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PROFILE OF THE SANDWICH GENERATION AND INTERGENERATIONAL TRANSFERS IN IRELAND



The Irish Longitudinal Study on Ageing







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On behalf of the TILDA Team

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Key Findings

- Women in the sandwich generation, with both living parents and children, account for 31% of all community dwelling women aged 50 to 69 years old which equates to 141,400 women living in Ireland.
- Women in the sandwich generation in Ireland have a higher level of educational attainment compared with other women in this age group; one-quarter have a tertiary level education and are younger than women who were not in the sandwich generation; 44% are aged less than 55 while only 5% are aged between 65 and 69 years of age.
- Half of all sandwich generation women provide substantial time support to their parents, one-third provide support towards basic and personal care such as dressing, eating and bathing (activities of daily living) for an average of 21 hours per week and more than half give household help with chores, transportation and shopping (instrumental activities of daily living).
- One-third of the sandwich generation women provide practical household help including shopping and household chores to their non-resident adult children for an average of 12 hours per month.
- One-third of sandwich generation women look after their grandchildren for an average of 34 hours per month.
- Nine per cent of sandwich generation women provide financial support to their parents, an average of €2,000 in the last two years, and two-thirds to their children, an average of €3,000 in the last two years.
- Intergenerational giving was associated with health and impacts both positively and negatively depending on the direction of the transfers; financial support for children is associated with improved self-rated health, but financial support for parents is associated with increased depression. Providing practical household support for children is also associated with increased depression.
- Later childbirth combined with adults living longer indicates that the sandwich generation will become more relevant. More women will be caring for dependent children and elderly parents while also playing a more active role in the work-force.
- The recent climate of austerity may impact on the ability of both elderly parents and younger adult children to financially support themselves, thus the sandwich generation may be increasingly called upon to support both generations, both financially and with their time, which will put further pressures on this vital generation.

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Introduction

Global population changes in the more developed world have occurred from increased life expectancy and delayed fertility with women having their children later in life. These population changes have led to an increase in the intermediate population, or the "sandwich generation" those who have both living parents and younger dependent children. Previous studies in Northern European, Southern European and the United States of America (US) have shown that women, being the intermediate between elderly parents and young adult children have borne the burden of care for both generations (Attias-Donfut, Ogg & Wolff, 2005; Grundy & Henretta, 2006; Roll & Litwin, 2010). The patterns of intergenerational transfers vary geographically and while in Northern Europe middle-aged children support their parents financially, in Southern Europe, the parents are supported through co-residence and time (Bonsang, 2007). However, in the context of this 'sandwich generation', most transfers are not in the direction of children to parents but rather from parents to children.

The population structure in Ireland is changing; people are living longer, fertility rates are dropping and women are older when they have their children. The proportion of men and women aged 85 years or over increased by 55% between 1991 and 2011 (from 0.8% to 1.3) (Central Statistics Office, 2012a). The average age of mothers giving birth increased from 30.3 years in 2001 to 31.5 years in 2010 and for first-time mothers rose from 28.8 years in 2006 to 29.4 years in 2010 (Health Research Board and Information Division, 2012). This delayed fertility has led to changes in society in Ireland: more women are remaining in the work-force, 56% of women were in employment in 2011, a 30% increase since 1997 (Central Statistics Office, 2012b). These changes combined with adults living longer indicate that the sandwich generation will become more relevant and more women will be caring for dependent children and elderly parents while also playing a more active role in the work-force. Furthermore the global recession may impact on the ability of both elderly parents and younger adult children to financially support themselves, thus the sandwich generation may be increasingly called upon to support both generations, both financially and with their time.

This report provides information on older women in Ireland who have both living parents and children (the sandwich generation). It characterises the sandwich generation women, describes the types of transfers they provide to the two generations and provides national prevalence for intergenerational giving from

women in Ireland to both their parents and their children. It also determines how intergenerational transfers impact on women's health within the sandwich generation. The data comes from the first wave of the Irish Longitudinal Study on Ageing (TILDA), a prospective study using a stratified probability sample of 8,175 community-dwelling men and women aged over 50 who were resident in Ireland, 3196 (39.1%) of whom are women aged 50-69 years.

This report is organised as follows: section 2 describes the distribution and characteristics of older women who are part of the sandwich generation by education, marital status, in addition to their employment status and location (Dublin/urban, area other than Dublin/rural). It also examines the numbers of children and living parents these women have and their living arrangements. Section 3 describes the types and frequencies of non-financial and financial transfers and what the determinants of providing these transfers are, between these women and their parents and children. Section 4 reports the impact that these transfers have on the health of sandwich generation women. Section 5 summarises the findings and indicates areas where these findings could inform policy.

Distribution and characteristics of women in the sandwich generation in Ireland

2.1 Who are the "sandwich generation" women?

The sandwich generation are defined as women aged 50-69 years with both a living parent and children within the last two years. The sandwich generation women accounted for 31% of all community dwelling older women aged 50-69 in Ireland. When we relate this to the population, this equates to 141,400 women aged 50-69. Table 1 describes the prevalence of the sandwich generation by age. Half of all women aged 50-54 are in the sandwich generation, and this decreases to 9% of 65-69 year olds. Women in the sandwich generation are younger than women who are not in the sandwich generation: 44% are aged less than 55 while 20% are aged between 60 and 69 and only 5% are aged between 65 and 69 years of age.

