COMPARATIVE ANALYSIS OF THE REPRODUCTIVE BEHAVIOUR OF MOTHERS AND DAUGHTERS OF ROMA ORIGIN IN THE REGION OF PLOVDIV

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Abstract: Background: Family is the fundamental structural unit of society and any change in the social, cultural, legal and political system affects its functions. A main function of the family is the reproductive one There are characteristic features in the reproductive behaviour in the Roma ethnic group. This study examines the relationship and the influence of the realized reproductive function of Roma mothers on the family planning of their daughters. The aim is to make a comparative analysis of the reproductive behaviour of mothers and daughters of Roma origin in the region of Plovdiv in Bulgaria.

Methods: A cross-sectional study was carried out in 2019 through structured anonymous interviews among 70 women of Roma origin. Statistical data processing was performed with descriptive and correlation analyses. Nonparametric methods for variables that do not have a normal distribution were applied.

Results: The age of marriage and first sexual intercourse of daughters statistically significantly depends on the place of residence and the level of education of their mothers. A strong correlation was also found between the age of marriage of mothers and that of their daughters, as well as the age of birth of the first child. The actual number of children of the mothers correlates weakly with the idea of an ideal number of children of the daughters.

Conclusion: The reproductive attitudes and behaviour of the daughters are statistically significantly influenced by the realized reproductive behaviour of their mothers.

Keywords: sexual culture, reproduction, family planning, reproductive attitudes, birth rate, Roma family, minority.

1. INTRODUCTION

Many scientific publications and official documents show data on the deepening demographic crisis in Bulgaria. There is a significant deterioration of the main demographic indicators: birth rate, mortality, natural increase (Semerdjieva M. , 2013). Our country is inhabited by several ethnic groups, as the Roma is one of the most numerous and ranks third in number after the Bulgarian and Turkish. Bulgaria is among the countries in the EU with the most significant Roma population. This determines the influence of this ethnic group on the demographic indicators of our country (Semerdjieva M. , 2013).

According to the National Statistical Institute data, in the period from 1900 to 2011 the number of Roma increased by 3.6 times, and by 2001 the natural growth of the ethnic group was positive, despite the negative one for the country. In the last 10 years of this period, there had been a decrease in the number of Roma by 45,565 people.

The family is the fundamental structural unit of society and any change in the social, cultural, legal and political system affects its functions (Semerdjieva M. , 2004).

Social influences in recent years have contributed to the formation of new values and attitudes within the family, which in turn leads to some changes in the importance of its various functions (Semerdjieva M. , 2004). Main functions of the family are reproduction and upbringing, according to certain norms and values of society (Semerdjieva M. , 2004).

According to a report by the European Commission, sex education and sexual culture influence reproductive attitudes and reproductive behaviour, which in turn determine population growth and population structure (European Comission, 2014). The Roma ethnic group has some characteristic features in reproductive behaviour. Family environment and sex education have an impact on children's reproductive behaviour, with daughters largely replicating that of their mothers (Taneva & Kirkova, 2020).

The real family model, implemented by mothers, is related to the family planning of their daughters и (Taneva, 2009), (Dimitrov, 1998), (Kumar, Bordone, & Muttarak, 2016). In the light of this, the study of two generations of women would give a clearer picture of the influence of the realized reproductive plans of mothers on the reproductive attitudes and the planned family model of their daughters. The question: "Are ethnic peculiarities in reproductive behaviour passed down through the generations and can the reproductive plans of future generations be foreseen?" is of interest.

The aim is to perform a comparative analysis of the reproductive behaviour of mothers and daughters of Roma origin in the Plovdiv region.
Tasks:
1. To study, analyze and compare the realized family plans of the mothers and the reproductive attitudes of their daughters.
2. To analyze the influence of the realized reproductive behaviour of mothers on the reproductive behaviour of their daughters.

