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## A Third Child in the Family: Plans and Reality among Women with Various Levels of Education\*

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**Abstract:** The article focuses on an analysis of the conditions and context surrounding the birth of a third child in the family, and especially on discovering the relationship between the likelihood of the birth of a third child and the level of attained education of the mother. The data in the analysis are drawn from the 'Family and Fertility Survey 1997', as one of the few available data sources enabling a more complex study of this issue. The original sample of individual data was used in the analysis, which covers 1735 women of reproductive age, between 15 and 44 years old. The first part of the paper is devoted to the relationship between the level of education of a woman and the planned number of children. A key section of the paper then focuses on an analysis of the factors that influence the likelihood of the birth of a third child, conducted using a regression model of relative risk (Cox's regression). Within the framework of observed indicators a woman's education proved itself to be the strongest predictor. A demonstrable influence on the likelihood of a third child in the family is also the fact of whether a woman practices a religious faith. The second part of the article focuses, on the one hand, on opinions about having a family and a professional career among women with various levels of education, and, on the other hand, on the broader issue of family policy, and especially its (possible?) connections with decisions concerning the number of children a woman has. The examples of Sweden and France are also presented within the analysis in the context of the discussion on family policy in the Czech Republic and its possible connections with the current process of reproductive behaviour.

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In recent years, a source of frequent discussion – and by no means among demographers alone – has been the current, historically low total fertility rate in the Czech Republic (1.14 in 2001), a situation that has persisted for approximately the past seven years. There are numerous factors counted as contributing to this situation, which is usually perceived as an unfavourable trend: from socio-cultural changes in the transforming Czech society, and the related transformation of young people's

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values, to the unsatisfactory family policy of the state.<sup>1</sup> The following analysis focuses on one interesting aspect of reproductive behaviour – a third child in the family – and examines this aspect in connection with the level of education of women. The education factor merits particular interest for a number of reasons: It is well known that education acts as a relatively precise reflection of not only the social and economic capital of individuals and groups, but also of their affiliation with a certain lifestyle (including a connection with geographic characteristics – large cities versus small communities), and values and attitudes. The level of education thus represents one of the most revealing sociological and demographic characteristics, which moreover impinges on more or less all other spheres of interest to the social sciences: in any study of different areas or aspects of social life, education almost always represents a significant factor, co-influencing and shaping the attitudes and behaviour maintained by individuals and social groups.

This study also examines the attitude and value orientations women with various levels of education maintain in relation to children, the family, and a professional career. In addition, the analysis includes a brief look into the issue of family policy, which is of particular interest in this study with respect to the question of the influence it has on decisions relating to the number of children a family will have and the reproductive behaviour of women.

The study draws on the results of the 1997 Family and Fertility Survey of the Czech Republic, which involved a research sample of 1735 women aged 15 to 44 (we used the original sample of individual statements from female respondents).<sup>2</sup> I am, of course, aware of the fact that the analysed data are now approximately six years old and that they therefore do not reflect the most recent developments in the reproductive behaviour and the attitude orientations of women, but unfortunately no more up-to-date data are available. On the other hand, it is possible to assume that some of the characteristics that form the subject of our interest are not likely to change too much over the course of only several years. A look back into the recent past can thus represent an interesting contribution to the current debates on the family and reproductive behaviour [see Pavlík and Kučera 2002; Rychtaříková 1996]. Moreover, within the recent past it is possible to get a clear glimpse of the continuity of current trends.

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<sup>1</sup> For a better understanding of the currently low Czech fertility rates see works by J. Rychtaříková and L. Rabušic.

<sup>2</sup> At the end of 1997, the 'Family and Fertility Survey' was conducted by the Czech Statistical Institute, in co-operation with the research agency Sofres-Factum. This survey was implemented as a part of the Family and Fertility Surveys project, and to date a total of 23 countries – 21 from Europe, along with the USA and Canada – have participated in it. The results for the Czech Republic were issued by the Czech Statistical Institute in the 'Reports and Analyses' series in a publication titled 'The Detailed Results from the Family and Fertility Survey (1997)'.

In accordance with internationally recommended methodology, the research work focused primarily on women of reproductive age, and the same questions were then presented to a set of men/partners.

With regard to the analysis of the results, it is necessary to realise that this is essentially an historical analysis – the women were questioned not only on their plans and expectations but also on their ‘reproductive past’. Therefore, the conclusions reached in this study to a large degree relate to generations that realised their fertility during the 1970s and the 1980s.

### **Education and the desired number of children**

For women, making and reaching decisions on the number of children to have is without doubt a complicated process and one that involves various factors. Moreover, as a woman grows older, the weight of these individual factors changes, often quite radically. Plans relating to the number of children always to a large degree reflect the actual, given situation a woman is in, which, in turn, is considerably influenced by demographic (especially age), geographic and socio-cultural characteristics (education, the character of the family background, economic situation, status strata affiliation, etc.). Among these factors, this study is interested in the level of attained education: how this very factor influences (or whether it has any influence at all?) the planned, or rather the ‘desired’ number of children women have?

