Prevalence of adolescent pregnancy in Romania

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Abstract

Aim: Adolescent pregnancy is a serious global health problem that affects a great number of young girls. The European Union has had a declining rate of adolescent pregnancies in the past years, yet the distribution is uneven, and there are still high numbers of adolescent pregnancies in Eastern European countries, specifically in Romania. The aim of this descriptive study is to create a clear vision on the data on adolescent pregnancy in Romania for the period 2000-2014.

Methods: Data was gathered on adolescent pregnancy in Romania for the years 2000-2014 from the Health for All database, and the World Bank database. Since the indicators of these two databases are different, calculations were conducted in order to make the different adolescent pregnancy rates comparable.

Results: The numbers of 'live births' show that in 2000 there was the highest number with 234,521 live births, followed by a decline up to 2002 with 210,529 live births. Evaluating the percentages of 'live births from mothers under 20 years old', it indicates that there was a decline in the percentage starting with 13.11% in 2000, and ending with 9.51% in 2014. From the data of the World Bank on adolescent fertility rate, it is indicated that, from 2000 until 2002, there was a small decline from 38,631 to 37,171. From 2007 until 2014, there was a drop of the adolescent fertility rate, with a value of 35.12 in 2014.

Conclusion: The findings of this study show that, although rates on adolescent pregnancy have been declining, the numbers are still considerably high in Romania. Also, this analysis indicates that there are important discrepancies in the numbers provided by different databases.

Keywords: adolescent, pregnancy, prevalence, Romania.

Introduction

Adolescent pregnancy is a serious global health problem. To date 16 million girls between 15 and 19 years old and 1 million girls under 15 years old give birth every year (1).

Young girls and boys often don't realize the consequences and dangers of entering parenthood on an early age. According to Charles et al. (2) pregnancy in adolescence is associated with poor educational achievement, poor physical and mental health, poverty and social isolation. In a report on teenage pregnancy (3) it states that teenage parents are more likely than their peers to live in poverty, unemployment, and are trapped in lack of education, childcare and encouragement. One article of Furstenberg (4) describes that children of teenage parents are more likely to have behavioural problems, and in adolescence to be involved with substance abuse and early sexual activity. The World Health Organization (WHO) states that complications occurring during pregnancy and labour represent the second most frequent cause of death in teenagers 15-19 years of age (1). On the other hand Lawler and Shaw (5) state that these negative effects are not due to the young age of teenage mothers, but other socio-economic factors in which the babies are born. In conjunction with that Nove et al. (6) state that excess mortality risk to adolescence mothers might be less than previously believed, and in most countries the adolescent maternal mortality rate is low compared to women older than 30 years. Clearly, there is still debate in the scientific world if these effects reflect causes or consequences of the prevalence of adolescent pregnancy.

In some developing and developed countries, pregnancy in adolescence is viewed as the social norm and the role of 'mother' is considered a desirable one. In the European Union, but also beyond, adolescent pregnancy is a public health problem, and although the pregnancy rate has been declining for the past 20 years (1), it has been a progress that has been uneven across regions and countries. Eastern Europe still has higher adolescence pregnancy rates than the rest in Europe (7). In line with the debate about these causes and consequences, there is also still a lot of debate on the data and numbers on adolescent pregnancies. According to Iorga et al. (8), Romania holds the second position in adolescent pregnancies in the EU, with 8,500 adolescent births on average per year and a teen birth rate of 39.4 %. But, in the study of Sedhg et al. (9) it states that in 2011, Romania had around 34,700 adolescence pregnancies, and the highest birth and pregnancy for 15-19 years of Europe (61% and 35%). Furthermore, it states that Romania, in 2011, had the highest number of births of girls aged 10-14 years old in the world (1.4%).

The aim of this descriptive study is to create a clear vision on the data on adolescent pregnancy in Romania.

Methods

This is a cross sectional study of data regarding adolescent pregnancy in Romania from 2000 until 2014. To determine the trends of adolescent pregnancy in Romania data on these numbers was gathered from two different databases. The statistics where gathered from the World Bank, which used the data from the United Nations Statistics Division Demographic Yearbook, and the Health for All European database. Adolescent age was considered women under 20 years old. All calculations were made in Microsoft Excel.

