
Review

Perinatal grandparents: A new frontier for caregiving

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Abstract: In the contemporary nuclear family, fewer children are born, both parents work, and it is rare for other relatives (such as parents, siblings, uncles, or other elderly family members) to live in the household. Both partners share the responsibilities of raising and caring for their children. When a child is born, today's parents often find themselves alone. As both parents work, raising a newborn becomes more challenging, necessitating support from other adults. The absence of a network of women who, in patriarchal societies, could provide assistance (such as sisters, aunts, and cousins) makes it necessary to seek help elsewhere. In families where grandparents are available, they constitute a crucial resource and become indispensable, at least during the early years. As caregivers, they take care of newborns by feeding, bathing, changing diapers, rocking, dressing, holding, putting them to sleep, escorting them to and from daycare or school, educating, telling stories, talking and playing with their grandchildren, and protecting them both inside and outside the home. While for many individuals becoming grandparents is one of the most fulfilling experiences in life, making them feel younger and more energetic, for others, it represents a challenging existential transition. Some refuse to embrace grandparenthood as it is perceived as a narcissistic wound, symbolizing aging, a loss of power, and the approach of death.

It is well established that fathers (or partners, including same-sex partners) who assume caregiving responsibilities for a newborn exhibit significant neuroendocrine and epigenetic changes. These changes also occur in grandparents when they undertake caregiving roles for an infant. To date, as far as we know, research has only focused on grandmothers, with no studies conducted on grandfathers. Research in mothers, fathers, and grandmothers has led to the hy-

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pothesis of a Global Parenting Caregiving System in our species, which is activated even in non-maternal caregivers (allomothers) and involves at least ten brain regions along with endocrine and epigenetic modifications.

Key words: *Caregiving, grandparents, grandfather, psychoneuroendocrinology, newborn, grandmaternal gatekeeping.*

From the patriarchal family to the nuclear family

Over the past eighty years, particularly since the second post-war period, the structure of Western families has undergone profound transformations. Families traditionally organized in a patriarchal manner – especially in small towns and rural areas but also in urban settings – have gradually evolved into what can be termed the «contemporary nuclear family» (Baldoni, 2025; Baldoni & Giannotti, 2022; Quilici, 2010). Several factors have contributed to this shift, including population migration to large cities, a decline in birth rates, and the widespread entry of women into the workforce.

In patriarchal family life, the patriarch (a grandfather or father) played the role of protecting and guiding the family. Extended family members often lived in close proximity. The division of labor between men and women was distinct, with privileges typically granted to males. Women were responsible for household tasks (cooking, cleaning) and were supported in maternity and child-rearing by a network of other women (their mothers, sisters, grandmothers, aunts, cousins, and wet nurses). Families tended to have many children (sometimes ten or more). Fathers and other male relatives (such as grandfathers and uncles), who were engaged in work and family economics, were involved in child-rearing primarily in educational, social, or religious aspects. Abuse or violence were not inherent to patriarchal life, whose primary aim was to protect the family; rather, such behaviors stemmed from specific cultural or social conditions.

In the contemporary nuclear family, fewer children are born (often none, and rarely more than one), both parents work, and it is uncommon for other relatives (parents, siblings, uncles, or elderly family members) to live in the household. Both partners share the responsibilities of raising and caring for their children. In this context, as extensively documented in contemporary research (Abraham & Feldman, 2022; Feldman, 2023; Feldman *et al.*, 2019; Bakermans-Kranenburg *et al.*, 2019; Lotz *et al.*, 2020; Baldoni & Giannotti, 2022; Baldoni, Ancora, & Latour, 2021), fathers who assume caregiving responsibilities for a newborn exhibit significant endocrine and neurobiological changes. These changes manifest as early as pregnancy and persist

throughout the perinatal period, including reductions in testosterone and estradiol, increases in oxytocin, prolactin, and vasopressin, as well as fluctuations in cortisol levels. Epigenetic modifications that alter gene expression and offspring phenotype have also been described (Mashood, & Champagne, 2014). These physiological modifications are accompanied by neural adaptations in the central nervous system and, in some cases, perinatal affective disorders such as depression, anxiety, and behavioral issues (Baldoni, 2016, 2024, 2025; Baldoni & Giannotti, 2020, 2022).