2. MATERIALS AND METHODS

A pilot survey was conducted through a structured, anonymous interview. The survey was conducted in 2019 among 70 women of Roma origin, after a declared informed consent. The parents have been informed about their minors. The interviews were conducted at Plovdiv University Hospital; Multiprofile Hospital for Active Treatment "St. Mina" – Obstetrics Gynaecological Department "Vessela"; Community Center for Children and Families – Plovdiv. The reproductive behaviour of mothers and the reproductive attitudes of daughters among Roma women, family planning, and the family model in this ethnic group, as well as the various factors influencing them, were studied.
Seventy structured interviews were conducted to collect the primary statistical information.
The interviews were conducted through a structured questionnaire, consisting of two parts: Part I – contains 62 questions related to the reproductive behaviour and attitudes of the interviewed woman;
Part II – 13 questions about the reproductive behaviour of the interviewed woman's mother.
The observed indicators were divided into the following groups:
Factorial for daughters: age, education, permanent residence, marital status.
Factorial indicators for mothers: age, education, permanent residence.
Resultant for daughters: sexual culture, sexual education, reproductive attitudes, reproductive behaviour, family planning.
Resultant for mothers: realized reproductive behaviour.
Descriptive and Spearman's correlation analyses and non-parametric methods for studying quantities that do not have a normal distribution were used for statistical data processing.
The data were analyzed with the statistical package SPSS ver. 23
Statistical significance level α <0.05was accepted.

3. RESULTS

3.1Socio-demographic characteristics of the studied contingent:

The mean age of the studied contingent of daughters was 30.83±12.51 years, with a minimum of 15 years and a maximum of 75 years of age.
Those who live in the town prevail. Their number was 54 people or 77.14% of all participants in the study. Those living in villages are 16 people, which is 22.86% of the total number of interviewed women.
The daughters were divided into five groups by education. The largest was the share of Roma women with primary education – 48.57%, followed by those with high education – 31.43%. Women who have never attended school were 17.14%. There were no women with secondary education in the sample, and the share of women who managed to get a higher education diploma was only 2.86%. The mean age of the mothers was 51.32 ± 12.26 years, with the lowest age in this group being 31 years and the highest – 87 years. Those who live in the city dominated in the group of mothers. These were 44 women or 62.86%. Mothers living in rural areas were 24 (37.14%).
Mothers were divided into three groups by their education. Those who had not attended school were 47.14%, almost as many were the women with secondary education – 42.86%. Mothers with secondary education are only 10.00%. A moderate positive statistically significant correlation was found between the educational level of the mothers and that of their daughters (r_s=0.579). The education of mothers is a factor influencing the level of education of their daughters.

3.2 Reproductive attitudes, family planning

The largest relative share of daughters is of those, who start having sex at the age of 14 (20.59%), followed by those starting at the age of 15 (14.71%). At the age of 16, 13.24% start having sex. The share of 18 and 19-year-olds were the same – 11.76%. At the age of 13, 7.35% of daughters indicated sexual intercourse. The mean age for this indicator was 16.91±3.69 years.
The Kruskal-Wallis method proved a strong relationship between education and the age of first sexual intercourse in daughters. The factor "education of mothers" also has a strong influence on the age of first sexual intercourse in daughters (p=0.011). As the educational level of mothers and daughters increases, so does the age of first sexual intercourse of the daughters.

The mean age of marriage for daughters was 17.62±4.27 years (Fig. 4), and in the group of mothers – 15.65±2.50 years (Fig. 5). The highest is the relative share of those, who marry at the age of 14 in both groups (17.65% for daughters and 18.84% for mothers). A positive and strong correlation ($r_s=0.647$) between the age of marriage of daughters and the age of marriage of their mothers was found. (Fig. 1)