From the Health for all database, indicators were chosen in the form of 'number of live births' and '% of all birth to mothers aged under 20 years'. Respectively, number 0063 and 7040 in the database. The country selected was Romania, being number 0038 in the database. The data of 'number of live births' was analysed for the course of 2000 till 2014. Following this, calculations where made of the annual growth or decline in percentages. The data of '% of all birth to mother aged under 20 years' was also analysed for the years of 2000 until 2014. Then, these percentages were compared with the 'numbers of live births' and from these calculations

the 'estimated numbers of births of mothers aged under 20 years' came forth. Conclusively, from these 'estimated number of live births of mothers aged under 20 years' the annual percentages of growth or decline where calculated.

From the database of the World Bank, firstly data was gathered on the total numbers of female population in Romania, for the years of 2000 until 2014. Then, the data on 'population ages 15-19 (% of female population) was analysed. Combining these two datasets produced the 'estimated numbers of women aged 15-19' living in Romania. Secondly, the 'adolescent fertility rate (births per 1000 women ages 15-19) number where accumulated, and using this data in comparison with the 'estimated numbers of women aged 15-19', the 'estimated number of births of women aged 15-19 years old' where calculated. Thirdly, from the 'estimated number of births of women aged 15-19 years old', the annual growth and decline percentage was calculated.

Finally, the annual percentage numbers of growth or decline from the 'number of live births' where compared with the numbers on growth or decline of the 'number of live births from women aged under 20'(gathered from the Health for all database) and 'estimated number of births of women aged 15-19 years old'.

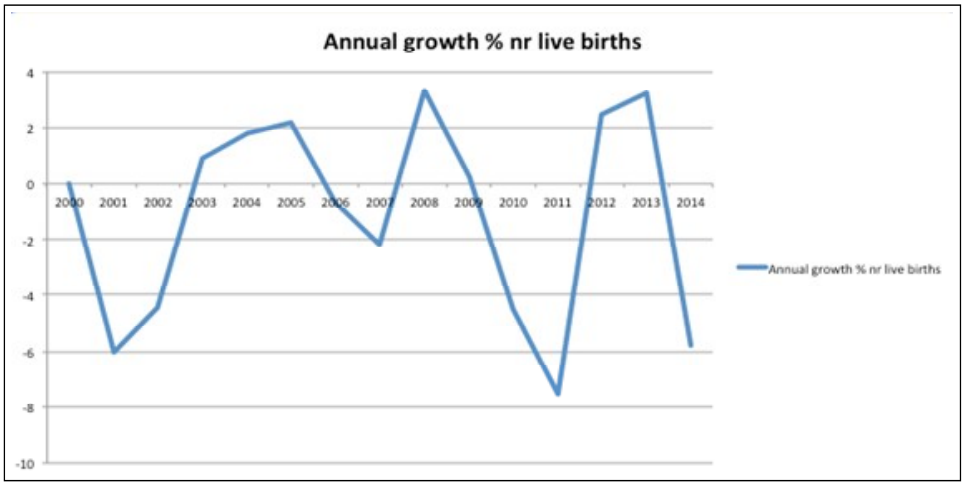
Results

Analysing the 'numbers of the live births per year' from the Health for All database, it shows that in 2000 there is the highest number with 234521 live births, following by a decline up to 2002 with 210529 live births. From 2003 till 2005, 2008 till 2009 and 2012 till 2013, there was a growth in the number of live births per year. These numbers, combined with their annual decline rate are stated in Table 1 and Figure 1.