Grandparents as caregivers

When a child is born, today's parents often find themselves alone. Both parents work, making it more challenging to raise a newborn. Assistance from other adults becomes necessary. With the absence of a network of women who, in patriarchal societies, could provide support (such as sisters, aunts, and cousins), parents must seek help elsewhere. When financially feasible, families turn to nannies and babysitters, and as soon as possible, the child is enrolled in daycare and later in preschool for part of the day. In families where grandparents are available, they serve as an important resource and often become indispensable, at least during the early years. As caregivers, grandparents take care of newborns, feeding, bathing, changing diapers, rocking, dressing, holding, putting them to sleep, escorting them to and from daycare or school, educating, storytelling, conversing, playing with their grandchildren, and protecting them both inside and outside the home.

Grandmothers, in most cultures – including non-Western and primitive societies – have traditionally assisted mothers during childbirth and in the early care of the newborn (Sansone, 2021). Perinatal research has shown that grandmothers engaged as caregivers and allomothers promote mothers' perinatal mental health (for example, by moderating perinatal depression) and influence grandchildren's development (Manzari *et al.*, 2019; Riem, & van Der Stratten, 2024).

Historically, grandfathers were exempt from these duties. However, like fathers, grandfathers today, along with grandmothers, increasingly participate in caring for their grandchildren.

The phenomenon of grandparents involved in neonatal care is widespread in Western countries, particularly in Italy (Zamberletti *et al.*, 2018). Several considerations can be made regarding the condition of contemporary grandparents, especially during the perinatal period:

- Despite their age, many grandparents remain relatively young. Many drive, are energetic, maintain decent health, and often contribute financially to the family. Some grandparents are still working and must manage their time accordingly (Polvere *et al.*, 2018). The increasing retirement age may negatively impact their

availability. In other cases, health issues may force them to choose between self-care and fulfilling their role as grandparents (Taylor *et al.*, 2017). Some have a partner who is unwell, no longer self-sufficient, and requires assistance, such as transportation to medical appointments, clinical exams, and treatments. In such cases, grandparents find themselves in a paradoxical situation, acting as caregivers on two fronts: for their partner and their grandchildren.

- Life narratives, such as those shared in psychotherapy or through semi-structured attachment interviews (Adult Attachment Interview), reveal that many grandparents become attachment figures by providing stability and security, particularly when both parents are frequently absent due to work or in cases of separated or divorced families. The death of a grandparent is often the first experience of significant loss in life, introducing to the concept of mortality.
- A perinatal loss affects the entire family – parents, siblings, and grandparents – like an emotional avalanche. Some manage to cope constructively, while others struggle, leading to disrupted intergenerational relationships (O’Leary *et al.*, 2011). For parents, the most crucial aspect is recognizing the ongoing intergenerational relationship with the deceased child. However, for grandparents, as well as for siblings, the perinatal death of a newborn is an emotionally challenging and often underestimated experience (Murphy & Jones, 2014).
- Grandparents sometimes have to divide their time and energy among multiple children and grandchildren, which can lead to conflicts. Relationship issues may arise between grandparents as a couple, between grandparents and their children, between siblings, and among grandchildren (e.g., jealousy, envy, and competition). In such cases, grandparents and parents must navigate and mediate these dynamics skillfully.
- In some situations, grandparents must interact with a non-biological father (or partner), who may be of a different gender, ethnicity, religion, or social background. Cultural, religious, or ideological biases can create serious acceptance challenges. In some cases, grandparents assume full parental roles, obtaining legal custody of their grandchildren (De Toledo & Brown, 1995), particularly when their children face difficulties such as rejecting parenthood, psychiatric disorders, substance abuse, or criminal activity. The phenomenon of “skipped-generation” families (Holman, 2011), in which grandchildren are raised by grandparents rather than their parents (Goodman, 2007; Zimmer & Treleaven, 2020), can lead to the transmission of distinctive behaviors or traits from grandparents to grandchildren without passing through the parents. Additionally, conflicts may arise within grandparent couples due to jealousy, envy, or competition. Some grandparents care for multiple grandchildren from different children, sometimes in different locations, making it impossible to provide

equal attention to all. In such cases, parents must mediate sibling relationships and manage expectations.