Table 1: The percentage of women in the sandwich generation by age group

Age Group	% Not Sandwich Generation	(95% CI)	% Sandwich Generation	(95% CI)	N
50-54	50	(46.5 – 53.5)	50	(46.5 – 53.5)	896
55-59	62.1	(58.7 – 65.4)	37.9	(34.6 – 41.3)	915
60-64	81.0	(78.1 – 83.6)	19.0	(16.4 – 21.9)	778
65-69	91.7	(88.0 – 92.8)	9.3	(7.2 – 12.1)	607
Total	68.8	(67.1 – 70.6)	31.2	(29.4 – 33.0)	3,196

Note: 95% CI, 95% confidence intervals

2.2 Characteristics of the sandwich generation

In other studies, higher socio-economic groups live longer and have later childbirths whereas lower socio-economic position has been associated with increased numbers of children but lower probability of having parents still living whilst children are dependent (Ferrie, Shipley, Davey, Stansfeld & Marmot, 2002; Lunn & Fahey, 2011). In TILDA, educational attainment has been used as an indicator of socio-economic status. Women in the sandwich generation in Ireland have a higher level of educational attainment compared with other women in this age group who do not have both living parents and children. The distribution of their education by age is shown in Table 2. Women with secondary and tertiary level education are more likely

to be in the sandwich generation than women with just primary education. One-third of women with secondary level education, and one-third of tertiary educated women were in the sandwich generation compared with 22% of women with just primary education. In fact over half of the sandwich generation women (55%) have secondary level education and one-quarter have tertiary level education. Some of this difference may be because the sandwich generation women are younger, and women's educational attainment increased in more recent years in Ireland, with more Irish women beginning to attend university in the late 1970s and early 1980s.

Table 2: The percentage of women by age and highest level of educational attainment by whether in the sandwich generation

	% Not Sandwich Generation	(95% CI)	% Sandwich Generation	(95% CI)	N
Primary Education	78.00	(74.7 – 81.0)	22	(19.0 – 25.3)	699
50-54	58.5	(48.2 – 68.1)	41.5	(31.9 – 51.8)	94
55-59	65.3	(57.8 – 72.1)	34.7	(27.9 – 42.2)	193
60-64	87.6	(82.0 – 91.6)	12.4	(8.4 – 18.0)	201
65-69	89.6	(84.6 – 93.1)	10.4	(6.9 – 15.4)	211
Secondary Education	66.1	(63.3 – 68.9)	33.9	(31.2 – 36.8)	1,369
50-54	48.6	(43.6 – 53.5)	51.5	(46.5 – 56.4)	414
55-59	61.7	(56.6 – 66.6)	38.3	(33.5 – 43.4)	402
60-64	78.3	(73.7–82.2)	21.7	(17.8 – 26.3)	336
65-69	91.7	(87.1 – 94.7)	8.3	(5.3 – 12.9)	217
Tertiary Education	64.0	(61.0 – 66.9)	36.0	(33.1 – 39.0)	1,128
50-54	49.0	(44.0 – 53.9)	51.0	(46.1 – 56.0)	388
55-59	59.4	(54.0 – 64.6)	40.6	(35.4 – 46.0)	320
60-64	77.6	(72.0 – 82.3)	22.4	(17.7 – 28.0)	241
65-69	91.1	(85.6 – 94.6)	8.9	(5.4 – 14.4)	179

Note: 95% CI, 95% confidence intervals

Table 3 shows the geographic distribution of the sandwich generation. Both the proportion of women within the sandwich generation and the age distribution is similar for urban and rural settings. Overall one-quarter of women are living in Dublin city or county, one-quarter in other cities and the remainder in a rural area. This is similar to women who are not in the sandwich generation.

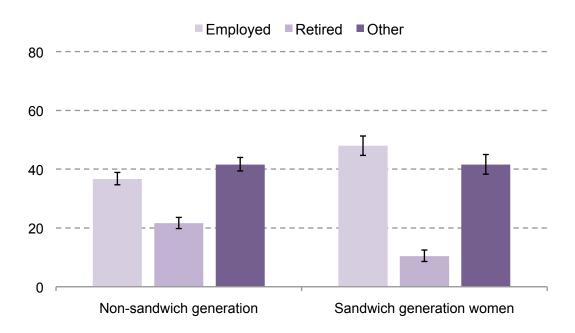
Table 3: The percentage of women by age and region of residence by whether in the sandwich generation

