Caring Responsibilities as a Career Hindrance of Mature People: Evidence from an International Survey

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Abstract:

**Purpose:** Career hindrance and development limitations among mature people who take care of others – the assessment of phenomenon.

**Design/Methodology/Approach:** Proprietary CAWI questionnaire was used. Research was conducted in 5 European countries with different welfare state regimes. The respondents were 45-65 years old. The sample comprised 2,522 people, including 634 participants who work and provide care at the same time. The data analysis methods included descriptive statistics, analysis of variance and logistic regression.

**Findings:** The conducted research made it possible to assess the phenomenon of combining professional work and taking care of dependent people in the countries covered by the research. The analysis of the research results allowed us to determine the percentage of those working and taking care of dependent people at the same time who claim that this is a barrier to the development of their professional career and improving their competences as part of potential lifelong learning activities. Additionally, the research results delivered information on the socio-economic characteristics that contribute to limiting the possibilities of competence development among working carers of dependent people.

**Practical Implications:** The distinguished socio-economic characteristics and their impact on hindering the career and development opportunities of working carers of dependent people can be used in the area of diversity management in the workplace. The results can be used to develop recommendations for people managing the team, regarding, among others, generational differentiation.

**Originality/Value:** The conducted research on the assessment of the impact of combining professional work and caring responsibilities on the hindrance of career development and limitation of development opportunities is unique.

**Keywords:** Career progression, competences, lifelong learning, care obligations, mature people, sandwich generation.

**JEL Classification:** J24, C19.

**Paper Type:** Research Paper.

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1. **Introduction**

Due to the increasingly visible effects of the aging of societies in European countries, the age structure of employees has been changing significantly. Employers are more frequently forced to take into consideration potential job candidates also from groups that are usually believed to be less active, such as mature people (aged 45+ or 50+, especially women). Therefore, in all the EU member states, the group of employees aged over 45 is constantly growing (European Commission, 2021). However, it should be noted that the changing family model and increased professional activity of women mean that many mature working people have to take care of others who depend on them. Combining the roles of an employee and a carer may result in less interest in raising competences by mature people.

As shown by international comparative data (Eurostat, 2016), the average share of people aged 55-64 involved in lifelong learning activities in the European Union (31.6%) is over 12 pp. lower than the average share of people aged 25-64 (43.7%) and by over 20 pp. lower than the share of the youngest group, that is, people aged 23-34 (52.2%). It should be emphasized that the situation varies in EU member states. For example, in Belgium the percentage of people aged 55-64 involved in lifelong learning is 29.2%, in Finland it is 34.3%, whereas in Poland only 13.4%. Low interest in lifelong learning may consequently reduce the attractiveness of this age group on the labour market, especially since the European Skills Agenda (European Commission, 2016) assumes that by 2030 the share of adult Europeans in lifelong learning should reach an average of 60%. Increasing the effectiveness of activities that could increase motivation to participate in lifelong learning in older age groups requires a special approach (Strom, 1999).

Economic practice shows that not only the age structure of employees is changing. The dynamic development of modern technologies means that people have to face different challenges more frequently than they did before. It is worth noting that the emergence of modern solutions leads not only to the elimination of outdated professional tasks but also to the occurrence of new duties. In order to perform them, mature employees should be able to constantly improve their knowledge, competences as well as skills. However, professional development is not easy for mature people, especially for women who are often involved in various caring responsibilities resulting from their roles of mothers or grandmothers. According to the results of the CATI research carried out among Polish mature women, designed by the authors and conducted by a specialized company in 2019 on a representative sample of 1000 respondents aged 45-65, only slightly more than 1/3 feel the support of the environment in their activities for professional development. The same research shows that nearly half of Polish women from this age group (49%) take care of dependent people.
The results of research conducted in Poland among mature women prompted us to plan and conduct comparative international studies in five European countries dedicated to the caring responsibilities of mature people. The main objective was to assess the intensity of taking care of dependent people by those aged 45-65 and, above all, to evaluate the frequency of combining professional work with taking care of other people by mature adults. While conducting the research, we were interested in the impact of the care on the professional career, and we wanted to check how people perceive their career in the context of family responsibilities. This article presents selected research results concerning factors influencing the career, education and professional development of mature people. We posed three research questions:

1. Which socio-economic characteristics have a significant impact on career hindrance and limitation of lifelong learning among mature people?