- Some grandparents are currently cared for and supported by their children and grandchildren, who, in turn, become caregivers and attachment figures (Patrick *et al.*, 2023). Italy appears to be the leading European country for teenage caregiving of grandparents (D'Amen *et al.*, 2020), to the extent that the government has proposed a “grandchild bonus” to financially support them (Salvia, 2017).

The significant role of grandparents as caregivers has led to the development of perinatal educational programs aimed at supporting them in this role and fostering an “interdependent” family environment (Polomeno, 1999a, 1999b).

The role of grandparents often assumes importance in family therapy. Many contemporary families consist of two working parents. When children are born, they must be cared for as infants, taken to daycare and school, and protected at home. Systemic family therapists have been addressing the role of grandparents for years, encouraging a three-generational perspective (Baldoni, 2025; see Fig. 1). One author who has highlighted this aspect through dedicated seminars is Maurizio Andolfi (2021).

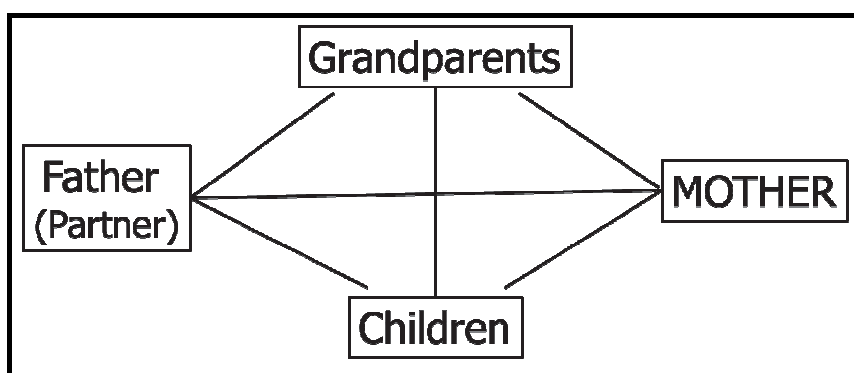


Fig. 1 – A trigenerational perspective (from Baldoni, 2025)

Experience in psychotherapy with individuals and their families teaches that becoming a grandparent can be the most beautiful period of life (which is still worth living). It makes you discover that even the elderly can be useful and feel loved by grandchildren and children. Grandchildren make us understand the importance of stories and narration of stories, the testimony of the family’s past (when the parents were small or of their own parents, that is, the great-grandparents). For grandparents, the exercise of creativity and imagination is very important: inventing fun and exciting fairy tales and stories, new and old games, teaching how to cook, to love

cinema, music or to play a musical instrument (Baldoni 2025). But above all, they can create an atmosphere of safety and stability, becoming attachment figures vicarious to those of the parents. In this, grandchildren play a fundamental and active role: they stimulate, guide, move, have requests, make observations, attract attention, provoke, play, joke and cry. This complex relationship with grandchildren involves the transmission of an ethical model (not based on social networks, TV or the Internet), which the new generations, as Lorenz (1973) rightly argued, need. They can therefore provide an affective, gender, ethical and social human model that integrates with that offered by parents. Becoming a grandparent, moreover, can also teach you to withdraw into the background, leaving space for the new generations without competing with your children. Faced with the looming danger represented by Artificial Intelligence (AI), grandparents can therefore represent an important element of compensation, as they report their own experience, offer life models and tell of a past in which the Internet, social networks and smartphones were unknown and were not a source of information.

Dysfunctional grandparents

Although for many people becoming a grandparent is one of the most beautiful experiences in life, which makes them more youthful and vital, for others it is a very difficult existential transition. Some refuse to be called grandparents (they prefer *daddy*, *papy*, *mamy*, or their own name) and do not accept becoming grandparents because it is the expression of a narcissistic wound, a sign of old age, loss of power and the approach of death.