	% Not Sandwich Generation	(95% CI)	% Sandwich Generation	(95% CI)	N
Dublin City or County	70.3	(66.9 – 73.5)	29.7	(26.5 – 33.1)	788
50-54	53.5	(47.2 – 59.7)	46.5	(40.3 – 52.8)	227
55-59	62.0	(54.8 – 68.8)	38.0	(31.2 – 45.2)	208
60-64	81.5	(75.1 – 86.6)	18.5	(13.4 – 24.9)	187
65-69	90.8	(84.9 – 94.6)	9.2	(5.4 – 15.1)	166
Another Town or City	68.4	(65.1 – 71.6)	31.6	(28.4 – 34.9)	889
50-54	47.9	(40.9 – 55.0)	52.1	(45.0 – 59.1)	248
55-59	63.3	(56.6 – 69.6)	36.7	(30.4 – 43.4)	244
60-64	79.6	(73.8 – 84.3)	20.4	(15.7 – 26.2)	234
65-69	90.2	(84.2 – 94.1)	9.8	(5.9 – 15.9)	163
A Rural Area	68.4	(65.7 – 71.0)	31.6	(29.0 – 34.3)	1,515
50-54	49.4	(44.4 – 54.4)	50.6	(45.6 – 55.6)	421
55-59	61.7	(56.9 – 66.3)	38.3	(33.7 – 43.1)	460
60-64	81.6	(77.2 – 85.3)	18.4	(14.7 – 22.8)	356
65-69	90.9	(86.7 – 93.8)	9.1	(6.2 – 13.3)	278

Note: 95% CI, 95% confidence intervals

Figure 1 shows the distribution of employment of the sandwich generation women. Almost a half of the sandwich generation women are employed compared with one-third of the non-sandwich and 10% are retired, compared with 22% of the non-sandwich generation women.

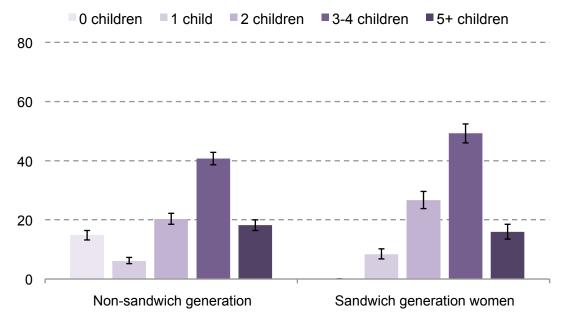
Figure 1: The percentage of women in employment by whether in sandwich generation



Note: error bars correspond to 95% confidence intervals

The generational structure within the family differs for sandwich generation compared with women not in the sandwich generation. They have more children, and are more likely to have co-resident children and have children aged less than 18. Half of all sandwich generation women have between 3 and 4 children, while 16% have 5 or more children (Figure 2). Nineteen per cent of the sandwich generation women have both parents still living, while two-thirds have only their mother alive. Ninety-five per cent of the non-sandwich generation have neither parents alive and 15% have no children.

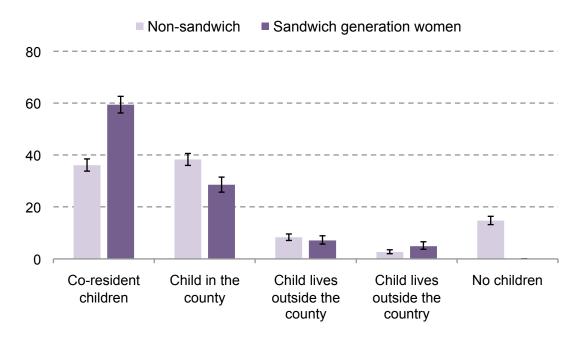
Figure 2: The percentage of women with children by whether in sandwich generation



Note: error bars correspond to 95% confidence intervals

Figure 3 shows co-residency and the proximity of their children to women aged 50-69 in Ireland. Overall 59% of the sandwich generation women have co-resident children compared with one-third of the non-sandwich generation women. While only a small proportion of the sandwich generation have co-resident parents, it is significantly more than the non-sandwich generation women (3.5% v 0.8%).

Figure 3: Co-residency and proximity of children by whether in the sandwich generation



Note: error bars correspond to 95% confidence intervals

3

Intergenerational transfers by the sandwich generation

Intergenerational transfers are defined as the transferring of either time or money from the sandwich generation to their parents or their children. Two types of intergenerational variables were considered: transfers of financial care and non-financial care between the generations, including taking care of grandchildren. TILDA respondents were asked about help given to children and parents, the type of help given (financial, other non-financial help and taking care of grandchildren) and the time given to this activity. Non-financial help given to parents was considered in two ways. The first was helping parents with their personal care like dressing, bathing and feeding; health professionals often use these activities as a measure of disability or functional status (called activities of daily living). The second kind of non-financial help to parents included assistance with other things such as household chores, errands, shopping and transportation.

Non-financial help to parents was assessed separately as both assistance with activities of daily living (ADL), and instrumental activities of daily living (IADL);

Non-financial help to parents, activities of daily living (ADL)

"In the last two years, because of health problems, did you help your parents/ father/mother regularly with basic personal activities such as **dressing**, **eating** and bathing?"

"Roughly **how many hours** did you spend helping them/him/her in an average week?"

Non-financial help to parents, instrumental activities of daily living (IADL)

"In the last two years, did you help your parents/father/mother regularly with other things such as **household chores**, **errands**, **shopping**, **transportation** etc.?"