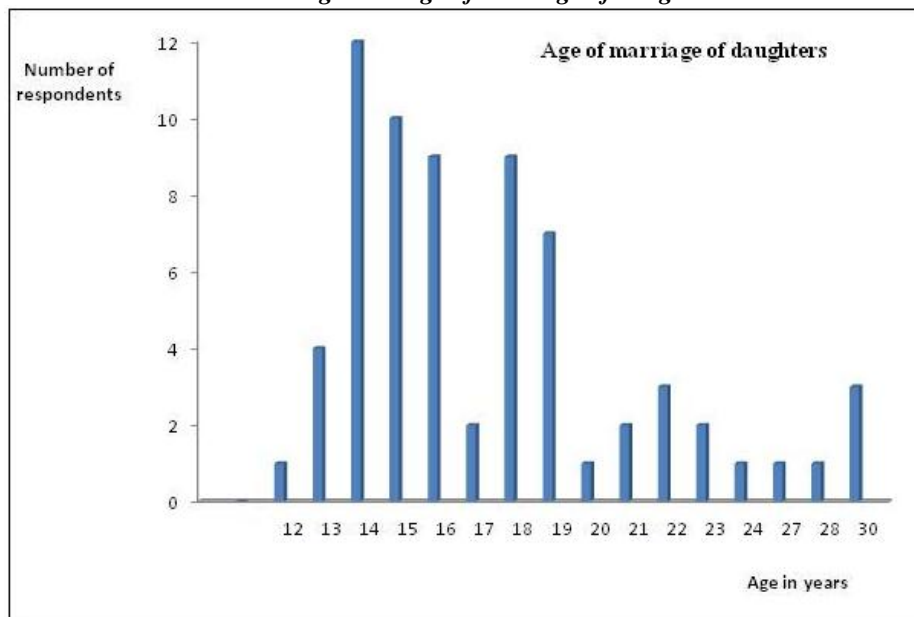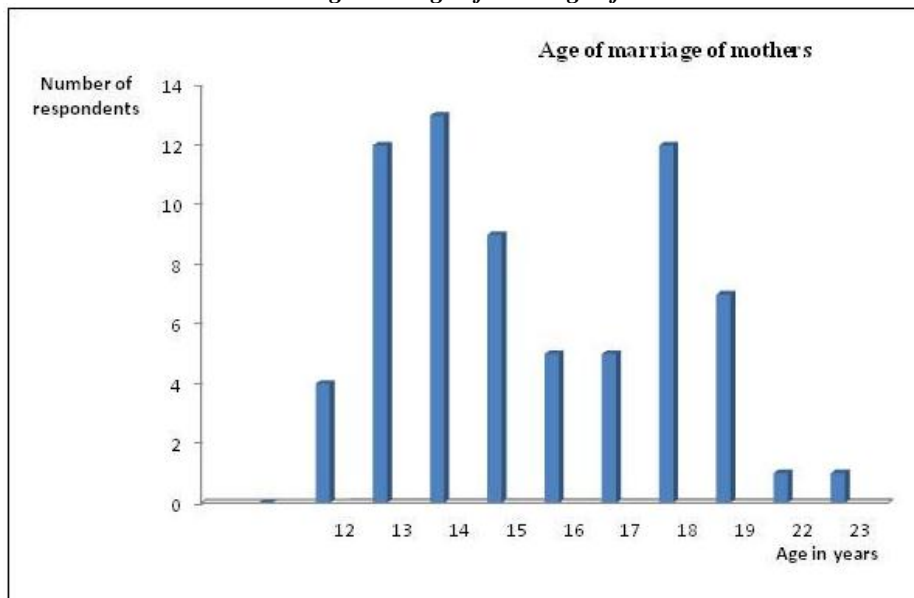*Figure 1. Age of marriage of daughters*

Figure 2. Age of marriage of mothers

Another factor that was found to influence the age of marriage of daughters was the educational level of their mothers (p=0.003). The daughters of more educated mothers marry at an older age.
Mann-Whitney's nonparametric analysis showed a statistically significant relationship between the mother's residence and the age of marriage and the onset of sexual activity (p<0.001). The daughters of mothers living in rural areas are more likely to marry and have sex before the age of fifteen. A positive and very strong correlation ($r_s=0.888$) was found between the years of marriage and the years of first sexual intercourse of daughters. The mean

age of delivery of the first child in daughters was 18.8±4.08 years, and in mothers – 16.76±2.75 years. A positive, strong correlation (r_s=0.647) between these indicators was proved.