2. To what extent do caring responsibilities hinder the careers of mature people?

3. To what extent do caring responsibilities limit the education and development of competences of mature people?

2. Theoretical Background

The growing importance of 50 or 60-year-olds (the generation of baby boomers) on the labour market coincides with the increase in their family responsibilities resulting from the need to care for dependent people (Van Bavel, De Winter, 2013). Due to insufficient help from the state and the cultural determinants of the importance of family roles, taking care of other family members, formally or informally, becomes an increasingly popular phenomenon in European societies (Bonsang, 2009; Herlofson and Brandt, 2019; Pocock and Charlesworth, 2017) and has an impact on the careers of carers. The issue of taking care of dependent people, especially the elderly, and its impact on the professional activity of women and men, has been raised, among others, by Given and Given (1991), who analysed the influence of providing care on health and employment of carers, or Coyne, Coyne, and Lee (2003), who checked the impact of taking care of dependent people on the career and aspirations of both men and women based on the research results from the USA and Great Britain. Toljamo, Perälä, and Laukkala (2012) analysed the influence of negative and positive factors resulting from caring for dependent people in Finland, whereas Lin et al. (2003) - different models of care provided by adult children for their parents. Strom, Strom (2020), on the other hand, analysed the issues of educating adults who are involved in family responsibilities.

Mature people who are the representatives of the Sandwich Generation i.e., who take care of dependent relatives from two generations have a particularly difficult role to play. Therefore, special attention was paid to this group of respondents in the analysis. For the purpose of the research, we adopted the definition of the Sandwich Generation consistent with most of the approaches presented in the literature on the
subject (Burke and Calvano, 2017; Riley and Bowen, 2005; DeRigne and Ferrante, 2012; Pagani and Marenzi, 2008; Steiner and Fletcher, 2017). By Sandwich Generation representatives we meant people taking care of family members from the younger (children, grandchildren), the same or the older generation (parents, in-laws, uncles), and devoting a total amount of more than 3 hours a week to that care. It is worth emphasising that while the issue of carers of dependent people is presented in the literature in an extensive manner, the Sandwich Generation is a relatively new term in both research and practical activities.

Until recently, this target group was rarely dealt with, whereas in some countries, such as those from the former Eastern Bloc, this phenomenon is still not recognized – a phenomenon which, especially in the context of extending life expectancy of women becomes very important for mature women, employers, as well as dependent people and decision makers who create the law. The scale of the Sandwich Generation phenomenon results, on the one hand, from demographic changes, and on the other one, from the later achievement of full financial independence by young people.

3. Research Methodology

3.1 Data Collection and Preparation

Comparative research on representative samples of Internet users was conducted in the period of September - November 2020 using Computer-Assisted Web Interview (CAWI). The research involved people aged 45-65 from five European countries different in terms of the adopted welfare state regimes, Belgium (only Flanders) with Continental welfare state regime, Finland with Social Democratic welfare state regime, Great Britain with Liberal welfare state regime, Italy with South European welfare state regime, and Poland with Central and Eastern European welfare state regime (Ebbinghaus, 2012; Eikemo et al., 2008; Emigh et al., 2018; Esping-Andersen, 1990).

Respondents from each country completed the same research questionnaire form prepared in the national language of the country (in the case of Belgium it was in Dutch). In the process of preparing the research tool, we strove to ensure that the content of the questions was properly understood by potential respondents. The questionnaire form was prepared in Polish, translated by a native speaker into English, and then translated into the national languages of research participants by native speakers again. The assumed sample size for each country was 500 people.

At the level of a country, the sample was of random-quota nature and it was representative in terms of characteristics such as gender, education and place of residence. The quotas were established based on the structure of people aged 45-65 in specific countries (Eurostat database, 2019). In the course of the research, we strove to ensure the greatest possible randomness of the recruited respondents by
using various methods of reaching them, including primarily Internet panels operating in a given country. The main questionnaire form comprised 51 questions, mostly closed-ended ones, but there were also 14 questions in the screener section and 10 in the section with respondents characteristics. The respondents were not supposed to answer all the questions in the main part of the questionnaire form - the choice of questions depended on the answers given in the screener, for example, regarding the employment situation or taking care of other people. The average duration of an interview was 12 minutes. The study was conducted by a company that specialises in public opinion polls, and the research questionnaire was approved by the ethics committee of Wroclaw University of Economics and Business. Participation in the study was voluntary. The respondents were informed that the interview is completely confidential and will be conducted in line with ethical standards of opinion and market research, and the results will be analysed only in an aggregated form.

