Formation of the Reproductive Behavior of Healthcare Students Depending on Their Mothers' Realized Plans

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Abstract

Introduction: A socio-demographic analysis of marriage and family requires conducting deep studies penetrating the essence of the processes among the population. The issue of birth-rate, as a basic factor that determines the reproduction of the population, takes a central position in the demographic studies. The study of the influence of the mothers' reproductive behaviour on their daughters' reproductive attitude is of an undisputed interest. This study deals with mothers' realized plans as a factor in their daughters' family planning.

Materials and methods: This cross-sectional study was carried out in 2018 through a direct group anonymous inquiry among 395 female students. The statistical processing of the data was made with descriptive, alternative, correlation and variance analyses.

Results: The students' reproductive behaviour is statistically significantly dependent on their mothers' realized family plans. Mothers' education and the real number of children are statistically significant factors for their daughters' views about the ideal and planned number of children.

Conclusion: This study of the reproductive behaviour of the students advances the knowledge in the field by revealing that it is statistically significantly dependent on their mothers' realized plans.

INTRODUCTION

A socio-demographic analysis of marriage and family requires conducting deep research, penetrating the essence of the processes among the population. The problem of birthrate, the major factor that determines the reproduction of population takes a central place in the demographic studies.[1,2] The 'One child model' is finally time-tested in the Republic of Bulgaria and this leads to a deepening of the heavy demographic crisis the country is in. In a study of the ideal number of children, carried out between 2015 and 2017, Hristova, Iskrov, and Stefanov prove reduced reproductive intention and less motivation for children.[3]

According to data from the UN from 2009, the demographic catastrophe in the last two decades ranked Bulgaria among the countries such as Latvia and Hong Kong with the lowest birthrate in the world.

A complex of social, economic, psychological and biological factors influences the level of birthrate. These factors should be effectively identified so that the right information is provided to policy-makers.[4] The family model is predictive of the children's future plans and expectati-

ons for their own families. The issue of the influence of the family environment on the reproductive behavior of the children, especially daughters, has been studied in different aspects. Mothers' preferences for their children's reproductive behaviour[5], mothers' socioeconomic status and empowerment[6,7], mothers' time of first childbirth and periods of births[8] are investigated as influencing factors on their daughters' reproductive plans, timing, and fertility. We found few studies dealing with mothers' realized plans as a factor in their daughters' family planning.[9-13] The study of the influence of mothers' reproductive behavior on their daughters' reproductive attitude is of an undisputed interest which provoked the present study.

Planning the number of children in the future family is an essential element of family planning.

AIM

The aims of the present study were:
1. To collect the primary statistical information for the realized natality of mothers of the students participating in the study and its influence on their future reproductive behavior.
2. To reveal the influence of the mother's reproductive behavior on two of the significant indicators in their daughters' family planning – planned and the ideal number of children.

MATERIALS AND METHODS

This sociological study was carried out in 2018 through a direct group anonymous inquiry. A total of 395 students from the Medical University of Plovdiv participated in the survey. The sample size was calculated at a confidence level of 95%, a margin of error 5% and a very large (unknown) population (https://www.surveysystem.com/sscalc.htm#two). The calculated sample size was 384. Our sample size was 395>384, a representative sample for the studied population - female healthcare students in Bulgaria. The following measures about participating students' mothers were registered in the questionnaire: year of birth, education, social group, place of living, number of live births, marriage age, proto- and inter-genetic intervals and their influence on the basic indicators in the family planning – planned number of children, wished and ideal number of children,

marriage age, proto- and inter-genetic intervals and factual number of children.

The nonparametric methods of Man-Whitney and Kruskal-Wallis were used for the analysis of ordinal variables and variables with abnormal distribution. Spearman's correlation was estimated between variables when at least one of them was measured on an ordinal scale or is not normally distributed. Pearson χ^2 test and Fisher's exact test were applied in nominal data investigation.

SPSS v.19 was used for the statistical analysis of the data. The level of significance for all statistical tests was set at α=0.05.

RESULTS

We studied the impact of mothers' marriage age of the respondents' views about the best marriage age **(Table 1)**. A positive weak correlation was found between these variables – r_s=0.39±0.05. The age, indicated by the daughters increased with the mothers' age of marriage.

The conducted inter-group comparison showed a difference only between the mother's age of marriage up to 19 years and above 25 years – p<0.0001 (u=2.06). We also studied the comparison between the average age of marriage in the mothers' and daughters' cohort. In the mothers' group, this age was 20.99±0.19 while their daughters' one was 24.54±0.14. The difference was statistically significant – p<0.001 (u=4.79).