Today, many adults are not prepared to face aging and society does not value those who take care of young people and in young people and adults it fosters a dysfunctional narcissism (see social networks, sports fanaticism, politicians, musical models, mass phenomena and gatherings in stadiums). These are business and marketing problems. Money is made on the narcissistic needs of young people and adults (Lash, 1979).

Many elderly people and parents today do not want to grow old and do not devote themselves sufficiently to their successors, there is a tendency to live in the present and a primary objective is the fulfillment of oneself and one's immediate needs, with the consequent loss of the sense of historical continuity and social responsibility (Selvini Palazzoli *et al.*, 1998; Baldoni, 2025). Today parents want to appear younger, similar to their children, and no longer recognize themselves in the behavioral models of previous generations. They present themselves to their children more as friends or brothers (Bly, 1996), unconsciously denying their own role and parental responsibilities. The family, social and cultural function of the el-

derly, as a result, is increasingly devalued, a phenomenon already recognized by Konrad Lorenz (1973) with the name of demolished tradition, and they are unable to use the experience of past generations as a model.

Other grandparents, while actively taking care of their grandchildren, tend to replace their parents or compete with them on how to care for and educate them, criticizing, devaluing or not recognizing (verbally or non-verbally, sometimes generating double bind phenomena) the role of parents of their children, see the phenomenon of enmeshment described by Minuchin (Minuchin, Rosman & Baker, 1978). An example could be a grandmother who explicitly or implicitly disapproves of her daughter for how she deals with pregnancy or for the way she cares for, feeds or educates her grandchildren. This can exacerbate a conflict of adolescent origin between grandmother and daughter, making the latter feel unjustified and favoring the manifestation of a perinatal affective disorder in her (Baldoni, 2025). Obviously, this problem can also manifest itself for the grandfather towards his own son, but also towards a daughter.

It may sometimes be necessary to relate to a non-biological father (or partner) of the same or different sex, or of a different ethnic or social origin. Cultural, religious or ideological prejudices can create serious acceptance problems.

Maternal and grandmaternal gatekeeping

The importance of the father is often underestimated by health workers (pediatricians, gynecologists, neonatologists, midwives, nurses), who tend to consider pregnancy and childbirth as exclusively female matters (Ireland *et al.*, 2016).

This attitude, called *maternal gatekeeping* (Allen & Hawkins, 1999; Gaunt, 2008; Baldoni, 2024), is often favored and shared by mothers themselves and leads to excluding fathers or legitimizing their disengagement towards mother and newborn. In patriarchal families it was considered normal and supported by women themselves who defended their role in the home from male privileges.

The phenomenon derives from an unconscious sedimentation of normative principles that date back to the Middle Ages. Historically and culturally, therefore, childbirth has always been a “woman’s affair”. Over the years it has led to significant discrimination between men and women, considering mothers as the main responsible for their children’s developmental problems, as in the case of the first theories on autism or the idea of a schizophrenogenic mother in the case of psychosis. In families of the past and today, *grandmaternal gatekeeping* is also possible (Baldoni, 2024), when grandmothers exclude grandfathers and male children because they are considered less competent as caregivers. This attitude can lead to conflicts and competition in the grandparental couple.

Neuroendocrine changes in grandparents

We know that a father (or a partner, even a homosexual one) who takes care of a newborn as a caregiver shows significant changes on a neuroendocrine and epigenetic level (Mashood, & Champagne, 2014; Fisher *et al.*, 2018; Feldman, Braun, Champagne, 2019; Bakermans-Kranenburg *et al.*, 2019; Lotz *et al.* 2020; Baldoni and Giannotti, 2022; Baldoni, 2024). The phenomenon manifests itself in both directions, both in the caregiver and in the newborn, influencing its development. What favors these changes is precisely the experience of perceptual contact (touching, hugging, warmth, smell, sight, hearing). The first research that highlighted the importance of perceptual experience was carried out by Myron Hofer first on rats, then extended to humans (1995, 2006). These changes also manifest themselves in the organism of grandparents, when they perform the functions of caregiver of a newborn. Currently, to our knowledge, the only research has been conducted on grandmothers, but none on male grandfathers.