Table 1. Data from the Health for All database on live births in Romania': Number of live births' and' Annual growth in percentage'

Year	Number of live births	Annual growth in %
2000	234521	NA
2001	220368	-6,03%
2002	210529	-4,46%
2003	212459	0,91%
2004	216261	1,78%
2005	221020	2,20%
2006	219483	-0,70%
2007	214728	-2,17%
2008	221900	3,34%
2009	222388	0,22%
2010	212199	-4,50%
2011	196242	-7,52%
2012	201104	2,48
2013	207611	3,24%
2014	195612	-5,78%

Figure 1. Data from the Health for All database on live births in Romania': Annual growth in percentages of the number of live births

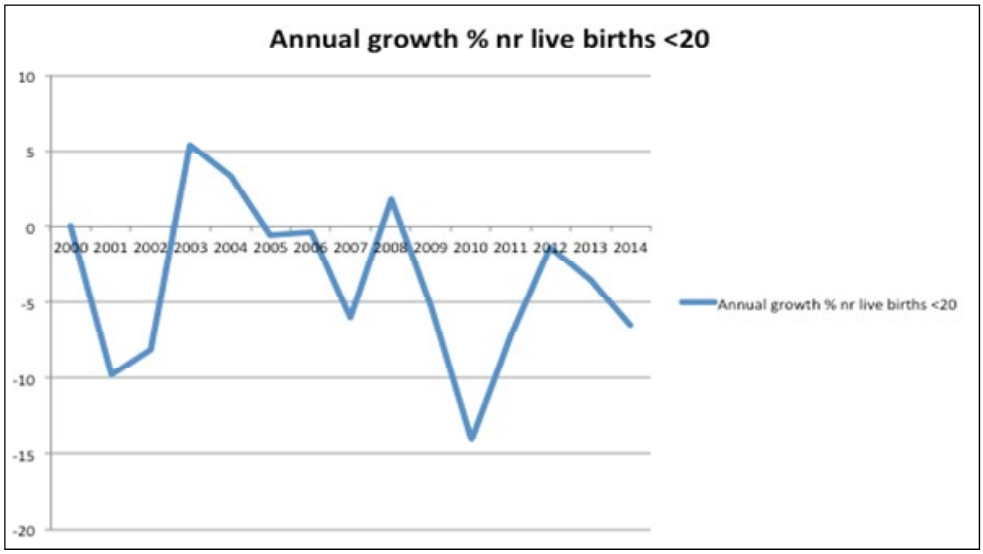


Evaluating the percentages of 'live births from mothers under 20 years old', it shows that there is a decline in percentage starting with 13.11 % in 2000, and ending with 9.51 % in 2014. Comparing these with the 'estimated numbers of live births under 20 years old' it shows that although numbers have declined, from 2002 until 2004, and 2007 until 2008, there was an increase in numbers of live births under 20 years old. The data, combined with their annual perceptual decline of growth rate is stated in Table 2 and Figure 2.

Table 2. Data on the live births in Romania *(Source: WHO, Health for All database)*

Year	% of live births < 20	number of live births < 20	annual growth %
2000	13,77%	32294	N/A
2001	13,22%	29133	-9,79%
2002	12,72%	26779	-8,10%
2003	13,28%	28215	5,36%
2004	13,48%	29152	3,32%
2005	13,11%	28976	-0,60%
2006	13,16%	28884	-0,32%
2007	12,65%	27163	-5,96%
2008	12,46%	27649	1,79%
2009	11,79%	26220	-5,17%
2010	10,61%	22533	-14,06%
2011	10,65%	20899	-7,25%
2012	10,25%	20613	-1,37%
2013	9,58%	19889	-3,51%
2014	9,51%	18603	-6,47%

Figure 2. Data about live births in Romania *(Source: WHO, Health for All database)*



From the data of the World data bank, it shows that from 2000 until 2013, there is a steady decline in the numbers of female population, and from 2013 up to 2014, a considerably small increase. Analysing the data of the adolescent fertility rate, it shows that from 2000 until 2002, there is a small decline from 38.631 to 37.171. From 2002 until 2007 there is an incline in births per 1000 women aged between 15 and 19, which goes up to 39,065 in 2007. From 2007 until 2014 there is a drop of the adolescent fertility rate, with ends at 35.12 in 2014. Looking at the estimated number of births of women aged 15-19 years old, there is an increase from 2002 until 2004 of estimated numbers of births. These numbers, with their annual upward and downward percentages, is depicted in Table 3.

