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## Aging parents and their middle-aged children: demographic and psychosocial challenges

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**Abstract** The aim of this paper is to investigate the impact of an extended lifespan of parents on middle-aged women and men from a demographic, sociological and psychological perspective. Based on Swiss data, three main research questions are investigated and discussed in three different sections: (a) How far has the common lifespan of children and parents been extended and how does it affect kinship structures? (b) How accurate is the term of “sandwich generation” in this context? (c) Which are the psychological concomitants—in terms of filial maturity—of being reinvolvement with one’s old parents in mid-life? The demographic analyses illustrate a considerable extension of common lifespan of children and parents. Combined with low fertility rates this results in rapidly increasing parent-support ratios. A sociological approach analysing the concept of “sandwich generation” indicates that, for women, a new kind of double burden (professional work and family care) is more widespread than being ‘sandwiched’ between the youngest and the oldest generation. Finally, in the third section, results are reported from a longitudinal study of middle-aged persons living in different social contexts (such as living or not living with a partner and/or children) on the intrapsychic concomitants of becoming reinvolvement with one’s parents. The response patterns reveal a considerable intergenerational ambivalence. Although the possibility to help old parents depends heavily on living context and is a question of available resources, the willingness to help is also closely related to psychological variables such as attachment.

**Keywords** Middle-aged persons · Aging parents · Demographic change · Filial maturity · Social relations

### Introduction

The combined effects of changing age structures (demographic aging) and an increasing life expectancy of the elderly affect the life cycle of the next younger generation. Changing intergenerational parent-support ratios enhance the risk of being confronted by the aging processes of more than just one parent. This contribution analyses and discusses the impact of an extended lifespan of parents in an aging society on middle-aged women and men from a demographic, sociological and psychological perspective. Based on Swiss data, the following research questions are investigated and discussed:

- (a) How many middle-aged women and men still have living parents, and how far has the common lifespan of children and parents been extended? In which way will the expected demographic aging affect the intergenerational kinship structures?
- (b) Can the middle-aged really be defined as ‘sandwich generation’, and how many middle-aged women are confronted by the double burden of caring for more than one generation?
- (c) Which are the intrapsychic concomitants of becoming reinvolvement with one’s parents in mid-life in terms of filial maturity and what impact do different social living contexts have on these variables?

This interdisciplinary contribution—using demographic, sociological and psychological approaches of conceptualization and data analyses—contains three interlinked parts. The first part analyses and illustrates the fundamental socio-demographic changes in kinship structures (longer common lifespan, changing parent-support ratios), based on socio-demographic data from Switzerland. A second part highlights the concept of

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“sandwich generation” from a primarily sociological perspective, discussing different concepts of ‘*sandwich generation*’ and presenting data on the intergenerational situation of middle-aged women. In the third section, a psychological approach is used. Based on the concept of filial maturity and using a quasi-experimental longitudinal design, differences between middle-aged persons living in different social contexts are reported.

### Demographic change: longer common lifespan and changing parent-support ratios

Switzerland, similar to other European countries, is confronted by a twofold process of demographic aging. First of all, the proportion of older people increases as a result of low birth rates. At the same time, the process of demographic aging is reinforced by an increasing life expectancy of older men and women (Swiss Federal Office of Statistics, 2002).

The higher life expectancy results in an extension of the common lifespan of children and parents, as illustrated by the data in Table 1. At the beginning of the 20th century a majority of women and men aged 25 had lost at least one parent (often the father), and among people aged 45, 60% had no longer a living parent. At the beginning of the twenty first century, however, more than 40% of women and men aged 45 still have both parents, and a further 48% have at least one parent left. While in 1900, 80% of the 50-year-olds had lost both parents, today up to age 55, a majority of adults has at least one parent left (mostly a mother). A similar trend to longer overlapping lifespans of generations has been observed in many other European countries (Hörl and Kytir 1998; Lauterbach 1995).

For middle-aged men and women, the development towards a longer common lifespan clearly has a positive dimension, as women and men experience the extension of a mainly positively loaded social relationship. At the same time, there is an other side to consider as well. Today, the years between 40 and 60, the period of middle age, have become the life phase when most men and women have to deal with the loss of both parents—a loss with a remarkably strong psychological impact, as the third part of this contribution will illustrate. In many cases, the death of the parents is preceded by a period of aging parents experiencing a high risk of being dependent on informal or formal care. In Switzerland, after the age of 65, the mean life expectancy of women was 20.6 years (including 16.3 years of disability-free life expectancy and 4.3 years with chronic disabilities) in 1997/1999. Men after 65 years of age lived on average 16.7 years (13.0 years disability-free and 3.7 years with chronic disabilities) (Höpflinger and Hugentobler 2003). Even though in Switzerland, as in other European countries like France (Robine et al. 1998) or Austria (Doblhammer and Kytir 1999), the disability-free life expectancy of the elderly population has significantly increased, the last phase in the life of old parents is often accompanied by a substantial burden of care for their middle-aged children. The burden of care is particularly heavy in case of dementia (and as parents get older, the risk of being affected by dementia increases rapidly).