The protogenetic interval was 1 year (62.50%) in the largest share of the daughters. Its mean duration is 1.62±1.29 years, with the smallest duration of the interval being 11 months and the longest-lasting 6 years. 72.13% of the mothers gave birth 1 year after marriage, and the mean duration of the period between marriage and the birth of their first child was 1.10±0.61 years. The shortest protogenetic interval in the group of the mothers was 10 months, and the longest – 4 years.

A very weak correlation between the duration of the protogenetic intervals of the mothers and the daughters (r_s=0.034) was found.

The intergenetic intervals in years in daughters were as follows:

The period between first and second child: mean duration 2.70±1.35, Mo=2 (40.82%).

The period between second and third child: mean duration 4.25±4.82, Mo=3 (37.50%).

The period between third and fourth child: mean duration 3.61±3.70, Mo=2 (33.33%).

There were no women with five or more children in the studied contingent.

The results obtained from the analysis of the answers, given by the daughters regarding the ideal number of children were interesting. The data showed that 58.46% indicated two children, and 36.92% answered that the ideal number of children in the family was three.

The non-parametric Kruskal-Wallis method proved that the daughters' education did not affect their perception of the ideal number of children in the family (p=0.503). The same method proved that the education of the mothers did not matter for this indicator (p=0.324). The place of residence of the mothers also does not affect the daughters' perception of the ideal number of children in the family (p=0.121).

The mean value of the total number of children born in the mothers' group was 3.53±1.81. The highest is the share of the women who gave birth to two (30.00%) and three children (30.00%). Four children have 17.14% of mothers, and only 2.86% have only 1 child. For daughters, the "total number of children born" is an indicator that cannot be compared to the same for mothers, because daughters have not yet completed their reproductive functions. Therefore, we investigated whether the mothers' actual number of children affects the daughters' perceptions of the ideal number of children in the family. A positive weak relationship between the two studied indicators (r_s=0.398) was found. The collected data showed that the mean age of delivery of the last child in mothers was 26.25±7.13 years, and the maximum – 47 years.

The daughters were asked about the age at which they thought the woman should stop deliver. The analysis of the data showed that the mean age for a cessation of reproductive functions, according to the daughters, was 36.05±6.29 years. The most consider 30 years (38.98%) and 40 years (27.12%). The highest age given in response was 50 years (5.08%) and the lowest 25 years (1.69%). No statistically significant correlation was found between the mothers' age of last delivery and the daughters' perception of the age of completion of the woman's reproductive functions.

4. DISCUSSION

The processing and analysis of the data showed peculiarities in the reproductive behaviour of the studied women. This was observed in terms of sexual initiation, age of marriage, intergenetic interval, protogenetic interval, family planning. A relation between the realized reproductive behaviour of the mothers and the reproductive attitudes of the daughters was proved, although no dependence was reported in some of the studied factors.

The data we received from both groups show that most of the women live in an urban area. The mother's place of residence influences the age of marriage and the onset of sexual intercourse of their daughters. Daughters of mothers living in the city marry over the age of 18 more often than daughters of mothers living in rural areas. In their study of early marriages among Serbian Roma girls, Hotchkiss et al. (Hotchkiss, Godha, Gage, & Cappa, 2016) described that child marriage was more common in rural areas. Similar data were found in a UNICEF report on Bulgarian Roma access to education (Zahova, 2016), which is in accordance with our findings of the age of onset of sexual life.

The educational level of Roma women in both groups is low, with the share of daughters who have never attended school is lower. A strong correlation exists between the level of education of mothers and that of daughters. Our study found that the education of mothers is a factor that also affects the age of marriage and the age at which Roma women start having sex. Another factor influencing the age of first sexual intercourse in daughters turned out to be their educational level. The same data were obtained by Gipson et al. in 2017. The authors describe that women with higher education are more likely to delay first sexual intercourse than their peers (Gipson & Upchirch, 2017). Low education is proving to be a risk factor for early marriages among Roma, according to a study by Hotchkiss et al. (Hotchkiss, Godha, Gage, & Cappa, 2016) and a UNICEF report from 2016 (Zahova, 2016). Our results showed a

strong correlation between the age of marriage of mothers and their daughters. According to this indicator, daughters repeat the experience of their mothers (Hotchkiss, Godha, Gage, & Cappa, 2016).