Table 3. Data on adolescent pregnancy in Romania *(Source: the World Bank)*

year	female population	% fem pop 15-19	nr fem 15-19	ado fert rat	nr births 15-19	annual growth %
2000	11463790	7,442	853135	38,631	32957	N/A
2001	11313535	7,367	833468	37,901	31589	-4,15%
2002	11116055	7,45	828146	37,171	30783	-2,55%
2003	11043464	7,591	838309	37,55	31479	2,26%
2004	10988040	7,662	841914	37,929	31933	1,44%
2005	10928084	7,574	827693	38,307	31706	-0,71%
2006	10871743	7,209	783787	38,686	30321	-4,37%
2007	10720794	6,723	720759	39,065	28156	-7,14%
2008	10551954	6,208	655065	38,71	25357	-9,94%
2009	10472080	5,79	606333	38,356	23257	-8,28%
2010	10416650	5,531	576145	38,001	21894	-5,86%
2011	10370869	5,337	553493	37,647	20837	-4,83%
2012	10328980	5,236	540825	37,292	20168	-3,21%
2013	10239901	5,203	532782	36,206	19289	-4,36%
2014	10257961	5,192	532593	35,12	18704	-3,03%

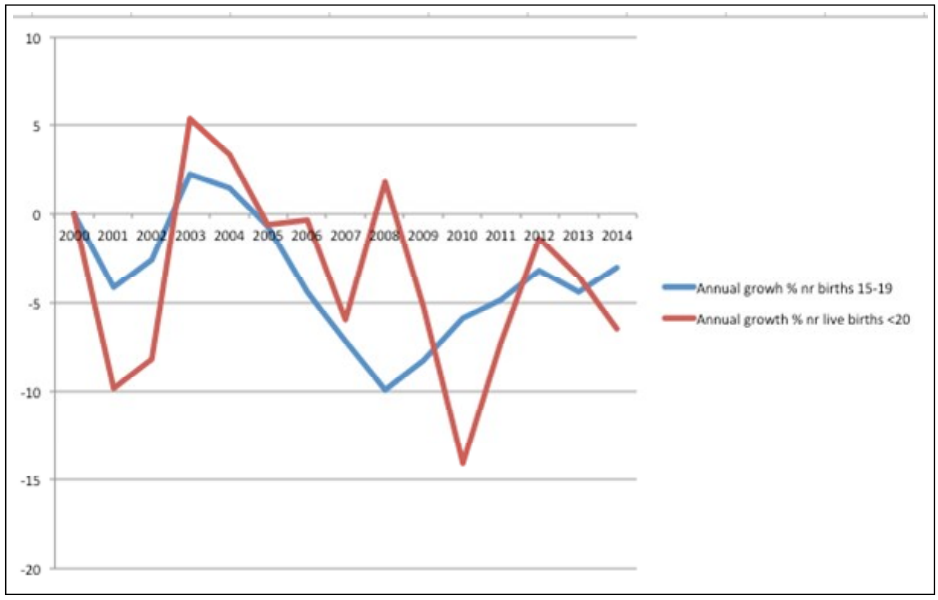
Finally, observing the compared data from the Health for all database and the World bank, it shows that from 2000 up to 2008, the annual growth between databases is in line on the fact of declining or increasing. It also shows that all of the numbers of live births and annual percentage

growth are different. From 2007 up to 2008, the numbers of live birth from the Health for all database seem to increase, where the numbers of live births from the World Bank seem to decrease. From 2009 until 2010, the numbers of Health for All have the strongest decrease of 14.06%. From 2007 up to 2008 the strongest decrease in the World Bank data takes place with 9.94%. The compared numbers and annual percentages are shown in Table 5 and Figure 3.