From a demographic perspective, the longevity of the parent generation, in combination with a low fertility of the children generation, affects the intergenerational kinship structures in a major way. The intergenerational situation can be particularly difficult for the children of today’s middle-aged ‘baby-boomers’. Compared to their parents, those with demographically strong birth cohorts had a significantly lower fertility rate, leaving their

**Table 1** Probability of having parents at different ages: Switzerland 1900 and 2000

People at age	Estimated probability of having living parents					
	In 1900			In 2000		
	No living parent (%)	One parent (%)	Both parents (%)	No living parents (%)	One parent (%)	Both parents (%)
–5	*	9	91	*	2	98
–10	1	18	81	*	2	98
–15	2	27	71	*	4	96
–20	5	34	61	*	7	93
–25	9	42	49	*	10	90
–30	15	48	37	*	13	86
–35	26	50	24	1	23	75
–40	41	46	13	4	36	60
–45	61	34	5	9	48	42
–50	80	19	1	24	56	21
–55	93	7	*	45	48	7
–60	99	1	*	72	27	1
–65	100	*	*	92	8	*

\*Less than 0.5%

Source Own calculations based on demographic data about cohort-specific survival rates and mean age at birth in different birth cohorts of parents (cohort-specific survival rates, see Swiss Federal Office of Statistics, 1998; mean age at birth, Swiss Federal Office of Statistics, 2004)

own children with a strongly increased burden of intergenerational care. The changing intergenerational structure can best be measured by using so-called ‘parent-support ratios’ (Myers 1992). This demographic indicator illustrates the changing numeric relationship between the aging parent generation and the next generation. The data in Table 2 indicate the expected development of parent-support ratios, or in a simplified way the intergenerational burden of the middle-aged, according to two population scenarios. The first scenario reflects the long-term effect of current trends (low fertility, no increased immigration and moderate increase of life expectancy). The second scenario is also based on low fertility trends (and no increased immigration) but includes the perspective of a strong increase in the life expectancy of the elderly (65 years of age and older), reflecting the possible effects of rapid medical progress in dealing with age-related disabilities.

In both scenarios the expected intergenerational changes indicate rapidly increasing parent-support ratios. From 2000 to 2060, the number of persons aged 80 years or older per 100 persons aged 50–64 years is expected to rise from 22.5 to between 43.7 and 59.3. During the next decades a longer common intergenerational lifespan is accompanied by a larger intergenerational burden for middle-aged men and women. The parent-support ratios increase particularly strongly if the elderly live even longer than actual trends indicate.

### The middle-aged as ‘sandwich generation’: myth or reality?

The popular image often used to characterize men and women in midlife is that of a ‘sandwich generation’. Especially middle-aged women are often perceived as being caught between the demands of both the younger and the older generation. Schwartz (1977) was one of the first researchers to use this metaphor, and Neugarten

**Table 2** Development of parent-support ratios according to population scenarios: Switzerland 2000–2060

Scenario	Parent-support ratios <sup>a</sup>			
	2000	2020	2040	2060
(1) Trend	22.5	24.3	40.5	43.7
(2) Strong increase in life expectancy after age 65	22.5	27.8	56.8	59.3

<sup>a</sup>Population aged 80 years or more per 100 persons 50–64 years of age

*Scenario 1 (Trend)* Low fertility, no increased immigration and moderate increase of life expectancy (until 2060 to 82.5 years for men and 87.5 years for women)

*Scenario 2 (strong increase in life expectancy of the elderly)* Low fertility, no increased immigration but strong increase in the life expectancy after age 65 (until 2060 from 16.7 to 21.5 (men) and from 20.6 to 25.0 (women))

Source Own recalculation of data on the age distribution of the Swiss population according to population scenarios; Swiss Federal Office of Statistics, 2002

(1979) helped to popularize the image of the generation caught in the middle. Today the image of the ‘sandwich generation’ is widely used in both popular and scientific literature (Borchers 1997; Hamill and Goldberg 1997). The concept of ‘sandwich generation’, however, refers to a variety of intergenerational situations. First of all, the concept is used to describe the socio-political burden of the active generation paying taxes and social contributions for both educating the young and financing the old, reflecting monetary transfers between so-called ‘welfare generations’ (see Arber and Attias-Donfut 2000; Attias-Donfut 1995). Secondly, even when referring to family generations, different authors define the ‘sandwich generation’ differently (Hörl and Kytir 1998). Some authors (such as Borchers 1997) use a broad socio-demographic frame of reference, defining the ‘sandwich situation’ as being in the situation of having both (adult) children and living parents or parents-in-law. Such a broad concept measures only the potential of being confronted by an extended intergenerational burden.

A more restricted definition of ‘sandwich-position’ refers to having both underaged children at home and being confronted by dependent parents, indicating a real experience of being caught in the middle (Höpflinger and Baumgartner 1999). In recent analyses, another aspect of intergenerational role conflicts has been emphasized: balancing the demands of later stages of professional work life with caring for dependent parents; a role conflict seen as a ‘second work-family incompatibility’ for women (after dealing with both work and small children) (see Dallinger 1996, 1998). Table 3 presents estimations of the probability of middle-aged women (40–64 years of age) in Switzerland to experience different kinds of intergenerational burdens.

