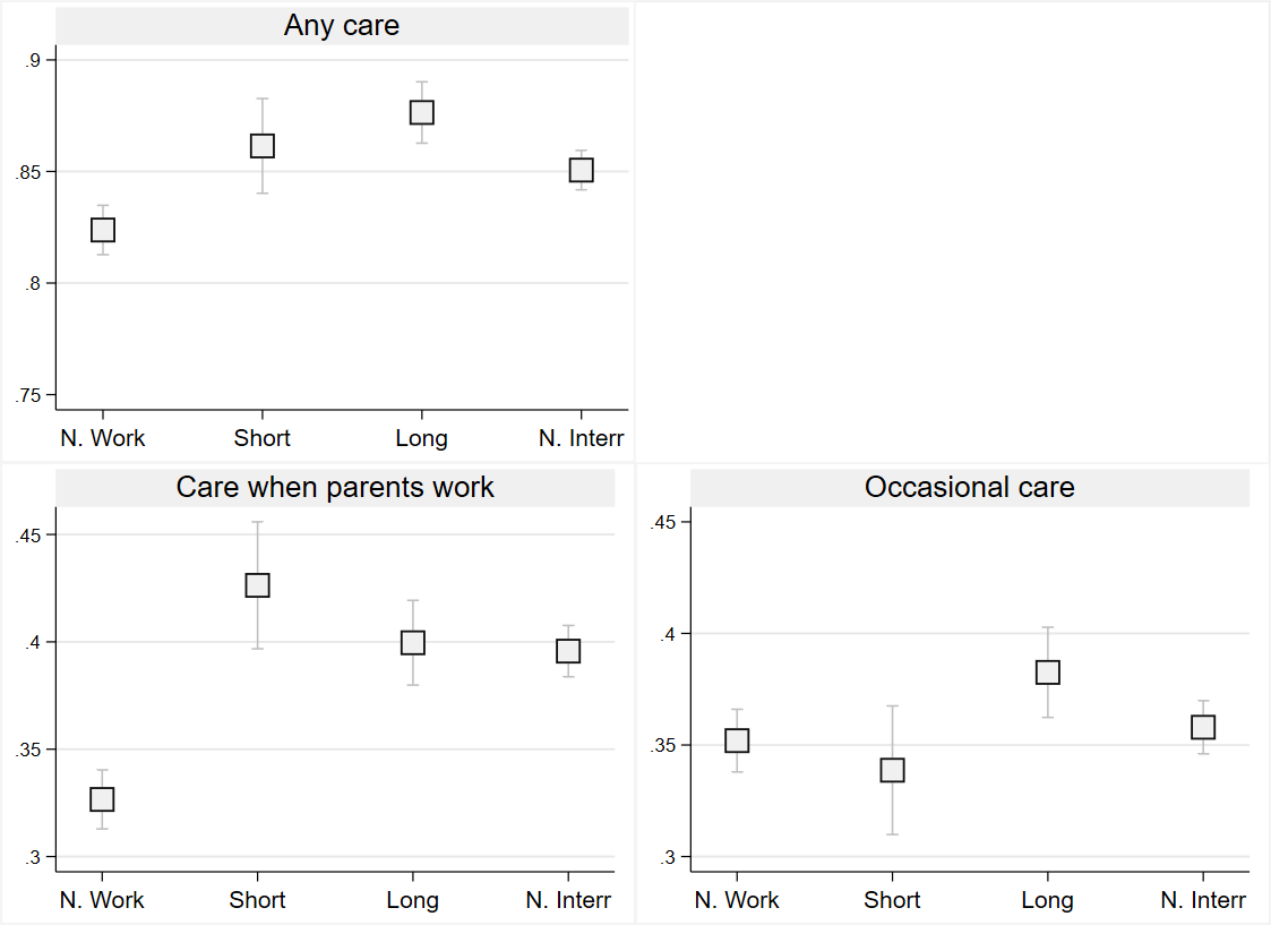
More in details, the upper left panel reflects previous results, with grandmothers who never worked having a probability of roughly 0.83 to provide *Any childcare*. Interestingly, disaggregating by level of work attachment, women who worked 1-25% of their life resemble more closely women who had an almost uninterrupted working career (76-100%) in terms of the predicted probability of childcare provision than women who were never in employment. Similarly, when considering only childcare provided when *parents work* (bottom left panel), the probability is around 0.33 for never-worked women, and it tends to increase as the participation in the labour market increases, although differences are not statistically significant (probabilities from 0.38 to 0.41). The predicted probability of grandchild care provided *occasionally* does not differ across the categories of the independent variable *percentage of life worked*.