Table 4: Data about live births in Romania *(Source: WHO and the World Bank)*

Year	number of live births < 20	annual growth %	nr births 15-19	annual growth %
2000	32294	N/A	32957	N/A
2001	29133	-9,79%	31589	-4,15%
2002	26779	-8,10%	30783	-2,55%
2003	28215	5,36%	31479	2,26%
2004	29152	3,32%	31933	1,44%
2005	28976	-0,60%	31706	-0,71%
2006	28884	-0,32%	30321	-4,37%
2007	27163	-5,96%	28156	-7,14%
2008	27649	1,79%	25357	-9,94%
2009	26220	-5,17%	23257	-8,28%
2010	22533	-14,06%	21894	-5,86%
2011	20899	-7,25%	20837	-4,83%
2012	20613	-1,37%	20168	-3,21%
2013	19889	-3,51%	19289	-4,36%
2014	18603	-6,47%	18704	-3,03%

Figure 3. Data on live births in Romania *(Source: WHO and the World Bank)*



Discussion

From this study comes forth, that although the rate of adolescent pregnancies in Romania has been declining from 2000 until 2014, the data from different databases regarding this topic show different outcomes. Also, it shows that the rate in which it has been declining, is not continuously, since there have been years in where the number

of live births from mothers under 20 have increased compared to the year before. For example, looking at the data from the Health for All database from 2007 until 2008, it states that the number of live births and live births from mothers under 20 have respectively increased with 3.34% and 1.79%. The data from the World Bank shows a decline of 9.94%. The 'adolescent fertility rate' given by the World Bank can also give a distorted representation. From 2006-2007, the adolescent fertility rate seems to have risen, yet the numbers of live births have declined with 7.14%. This makes clear that these datasets are not in line with each other.

While Sedgh et al. (9) found that in 2011, Romania had around 34,700 adolescent pregnancies; the numbers of this study show otherwise. From the data gathered from the Health for all database, in 2011 Romania seemed to have 20899 adolescent pregnancies. The data from the World Bank suggests that in 2011 Romania had 20837 adolescent pregnancies. These differences are respectively 13801 and 13863 adolescent pregnancies, and taken the importance of the problem in mind, this should not be neglected.

Iorga et al. (8) stated that Romania has 8,500 adolescent births on average per year, and that they have a teen birth rate of 39.4%. In contrary to this, this study has found that the lowest number of adolescent births found in Romania was 18603. Looking at this data from the Health for All database, an average of 8500 adolescent births on average per year could be considered unlikely.

Although this study was insightful, it was subject to some limitations. Firstly, since adolescent pregnancy is a multidimensional problem, the numbers on live births numbers merely depict a part of the problem. When looking at the problem of adolescent pregnancies, it is important to take possible contributing factors in account. For example, access to contraceptives is in important element when addressing this problem. Access to contraceptives differs highly between countries due to need of parental consent, the high costs of supplies, limited number of outlets or lack of sexual education (9). In this study, the situation with regards to access to contraceptives in Romania has not been taken in account. Therefore, conclusions made from this study can be seen as less valid, and for future research it is recommended to have an aim more directed to the contributing factors of adolescent pregnancy, such as the access to contraceptives (10).

Secondly, abortions, stillbirths and miscarriages are also a vital part of the problem of adolescent pregnancy. The possibility for adolescents to end unplanned pregnancies is not always available (11), and is dependent on the availability of 'liberal abortion laws'. This study focussed on data on 'live births', but provides no information or data on the numbers of abortions, stillbirths and miscarriages or the possibility for adolescents to terminate pregnancies in Romania. For future research it would be recommend including data and information on these factors.

Thirdly, since the calculations made from the two datasets are not 'hard data'. All the calculations that have been made can only be seen as 'estimates', and their value should be taken in consideration.

All these limitations could inhibit the study of addressing the full spectrum of the problem, yet the findings could be beneficial for policymakers, public health workers, health professionals and other stakeholders.

In conclusion, in this study, the prevalence of adolescent pregnancy in Romania over the course of 2000 until 2014 was examined. The findings show that although rates have been declining, the numbers are still considerably high. Also, it shows that there are important discrepancies in the numbers gathered from different databases. To ensure an effective approach in addressing this problem, more research and statistical analysis on regional data regarding adolescent pregnancy and influential factors in Romania is recommended.

Conflicts of interest: None declared.

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