The main objective of the research was to obtain data about people aged 45-65 in terms of caring responsibilities, their impact on professional life and possibilities of improving competences, as well as information about the atmosphere and solutions functioning in the workplace that facilitate/ hinder combining work and family responsibilities. In addition, special attention was paid to people from the Sandwich Generation, that is, those who are involved in taking care of family members from the younger (e.g., children, grandchildren) the same and the older generation (e.g., parents, relatives, life partners).

In the case of some answers to the questions in the questionnaire, the input data were recoded due to the methodological requirements of the research tools used. This situation concerned mainly the 5-point Likert scale (from 1 - I do not agree at all to 5 - I fully agree), whereas the answers were aggregated into two states: “I agree” and “I do not agree”. Variables which were a combination of answers from several questions also had to be prepared. For the purpose of the research, it was assumed that people involved in taking care of others are those who provide this care on average over 3 hours a week, whereas working people are those who perform their professional duties more than fifteen hours a week. In the case of the Sandwich Generation, an additional condition was taking care of younger and same/older generation representatives at the same time.

3.2 Sample Characteristics

During the research, we collected 2.522 completed questionnaire forms. The characteristics of the research sample in terms of selected features are presented in Table 1. The share of respondents according to gender and distinguished age groups was comparable. As for the education level, most people had secondary/post-secondary education, followed by tertiary/academic degree, whereas the least numerous group were people with primary education or lower. The situation was different across countries, mainly due to the participation of representatives with
different education levels, which corresponded to the structure of the population covered by the research. About half of the respondents lived in towns with the population of no more than 50,000 (total 54.1%), whereas the smallest was the share of respondents from large cities, with the population of more than 500,000 (total 13.6%).

**Table 1. Sample characteristics – percentage of respondents (N = 2522)**

| Characteristic                  | Categories                   | %   |
|--------------------------------|------------------------------|-----|
| Gender                         | Female                       | 50.2|
|                                | Male                         | 49.8|
| Age                            | 45-50                        | 27.1|
|                                | 51-55                        | 21.8|
|                                | 56-60                        | 24.4|
|                                | 61-65                        | 26.8|
| Education level                | Primary or lower             | 21.0|
|                                | Secondary, post-secondary    | 47.1|
|                                | Tertiary, academic degree    | 32.0|
| Place of residence – inhabitants’ number | up to 20,000 | 36.0|
|                                | up to 50,000                 | 18.1|
|                                | up to 100,000                | 14.7|
|                                | up to 500,000                | 17.7|
|                                | over 500,000                 | 13.6|

*Source: Own elaboration.*

The respondents varied in terms of their status on the labour market. The most numerous group (51.7%) included people employed by someone else, mainly full-time. The percentage of self-employed people in the research sample was 6.6%, 2/3 of which worked full-time. The remaining respondents were not employed at all. Only few of the respondents combined working for someone else with self-employment.

**3.3 Analytical Methods**

In this article, we used various statistical methods: descriptive statistics, analysis of variance and logistic regression. One-way ANOVA was used to gain information about differences in dependent variables across countries. Post hoc Tukey’s HSD test for multiple comparisons (Abdi and Williams, 2010; LeBlanc, 2004) was used when significant differences were discovered to find pairs of countries for which means differ significantly.

Logistic regression was used to identify socio-economic characteristics that have a significant impact on the perception of care as a barrier to the development of career and competencies. Logistic regression models were fully assessed based on chi-square omnibus test of model coefficients and pseudo-R square values, Cox & Snell and Nagelkerke. The omnibus test verifies if a model including a set of proposed
explanatory variables gives an improvement over the baseline model (Meyers et al., 2006). Pseudo R-square measures are mostly used for comparisons between models than as an absolute measure of fit (Gordon, 2012). Individual parameters estimates were tested by the Wald statistic (Cohen et al., 2003). Odds ratios were used for the interpretation of the influence of independent variables on the binary outcome. The cut-off or significance level of 0.05 was used in statistical testing procedures, both in ANOVA and logistic regression modelling. IBM SPSS Statistics 27 software was used for the computations.