The first row in Table 3 indicates the proportion of women confronted by one or two dependent parents. This situation becomes more frequent after age 40, and the highest frequency of being confronted by at least one dependent parent is observed for women aged 50–54 years. After this age, the dependency burden decreases again as a result of the death of old parents. German data, in general, indicate a similar age distribution of people having dependent parents (Künemund 2000; Lettke 2002). Even considering that the data presented are cross-sectional data, we can estimate that at least half of all women have to deal with dependent parents during middle age (40–64).

If a ‘sandwich-situation’ is defined as being at the same time responsible for underaged children and having dependent parents within or without the household) (second row in Table 3), the proportion of women caught in the middle is actually relatively low. Such a ‘sandwich situation’ occurs in Switzerland—a country with relatively late family formation—primarily at early middle age. In countries with early family formation, the proportion of women confronted with the responsibility of caring for two generations at the same time can be even lower, as the phase of active child-rearing ends earlier. However, as in many European countries, late

**Table 3** Intergenerational challenges for middle-aged women: Switzerland 2000

	Women aged					Sum <sup>b</sup> (%)
	40–44 (%)	45–49 (%)	50–54 (%)	55–59 (%)	60–64 (%)	
Percentage confronted by one or two dependent parents <sup>a</sup>	9	11	16	13	7	56
Percentage having at least one minor child (0–17 years) at home and having one or two dependent parents	6	6	3	1	0	16
Percentage in paid work and having one or two dependent parents	7	9	12	8	3	39

<sup>a</sup>Dependent parent defined as parent no longer able to fulfill activities of daily life (measured by ADL-scale)

<sup>b</sup>As some women have to deal with a specific situation for longer than one 5-year period, the sum indicates only the potential maximal proportion of women being confronted by a specific situation during age 40–64. The real proportion of women experiencing this situation at least once during middle age is lower

Source Own calculations taking into account mean intergenerational age differences, proportion of women having living parents at different ages, age-specific household composition and labour force participation of women and prevalence of elderly parents being dependent. Data source Swiss Labor Force Survey 2000, Swiss Census 2002, Swiss Health Survey 2002, Statistic of Socio-medical Institutions 2000

childbearing has increased substantially, this kind of sandwich situation may well become more frequent in future.

As more women remain engaged in monetary work, more women have to care for dependent parents while being professionally engaged, and accordingly the number of women experiencing this new type of family-work role conflict is probably increasing (see third row in Table 3). Actually, the risk of a ‘double burden’ increases after age 40, and it is highest for the age group 50–54 in Switzerland. We can estimate that actually about two-fifths of all Swiss women are confronted with at least a potential work-care role conflict during middle age. In some cases, the chosen solution to high intergenerational dependency burden is early retirement (Schneider et al. 2001); a strategy that negatively affects the old-age financial security of women formerly engaged in family care. In other cases, the dependency burden of working women is reduced by using professional care or by distributing care responsibility more widely between sisters and brothers etc. Deteriorating parent-support ratios in combination with an increasing labour force participation of younger generations of women will, in future, increase the risk of this kind of intergenerational role conflict (professional work and family care during later phases of professional life).

### Dealing with aging parents: filial maturity of middle-aged persons

Based on what has been stated so far, it becomes clear that the demographical and social changes have a considerable impact not only on intergenerational exchange but also on individuals’ lives. Especially during the last

years of their aged parents’ lives, middle-aged children are in many cases confronted with the more negative dimensions of aging. Experiencing a frail and dependent parent is in many cases associated with the fear of having to confront the same fate themselves at a later age. But even the so-called ‘normal’ aging of parents confronts their middle-aged children with unavoidable perspectives of old age. The data presented so far suggest rapidly increasing parent-support ratios for middle-aged persons. This fact might have an important impact on both opportunities and constraints of these individuals, since life paths and role choices are embedded in pre-existing societal and familial imperatives. On the one hand there are societal and familial expectations and obligations which middle-aged persons are confronted with (e.g. to raise teenage children into adulthood, to support old parents, to hold or to restart a professional career). On the other hand, these persons become increasingly aware of their limitations of time and personal resources with advancing age. A review of the literature reveals that parameters of parent-help and caring have been considered mainly from demographic and sociological perspectives (e.g. intergenerational solidarity approach, i.e. Eckert and Shulman 1996; Silverstein and Bengtson 1997; Lüscher and Pillemer 1998). The questions of the intrapsychic concomitants of becoming reinvolved with one’s parents in mid-life and the psychological determinants of the readiness to help are receiving increasing attention in the last few years (Fingerman 2000; Lang and Schütze 2002). However, little is yet known about the impact of varying social living contexts of men and women in middle age (such as having a partner and/or children) on their motivation and possibilities to invest in familial role expectations, especially in supporting old parents.