"Roughly how many hours did you spend helping them/him/her in an average week?"

Non-financial help to children was assessed by the following questions:

Non-financial help to children¹

"In the last 2 years, excluding childcare, have you spent at least 1 hour a week helping your adult children and/or grandchildren with things like:

- 1. **Practical household help:** help with home repairs, gardening, transportation, shopping, household chores
- 2. **Help with paperwork,** such as filling out forms, settling financial or legal matters"

"About **how many hours** per month on average did you provide such help to your children?"

Taking care of grandchildren

"In the last two years, have you spent at least 1 hour a week taking care of grandchildren or great-grandchildren (who live outside your own household)?"

"About **how many hours** on average per month did you spend taking care of your grandchildren or great-grandchildren (who live outside your own household)?"

Financial help to parents was assessed by the following questions:

Financial help to parents

"Not counting any shared housing or shared food, in the last two years, have you given financial help to your parents/father/mother? Include help to pay costs such as rent, but exclude shared housing or food. By financial help we mean help to pay bills in general (medical, utility bills, etc.), or covering specific types of costs such as health insurance, schooling, rent, down payment for a home, etc."

¹ This refers only to help provided to children outside the household i.e. help provided to a co-resident child was excluded.

Financial help to children was assessed by the following questions:

Large material gifts to children:

"In the last ten years, have you given the deeds of a house, business, property, or a large amount of money of €5,000 or more to any of your children (or grandchildren)? About how much was this support in total?"

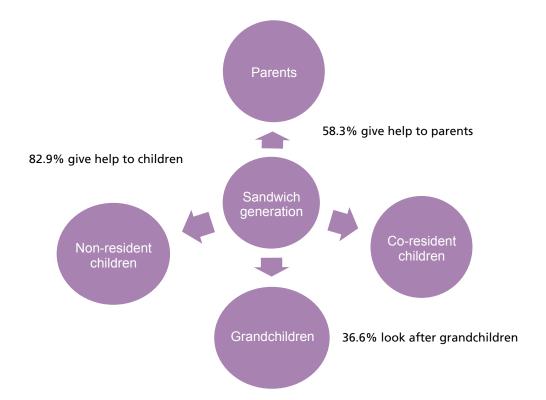
Other financial help to children:

"During the last two years, did you give financial or in kind support totalling €250 or more to any of your children and/or grandchildren (or their spouse/partner)? Assistance may include student fees and accommodation. By in kind support we mean goods or equipment (such as washing machine, computer, food, etc.)"

3.1 Patterns of intergenerational transfers by the sandwich generation women

The overall proportions and direction of intergenerational transfers are shown in Figure 4. Fifty-eight per cent of sandwich generation women give help to their parents, and 83% give help to their children. One-third look after grandchildren.

Figure 4: Intergenerational transfers from the sandwich generation



The type of help given varied by the direction and is shown in Figure 5. Women are more likely to provide financial help to their children and other non-financial help to their parents. Two-thirds of sandwich generation women provide financial help to their children compared with 9% to their parents, while 56% provide non-financial help to their parents compared with one-third to children.

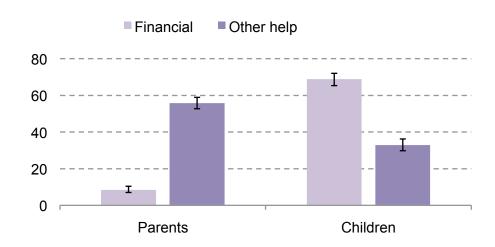


Figure 5: Type of transfer and direction by sandwich generation women

Note: error bars correspond to 95% confidence intervals

Figure 6 shows the age distribution of sandwich generation women by type of care given. A clear gradient in the type of help given by age can be seen; younger sandwich generation women are more likely to provide financial help, while the proportion looking after grandchildren increases with age. Three-quarters of sandwich generation women aged 50-54 provide financial help compared with half of 65-69 year olds and 23% of 50-54 year olds help to look after grandchildren compared with 69% of women aged 65-69 years old. Two-thirds of all women provide other non-financial help, excluding childcare to either their parents or their children, this ranged from 74% of 60-65 year olds to 50% of 65-69 year olds.