4. Results

4.1 Combining Work and Care Obligations – Extent and Characteristics of the Phenomenon

In the group of people aged 45-65, 40% of the respondents declared that they took care of others more than three hours a week. Interestingly, the percentage of women was higher by 7 pp. than the percentage of men. The highest percentage was noted for women in Poland (61%) and for men in Italy (50%). The least burdened with caring responsibilities were the inhabitants of Finland – 33% of women and 26% of men.

Respondents working more than fifteen hours a week and taking care of other people more than three hours a week accounted for 25% of the research sample, with a similar share of men and women. The situation looked different across countries, with the highest percentage of professionally active people taking care of others in Poland (38%) and Italy (32%), and with the lowest in Belgium and Great Britain (18% each). In three countries - Belgium, Finland and the Great Britain - the share of women and men was comparable. In Poland, women more often combined professional and caring responsibilities (41% of women vs. 36% of men), whereas in Italy the situation was the opposite (38% of men vs. 26% of women). About 48% of the respondents had secondary/post-secondary education, 39% tertiary/academic degree, whereas around 13% had primary education or lower.

The average age of people combining professional and caring responsibilities was 52, but it is worth noting that this group included respondents aged 45 and 65, that is, the youngest and the oldest research participants. According to the adopted assumptions, people working more than fifteen hours a week and taking care of others more than three hours a week were taken into account. In fact, the declared average work time was over 38 hours a week, and the time spent performing caring responsibilities was 17.5 hours. For both of these characteristics, a large variation in the values for individual respondents was noted. The standard deviation was 9.4 and 16.9, respectively.

Depending on the country, the percentage of people caring for both younger and older/same generation representatives ranged from 5.6% for Great Britain to 24.7%
for Italy. In each of the countries covered by the research, the share of women in this group was higher than the share of men. The biggest difference at the level of 9.6 pp was noted in Poland, whereas the smallest - in Italy (2.9 pp). Further analyses were carried out on the subsample of respondents who combine work and care obligations.

4.2 Impact of Caring Responsibilities on Career Progression

Assessment of the impact of caring responsibilities on mature people's career progression was based on the answers to the statement: *Family/caring responsibilities are holding back my professional career.* 19.2% of the respondents agreed with this statement. 1 in 20 people (5.2%) experienced a negative impact of caring responsibilities on their career development, and for 14% this impact is noticeable, although to a lesser extent. For over half of the respondents (55.0%) taking care of others did not limit their professional career. 1 in 4 people (25.7%) did not express any opinion on that.

In order to identify differences in the opinions expressed by respondents from different countries, we performed one-way ANOVA (see Table 2). The analysis of variance showed that there was no statistically significant difference in the values of the variable describing the degree of career hindrance between the groups covered by the research ($F = 2.137$, $p = 0.075$). The results indicate that the respondents from the countries covered by the research assessed the impact of caring responsibilities on their career in a similar way.

| Dependent Variable | Sum of Squares | df | Mean Square | $F$ | p-value |
|--------------------|----------------|----|-------------|----|---------|
| Impact on career progression | Between Groups | 11.328 | 4 | 2.832 | 2.137 | 0.075 |
| | Within Groups | 833.454 | 629 | 1.325 | | |
| | Total | 844.782 | 633 | | | |
| Impact on education/competences improvement | Between Groups | 22.079 | 4 | 5.520 | 4.068 | 0.003 |
| | Within Groups | 853.550 | 629 | 1.357 | | |
| | Total | 875.629 | 633 | | | |

*Source: Own elaboration.*

Whether or not taking care of others affects professional career depends on different factors. As potential determinants, the following socio-economic characteristics were taken into account, gender, age, education level, average number of hours spent at work per week, average number of hours spent taking care of other people per week, and the fact of belonging to the Sandwich Generation. In order to evaluate the significance and direction of the impact of the above-mentioned determinants, logistic regression was used, in which the dependent variable was recoded into a binary one (responsibilities hinder professional career vs do not hinder professional...
career). Omnibus test of model coefficients reveals that the model with independent variables is better than the null model (chi square statistic = 23.612, p = 0.001). Pseudo-R square coefficients are as follows: Cox and Snell R square = 0.049 and Nagelkerke R square = 0.072). Detailed results of the estimation of logistic regression parameters are presented in Table 3. Both positive and negative coefficients were obtained, which indicates a different direction of the impact of the factors under consideration. The Wald test indicates that the variables of significant impact include age (Wald = 4.778, p = 0.029), care hours (Wald = 4.754, p = 0.029) and the fact of belonging to the Sandwich Generation (Wald = 7.383, p = 0.007). The values of odds ratios (exp(B)) allow us to conclude that:

- The strongest impact has been observed for the categorical variable representing the fact of belonging to the Sandwich Generation. This fact increases the odds of career hindrance 1.827 times compared to the situation when someone takes care of people from one generation only.
- The age of the respondent has a negative effect. A person one year older is 0.954 times less likely to admit that caring responsibilities affect their career progression.
- The number of care hours has a positive effect. Spending one hour more per week taking care of others increases the odds of career hindrance 1.013 times.

Table 3. Results of logistic regression – dependent variable: impact on career progression (N = 471)

| Variable      | B    | Standard Error | Wald  | df | p-value | Exp(B) |
|---------------|------|----------------|-------|----|---------|--------|
| Gender        | 0.172| 0.227          | 0.571 | 1  | 0.450   | 1.187  |
| Age           | -0.047| 0.021         | 4.788 | 1  | 0.029   | 0.954  |
| Education     | -0.672| 0.343         | 3.840 | 1  | 0.050   | 0.511  |
| Education - tertiary | -0.291| 0.340         | 0.734 | 1  | 0.392   | 0.747  |
| Work hours    | 0.000| 0.012          | 0.001 | 1  | 0.980   | 1.000  |
| Care hours    | 0.013| 0.006          | 4.754 | 1  | 0.029   | 1.013  |
| SG            | 0.603| 0.222          | 7.383 | 1  | 0.007   | 1.827  |
| Constant      | 1.249| 1.294          | 0.932 | 1  | 0.334   | 3.487  |

Source: Own elaboration.

4.3 Impact of Caregiving on Competences Improvement

The impact of caring obligations on educational involvement and competence development of adults was analysed on the basis of answers to the following statement: Family/caring responsibilities prevent me from taking up education/improving my professional competences. 23.2% of the respondents claimed that taking care of other people limit their involvement in activities related to lifelong learning. 6.3% of the respondents expressed such a view with full conviction (“I completely agree”), whereas 16.9% replied “I rather agree”. A
significant percentage of the respondents (29.0%) did not express any clear opinion on this issue. For less than half of the respondents (47.8%), taking care of others did not create barriers in the area of education and competence improvement. Relatively many respondents (21.3%) claimed they did not experience any negative impact (“I completely disagree”).

In order to evaluate differences in the assessment of the impact of caring for others on lifelong learning in different countries, one-way ANOVA (Table 2) was used. The results of the variance analysis indicate that there is a statistically significant difference between the countries covered by the research in the perception of care as a factor hindering professional development (F = 4.068, p = 0.003). Due to the differences, we carried out post hoc tests to verify them in detail. Tukey’s HSD test for multiple comparisons shows that statistically significant differences occurred for the following pairs of countries: Belgium and Poland (mean difference = -0.444, p = 0.023), Belgium and Italy (mean difference = -0.463, p = 0.021). The Poles and Italians, more frequently than the Belgians, feel the negative impact of care on activities connected with their education and competence improvement. As for other pairs of countries, there were no statistically significant differences.

Table 4. Results of logistic regression – dependent variable: impact on education and competences improvement (N = 450)

| Variable                  | B     | Standard Error | Wald   | df | p-value  | Exp(B) |
|---------------------------|-------|----------------|--------|----|----------|--------|
| Gender                    | -0.017| 0.224          | 0.006  | 1  | 0.939    | 0.983  |
| Age                       | -0.085| 0.021          | 15.669 | 1  | 0.000    | 0.919  |
| Education secondary       | -0.070| 0.341          | 0.042  | 1  | 0.837    | 0.932  |
| Education - tertiary      | -0.432| 0.354          | 1.492  | 1  | 0.222    | 0.649  |
| Work hours                | 0.017 | 0.012          | 2.079  | 1  | 0.149    | 1.017  |
| Care hours                | 0.014 | 0.006          | 5.316  | 1  | 0.021    | 1.014  |
| SG                        | 0.792 | 0.221          | 12.853 | 1  | 0.000    | 2.208  |
| Constant                  | 2.727 | 1.295          | 4.436  | 1  | 0.035    | 15.293 |

Source: Own elaboration.