Data on the desired number of children encompasses both women without children (‘how many children would you like to have?’) and women who already have children (‘how many *more* children would you like to have?’). The indicator thus synthesises the changing expectations and attitudes of women along with the increase in age and the ‘accumulation’ of children. Out of the total sample of 1735 women in the survey, 469 were childless (27%). Out of these 469 women, more than 90% wished in the future to have a child, and only not quite 4% responded definitely that they did not want a child. The decision to not have a child was, however, in no way influenced by the level of attained education. The negligible share of women planning to remain childless corresponds with the results of the ‘Young Generation 1997’ survey, in which only approximately 2% of single women aged 18–30 responded that they did not plan to have any children [Fialová et. al. 2000: 92].

Table 1 shows the figures for the desired number of children among women aged 18–29 in comparison with older women aged 30–44, according to the level of the woman’s education.

The analysis of the desired number of children among women with various levels of education revealed an interesting fact: the structure of responses, when differentiated according to education, differs strikingly for the women in the younger and the women in the older age categories. The data reveal that with the increase in a woman’s age the planned or desired number of children evolves in a specific manner: young women, among whom there is still a considerable share of childless women (44% of women in the 18–29 age group), differ in terms of their plans and expectations from older women, who usually already have a child or children. Although in both age groups the majority of women would like two children (the ex-

**Table 1. The desired number of children according to the level of attained education: women aged 18–29 and 30–44, % in the columns**

Desired number of children in the family	Age category 18–29						Age category 30–44					
	Education (%)				Total		Education (%)				Total	
	Elementary, no education	Secondary without GCE	Secondary with GCE	Post-secondary	abs.	%	elementary, no education	secondary without GCE	secondary with GCE	Post-secondary	abs.	%
One	10.5	11.9	11.4	14.9	75	11.8	12.0	16.2	17.8	21.3	147	16.9
Two	47.4	69.6	61.6	55.3	402	63	37.0	54.8	62.3	65.7	494	56.8
Three	17.5	9.9	9.6	14.9	69	10.8	38.0	24.6	16.9	6.5	183	21.1
More than three	7.0	1.6	1.4	2.1	13	2.0	12.0	3.4	2.4	3.7	36	4.1
One or two	3.5	1.2	6.4	4.3	25	3.9	–	0.3	0.3	1.9	4	0.5
One or three	–	0.8	1.4	6.4	9	1.4	–	–	–	–	–	–
Two or three	7.0	2.8	5.0	–	25	3.9	0.9	–	–	–	1	0.1
Other	–	0.4	1.4	2.1	6	0.9	–	0.3	0.3	0.9	2	0.2
Don't know, no answer	7.0	2.0	1.8	–	14	2.2	–	0.3	–	0.9	2	0.2
Total (%)	100	100	100	100	x	100	100	100	100	100	x	100
N	57	253	281	47	638	x	108	321	332	108	869	x

ception being women with elementary education), with the increase in age the proportion of those who plan only one child or plan three children changes. However, this development is distinct, or more precisely opposite in character for those women with higher levels and those women with lower levels of education.

Young women with post-secondary education, in comparison with their peers with secondary education, with relative frequency still plan to have three children – 15% of those with post-secondary education as opposed to 10% of those with secondary education – while in the older age group only 6.5% of those with post-secondary education would like to have three children, which is significantly less than among women with elementary education (38%), but substantially less than women with GCE level secondary education (17%). In the older age group, 30–44 years, a very clear trend can be observed in that with higher levels of education the share of those who would like three children declines, and does so dramatically. In addition, in this age category, as the level of education rises the proportion of women who would like only one child in the family increases also: 21% of women with post-secondary education as opposed to 12% of women with elementary education.

The exact opposite trend to that observed among post-secondary educated women can be found among the women with the lowest level of education: with the increase in age the proportion of women with elementary education who would like three or more children also increases. While in the 19–29 age group just under one-fifth of women with elementary education would like three children, in the 30–44 age group the figure is 38%. From the perspective we are looking at, women with secondary education, both with and without GCE, rank closer to women with elementary education: with the increase in age the share of women who would like three children also grows, and in this case does so most notably among those

women without GCE. Even in these two categories, however, the proportion of women who would like one child increases, though not as markedly as it does in the case of post-secondary educated women.

The analysis showed that in connection with the increase in age the plans and expectations of women with regard to the number of children in the family *change in various ways according to the level of attained education*, while women with elementary education on the one hand, and women with post-secondary education on the other form particularly distinct groups. Although with the increase in age women with elementary education more often give preference to three or even four children in the family, among women with post-secondary education the share of those who would like three children falls dramatically in favour of having two or even just one child in the family. At the time of family planning, i.e. in the young age group of 18–29, the option of having three children in the family is a more common plan among this group of women than it is in the case of women with secondary education. If we focus on post-secondary educated women alone, where the decline in the desired number of children in relation to the increase in age is most strongly evident, we must turn our attention to the question of exactly what factor or factors lie behind how this opinion develops. It would appear that something is ‘preventing’ women from realising their plans and expectations; how significant a role external factors play in this will be the subject of the next section of the analysis, in which we will look at some of the circumstances surrounding women’s reproductive practices in fact, with specific regard to third-birth rates of women with various levels of education.