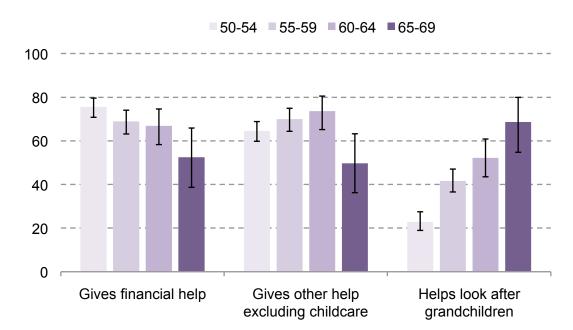


Figure 6: Type of transfers by sandwich generation women by age group

Note: error bars correspond to 95% confidence intervals

3.2 Non-financial transfers from sandwich generation women to two generations

Sandwich generation women provide non-financial time support to both their parents and their children. The patterns of these transfers from the sandwich generation to their parents and children are described in Table 4. Parents received the highest frequency of non-financial time transfers with half of all sandwich generation providing some time support to their parents, a third providing support towards activities of daily living (ADL²) and more than half for instrumental activities of daily living (IADL³). For the third of women providing ADL, they provide substantial numbers of hours of care to their parents, the average number of hours was 21 per week and the average number of hours per week for IADL was 10. Onethird of the sandwich generation women provide other time support, excluding childcare of grandchildren, to their children. The kind of help this includes is detailed on page 9, and includes both practical household help and help with paperwork. The average number of hours given to children is 12 hours per month. Over one-third of sandwich generation women provide childcare to grandchildren, and this proportion increases with age as shown in Figure 6. The average number of hours they look after grandchildren is 34 hours per month. A low proportion of sandwich generation women co-reside with their parents, while almost two-thirds still have children living with them.

² ADL defined as basic personal activities such as dressing, eating and bathing.

³ IADL defined as household chores, errands, shopping and transportation.

Table 4: The patterns of non-financial transfers given from the sandwich generation to their parents and children by type of transfer

	Given to Parents	Given to Children
Non-financial time transfers in the past 2 years		
Overall frequency (%, 95% CI)	55.8 (52.7 – 58.9)	32.9 (29.8 – 36.2)
Activities of daily living (ADL ²) % (95% CI)	32.9 (29.9 – 36.2)	-
Mean hours per week (95% CI)	21 (18-25)	
Instrumental activities of daily living (IADL ³) % (95% CI)	53.8 (50.7 – 56.9)	32.9 (29.8 – 36.2)
Mean hours per week (95% CI)	10 (9-11)	
Mean hours per month (95% CI)		12 (8-17)
Providing care to grandchildren (%, 95% CI)	-	36.6 (33.5 – 40.0)
Mean hours per month (95% CI)		34 (27 - 41)
Co-residence		
Frequency (%, 95% CI)	3.5 (2.5 – 4.9)	59.4 (56.1 – 62.6)

Note: 95% CI, 95% confidence intervals

The proportion of women in the sandwich generation providing non-financial transfers to parents and children doesn't vary by educational attainment (Figure 7). Providing childcare to grandchildren is associated with lower educational attainment as shown in Figure 7; 58% of women with primary education looked after grandchildren in the past month, compared with 20% of women with tertiary education.

Primary education

Secondary education

Tertiary education

Office Secondary education

Formary education

Secondary education

Formary education

Tertiary education

Formary education

Tertiary education

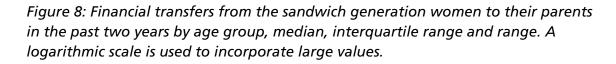
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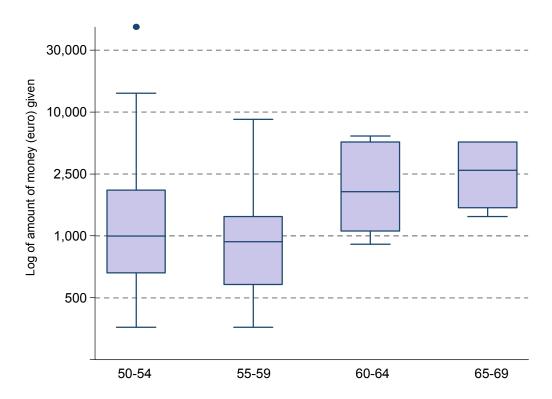
Figure 7: Intergenerational transfers by educational attainment in sandwich generation women

Note: error bars correspond to 95% confidence intervals

3.3 Financial transfers from the sandwich generation women to two generations

Sandwich generation women also provide financial help to both their parents and children. While the proportion of sandwich generation women who provide financial transfers is substantial the amount of money given varies. A higher proportion provides financial support to their children than their parents with a similar average value of support of around €2000 in the past two years. The level of financial help provided to parents is illustrated in Figure 8. The average value of money given in the past two years to parents was €2000; the range of money given is shown by age group. There is a wide variation in the amount of money given by women to their parents, and the average amount given increases with age (Figure 8).

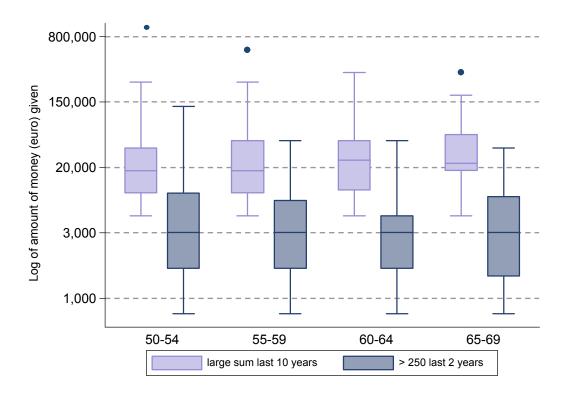




Sandwich generation women who give financial transfers to their parents are more likely to have higher educational attainment (see Figure 7). Women who have tertiary level education were almost three times more likely to have provided financial support in the past two years to their parents than women with primary education (14% compared with 5%). Financial transfers to children are also associated with higher educational achievement; 82% of women with tertiary education financially supported their children in the past two years, compared with 51% of women with primary education.