In the context of intergenerational relationships of middle-aged women and men, the concept of *filial maturity* seems to play an important role. Referring to Blenkner's (1965) pioneering work, "filial maturity" can be defined as the successful accomplishment of the filial task, which a majority of middle-aged adult children are confronted with when they have to face their ageing parents' needs for comfort and support. Despite different critiques on Blenkner's concept of filial maturity as a developmental stage in middle age, it has become a classical reference point for investigations on familial relations in later years. Based on structural equation models, Marcoen (1995) has postulated an empirical model of "filial maturity" and proposed a psychometrical instrument to assess this construct. Following his model, seven components of filial maturity can be distinguished: *Filial love* and closeness originating from early childhood attachment and a sense of *Filial obligation* are the motivating forces leading to the willingness to fulfil the role of caretaker (*Filial helpfulness*). However, the adult child's voluntary commitment to help and care is not the sole determinant of the nature and the amount of help actually provided (*Filial help*) when older parents become increasingly dependent. Feelings of *Filial autonomy*, the degree of reciprocity between caregiver and care receiver (*Parental consideration*), as well as the collaboration among siblings in the family system (*Family solidarity and help*) also determine the amount and quality of filial care. In Marcoen's model, filial love and autonomy (which were negatively correlated) explained a considerable percentage of the variance of the two central variables filial help and helpfulness.

Filial maturity is thus a multidimensional construct, which refers to a dynamic state of successful coping with the normative developmental task in middle-aged adult children. However, it does not refer to an absolute or socially defined norm in terms of the nature and the amount of care, help, and support that must be provided by adult children for aged parents. Personal and contextual characteristics contribute to the creation of individual patterns of optimal filial caregiving (Marcoen 1995, 127).

In empirical research, we can observe an increasing interest in questions concerning the psychological determinants of these dimensions and how they interact and evolve over time. Important impulses came from lifespan attachment theory (Grossmann et al. 2002). Attachment security in adults seems to be positively associated with empathy and social responsibility, which are both important prerequisites for providing help (Diehl et al. 1998). There is empirical evidence, that middle-aged women's secure attachment to their mothers as well as their feelings of obligation to help, were positively associated with the instrumental support they actually gave (Cicerelli 1993). An interesting research question, which has hardly been studied so far, would be: to what extent attachment patterns of middle-aged persons are associated with

the quality of relations with their old parents on the one hand and with those with their children on the other hand.

In this third section of the paper we want to highlight some of these research questions, and especially the role of filial maturity of middle-aged persons living in different contextual conditions and how it evolves over time. For this purpose we will report some original data from the longitudinal research project "Transitions and Life Perspectives in Middle Age".<sup>1</sup> The aims of the research presented here are:

- First, to give a description of the frequency of experience of frailty and death of parents in middle-aged persons, as well as to describe the quantity and quality of the social contacts of these persons with their old parents compared to other family members.
- Secondly, to highlight the scores and change of the different dimensions of filial maturity of middle-aged persons living in different social/familial contexts (such as having or not having a partner and children).
- Thirdly and finally, to explore how the different dimensions of filial maturity of middle-aged persons relate with the quality of attachment to their own children.

Taking into account the results from earlier studies on this topic (e.g. Perrig-Chiello and Sturzenegger 2001; Perrig-Chiello and Perren 2005), we expect that

- (a) The confrontation with frailty and death of old parents is a normative developmental task for persons in middle age.
- (b) Filial maturity (especially the crucial dimensions "filial help" and "helpfulness") and the quality of the relationship of middle-aged persons with their old parents depend on the specific living context of the middle-aged person such as having or not having a partner and children. Here we expect significant differences in the various dimensions of filial maturity, especially for filial help. Taking into account the research on intergenerational ambivalence (Lüscher and Pillemer 1998) as well as the results from the second part of this paper, we furthermore expect opposing patterns concerning the levels of filial maturity dimensions (i.e. high amounts in filial obligation and low in help).
- (c) Based on results from lifespan attachment theory, we expect a significant correlation between the different dimensions of filial maturity of middle-aged persons and the quality of attachment with their old parents as well as with their young children.

Here we report original data from a longitudinal study with two measuring points, one in 1998, the other in 2001. Participants were 199 persons (146 women; 53 men; mean age: 47.10) in 1998, and 170 persons (118

<sup>1</sup>This research was supported by the Swiss National Science Foundation (Project-Nr. 5004-047741/1/Perrig-Chiello and Höpflinger 2001)



women; 52 men; mean age: 50.05) in 2001. This sample is a subsample of a larger survey study ( $N=1015$ , a sample that can be considered as being representative of a healthy middle-aged urban population in Switzerland (for further details see Perrig-Chiello et al. 1999). For the present quasi-experimental study, participants were allocated to different living context groups and compared regarding the quality and quantity of their contacts with their old parents and the different dimensions of filial maturity.

The living context groups were ( $N$  in 1998/2001):

Double track women (living with partner and children, working)	( $N=56/43$ )
Conventional homemakers (living with partner and children, not working)	( $N=35/25$ )
Single mothers (living with children, without partner, working)	( $N=37/33$ )
Single women (living without partner and children, working)	( $N=18/17$ )
Married men with children (living with partner and children, working)	( $N=45/45$ )
Single men (living without partner and children, working)	( $N=8/7$ )

Variables were assessed in face-to-face interviews using the following questionnaires:

*Filial Maturity* (Filial Maturity Scale, Marcoen 1995)<sup>2</sup>

- Filial love (20 items, example: my parents love me) (Cronbach's alpha = 0.92).
- Filial obligation (eight items, example: when I cannot give my parents all the help they need, I feel guilty) (Cronbach's alpha = 0.69).
- Filial autonomy (16 items, example: the care for my parents must not weight on my family) (Cronbach's alpha = 0.89).
- Filial helpfulness (seven items, example: my parents can always count on me) (Cronbach's alpha = 0.86).
- Filial help (seven items, example: when my father or mother is ill, I go and visit them more often) (Cronbach's alpha = 0.89).
- Parental consideration (12 items, example: my parents take into account what I can and cannot do) (Cronbach's alpha = 0.81).
- Family solidarity and help (11 items, example: when my parents need help I am always on my own) (Cronbach's alpha = 0.69).