Using logistic regression, we checked whether the previously indicated socio-economic characteristics (gender, age, level of education, average number of hours spent at work per week, average number of hours spent taking care of others per week, belonging to the Sandwich Generation) have an impact on whether or not taking care of others limits the possibilities of lifelong learning. The dependent variable has been recoded into a binary one (caring responsibilities limit learning and competence improvement vs they do not). Omnibus test of model coefficients reveals that the model with independent variables is better than the null model (chi square statistic = 43.244, p = 0.000). Pseudo-R square coefficients are as follows: Cox and Snell R square = 0.092 and Nagelkerke R square = 0.128). Table 4 shows detailed results concerning the individual parameters of logistic regression. The coefficients have different signs, which allows us to identify different directions of
the impact of exploratory variables. The Wald test indicates that the variables of significant impact include age (Wald = 15.669, p = 0.000), care hours (Wald = 5.316, p = 0.021) and the fact of belonging to the Sandwich Generation (Wald = 12.853, p = 0.000). The obtained values of odds ratios (exp(B)) allow us to conclude that:

- The strongest impact has been observed for the categorical variable representing the fact of belonging to the Sandwich Generation. This fact increases the odds of limiting competence improvement 2.208 times compared to the situation when someone takes care of people from one generation only.
- The age of the respondent has a negative effect. A person one year older is 0.919 times less likely to admit that caring obligations affect education and improvement of competences.
- The number of care hours has a positive effect. Spending one hour more per week taking care of others increases the odds of career hindrance 1.014 times.

5. Discussion and Conclusion

Demographic changes, lack of specialists on the labour market and the constantly increasing group of employees aged 45-65 make it necessary for employers to change their attitude towards mature adults. They should note that mature people have enormous potential and valuable experience as well as qualifications that young people do not possess. However, the change of attitude and noticing the potential must be accompanied by specific support activities, tailored to the needs and expectations of mature people, especially those from the Sandwich Generation. According to the results of conducted analyses, the categorical variable representing the fact of belonging to the Sandwich Generation has the strongest impact on career hindrance and limitation of possibilities of competence improvement. Belonging to this group almost doubles the odds of career hindrance or limitation of competence development compared to the situation when someone takes care of people from one generation only.

The relationship between taking care of other people, especially in the Sandwich Generation, and professional development, has significant consequences for management. The management style should reflect the understanding of the ongoing demographic changes, the necessity and the ability to manage employees of different ages and at different stages of life. In diversity management, it is important to have a positive attitude towards older employees and to create opportunities to develop their potential. The ability to plan the work of older employees and integrate them in all areas of the organization’s operation is also important. The significance of professional development opportunities for mature people speaks in favour of continuing research in this field.
It is also worth pointing to the limitations of the research, the results of which are presented in the article. Firstly, it is limited to only five European countries, which may not provide a full image of the situation. The second issue concerns the method of data collection. CAWI determines the selection of respondents to a certain extent, increasing chances for those who are more digitally mobile, which, even if the sample is representative due to a number of demographic and social characteristics, may in some way influence the obtained results.

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References:

Abdi, H., Williams, L.J. 2010. Tukey’s honestly significant difference (HSD) test. In: Salkind N. (Ed.), Encyclopedia of Research Design. Sage Publications, Thousand Oaks.

Bonsang, E. 2009. Does informal care from children to their elderly parents substitute for formal care in Europe? Journal of Health Economics, 28(1), 143-154. ISSN 0167-6296, doi: 10.1016/j.jhealeco.2008.09.002.

Burke, R.J., Calvano, L.M. (Eds.). 2017. The Sandwich Generation - Caring for Oneself and Others at Home and at Work. New Horizons in Management series, Edward Elgar Publishing.

Cohen, J., Cohen, P., West, S.G., Aiken, L.S. 2003. Applied multiple regression/correlation analysis for the behavioral sciences. Lawrence Erlbaum Associates Inc., Mahwah, New Jersey.

Coyne, E.J., Coyne, E.J., Lee, M. 2003. Human Resources, Care Giving, Career Progression and Gender: A Gender-Neutral Glass Ceiling (1st ed.). Routledge. doi: 10.4324/9780203607206.

DeRigne, L.A., Ferrante, S. 2012, The Sandwich Generation: A Review of the Literature. Florida Public Health Review, Vol. 9, Article 12. https://digitalcommons.unf.edu/fphr/vol9/iss1/12.