Financial transfers from sandwich generation women to their children are illustrated in Figure 9. Almost one-quarter of the women gave a large financial gift to their children greater than €5,000 in the past 10 years. The average value of this gift was €45,100 and again there was a wide range in the amount given. Other financial transfers of more than €250 given by women to their children in the past two years are also shown in Figure 9 by age group. The average amount given overall was €3,000, and this was similar for each age group, although the range varied.

Figure 9: Financial transfers from the sandwich generation women to their children by age, large sums in the past ten years, and >€250 in the past two years, median, interquartile range and range. A logarithmic scale is used to incorporate large values.



3.4 Sandwich generation women gave simultaneously to both generations

Sandwich generation women who provide non-financial transfers to their parents are also more likely to be providing both financial and non-financial support to their children (Table 5). Other non-financial transfers to children are also associated with younger age (Figure 6) and with providing financial help to their children. Table 5 shows that three-quarters of women who have provided non-financial help to their children have also provided financial help in the past two years. More than half of women who looked after grandchildren in the past month also helped their children with other activities in the past month (Table 5).

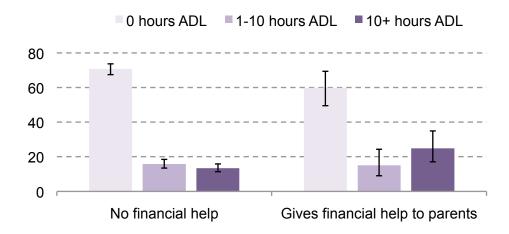
More than three-quarters of women (79%) who were financially supporting their parents were also financially supporting their children. Additionally 71% also gave other non-financial care to their parents, one-third to their children and one-quarter looked after grandchildren. Women who give financial support to their children are also more likely to be supporting their children with other activities (37%) and to be providing ADLs to their parents (60%). The distribution of other types of transfers by the sandwich generation women who give financial transfers to their parents is shown in Table 5.

Table 5: Sandwich generation women who give one type of transfer by other transfers: column percentage giving other types of transfers also.

	Non-Financial Transfers		Looking After Grandchildren	Financial	Financial Transfers	
	To Parents	To Children		To Parents	To Children	
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	
Non-financial Transfers						
To parents	-	66.1 (60.7 – 71.1)	59.6 (54.3 – 64.8)	71.2 (61.3 – 79.5)	59.8 (56.1 – 63.5)	
To children	39.0 (35.0 – 43.1)	-	54.1 (48.6 – 59.6)	33.6 (24.4 – 44.3)	36.7 (33.1 – 40.4)	
Childcare of Grandchildren	39.1 (34.8 – 43.7)	60.2 (54.8 – 65.5)	-	26.6 (18.4 – 36.8)	35.5 (31.8 – 39.3)	
Financial Transfers						
To parents	10.9 (8.6 – 13.6)	8.7 (6.2 – 12.1)	6.2 (4.1 – 9.1)	-	9.8 (7.8 – 12.1)	
To children	73.7 (69.4 – 77.6)	76.5 (71.1 – 81.2)	66.6 (60.9 – 71.8)	78.8 (68.5 – 86.4)	-	

Note: 95% CI, 95% confidence intervals

Figure 10: Financial transfers to parents by numbers of hours support towards activities of daily living (ADL) provided per week to parents in sandwich generation women.



Note: ADL defined as basic personal activities such as dressing, eating and bathing. Error bars correspond to 95% confidence intervals.

Figure 10 shows that sandwich generation women providing financial support to their parents are also more likely to be providing support towards ADLs. Overall 40% of women providing financial support to their parents are also providing some ADLs per week, compared with 29% of women not providing financial transfers and 25% of them were providing at least 10 hours of care per week.

4

Impact of intergenerational transfers on self-reported health of women in the sandwich generation

Research suggests that the impact of providing intergenerational support on women's health varies by the type of support given. Giving financial support to your children has been associated with improved self-rated health (Li, Song & Feldman, 2009), and improved mental health (Roll & Litwin, 2010). This positive association with providing financial support to children is hypothesised to be the result of altruistic motivations for giving (Roll & Litwin, 2010). Non-financial giving in the form of caring for elderly parents has been found to be negatively associated with health. Informal care giving at the population level has been associated with poor self-reported health (Coe & Van Houtven, 2009; Legg at al, 2013) and depressive symptoms (Amirkhanyan & Wolf, 2006; Coe & Van Houtven, 2009) in other countries. This effect increased with increased numbers of hours of care given (Legg et al., 2013) and with numbers of years of caring provided (Coe & Van Houtven, 2009). Taking over caring for grandchildren has also been associated with increased depressive symptoms and poorer physical health in grandmothers with worsening physical health and increased stress over time (Musil et al, 2011).

4.1 Self-reported health measures

We examined the impact of intergenerational giving on the health of women in the sandwich generation in Ireland. Self-reported physical and mental health was collected through the following questions.