A study on 50 caregiver grandmothers (Rilling, Gonzalez, & Lee, 2021), assessed through functional magnetic resonance imaging and self-report questionnaires, subjected them to stimuli such as photographs of their grandchildren and other newborns, invited to observe the figures and discriminate the child's emotion. The grandmothers were compared with 30 fathers studied with the same procedure. The results highlighted in grandmothers a more intense activation than that of the father in several areas involved in caregiving (medial orbitofrontal cortex, insula, right precentral cortex) with greater capacity for empathy and motivation. In fact, the central nervous system of grandmothers tends to change in a similar way to that of mothers and more intensely than that of fathers. These changes could favor an extension of the female life cycle for decades after the end of fertility (Hawkes, & Coxworth, 2013). Other contributing factors are: 1) the greater longevity of mothers' parents compared to the past (Coall, Hertwig, 2010) and the greater investment of mothers in caregiving (because they have few children). With the increase in separations and divorces, the help of grandmothers as caregivers has become more essential (Buchanan, & Rotkirch, 2018).

Grandchildren could therefore constitute a stimulus for grandmothers' brains, extending their post-reproductive longevity and this should also apply to other non-maternal caregivers (Rilling, Gonzalez, & Lee, 2021).

Research on paternal caregiving experiences (nutritional, hormonal, toxic, social, stress), has shown that they cause significant variations in the gene expression and phenotype of the offspring, which can persist for generations, also involving grandchildren (Mashood, & Champagne, 2014). These environmentally induced epigenetic modifications occur in gametes and epigenetic reprogramming is main-

tained after fertilization by modifying the genes and phenotype of the offspring through potential alterations in DNA methylation. These modifications are transmitted to subsequent generations through the germ line.

Studies on hormonal modifications of caregivers are still few, and, once again, have been carried out mainly on grandmothers (Byrd-Craven, & Rankin, 2022), with the aim, for example, of deepening the endocrine aspects of relationships between women.

A Global Parental Caregiving System

Research on the neuroendocrine changes in mothers, fathers and grandmothers has led to the hypothesis of a *Global Parenting Caregiving System* in our species that is also activated in non-maternal caregivers (allomothers) (Abraham, Feldman, 2018; Rilling, Gonzales, & Lee, 2021). This system involves at least 10 brain areas underlying emotional empathy and motivation, including: medial orbitofrontal cortex, ACC (anterior cingulate cortex), IFG (inferior frontal gyrus), Insula, VTA (ventral tegmental area) and MPOA (medial preoptic area). On the endocrine level, the main changes are in: testosterone, estradiol, oxytocin, vasopressin, prolactin and cortisol (see Fig. 2.0). As mentioned, these changes are influenced by the perceptual experience of caregiving and no differences have been found in the relationship with biologically related or unrelated, foster or adapted newborns.

Currently, there are virtually no studies of this type on male grandparents and other allomothers (uncles, siblings, babysitters, wet nurses, adoptive and foster parents) (Abraham, Feldman, 2018; Rilling, Gonzales, & Lee, 2021; Feldman, 2023; Abraham *et al.* 2014; Bakermans-Kranenburg *et al.*, 2019; Baldoni, 2024) and could constitute a new perspective for research.

Endocrine changes	>testosterone, estradiol, >oxytocin, vasopressin, prolactin, cortisol
Neural Correlates	10 brain areas underlying emotional/cognitive empathy and motivation, including: medial orbitofrontal cortex, anterior cingulate cortex (ACC), (inferior frontal gyrus (IFG), Insula, ventral tegmental area (VTA), and medial preoptic area (MPOA)

Fig. 2 – Global Parenting Caregiving System

Conclusions

After having studied the psychoneuroendocrine aspects of the father, research in recent years has also focused on grandparents. For now, the few scientific data concern grandmothers, but inevitably future studies will also consider grandparents and all other non-maternal caregivers (allomothers). These studies will allow us to better understand the adaptive skills of our species and to identify the best conditions for the growth and education of offspring. The results of the most recent research make it necessary to reformulate evolutionary theories that consider the psychobiological plasticity of our species, and specifically parental ones, not only in cultural terms, but also neuroendocrine and epigenetic.

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