Ebbinghaus, B. 2012. Comparing Welfare State Regimes: Are Typologies an Ideal or Realistic Strategy? ESPAnet Conference. Edinburgh, UK. https://dokument.pub/welfare-state-regimes-are-an-ideal-or-realistic-strategy1-flipbook-pdf.html.

Eikemo, T.A., Bambara, C., Joyce, K., Dahl, E. 2008. Welfare state regimes and income-related health inequalities: A comparison of 23 European countries. European Journal of Public Health, 18(6), 593-599, doi: 10.1093/eurpub/ckn092.

Emigh, R.J., Feliciano, C., O’Malley, C., Cook-Martín, D. 2018. The Effect of State Transfers on Poverty in Post-Socialist Eastern Europe. Social Indicators Research, 138(2), 545-574. doi: 10.1007/s11205-017-1660-y.

Esping-Andersen, G. 1990. The Three Worlds of Welfare Capitalism. Princeton University Press.
European Commission. 2016. European Skills Agenda for Sustainable Competitiveness. Social Fairness and Resilience. https://ec.europa.eu/social/main.jsp?catId=1223&langId=en.

European Commission. 2021. The 2021 Ageing Report Economic and Budgetary Projections for the EU Member States (2019-2070). https://ec.europa.eu/info/sites/default/files/economy-finance/ip148_en_0.pdf.

Eurostat. 2016. Participation rate in informal learning by sex and learning form. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Participation_rate_in_informal_learning_by_sex_and_learning_form,_2016_(%25_of_the_population_aged_25_to_64_in_the_last_12_months).png.

Given, B.A., Given, C.W. 1991. Family Caregiving for the Elderly. Annual Review of Nursing Research, 9(1). doi: 10.1891/0739-6686.9.1.77.

Gordon, R.A. 2012. Applied statistics for the social and health sciences. Routledge, New York.

Herlofson, K., Brandt, M. 2019. Helping older parents in Europe: the importance of grandparenthood, gender and care regime. European Societies (first online). doi: 10.1080/14616696.2019.1694163.

LeBlanc, D.C. 2004. Statistics: concepts and applications for science. Jones & Bartlett Publishers, Sudbury, MA.

Lin, I.F., Goldman, N., Weinstein, M., Lin, Y.H., Gorondo, T., Seeman, T. 2003. Gender Differences in Adult Children's Support of Their Parents in Taiwan. Journal of Marriage and Family, 65, 184-200. doi: 10.1111/j.1741-3737.2003.00184.x.

Meyers, L.S., Gamst, G., Guarino, A.J. 2006. Applied multivariate research: Design and interpretation. Sage Publications, Thousand Oaks.

Pagani, L., Marenzi, A. 2008. The labor market participation of sandwich generation Italian women. Journal of Family and Economic Issues, 29(3), 427-444.

Pocock, B., Charlesworth, S. 2017, Multilevel Work–Family Interventions: Creating Good-Quality Employment Over the Life Course. Work and Occupations, 44(1), 23-46. doi:10.1177/0730888415619218.

Riley, L.D., Bowen, C.P. 2005. The Sandwich Generation: Challenges and Coping Strategies of Multigenerational Families. The Family Journal, 13(1), 52-58.

Strom, R.D., Strom, P.R. 2020. Productive aging: peer influence and retirement. Educational Gerontology. doi: 10.1080/03601277.2020.1807085.

Strom, R.D. 1999. Lifelong Learning for Grandparents: Cultural Considerations in Taiwan and the United States. Journal of Family Studies, 5(2), 157-179. doi: 10.5172/jfs.5.2.157.

Steiner, A.M., Fletcher, P.C. 2017. Sandwich Generation Caregiving: A Complex and Dynamic Role. Journal of Adult Development, 24(2), 133-143, doi: 10.1007/s10804-016-9252-7.

Toljamo, M., Perälä, M.L., Laukkala, H. 2012. Impact of caregiving on Finnish family caregivers. Scandinavian Journal of Caring Sciences, 26, 211-218. doi: 10.1111/j.1471-6712.2011.00919.x.

Van Bavel, J., De Winter, T. 2013. Becoming a Grandparent and Early Retirement in Europe. European Sociological Review, 29(6), 1295-1308. doi: 10.1093/ESR/JCT005.