Self-rated health

Participants were asked to self-rate their health relative to other people their own age: "In general, compared to other people your age, would you say your health is, excellent, very good, good, fair or poor?" This was grouped as excellent or very good, good and fair or poor.

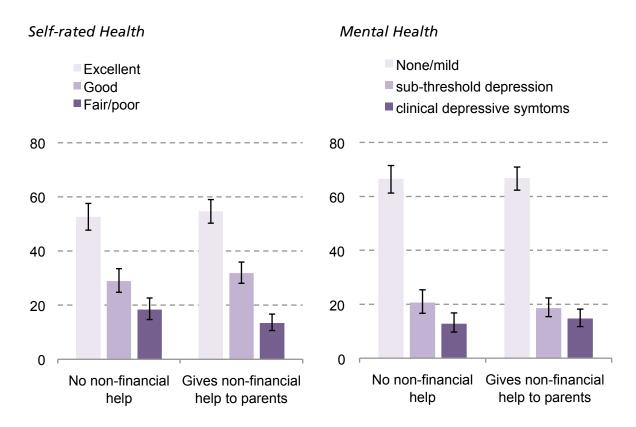
Mental Health

Depressive symptomology was measured with the Centre for Epidemiological Studies Depression scale (CES-D) (Beekman et al 1997). Each item requests a frequency score from never to almost all the time. This 20-item scale measures depression. The score was grouped as: no clinical symptoms if scored <7, sub-threshold depression was classified as a person with depressive symptoms but did not meet the criteria for a depressive disorder if scored from 7-15 and a score >15 as met the criterion for a major depressive disorder (Vahia et al 2010).

4.2 Non-financial transfers and health in sandwich generation women

There is no difference in self-rated health relative to other women their own age in women who give non-financial transfers to their parents in the form of informal care and those who do not. Over half of women report their health as excellent relative to other women their own age. There is also no difference in mental health between these women (Figure 11).

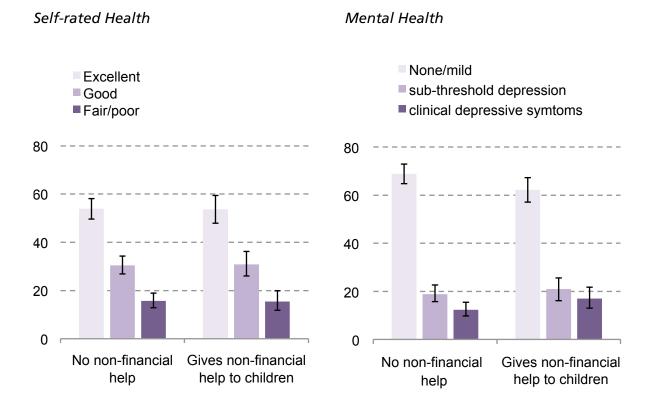
Figure 11: Non-financial transfers to parents and self-reported health in sandwich generation women



Note: Error bars correspond to 95% confidence intervals.

There is also no difference in self-rated health in sandwich generation women who give other non-financial transfers to their children and those who do not (Figure 12). Overall 54% report their health as excellent relative to other women their own age and 16% as fair or poor. Clinical depression is more common in women who give non-financial help to their children, 17% have severe depressive symptoms compared with 14% who have not given time transfers to their children in the past two years (Figure 12).

Figure 12: Non-financial transfers to children and self-reported health in sandwich generation women



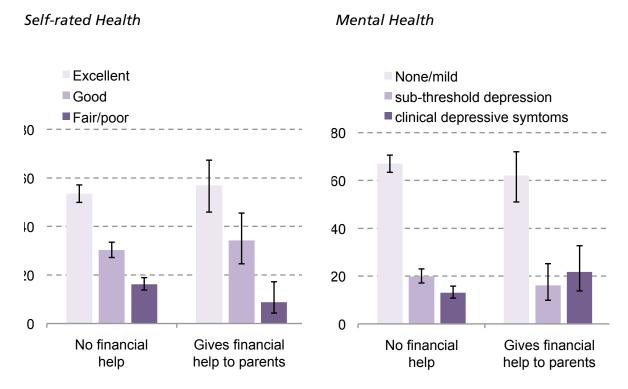
Note: Error bars correspond to 95% confidence intervals.

This relationship between informal caring and depression has been well documented. We hypothesis that some of this association with poorer mental health may reflect the associated stress of providing dual care, to both parents and children, draining both time and finances. Table 5 showed that two-thirds of women who provide help to their children are also providing informal care to their parents. Furthermore two-thirds of sandwich generation women who provide time to their children also provide their children with financial help.