### **The likelihood of the birth of a third child among women with various levels of education: Cox’s regression model**

How are women’s expectations and plans genuinely realised? The level of attained education without a doubt does have an influence on the number of children there are in a family [see Fialová 1994]. Here, however, our interest is specifically focused on the third child in a family. We are interested in what role education plays among the factors that have an effect on whether a woman has a third child. In other words, to what extent is the likelihood of the birth of a third child influenced by a woman’s level of education, or is education only one of a number of factors that contribute to reproductive behaviour, with the strength of its influence comparable to that of other socio-cultural and economic characteristics?

For the analysis of these points I used Cox’s regression model, and among the characteristics entered into the model, in addition to the woman’s education level, I selected the following factors: generation, place of residence, membership in a religious community, the character of the background family, number of siblings, interval between first and second birth, age at the time of second birth, and the presence of a ‘new partner’, i.e. a partner other than that with whom the woman had the

second child. These characteristics represent, in my view, important demographic and socio-cultural factors, which I expected to be in close relationship with the probability of having a third child.

## **Methodology**

Cox's models belong to the category of proportional hazard models and thus also to the group of (hazard) regression models. The methodology of these models is dealt with in greater detail in the appendix.

In this study, the purpose of the regression model is to measure the hazard function of the transition from the initial state, i.e. from the state in which the woman has two children to the state in which she has three children. This hazard can be expressed as the probability that a woman will experience a third birth in the next month, given her individual characteristics (independent variables – see below) and that she has not given birth within the current month. The hazard is purged of the influence of all other variables. Cox's models enable an estimation of the hazards with regard to their changing character over the course of time – the risks are estimated as changing in the observed time period.

The event studied (the dependent variable) is the occurrence of a third birth, measured as the reported date of the third birth. Within the framework of the observation period, there were 188 third births among the sample of Czech women.

The time interval between the birth of the second and the birth of the third child is measured in whole months. The period of observation starts (i.e. the woman comes under observation) with the birth of the second child and stops (i.e. the woman falls out of observation) at the time when one of the following events – whichever comes first – occurs: at the date of birth of the third child; once fifteen years have passed since the second birth; or at the time of the interview (i.e. November 1997).

## **Variables entered into the model**

The likelihood that a woman will actually have a third child depends on many demographic and social factors, often wound up in a complex network of relations, not all of which can be determined with the aid of available statistical methods. The selection of factors is also always limited by the type and character of data. In order to grasp as well as possible the complexity of the aspect of family behaviour that the study is investigating, I entered the following factors (independent variables) into the model:

- Attained level of education: elementary (i.e. ISCED 2); secondary without GCE (i.e. ISCED 3C, reference category); secondary with GCE (i.e. ISCED 3A, 3B); post-secondary (i.e. ISCED 5A, 5B, 6)

- Generation: 1952–1959; 1960–1969; 1970–1982 (reference category)
- Place of residence: up to 9999 inhabitants; 10 000–999 999 inhabitants; 1 million or more inhabitants (reference category)
- The fact of whether the respondent is religious, i.e. whether she regularly attends religious services: she attends religious services at least once a week; she attends religious services less than once a week (reference category)
- Character of the respondent's family background: she grew up in a two-parent family; she grew up in a single-parent family, or in another situation (reference category)
- Number of children in the background family of the respondent: 5 or more children is the reference category
- Interval between first and second child (in months): 8–18; 19–24; 25–30; 31–36 (reference category)
- Age at the time of second birth: 19 years and under; 20–24 years; 25–29 years; 30 years and over (reference category)
- The fact of whether the respondent had the third child with a different partner than the second child, and in the case where she did not have a third child, the fact of whether she lives with a different partner than at the time of birth of the second child: if not = reference category

## **Results**

The results indicated that out of all the variables observed the greatest influence on the likelihood that a woman will have a third child is exercised by the level of the woman's education and by how religious a woman is. The impact of the remaining factors entered into the model was either considerably less or did not prove to be significant.

Third-birth risk in the family declines proportionally to the increase in the level of education, and the decline is very dramatic. The relative chances that a woman will have a third child in the case of women with elementary education is 2.13 times that of women with secondary education without GCE, but only 73% in case of women with secondary education with GCE, and only 56% in case of women with post-secondary education, compared to the same reference category. Women who attend religious services at least once a week have a 2.37 greater chance of giving birth to a third child than the other women. The fact that membership in a religious community has a positive influence on the number of children in a family is nothing new [Fialová et. al. 2000: 69, 91]; it is related to the different values and lifestyle maintained by this group of women.