Work history from the family-interruptions perspective

In Figure 5, we report results of models exploring grandmothers' employment history while accounting for employment interruptions for family related reasons. Once again, the dualism between never and ever in employment emerges, with women in the latter group generally being more likely to provide grandparental childcare. A few considerations are in order, however. Women who did participate in the labour market in their adult life but also had long interruptions due to family reasons (i.e., >10 years) have the highest probability to provide grandchild care both when *any childcare* (upper left panel, probability equal to 0.87) and *occasional* care (bottom right panel, probability equal to 0.38) are investigated. However, it is women who only briefly interrupted their working history due to family reasons (i.e., ≤10 years) who have the highest probability to provide grandchild care when *parents are at work* (bottom left panel, probability equal to 0.43). Nevertheless, these

differences tend to be not statistically significant and they are also rather small from a substantive point of view. Overall, the probability to engage in grandparental childcare when parents work remains higher in general for women who worked, regardless of interruptions (probabilities around 0.40).

Fig. 5 *Predicted probabilities to perform grandparental childcare under different circumstances, by grandmothers' work history: Interruptions for family related reasons*



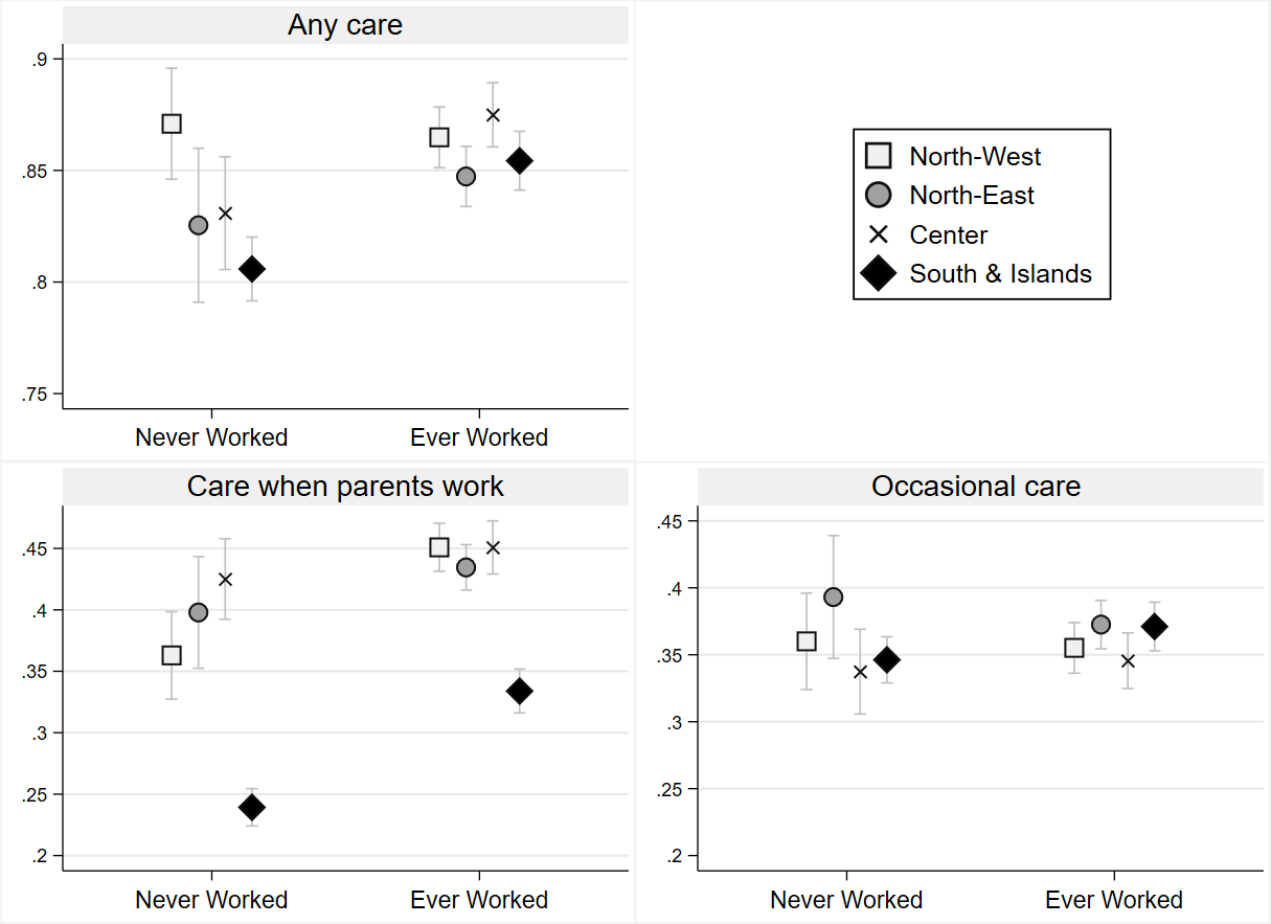
Note: Results from logistic regression models, control variables included: age; occupational status; birth cohort; educational level; area of residence. N. Work = Never Worked. N. Interr = Never Interrupted. CI for approximate 5% significance level for the comparison of pairs of predicted probabilities.
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Grandparental childcare and work history across Italian regions