(7-point-scale 1 = totally disagree to 7 = totally agree).

<sup>2</sup>In the 2nd wave only four out of seven dimensions of filial maturity were assessed: filial help, filial helpfulness, filial autonomy, parental expectations

*Quantity and quality of relationship* Relationship (MIDI-The Midlife Development Inventory, Brim 1994)

- Frequency of contacts with children, partners, parents, siblings, neighbours (8-point-scale, 1 = never to 8 = several times daily) (Cronbach's alpha = 0.68)
- Perceived quality of contacts (10-point-scale 1 = very bad to 10 = excellent) (Cronbach's alpha = 0.71)

*Attachment* (Barnas et al. 1991)

Attachment between women and their adult children (11 statements; 4-point-scale) (Cronbach's alpha = 0.75)

Frailty and death of old parents and quantity and quality of social contacts of middle-aged persons with their old parents

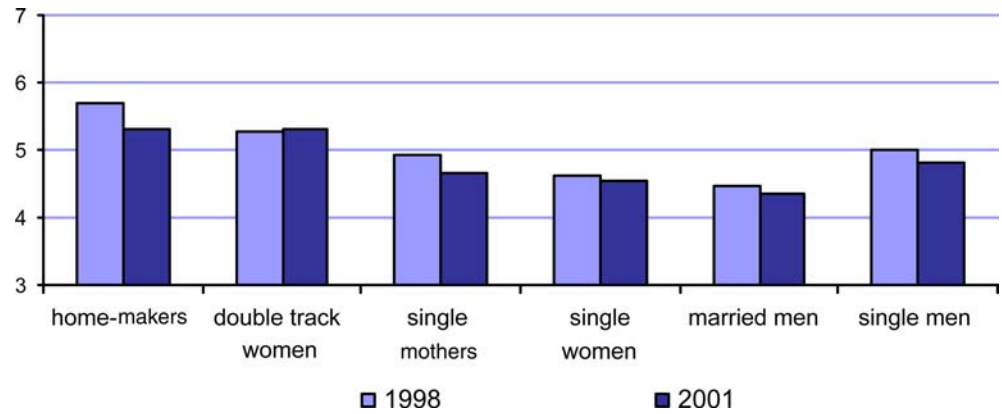
In 1998, 43%, both parents of our sample were still alive. Three years later, this was the case for only 35%. As our data clearly show, the death of parents is one of the most negatively experienced biographical transitions in middle age. On a scale of emotional valence for different biographical transitions (scores 1–10; 1 = very distressing, 10 = very gladdening) the death of one's father was rated 3.0 (SD 2.1) and the death of one's mother 3.3 (SD 2.2) (by comparison: divorce was rated 3.6 and dependency and frailty of parents 3.3). Persons in middle age are also increasingly confronted with the necessity to help and care for their ageing parents. At the 1st wave, 26% had to face this situation; 3 years later, this was already the case for 36%. Obviously, in Switzerland, parent help and care are still normative tasks, especially for women.

Concerning the *quantity of social contacts* of middle-aged persons with their old parents, we observe significant group differences: homemakers and the double-track women have the most contact with their old parents. Single mothers and married men have the least contact (5,125;  $F=2,19$ ,  $p=0.05$ ) (see Fig. 1). The longitudinal comparison didn't show significant changes for any of the groups.

Middle-aged persons rate the *quality of social contacts* with their ageing parents only as average compared with the higher rated quality of contact with children, partner and best friend ( $x=6.6$  on a scale 1–10, for comparison: children: 8.93, partner: 8.66, best friend: 8.71, siblings: 6.3). Our results reveal neither group differences nor change over time (1998: (5,125),  $F=1.01$ ,  $p=0.41$ ; 2001: (5,111),  $F=0.33$ ,  $p=0.89$ ).

Following Winsborough's (1980) suggestion, a life-cycle transition begins for a cohort when 25% of the members have experienced it and is completed when 75% have experienced it. We found this is to be the case for our sample. To a huge majority, these persons are confronted with frailty and death of their parents, and therefore also with the more or less explicit obligation to help. The quality of social relations with ageing parents are on an average level and significantly lower than with

**Fig. 1** Frequency of contacts of different groups with their parents (1 = min, 8 = max)



partners, children or close friends—this independent of the living context of the middle-aged children. The quantity of social contacts and filial help, however, varies with the living context—homemakers having the highest scores and single mothers the lowest ones. This result suggests that filial help depends indeed, to a substantial amount, on the available social resources (contextual conditions). As could be demonstrated in other research, one-parent women are the most disadvantaged group concerning financial, social, psychological and physical resources (Perrig-Chiello and Perren 2005).