The number of children in the background family of the woman, or specifically the fact that she did not grow up as an only child, also has a significant influence on the third-birth risk. In relation to the reference group of women who come from fam-



**Table 2. Third-birth risks for women, 1997**

Factors	Categories	Exp (B)
Completed level of education	Elementary	2.13**
	(Secondary without GCE)	1
	Secondary with GCE	0.73*
	Post-secondary	0.56*
Generation	1952-1959	0.89
	1960-1969	1.07
	(1970-1982)	1
Place of residence	Up to 9 999 inhabitants	0.87
	10 000-999 999	1.24
	1 million and over	1
How religious a woman is	Participation in religious services at least 1x weekly	2.37**
	(Participation in religious services less often than 1x weekly)	1
Background family: complete & incomplete	Complete family	0.97
	(Incomplete family)	1
Number of children in the background family	1	0.72*
	2	0.96
	3	0.91
	4	1.10
	(5 a více)	1
Interval between first and second birth (in months)	8-18	1.11
	19-24	1.15
	25-30	0.98
	(31-36)	1
Age at the time of second birth	19 years or less	1.56*
	20-24 years	1.04
	25-29 years	1.00
	(30 years or over)	1
New partner <sup>1)</sup> : yes & no	Yes	1.03
	(No)	1

method = ENTER

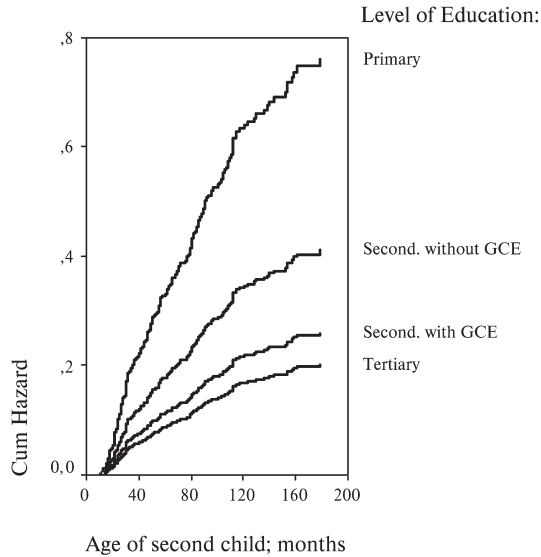
\* Statistically significant at the level of significance 0.001

\*\* Statistically significant at the level of significance 0.05

Reference categories are presented in brackets.

<sup>1)</sup> 'New partner' refers to whether the woman has the third child with a partner other than that with whom she had the second child, or, in the case where she does not have a third child, whether she lives with a different partner than at the time of birth of the second child.

**Figure 1. Hazard function: second & third child**



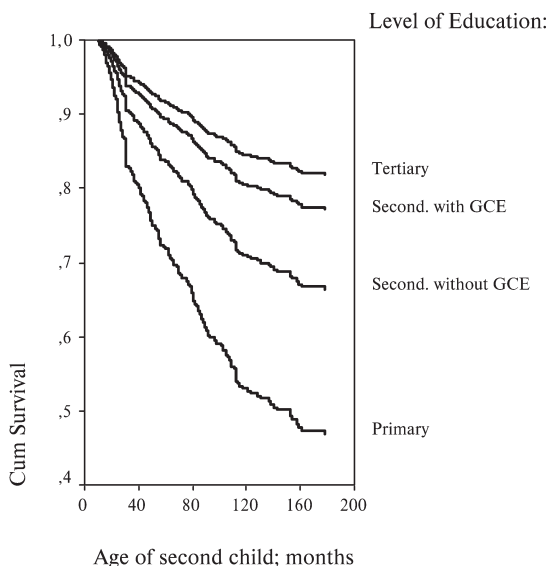
ilies with five or more siblings, women who have no siblings have only a 72% likelihood of having a third child. The connection between the number of siblings a woman has and her planned and ultimate number of children has also been confirmed in other Czech [see Fialová et al. 2000] and foreign [Pinnelli et al. 2000] studies.

Finally, if a woman had her second child relatively early in life, specifically by the age of 20, the chances that she will have a third child increase by 56%.

The other variables, i.e. generation, size category of the community, the fact of whether the woman comes from a two-parent or single-parent family, the interval between the birth of the first and second child, and the presence of a new partner (see methodology variables entered into the model) had no significant influence on the likelihood of the birth of a third child, i.e. the 'pure' influence of these factors on the observed event was not proved.

Among the factors that influence the likelihood of the birth of a third child in the family, *education proved to be one of the two most significant* – along with membership in a religious community. The strength of the influence of education even clearly exceeded that of traditional demographic characteristics, such as generation, age at the time of birth of the second child, and the interval between the birth of the first and the second child. Equally, other socio-cultural characteristics were found to be relatively secondary in importance in comparison with the influence education has on the third-birth risks. With regard to this dependence, the data confirmed the negative influence of increasing education on the number of children in a family, as demon-

**Figure 2. Survival Function: second & third child**



strated already in some older analyses [Fialová 1994]. Post-secondary educated women with two children have only a 56% chance of having a third child in comparison with women with secondary education without GCE. Conversely, with regard to the same reference category, the hazard of the birth of a third child among women with the lowest level of education is more than double. Similar evidence also emerged from the data on differential fertility in the 2001 Census [see *Sčítání lidu* 2001].