Finally, we examined territorial heterogeneity by adding in our models an interaction term between the work history and the area of residence. Figure 6 shows predicted probabilities for the ever-worked

specification of work history and macro-area (the results for the other specifications of work history, consistent with the pattern reported below, are not shown but available upon request).

Fig. 6 *Predicted probabilities to perform grandparental childcare under different circumstances, by grandmothers' work history (Having ever worked – No/Yes) and macro-areas of residence*



Note: Results from logistic regression models, control variables included: age; occupational status; birth cohort; educational level. Interaction term added between work history (ever worked) and area of residence. CI for approximate 5% significance level for the comparison of pairs of predicted probabilities.
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Grandmothers residing in the North and Centre of Italy are overall more likely to provide childcare than grandmothers living in the South, regardless of their previous participation in the labour market. This is especially true when considering *care when parents work*, whereas *occasional care* is provided to the same extent in all Italian territories. However, there are some territorial differences in the relation between work history and grandmothers' childcare. From the first panel of Figure 6 (upper left), we see that for women living in northern (East and West) Italian regions, having ever

worked during their adult life is not significantly associated with a higher probability to provide *any* care to grandchildren (large confidence intervals prevent us to comment on differences in magnitude). Grandmothers living in central and southern areas who did work, instead, have a higher probability to provide *any care* (0.87 and 0.86, respectively), than grandmothers who never had a paid work (0.84 and 0.81, respectively).

Moving to the bottom left panel of Figure 6 (grandparental childcare *when parents work),* territorial differences in childcare between grandmothers who never and ever worked are detected, with a statistical significance especially for North-West and South. In both areas, grandmothers' previous participation in the labour market is positively associated with a higher probability to provide grandchild care (with an absolute difference between ever- and never-worked grandmothers around 10 percentage points). The predicted probabilities of grandparental childcare equal 0.24 and 0.34 for southern grandmothers, respectively. These are notably lower levels than those registered in North-Western regions (0.36 and 0.45 for never- and ever-worked women, respectively)..