Amount and change of the different dimensions of filial maturity of middle-aged persons in general and living in different familial contexts.

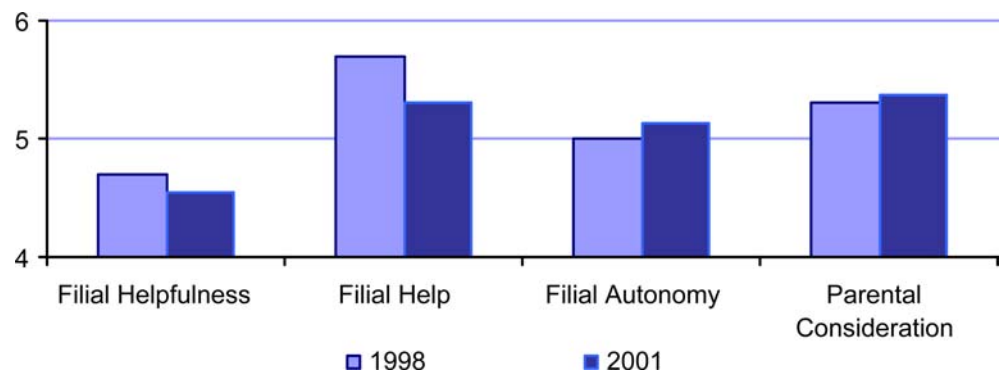
Our results suggest a considerable ambivalence of middle-aged persons concerning the perception of filial tasks, parental consideration and familial support. As shown in Fig. 2, filial help is rated significantly higher than filial helpfulness, filial autonomy and parental consideration (1998:  $t(163) = -13.75$ ;  $p < 0.01$ ; 2001:  $t(144) = -12.39$ ;  $p < 0.01$ ). Both, filial help ( $t(143) = 4.86$ ;  $p < 0.01$ ) and filial helpfulness ( $t(143) = 2.00$ ;  $p = 0.05$ ) show a significant decrease over the 3-year period. This is in contrast to a slight increase of filial autonomy ( $t(123) = -1.78$ ;  $p = 0.07$ ). Parental consideration, however, remains at a constant high level ( $t(123) = -1.18$ ;  $p < 0.24$ ).

Group comparisons reveal significant differences, with homemakers having the highest scores for filial help and single mothers the lowest scores ( $x = 5.93$  (SD.77)

vs.  $x = 5.37$  (SD 1.5),  $p = 0.03$ ). A closer look at single items illustrates the relational ambivalence even better: 85% of the respondents think that every adult child has the responsibility to help their parents whenever they need help, and 93% even say that if they themselves were concerned, they would provide this help (filial help). However, 77% state that they feel left alone with the filial task (family solidarity and help) and 60% report that their parents do not appreciate their efforts enough (parental consideration). And finally, 80% say, that their parents expect too much from them and state that they are not willing to spend too much time for them, claiming the right to conduct their own life (filial autonomy).

The response patterns of the middle-aged persons of our sample clearly reveal the ambivalent structure of intergenerational relations across all groups (as theoretically postulated by Lüscher and Lettke 2002; Lüscher and Pillemer 1998). On the one hand we have the highest scores for filial help, but on the other, we find the lowest values regarding filial helpfulness. This discrepancy indicates that middle-aged persons help their parents much more than they would really like to. The decrease of both parameters with advancing age perpetuates this discrepancy. We further observe constant high scores for parental consideration and at the same time increasing scores in autonomy. This result indicates that middle-aged persons experience high expectations from their parents (parental consideration), which stand in contrast to their increased striving for their own

**Fig. 2** Longitudinal changes of various Filial Maturity scores (1 = min, 7 = max)



**Table 4** Social relations of middle-aged persons with their old parents and their attachment with their young children

Filial maturity of middle-aged persons	Amount of secure attachment of middle-aged persons with their children
Filial love	0.24**
Filial obligation	0.26**
Filial helpfulness	0.34**
Filial help	0.20*
Filial autonomy	-0.18*
Parental consideration	0.19*
Familial solidarity and help	0.07

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$

autonomy (filial autonomy) and possibly also to their limited resources (work, family).

Filial maturity of the middle-aged and the quality of attachment to their old parents and their young children

Finally, we had the opportunity to shed light on the interdependence of filial maturity and attachment from a three-generational-perspective. We calculated in a first step the correlations between the different dimensions of filial maturity of middle-aged persons and the level of their attachment with their own children. As can be seen in Table 4, all dimensions of filial maturity, with exception of perceived family solidarity and help, are significantly associated with a secure attachment of middle-aged parents with their children. The only dimension, which is negatively correlated, is filial autonomy ( $r = -0.18$ ,  $p \leq 0.05$ ): a higher tendency to differentiate one-self from old parents' needs in middle-aged persons is negatively associated with their attachment to their own children. A closer look at the variable filial autonomy suggests that higher values on this scale indicate a stronger sense of separateness. In our study, filial autonomy is negatively correlated with filial helpfulness ( $r = -0.42$ ,  $p \leq 0.001$ ), with filial help ( $r = -0.21$ ,  $p = 0.01$ ) and with parental consideration ( $r = -0.26$ ,  $p \leq 0.001$ ). According to research results by Marcoen (1995), filial autonomy is negatively associated with filial love, and high levels of filial autonomy mitigate the middle-aged children's willingness to help their aged parents. Taking into account the results from lifespan attachment research, we could conclude that a strong sense of separateness of middle-aged persons towards their parents should be mirrored in a weak attachment towards their own children, which is the case in our study.