If, however, post-secondary educated women aged 18–29 relatively often indeed *want* a third child (see above), but actually have a third child significantly less often than less educated women, what are the reasons behind this fact? The increased need for self-realisation, better opportunities and the need for professional fulfilment, increased demands on the education of their children, and the different lifestyle of women with higher education, clearly rank among the factors that form the background to these trends. An analysis of these factors, including the question of whether some other realities may be added to them, forms the subject of the next section.

**Opinions on the family and a professional career among women with different levels of education**

Table 3 presents the degree of importance that some things relating to individual spheres of life (family life, professional career, care for the children, finance, etc.) represent for women with different levels of education. The data clearly reveal that

**Table 3. How important to you are the following things? Women aged 25–44, averages on a three-point scale (1 – very important, 2 – quite important, 3 – not important)**

	Education				Total	N
	Elementary, no education	Secondary without GCE	Secondary with GCE	Post-secondary		
To have enough time for me and for my interests	2.15	2.12	2.05	1.99	2.08	1200
To be appreciated outside the family, including work acknowledgement	2.16	2.14	2.09	1.99	2.10	1174
To have sufficient income	1.55	1.52	1.62	1.67	1.58	1206
To strive towards self-realisation	<b>2.38</b>	2.20	2.12	<b>1.95</b>	2.16	1161
To be able to provide sufficient care and attention to my children	1.51	1.54	1.46	1.39	1.49	1200
To have a professional career	<b>2.73</b>	2.65	2.54	<b>2.29</b>	2.57	1174
To have a full and happy family life	1.40	1.44	1.41	1.34	1.41	1197
To live in a nice, spacious home	1.83	1.90	1.92	2.03	1.92	1200
To be able to provide my children with a complete education	<b>1.58</b>	1.42	1.33	<b>1.31</b>	1.39	1205

the need for self-realisation and a professional career increases with the level of a woman’s education. The differences between women with the lowest and the highest levels of education are particularly evident. Women with higher education place relatively more emphasis on the need to provide their children with sufficient care and attention, and especially the need to provide their children with a complete education, in comparison with less educated women. With the increase in the level of education the significance of the entries ‘to have enough time for me and for my interests’ and ‘to be appreciated outside the family, including work acknowledgement’ rises. Conversely, the importance of factors assessing material and financial security (to have sufficient income, to live in a nice, spacious home) declines with the increase in the level of a woman’s education. The significance ascribed to ‘a full and happy family life’ was high among all of the groups of women and no notable differences were observed among the individual educational categories.

From the perspective of this study, what is important is that the differences that exist among the groups of women most clearly distinguished themselves in the factors relating to self-realisation, a professional career, and the need to provide children with education. With each higher level of a woman’s education the need for professional fulfilment and self-realisation outside the home also increased; this need then peaked among women with a post-secondary education. These facts are even confirmed in the explicit attitudes the women maintained with regard to the questions of combining a family and a professional career and the association between satisfaction with one’s life and a specific number of children (see tables 4 and 5).

The different attitudes towards combining a professional career and family life were clearly evident in the responses to the direct question, ‘How many children can a person have and still manage a professional career?’. The most notable differences appeared in the category ‘it doesn’t depend on the number of children’: while 41%

**Table 4. How many children can a person have and still manage a professional career? Women aged 25–44, % in the columns**

	Education				Total
	Elementary, no education	Secondary without GCE	Secondary with GCE	Post- secondary	
No children	14.8	18.1	<b>25.2*</b>	20.4	20.9
One child	12.5	14.2	19.2	22.4	17.0
Two children	<b>10.2*</b>	22.9	21.9	<b>30.6*</b>	22.1
Three or more children	<b>5.5*</b>	2.4	1.4	3.4	2.5
It doesn't depend on the number of children	<b>41.4*</b>	31.2	<b>24.6*</b>	<b>19.0*</b>	28.2
Don't know/No answer	15.6	11.3	7.6	4.1	9.4
N	128	459	484	147	1218

\* statistically significant at the level of significance 0.01

**Table 5. How many children can a person have and still be satisfied with one's life and be happy? Women aged 25–44, % in the columns**

	Education				Total
	Elementary, no education	Secondary without GCE	Secondary with GCE	Post- secondary	
No children	0.8	0.4	1.2	1.4	0.9
One child	3.9	8.1	6.4	8.2	7.0
Two children	20.3	29.0	28.9	21.1	27.1
Three or more children	<b>10.9*</b>	7.0	<b>4.3*</b>	4.1	6.0
It doesn't depend on the number of children	60.9	53.4	55.2	63.9	56.2
Don't know/No answer	3.1	2.2	3.9	1.4	2.9
N	128	459	484	147	1218

\* statistically significant at the level of significance 0.01

of women with elementary education believed that if a woman wants a professional career it does not matter how many children she has, among women with secondary education with GCE the figure is only 25%, and among women with post-secondary education only 19%. Conversely, with increasing education the number of women who indicated one or two children also increased, while women with elementary education most often indicated three or more children. It is interesting that the highest share of women who believe that a person cannot have any children if they wish to have a professional career appeared among women with secondary education with GCE (25%, while for post-secondary educated women the figure is 20%, and for women with elementary education 15%). To summarise, among women with the lowest level of education there is a large portion who do not consider the

number of children as being of decisive importance in the possibility of pursuing a professional career; with the increase in the level of education the share of those women who feel this way falls sharply in favour of those who indicate no children or at most one child as feasible. The possibility of having a professional career on the condition that a woman has no children was cited most often by women with secondary education with GCE, while post-secondary educated women were more inclined to indicate the variant of having one or two children.