Discussion and conclusions

In this study we focused on the link between work history of grandmothers during their adult life (between ages 18-49) and their provision of childcare (variously defined) to grandchildren during later life, in Italy. In a context of a still low offer of public childcare services, and considering the changes in the women labour market participation of the recent decades, a better understanding of this link is of paramount importance.

As discussed in the Background section of the article, competing arguments about the sign of the association between grandparental childcare provision and work history can be formulated. On the one hand, we speculated that grandmothers who had less continuous working careers, for example due to family-related interruptions, or lifelong homemakers, could be the most likely to provide childcare because of a stable preference for family duties. On the other hand, we argued that

grandmothers' employment (or economic inactivity) could mirror their daughters' employment commitment, due to intergenerational reproduction of labour market participation. Grandmothers who never worked could be more likely to have daughters who never worked, therefore less in need of help with childcare.

Our results clearly point in the direction of a positive association between participation in the labour market during adulthood and the probability to provide grandchild care in different circumstances in later life. Our findings also show that the degree of attachment to the labour market is irrelevant. We differentiate work history according to the percentage of life spent working or depending on whether grandmothers experienced or not interruptions in their work history for family related reasons. In both cases, what mattered is whether grandmothers did participate in the labour market or not during their life.

The association between work history and grandparental childcare provision is particularly strong when we focus on care provided when parents work. In this case, women who ever worked in their life show a probability of 0.40 to provide grandchild care, against a probability of 0.33 for women who never did. This result, together with the fact that we did not find differences according to different specifications of work history (e.g. length of family-related work interruptions, a proxy of family orientation) supports the idea of intergenerational reproduction of work: grandmothers who were ever employed in their life are the most likely to have employed daughters, more in need of support with childcare. This idea has been further explored breaking up our results according to Italian macro-areas, given the strong heterogeneity in terms of female labour force participation between the North and the South of the country.

Our study also confirms striking territorial differences in the probability to provide grandparental childcare: in the North, grandmothers are much more likely to support the middle generation with care than in the South, particularly when parents work, as in the latter area less women are employed. Still, differences are present according to work history. There, grandmothers who

participated in the labour market have a probability to provide grandchild care when parents work 41% higher than that for their counterpart who did not work (0.34 vs 0.24).

To conclude, we found that in Italy about 40% of grandmothers take care of their grandchildren when the parents work, thus offering an important source of intergenerational support to help parents (and especially mothers) to reconcile work and family life. This form of support is particularly important in a context like the Italian one, where the provision of public services is still partial and inadequate (e.g., Albertini, 2016; Di Gessa et al., 2016; Bordone et al., 2017). Our results offer indirect evidence that the grandmothers' childcare provision is strictly related to need of support of the "middle generation", i.e. that of parents. Importantly, we proved that this kind of intergenerational support is especially high when the grandmother herself worked during life. First, in our view, these results offer indirect support for the idea that intergenerational transmission of labour market behaviour is at play. Second, it is more likely for previously working grandmothers to support their working children (allegedly, their working daughters): women who worked in their life, likely experiencing difficulties in reconciling work and family life in a context of low formal (i.e., public) childcare availability, are probably more prone to offer help to their children facing similar situations.

The role of caregiving grandmothers as "mother savers" (Herlofson & Hagestad, 2012) is important in southern Italian regions too. There, female involvement in labour market is still lower than in northern areas, reducing the "need" of grandchild care. However, when both parents work, the even larger lack of public childcare services in those contexts makes intergenerational support even more urgent and irreplaceable. It is clear, that in a situation of growing female labour force participation, women (and couples) cannot continue to count only on grandmothers. Our results are also in line with other studies on intergenerational relationships that argue against the dichotomy between "weak" and "strong" family ties. Similar to Albertini et al. (2018), our study shows that family solidarity can be activated in case of need also in "weaker" family ties contexts. This is the case in the Northern regions of Italy that are often considered in contrast to the more family-oriented

Southern Italian regions. Actually, our results would suggest the Northern part of the country to be a "stronger" family ties region as compared to other Italian areas because of its higher prevalence of grandparental childcare due to higher needs of the younger generations.