Further evidence for the intergenerational persistency of patterns of filial closeness can be observed by correlating the quality of relationship patterns of middle-aged persons with their old parents and the level of secure attachment of these middle-aged persons with their own children. Here the quantity and quality of relationship of middle-aged people with their old parents are positively associated with the amount of secure attachment with

their young children ( $r = 0.43$ ,  $p \leq 0.001$  and  $r = 0.31$ ,  $p \geq 0.01$ ).

Our results suggest thus that the emotional closeness of middle-aged people with their old parents is mirrored in the attachment quality with their offspring. Persons who report a strong relationship with their own children are those, who are more likely to help and care for their old parents. Two caveats have to be considered when interpreting our findings. First, the data presented in this study are correlational in nature. In addition, a larger sample size would have been necessary to allow better generalizations. However, the fact that a quasi-experimental design was adopted might compensate to a certain extent this latter limitation, in the sense that for middle-aged persons living in specific social contexts, very concrete statements could be made.

## Final conclusions

From a demographic perspective, the longevity of the parent generation, combined with a low fertility of the children generation, is significantly changing the inter-generational kinship structures, and population scenarios indicate rapidly increasing parent-support ratios for Switzerland, a development that is expected in other European countries too.

In a second part, the concept of "sandwich generation" has been highlighted from a primarily sociological perspective. Based on various Swiss data sources, it can be concluded that rising parent-support ratios in combination with an increasing labour force participation of women of younger generations will in future create a new kind of double burden (work and care during later phases of professional life) one that is much more challenging than being 'sandwiched' between the youngest and the oldest generation.

Finally, in the third section, results from a longitudinal study are focused on psychological and contextual prerequisites of filial maturity in middle-aged persons. The response patterns show a considerable intergenerational ambivalence. Although the possibility to help old parents depends heavily on living context and is a question of available resources, the willingness to help is also closely related to psychological variables such as attachment. All this mirrors the view of middle-aged persons concerning their possibilities and limits to help their old parents. Future research should focus on parental maturity and tasks, i.e. take into account the perspective of old parents concerning their expectations towards their middle-aged children and how this converges with filial maturity.

## References

- Arber S, Attias-Donfut C (eds) (2000) The myth of generational conflict—the family and the state in ageing societies. Routledge, London