Differences among the women appeared even in the responses to the question 'How many children can a person have and still be satisfied with one's life and be happy?', especially in the category 'three or more children'. While almost 11% of women with elementary education believed that a person could have three or more children and still be satisfied and happy, among those with secondary education with GCE the figure is only 4.3%, and among post-secondary educated 4.1%.

It is evident that with the rise in the level of education among women there appears to be an increasing need for professional fulfilment and self-realisation (it is interesting that the need for material security rather declines – however, the reason here need not only be the weaker materialistic orientation of secondary and post-secondary educated women, but also the fact that, in comparison with less educated women, post-secondary educated women have relatively fewer problems with financial security). A higher level of education does, however, affect the women's attitudes in another sense, in that their opinions change with respect to combining a family and children with a professional career, and with respect to the relationship between the number of children one has and having a happy and satisfied life. It could be said that the more educated a woman is the clearer her attitude towards combining a career and children: the women believe with considerably greater frequency that children represent a significant factor in the professional life of a woman (i.e. the number of children matters, see table 6) and although a sort of imaginary boundary is formed by the figure of two children, a relatively large number of women with post-secondary and secondary education believe that if one wants to have a professional career a person can have only one child or even no children. In comparison with less educated women, therefore, a considerably larger portion of women with secondary and post-secondary education consider children (not only three or more, but even one or two) as an obstacle to pursuing a career. In the case of three or more children, this is even considered a factor interfering with a happy and satisfied life. However, here it is possible to assume – and the data indeed confirmed this – that more educated women have a greater need to provide children with sufficient care and attention and a complete education (which is more difficult to achieve with a larger number of children).

### **Family policy: a significant factor in the process of reproductive behaviour?**

When observing the reproductive behaviour of women and the factors that influence this behaviour – including their attitude and opinion orientations – it is impossible to overlook a subject that undoubtedly relates to family behaviour, and that is family policy. This is an area that, in terms of its nature and the kind of role it plays in the process of reproductive behaviour, is quite specific; an analysis of family policy in relation to the reproductive behaviour of women would certainly be worthy of a separate article. But it is not our aim here to focus on family policy itself, nor would it even be possible within the aim and reaches of this study. Nonetheless, we should briefly mention one aspect of family policy that is significant for us: the role that it plays in the decision-making concerning the number of children there will be in a family.

A good example of how family policy can influence the pattern of reproductive behaviour is found in the study by D. Corman, which examined family policy as one of the factors influencing the likelihood of the birth of a third child among women and men in Sweden and in France [see Corman 2000]. The significant influence family policy has on the reproductive behaviour of men and women came to light through the factor of education. In Sweden, higher education does not represent an obstacle to the birth of a third child: women with post-secondary education have roughly the same likelihood of having a third child as women with elementary education [Corman 2000: 6]. On the other hand, French women with a university degree demonstrate the least likelihood of having a third child of all the education groups: approximately one-half as likely as women with elementary education. The weak influence of education on the likelihood of the birth of a third child among Swedish women indicates that a professional career does not represent a 'threat' to family life in places where the state facilitates and supports various forms of participation of women/mothers on the labour market (especially through part-time employment) and offers possibilities for combining a professional career with raising children.<sup>3</sup> In France, however, highly educated women have fewer opportu-

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<sup>3</sup> In Sweden, there exists an advanced system of public day centres for children of pre-school age, which are provided free of charge (so-called double-socialisation, whereby children aged 3 to 4 spend a considerable part of their day outside the home in a state day-care facility for children), and this enables mothers with small children to go to work, usually on a part-time basis. At the same time, employers are motivated by the state to facilitate the participation of parents with small children in the labour market. The system of parental leave is also very generous in Sweden, where the mother or father who is at home with the child or children receives 90% of his/her monthly pay for a period of twelve months and a fixed sum for the next six months (in 1997 this was 60 SEK a day). Parents also have a right to 60 days paid leave for looking after an ill child. State family policy in Sweden is just as strongly oriented towards achieving equal opportunities for men and women: considerable flexibility in the possibility of adjusting daily or weekly working hours for parents with small children facilitates the relatively high degree of participation of fathers in raising their children [for more details see *Reconciling Work ...* 1996]

nities for combining their professional life with family life, and they are therefore less 'willing' to have more than two children.