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Appendix

Table A 1 *Logistic regression models for the probability to perform grandparental childcare under different circumstances, by grandmothers' work history: having ever worked (No/Yes)*

	Any care			**Care when parents work**			**Occasional Care**		
	Coef.		*SE*	*Coef.*		*SE*	*Coef.*		*SE*
Ever Worked (ref. Never Worked)	0.26	***	0.07	0.33	***	0.06	0.04		0.06
Age	0.19		0.10	0.25	**	0.08	0.14		0.08
Age # Age	0.00	*	0.00	0.00	***	0.00	0.00	*	0.00
Macro-Area (ref. North-West)									
North-East	-0.20	*	0.10	-0.03		0.07	0.08		0.07
Center	-0.02		0.11	0.07		0.07	-0.05		0.08
South & Islands	-0.22	*	0.09	-0.56	***	0.07	0.02		0.07
Employment status at interview (ref. Employed)									
Not Employed	0.27	*	0.11	0.58	***	0.08	0.10		0.08
Educational level (ref. No education)									
Primary	0.36	***	0.10	0.37	***	0.10	0.13		0.09
Lower Secondary	0.58	***	0.12	0.53	***	0.11	0.19		0.10
Upper Secondary and higher	0.69	***	0.13	0.56	***	0.11	0.15		0.10
Birth Cohort (ref. 1930-1939)									
1940-1947	-0.18	*	0.09	0.07		0.07	-0.08		0.07
1948-1966	-0.54	***	0.12	0.08		0.09	-0.13		0.09
Constant	-2.73		3.14	-9.01	***	2.43	-4.07		2.39

Note: Full models for Figure 3. Significance level: *p < 0.05; **p < 0.01; ***p < 0.001
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Table A 2 *Logistic regression models for the probability to perform grandparental childcare under different circumstances, by grandmothers' work history: Percentage of adult life (18-49) worked*

	Any care			**Care when parents work**			**Occasional Care**		
	Coef.		*SE*	*Coef.*		*SE*	*Coef.*		*SE*
Percentage of Life worked (ref. Never Worked)									
1-25%	0.27	*	0.11	0.26	***	0.08	0.07		0.08
26-50%	0.24	*	0.11	0.35	***	0.08	0.10		0.08
51-75%	0.25	*	0.11	0.32	***	0.08	0.05		0.08
76-100%	0.27	**	0.09	0.35	***	0.07	0.00		0.07
Age	0.19		0.10	0.25	**	0.08	0.14		0.08
Age # Age	0.00	*	0.00	0.00	***	0.00	0.00	*	0.00
Macro-Area (ref. North-West)									
North-East	-0.20	*	0.10	-0.03		0.07	0.08		0.07
Center	-0.02		0.11	0.07		0.07	-0.05		0.08
South & Islands	-0.22	*	0.09	-0.56	***	0.07	0.02		0.07
Employment status at interview (ref. Employed)									
Not Employed	0.27	*	0.11	0.60	***	0.08	0.09		0.08
Educational level (ref. No education)									
Primary	0.36	***	0.10	0.38	***	0.10	0.13		0.09
Lower Secondary	0.58	***	0.12	0.54	***	0.11	0.19		0.10
Upper Secondary and higher	0.69	***	0.13	0.56	***	0.11	0.15		0.10
Birth Cohort (ref. 1930-1939)									
1940-1947	-0.18	*	0.09	0.07		0.07	-0.08		0.07
1948-1966	-0.55	***	0.12	0.09		0.09	-0.13		0.09
Constant	-2.73		3.14	-8.96	***	2.43	-4.16		2.39

Note: Full models for Figure 4. Significance level: *p < 0.05; **p < 0.01; ***p < 0.001
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Table A 3 *Logistic regression models for the probability to perform grandparental childcare under different circumstances, by grandmothers' work history: Interruptions for family related reasons*