4.3 Financial transfers and health in sandwich generation women

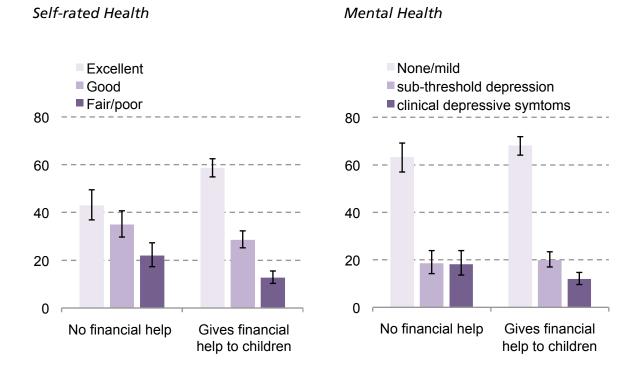
Figure 13 shows self-reported physical and mental health in women who provided financial transfers to their parents in the past two years. More than half of the sandwich generation women (54%) rated their health to be excellent, compared to other women their own age and this is similar for both those who did and did not provide financial support to their parents. Of the sandwich generation women who gave no financial support to their parents, 16% rated their health as fair or poor, and 9% of those women who did give financial support to their parents in the last two years (Figure 13). However financially giving to parents is associated with case-level depression, and 22% who financially supported their parents in the last two years were clinically depressed, compared with 13% of those sandwich generation women who did not transfer money to their parents in the past two years.

Figure 13: Financial transfers to parents and self-reported health in sandwich generation women



Note: Error bars correspond to 95% confidence intervals.

Figure 14: Financial transfers to children and self-reported health in sandwich generation women



Note: Error bars correspond to 95% confidence intervals.

Figure 14 shows self-reported health in sandwich generation women by whether they financially supported their children in the past two years. Financially giving to children is associated with better self-rated health, women are more likely to rate their health as excellent relative to women their own age (59% compared with 43% who did not give financially to their children) and only 13% rate their health as fair or poor compared with 22% of women who did not report giving. There is no statistically significant difference in mental health between the two groups, with 18% who give no financial help to their children clinically depressed compared with 12% of those who did financially support their children.

Conclusions

One- third of women aged 50-69 in Ireland are in the sandwich generation and the majority are providing care to both elderly parents and dependent children. Almost two-thirds of the sandwich generation women had provided financial support to their children in the past two years and ten per cent to their parents. One-quarter gave a large financial gift to their children in the past decade. One-third help their parents with ADLs, for an average of 21 hours per week. Intergenerational giving is associated with health and impacted both positively and negatively depending on the direction of the transfers. Financial support for children is associated with improved self-rated health, but financial support for parents is associated with increased depression. This supports previous findings from cross-sectional studies where financially supporting children was found to be associated with improved self-rated health and mental health (Li et al., 2009; Roll & Litwin, 2010). Surprisingly providing non-financial care is not associated with poorer perceived physical health, but providing non-financial care to children is associated with poorer mental health. This relationship between non-financial support in the form of informal caring and poorer self-rated health and increased depression has been well documented (Lee, Colditz, Berkman & Kawachi, 2003; Legg et al., 2013; Schulz & Beach, 1999). When considering non-financial care, the type of care given and longevity of provision is important. Informal care for conditions like dementia or chronic arthritis is complex and dynamic. The longitudinal aspect of TILDA will allow the long-term effects of caring on health to be examined as the TILDA participants are followed over subsequent waves. This will provide more detail on the relationship between the types of non-financial caring given and length of provision of care.

The impact of financial giving on mental health could operate via different pathways. Providing financial support to parents may reflect more elderly, frail parents who require both informal and formal care. Women who give financial help to their parents are twice as likely to also provide ADL care for their parents. Thus the financial support provided by children may be for private home-help and the associated depression may reflect both the financial strain and the stress of informal caring for parents. Alternatively depression could be associated with the reduction in the women's savings due to financially supporting their parents, and subsequent worry about their ability to provide for themselves and both their parents and children in the future (Roll & Litwin, 2010).

The association between social inequality and health should also be considered when interpreting these results. Women with less financial ability to support their parents and children may also have poorer health due to social inequalities in health from other associations. However longevity and later childbirths are both associated with higher socio-economic groups and higher-education was associated with having both children and parents living, and less education with increased numbers of children but lower probability of parents living (Ferrie et al., 2002; Lunn & Fahey, 2011). While Wave 1 of TILDA is a cross-sectional design and so the temporal associations and the long-term effects between providing care, both financial and non-financial, and health cannot be observed. The future waves of the study will enable the relationship between self-reported health and intergenerational transfers to be fully understood and the temporal association between transfers and their impact on health will be directly measured. The breadth of health, social and economic data gathered through TILDA will allow the monitoring of change in these relationships over time as parents become more elderly and require more care and the personal and health situations of the three generations change over time. This will become particularly relevant in the context of the recent climate of austerity which will put further pressures on this generation.

In conclusion, women within the sandwich generation make an important contribution to supporting two generations; their children and their elderly parents, and this has an impact on their physical and mental health. A key challenge facing public health in Ireland will be the burgeoning ageing population and the increasing demands on the middle generation for both financial and informal care which may lead to an increasing negative impact on health. Provision of advice and support for sandwich generation women on how to plan, financially, and otherwise, for dual caring in the future may offset some of these negative effects on health. Stress management programmes have been found to be effective in preventing adverse mental health outcomes. There is a need for integrated public health policies for targeting people at risk, and the development of effective interventions to prevent ill health in this vital population.

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