In so far as the influence of education on the birth of a third child among men is concerned, similar evidence has emerged. In Sweden, the influence-of-education curve forms the letter U, while in France it takes the shape of a J. The relatively higher likelihood that Swedish men with a university degree will have a third child, in comparison with equally educated French men, again indicates that there are better possibilities for combining a professional career and family life in the Swedish society than in the French. The differing curves depicting the relationship between the birth of a third child and the level of the men's education also testify to how important an influence the participation of men in raising children is for individual reproductive behaviour. The efforts that Sweden has exerted in order to 'involve' fathers in raising their children is bearing fruit in the form of the higher number of children that these men have. Conversely, in France the question of gender equality is not a priority for those responsible for determining family policy. It is interesting that the flexibility of 'working arrangements' and the possibilities for combining family and working life are taken advantage of more by so-called white-collar workers than blue-collar workers (while it is well known that these opportunities are on a higher level in Sweden than in France). In France, it is moreover men in white-collar positions who spend the most time at work, which is also evident in the fact that for them the child represents a career obstacle. In Sweden, men with the highest level of education participate in raising children relatively more often than men with lower levels of education [see Sundstrom and Stafford 1992].

Turning attention back to the Czech Republic, family policy in this country is certainly a long way off from the generous Swedish model. Combining work with raising children is (for both men and women) in the Czech lands far more difficult than in Sweden, and more educated women are often forced to choose between a career and (more) children.<sup>4</sup> The Family and Fertility Survey 1997 that we analysed included a section devoted to family policy – women were asked to comment on individual measures of family policy and for each to indicate whether they are for or against its implementation.<sup>5</sup> The measure that received relatively the best evaluation from the women was 'better conditions for maternity leave for working women who have small children', 'lower income tax for people with dependent children', 'ma-

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<sup>4</sup> Unlike other states, in the Czech Republic the practice of part-time employment (which is particularly suitable for mothers with small children) and the state system of care for children of pre-school age are not developed, and financial benefits on maternity leave are relatively low.

<sup>5</sup> The measures that were suggested included: better conditions for maternity leave for working women who have small children; lower income taxes for people with dependent children; better day-care facilities for children aged up to 3 years; better day-care facilities for children aged 3 to 5; benefits to families with children scaled according to the income of the family; maternity grants on the birth of each child; parental benefits for mothers and fathers who do not want to go to work because they want to look after their small children; a significant in-



**Table 6. If the measures chosen by you were introduced, would the implementation of those measures have an impact on your life? Please indicate whether you agree or not with the following statement:**

**If the measures chosen by me were introduced, it would be easier for me to have as many children as I want (women aged 25–44, % in the columns)**

	Education				Total
	Elementary, no education	Secondary without GCE	Secondary with GCE	Post-secondary	
Agree	51.6*	58.4	55.2	65.3*	57.2
Disagree	29.7	27.5	27.9	24.5	27.5
Don't know/No answer	18.7	14.1	16.9	10.2*	15.3
Total	100.0	100.0	100.0	100.0	100.0
N	128	459	484	147	1218

\* statistically significant at the level 0.01

ternity grants on the birth of each child' and 'a significant increase in monthly child benefits' (more than 95% of women aged 25–44 were in favour of this measure). Large support was also given to the measure aimed at easing a mother's working life, especially 'flexible working hours for working families with small children' and 'more and better opportunities for parents with children to work part-time', which around 90% of women expressed themselves in favour of. The measures aimed at improving the combination of employment and caring for children received slightly more support from women with post-secondary education. Conversely, some of the entries relating to finance (a significant increase in monthly child benefits, lower income taxes for people with dependent children, better housing for families with children and attractive loans for newlywed couples) received relatively greater preference among women with lower education.

However, in my opinion, more interesting information than support for the individual measures of family policy was presented in the responses to the question of whether the implementation of selected measures would have an impact on the personal lives of the respondents – see table 6.

Almost 60% of the female respondents indicated that for them it would be easier to have as many children as they wished if the measures of family policy they selected were implemented. If we take a separate look at the individual categories of

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crease in the monthly child benefits; after-school clubs for students, where they could spend time before and after school hours and during the holidays; flexible working hours for working parents with small children; more and better opportunities for parents with children to work on a part-time basis; a considerable reduction in the costs of education; better housing for families with children; attractive newlywed loans.

education it is clear that this opinion is shared most frequently among post-secondary educated women (65%) and least often among women with the lowest education (52%); moreover, women with post-secondary education are the clearest of all the education categories in their view on this issue (they least often responded with 'I don't know'). It seems that it is women with university degrees who are most affected by the need to make a choice between a professional career and a family, and that they are the ones who in the Czech environment most strongly feel the lack of the kind of family policy measures that would make such a decision easier.

The process of family planning is certainly in general very complex and complicated: it would be an oversimplifying approach to ascribe the main role in the considerations over whether or not to have another child to family policy alone.<sup>6</sup> Nevertheless, the aim of this brief probe into the area of family policy was to show the influence this area may have, from the most general point of view, on the *decision-making* concerning whether to have another child, and on actual reproductive behaviour. It is the more educated women in particular (and men, as is evident from the Swedish example) who most appreciate the opportunity to combine professional life with a family, which is given as a clear priority in the Scandinavian countries. On the other hand, in the Czech Republic these opportunities are (still?) very limited: the situation in the area of family policy is *one of the most significant factors* behind the high share of 'unrealised fertility' in this country, or in other words, behind the difference between planned and 'desired' numbers of children and the actual number of children born, especially in the case of women with post-secondary education.