	Any care			**Care when parents work**			**Occasional Care**		
	Coef.		*SE*	*Coef.*		*SE*	*Coef.*		*SE*
Interruptions for family reasons (ref. Never worked)									
Short interruptions for family reasons	0.29	*	0.14	0.44	***	0.10	-0.06		0.11
Long interruptions for family reasons	0.42	***	0.11	0.33	***	0.08	0.13		0.08
No interruptions for family reasons	0.20	*	0.08	0.31	***	0.06	0.03		0.06
Age	0.19		0.10	0.25	**	0.08	0.14		0.08
Age # Age	0.00	*	0.00	0.00	***	0.00	0.00	*	0.00
Macro-Area (ref. North-West)									
North-East	-0.21	*	0.10	-0.04		0.07	0.08		0.07
Center	0.00		0.11	0.08		0.07	-0.05		0.08
South & Islands	-0.19	*	0.09	-0.56	***	0.07	0.03		0.07
Employment status at interview (ref. Employed)									
Not Employed	0.24	*	0.11	0.58	***	0.08	0.08		0.08
Educational level (ref. No education)									
Primary	0.36	***	0.10	0.37	***	0.10	0.13		0.09
Lower Secondary	0.57	***	0.12	0.54	***	0.11	0.18		0.10
Upper Secondary and higher	0.70	***	0.13	0.56	***	0.11	0.15		0.10
Birth Cohort (ref. 1930-1939)									
1940-1947	-0.19	*	0.09	0.07		0.07	-0.08		0.07
1948-1966	-0.55	***	0.12	0.08		0.09	-0.13		0.09
Constant	-2.91		3.14	-9.03	***	2.43	-4.18		2.39

Note: Full models for Figure 5. Significance level: *p < 0.05; **p < 0.01; ***p < 0.001
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601

Table A 4 *Logistic regression models for the probability to perform grandparental childcare under different circumstances, by grandmothers' work history (Having ever worked – No/Yes) and macro-areas*

	Any care			**Care when parents work**			**Occasional Care**		
	Coef.		*SE*	*Coef.*		*SE*	*Coef.*		*SE*
Ever Worked (ref. Never Worked)	-0.05		0.18	0.37	**	0.13	-0.02		0.13
Macro-Area (ref. North-West)									
North-East	-0.36		0.24	0.15		0.18	0.14		0.18
Center	-0.32		0.21	0.26		0.15	-0.10		0.15
South & Islands	-0.49	**	0.17	-0.60	***	0.13	-0.06		0.13
Interaction term									
Ever Worked # North-East	0.22		0.26	-0.22		0.19	-0.07		0.20
Ever Worked # Center	0.41		0.24	-0.27		0.17	0.06		0.18
Ever Worked # South & Islands	0.41		0.21	0.10		0.15	0.13		0.15
Age	0.18		0.10	0.25	**	0.08	0.14		0.08
Age # Age	0.00	*	0.00	0.00	***	0.00	0.00	*	0.00
Employment status at interview (ref. Employed)									
Not Employed	0.28	*	0.11	0.59	***	0.08	0.11		0.08
Educational level (ref. No education)									
Primary	0.37	***	0.10	0.37	***	0.10	0.13		0.09
Lower Secondary	0.59	***	0.12	0.53	***	0.11	0.19		0.10
Upper Secondary and higher	0.69	***	0.13	0.54	***	0.11	0.14		0.10
Birth Cohort (ref. 1930-1939)									
1940-1947	-0.18		0.09	0.08		0.07	-0.08		0.07
1948-1966	-0.54	***	0.12	0.09		0.09	-0.13		0.09
Constant	-2.37		3.15	-8.98	***	2.44	-4.02		2.40

Note: Full models for Figure 6. Significance level: *p < 0.05; **p < 0.01; ***p < 0.001
Source: Authors' elaborations on Multipurpose surveys on Families and Social Subjects – ISTAT, 2003, 2009, 2016. N=7,601