- Attias-Donfut C (ed) (1995) Les solidarités entre générations. Vieillesse, familles, état [The solidarity between generations. Old age, family, state]. Nathan, Paris, pp 40–81
- Barnas MV, Pollina L, Cummings EM (1991) Life-span attachment: relations between attachment and socioemotional functioning in adult women. *Genet Soc Gen Psychol Monogr* 117(2):175–202
- Blenkner M (1965) Social work and family relationships in later life with some thoughts on filial maturity. In: Shanas E, Streib F (eds) *Social structure and the family: generational relations*. Prentice Halls, Englewood Cliffs, pp 46–59
- Borchers A (1997) Die Sandwich-Generation. Ihre zeitlichen und finanziellen Leistungen und Belastungen [The sandwich generation. Their temporal and financial services and burdens]. Campus, Frankfurt
- Brim OG (1994) MIDI the midlife development inventory part I and II. McArthur Foundation, Vero Beach
- Bundesamt für Statistik (1998) Kohortensterbetafeln für die Schweiz 2000–2060. Geburtenjahrgänge 1880–1980 [Cohorts' mortality tables, Switzerland 2000–2060. Data on CD-Rom]. BFS, Neuchâtel
- Bundesamt für Statistik (2002) Szenarien zur Bevölkerungsentwicklung der Schweiz 2000–2060. Vollständiger Szenariensatz [Scenarios on the population development in Switzerland 2000–2060. Data on CD-Rom]. BFS, Neuchâtel
- Bundesamt für Statistik (2004) Demographisches Portrait der Schweiz [Demographic description of Switzerland. Data on CD-Rom]. BFS, Neuchâtel
- Dallinger U (1996) Pflege und Beruf—ein neuer Vereinbarungskonflikt in der späten Familienphase. Ein Literatur- und Forschungsüberblick [Care and career—a new conflict in the late family phase. A literature and research overview]. *Zeitschrift für Familienforschung* 8(2):6–42
- Dallinger U (1998) Der Konflikt zwischen familiärer Pflege und Beruf als handlungstheoretisches Problem [The conflict between familial care and career as problem of theory of action]. *Zeitschrift für Soziologie* 27(2):94–112
- Doblhammer G, Kytir J (1999) 'Kompression' oder 'Expansion' der Morbidität? Trends in der Lebenserwartung älterer Menschen in guter Gesundheit 1978 bis 1998, Demographische Informationen 1997/1999 [Compression or expansion of morbidity? Trends in the life expectancy of older people in good health 1978–1998, demographical information 1997/1999]. Oesterreichische Akademie der Wissenschaften, Wien, pp 71–79
- Eckert JW, Shulman SC (1996) Daughters caring for their aging mothers: a midlife developmental process. *J Geront Soc Work* 25:17–32
- Grossmann KE, Grossmann K, Winter M, Zimmermann P (2002) Attachment relationships and appraisal of partnership: from early experience to sensitive support to later relationship representation. In: Pulkkinen L, Caspi A (eds) *Paths to successful development. Personality in the life course*. Cambridge University Press, Cambridge, pp 73–106
- Hamill SH, Goldberg WA (1997) Between adolescents and aging grandparents: midlife concerns of adults in the 'Sandwich Generation'. *J Adult Dev* 4:135–147
- Höplinger F, Baumgartner D (1999) 'Sandwich-Generation': Metapher oder soziale Realität? [“Sandwich generation”—metaphor or social reality?]. *Zeitschrift für Familienforschung* 11(3):102–111
- Höplinger F, Hugentobler V (2003) Pflegebedürftigkeit in der Schweiz. Prognosen und Szenarien für das 21. Jahrhundert [Need of care in Switzerland. Prognostic and scenarios for the 21st century]. Huber, Bern
- Hörl J, Kytir J (1998) Die 'Sandwich-Generation': Soziale Realität oder gerontologischer Mythos? Basisdaten zur Generationenstruktur der Frauen mittleren Alters in Österreich [The “sandwich generation”—social reality or gerontological myth?]. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 50(4):730–741
- Künemund H (2000) Pflgeetätigkeiten in der zweiten Lebenshälfte—Verbreitung und Perspektiven [Care functions in the second half of life Prevalence and perspectives]. In: Backes GM, Clemens WG (eds) *Lebenslagen im Alter Gesellschaftliche Bedingungen und Grenzen*. Leske & Budrich, Opladen, pp 215–228
- Lauterbach W (1995) Die gemeinsame Lebenszeit von Familien-generationen [The common life span of different generations in a family]. *Zeitschrift für Soziologie* 24(1):22–41
- Lettke F (2002) Pflegen wollen, sollen, müssen oder dürfen? Zur Ambivalenz von Generationenbeziehungen im Alter [Providing care—obligation, privilege, voluntary service? About the ambivalence of intergenerational relationships in old age]. In: Motel-Klingebiel A, von Kondratowitz HJ, Tesch-Römer C (eds) *Lebensqualität im Alter Generationenbeziehungen und öffentliche Servicesysteme im sozialen Wandel*. Leske & Budrich, Opladen, pp 71–94
- Lüscher K, Lettke F (2002) L'ambivalence, une clé pour l'analyse des relations intergénérationnelles [Ambivalence, a key to the analysis of intergenerational relationships]. *Retraite et Société* 35:140–169
- Lüscher K, Pillemer K (1998) Intergenerational ambivalence: a new approach to the study of parent-child relations in later life. *J Marriage Fam* 60:413–425
- Marcoen A (1995) Filial maturity of middle-aged adult children in the context of parent care: model and measures. *J Adult Dev* 2(2):125–136
- Myers GC (1992a) Demographic aging and family support for older persons. In: Kendig HL, Hashimoto A, Coppard LC (eds) *Family support for the elderly*. University Press, Oxford, pp 31–68
- Neugarten BL (1979) The middle generations. In: Ragan PK (ed) *Aging parents*. University of Southern California Press, Los Angeles, pp 258–266
- Perrig-Chiello P, Höplinger F, Kaiser A, Sturzenegger M (1999) Psychosoziale Aspekte der Lebensbedingungen von Frauen und Männern im mittleren Lebensalter [Psychosocial aspects of the living conditions of middle-aged men and women]. *Zeitschrift für Familienforschung* 11(3):5–27
- Perrig-Chiello P, Höplinger F (2001) Zwischen den Generationen—Frauen und Männer im mittleren Lebensalter [Between generations—men and women in middle age]. Seismo-Verlag, Zürich
- Perrig-Chiello P, Sturzenegger M (2001) Social relations and filial maturity in middle-aged adults: contextual conditions and psychological determinants. *Zeitschrift für Gerontologie Geriatrie Spec Issue “Ageing Eur”* 34(21):21–27
- Perrig-Chiello P, Perren S (2005) Impact of past transitions on adaptation in middle age. In: Willis S, Martin M (eds) *Middle adulthood: a lifespan perspective*. Sage Publication, Thousands Oak, pp 143–179
- Robine JM, Mormiche P, Sermet C (1998) Examination of the causes and mechanisms of the increase in disability-free life expectancy. *J Aging Health* 10(2):171–191
- Schneider T, Drobnic S, Blossfeld HP (2001) Pflegebedürftige Personen im Haushalt und das Erwerbsverhalten verheirateter Frauen [Persons in need of care in the household and the employment behavior of married women]. *Zeitschrift für Soziologie* 30(5):362–383
- Schwartz AN (1977) *Survival handbook for children of aging parents*. Follett, New York
- Winsborough H H (1980) A demographic approach to the life-cycle. In: Back KW (ed) *Life course: integrative theories and exemplary population*. Westview, Boulder