## Conclusion

The analysis indicated several realities affecting the relationship between the desired number of children and the ensuing actual reproduction among women with various levels of education, with an emphasis on the case of a third child in the family. Our results show that there exists a clear discrepancy between the number of children desired and the actual number of children a woman has, which is particularly pronounced among women with post-secondary level education. The example of the third child in a family is a good illustration of this discrepancy.

Education can be described as one of the most striking factors influencing the existence of a third child in the family. According to Cox's model, the likelihood that a woman will have a third child sharply declines with the increase in the level of her

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<sup>6</sup> The factors underlying the low rates of fertility in many countries have been examined from different points of view; see for example work by Peter McDonald, who emphasises the importance of improving gender equity in family-oriented institutions to raise fertility [McDonald 2000: 10]. Other related discussions have been going on in the field of postmodernism and late modernism, for example, within the sociological 'theory of individualisation' [see Možný 1999: 200–208].

education, which means that among post-secondary educated women the likelihood is at its lowest, while among women with elementary education it is at its highest. What is interesting, however, is the *confrontation between women's actual reproduction and their plans and expectations* at the age when women usually begin or are already engaged in planning a family (18–29 years). The group of women with post-secondary education indicated with relative frequency (more often than women with secondary education) that they would like to have three children, and they also relatively often actually planned to do so. Over time, however, the share of post-secondary educated women who wanted to have three children fell dramatically and in the 30–44 age group less than one-half of the number in the 18–29 age group still felt this way. Conversely, with the increase in age the proportion of post-secondary educated women who wanted only one child also rose. It is thus clear that the attitudes of women and the decisions they make on the number of children they want to have change dramatically with age, and that this development occurs differently for women with various levels of education.

The analysis demonstrated the following: although post-secondary educated women at a young age plan relatively often to have three children (nearly as often as women with elementary education and considerably more often than women with secondary education), the likelihood that *in actual fact* they will have a third child is very low in comparison with the other educational categories of women.

We also touched on some factors that clearly lie behind this noted discrepancy between the plans and the actual behaviour of post-secondary educated women. Among them is the often-discussed need for professional fulfilment and self-realisation, which especially in the case of post-secondary educated women are factors that move most strikingly to the forefront. However, these women also believe more often than the others that it is not possible to easily reconcile a professional life with taking care of one's children, or, as the case may be, taking care of yet *another* (third?) child, and it is possible to find among them a relatively large number who indicate that a person can only have one child or even no children if she also wants at the same time to have a professional career. Here we arrive at a subject that was mentioned in the previous section of this study – family policy. Clearly, family policy functions as one relatively strong factor behind the high share of unrealised reproductive plans among post-secondary educated women: 65% of women with the highest level of education indicated that in the case of more favourable circumstances for combining a professional life with caring for one's children it would be easier for them to have as many children as they wished.

It appears that the answer to the hypothetical question, 'Why do women with a university degree exhibit the least likelihood of having a third child, even though at a young age they often wish to have three children?', lies right here, in the broader context of the state's approach to the issue of the family and the sphere of family policy. At the same time, the reference to this area involves more than just the system of financial and social assistance to young mothers and families, but also and especially includes the above-mentioned possibility of reconciling working life with

family life – or, in more general terms, the *overall attitude of society* and the state towards starting a family and raising children.

### Appendix on methodology

Cox's models belong to the category of proportional hazard models. Cox Regression uses the hazard function to estimate the relative risk of failure. The hazard function  $h(t)$  is a rate. It is an estimate of the potential for death per unit time at a particular instant, given that the case has survived until that instant.

Cox's regression is used for determining the influence of predictor variables (covariates) on a dependent variable, by determining the relative hazard function, or the survival function respectively. Unlike other common regression models, Cox's models take into account the fact that this relative hazard changes over the course of the observation time because the influence of the individual independent variables need not necessarily be constant over time.

The model can be described in its simplest form as follows:

$$[1] \quad h(t) = [h_0(t)]e^{(BX)}$$

where  $x$  is a dichotomous covariate that takes the values of 0 for control or no condition and the value of 1 for condition.

$B$  is the regression coefficient;

$e$  is the base of the natural logarithm;

$h_0(t)$  is the baseline hazard function when  $X$  is set to 0 (the expected risk without the condition).

If both sides of the Equation 1 are divided by  $h_0(t)$ , the result is:

$$[2] \quad h(t)/h_0(t) = e^{(BX)}$$

The quantity  $h(t)/h_0(t)$  is called the relative hazard or the hazard ratio. It indicates the increase (or decrease) in risk incurred by applying the condition.

If the natural log is taken of both sides of Equation 2, the result is:

$$\ln[h(t)/h_0(t)] = BX$$

The quantity  $\ln[h(t)/h_0(t)]$  is the log relative hazard, which can be used to compare the relative risk for cases where the condition is met or, respectively, is not met.

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