Roma have an early onset of sexual activity. This trend has persisted through the generations. Semerdzhieva et al. (Semerdjieva, Mateva, & Dimitrov, 1998) describe that more than half of Roma women start having sex at the age of 15. Our data show that the mean age of the first sexual intercourse is slightly higher – 16.91 years. We obtained similar results compared to the mean age of marriage. For mothers, it is 15.65, and for daughters, the mean age is slightly higher – 17.62 years. Semerdzhieva et al. (Semerdjieva, Mateva, & Dimitrov, 1998) state in their work on the sexual culture of the Roma that the average age of marriage is 15.5 years. Early marriage and delivery are typical for other ethnic groups as well (Dhakal, Shrestha, Bohara, & Neupane, 2020). Data on early sexual intercourse and low age of marriage were also reported in a study on Spanish Roma, which deals with the reproductive health among Roma in Seville (Escobar-Ballestra, Garcia-Ramirez, Albar-Marin, & Paloma, 2019). In her monographic work, Sandeva states that early marriage is a part of the traditions of the Roma ethnic group (Sandeva, 2020). The protogenetic interval in both groups is similar. Our results showed that the largest share of mothers and daughters give birth one year after marriage. Similar data can be found in a UNICEF report from 2016 (Zahova, 2016). Semerdzhieva, who also studied two cohorts of Roma women (mothers and daughters), points one-year duration of the protogenetic interval in both studied groups (Semerdjieva M. , 2004).

It is interesting to note that none of the surveyed daughters has five or more children. Only nine women have four children, the largest is the share of the daughters with two children. However, this indicator cannot be compared with the number of children in the mother group, as daughters have not completed their reproductive functions. A strong correlation between the age of birth of the first child of mothers and daughters was found. The results we received for the daughters' opinion about the ideal number of children in the family showed that most of them indicated two children. The education of the mothers does not affect the daughters' perception of the ideal number of children in the family, which contradicts the results of Taneva et al. (Taneva & Kirkova, 2020), according to which the educational level of mothers influences the notion of an ideal number of children. Regarding the influence of the mothers' place of residence on the attitudes of the daughters about an ideal number of children, we did not find a relationship. Dimitrov (Dimitrov, 1998) and Taneva (Taneva, 2009) report similar results. According to Kumar et al. (Kumar, Bordone, & Muttarak, 2016), the fertility of mothers does not affect daughters' attitudes towards family size, nor have we obtained results for such dependence. However, in her dissertation (Taneva, 2009), Taneva proves that mothers' actual number of children affects their daughters' planned number of children. The same results were obtained in another study by Taneva et al. (Taneva & Kirkova, 2020). We studied the daughters' perception of the age at which women should stop their reproductive functions. According to most of the daughters, 30 years is the age at which a woman should stop deliver. Similar data were obtained by Voicu et al. (Voicu & Popescu, 2009) in their report examining family life and the position of Roma women in Romania. In our study, the mothers' age of last delivery does not influence their daughters' perception of the age at which a woman's reproductive functions are completed.

5. CONCLUSION

The reproductive attitudes and behaviour of daughters are statistically significantly depending on the realized reproductive behaviour of their mothers. The tendency of this ethnic group for the early onset of sexual life and marriage in childhood is preserved. Factors of residence and education of the mother affect the age of marriage and the beginning of sexual life. The education of Roma women is not a priority for this ethnic group and the majority of women do not receive a proper education. Most of them give birth to their first child 1 year after marriage, and these data are valid for both cohorts. The age of the mother's first delivery strongly correlates with that of the daughter. The largest is the share of daughters, who indicated the two-child family model as an ideal for them, without proving a relationship between this attitude of the daughters and the actual number of children of the mothers. According to the daughters, a woman's reproductive functions must be completed by the age of 30.

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