The relative share of the students who have planned the number of the children in their future family is the biggest in the sample of mothers with two children (67.04%), followed by the share of the students whose mothers have 3 children (21.83%). The smallest is the relative share of the students with mothers who have only one child (11.13%).

Nearly 10% of the students did not think about planning some children in the future family and 30.58%±2.31% of the studied sample did not plan their future family. A positive moderate correlation was found between the mothers' factual number of children and the planned number by the students – r_s=0.48±0.06.

We found a statistically significant influence of the mothers' educational level on their daughters' planned number of children – p<0.001 (F=1.23) **(Table 2)**.

We did not find a statistically significant relationship between the mothers' place of living and the number of

Table 1. The relation between mothers' age of marriage and daughters' views about the best age of marriage

Mothers' age of marriage	Mean age of marriage indicated by daughters				
	n	$\overline{x} \pm S^{\overline{x}}$	S_x	t	P_t
Up to 19 years.	119	24.43±0.23	2.50	9.77	<0.001
20 - 24 years	228	24.48±0.18	2.69	9.10	<0.001
25 +	43	25.56±0.51	3.35	7.63	<0.001
Total	390	24.54±0.14	2.83	8.67	<0.001

Table 2. Female students' planned number of children depending on their mothers' education level

Mother's education	Daughters planned number of children						
	Number	$\overline{x}\pm S^{\overline{x}}$	S_x	T	P_t	F	P
Primary	12	1.96±0.14	0.49	4.00	<0.001		
High	143	2.13±0.08	0.61	3.49	<0.001		
College	43	2.17±0.10	0.66	3.21	<0.01	1.23	<0.05
Higher	47	2.27±0.12	0.81	2.75	<0.01		
Total	248	2.14±0.04	0.62	3.35	<0.001		

children planned by their daughters (p>0.05, u=0.40). The planned number of children of daughters with mothers who live in urban areas was 2.12±0.06 and in rural places of living - 2.16±0.08.

The educational level of mothers statistically significantly influences the students' notion of the ideal number of children (p<0.05, u=2.78).

We studied the impact of the actual number of children in the family on the students' opinion for an ideal number of children. The conducted nonparametric analysis confirmed the alternative hypothesis at a significance level of 99.99% (χ^2=26.21). The alternative hypothesis was also confirmed by the negative weak correlation we found (r_s=0.33±0.04) between the ideal number of children for the students and their mothers' factual number of children.

The mothers' place of living does not have a statistically significant influence on the ideal number of children, pointed out by the students participating in the survey (p>0.05, u=0.71). For mothers who live in urban areas the mean ideal number of children for their daughters was 2.18± 0.03, and for mothers with a rural settlement – 2.23±0.07 is the mean ideal number of children for their daughters.

DISCUSSION

The implications about the impact of mothers' reproductive behaviour on their daughters' behaviour show that statistically significant relationships exist even though some of the investigated factors do not have an effect. The mothers' marriage age has an impact on the students' views about the best marriage age.[10] The students, whose mothers' age of marriage was up to 19 pointed the lowest age and the students, whose mothers married at an age above 25 pointed the highest one.

According to Stanfors and Scott[14], daughters of mothers who were relatively young when they started childbearing are significantly more likely to have their first birth at young age. Our results build upon this revealing that daughters of mothers who married young are more likely to do the same.

According to Kumar, Bordone, and Muttarak[12], family size preferences are not associated with the mother's fertility. In our study, the mothers' factual number of children influences their daughters' planned number of children. In their study, Hristova, Iskrov, and Stefanov[3] highlight the

fact that the two-child model remains the most accepted concept of a family. These results confirm the outcomes reported by Taneva.[9]

We were impressed by the fact that every tenth student had not thought about planning some children in the future family. The number of children, planned by the students, increases with the mother's number of children. Our results corroborate Silalahi and Setyonaluri's[13] findings that women with many siblings tend to have more children.

The educational level of mothers influences their daughters' views about the planned number of children. The planned number of children by the future mothers increases with their mothers' educational level. The results support the findings of Dimitrov[10] and Taneva[9] about mother's education influence on daughters' family plans but contradict the results of Kumar et al.[12] according to which the higher the education of the biological mother, the lower the size of family that the woman would like to have. These differences in the literature on the same issue indicate that the problem should be investigated in the light of the cultural, ethnical and socio-economic environment of the family transition of fertility models and behaviour.

The mothers' place of living did not influence the number of children planned by their daughters. Similar results were reported by Dimitrov[10] and Taneva[1].

A relation was searched between the mothers' reproductive behavior and their daughters' views about the ideal family. The ideal number of children is what students would like to have, ignoring the material and living conditions they would have in their future family.

The mothers' factual number of children statistically significantly influences the ideal number of children, pointed out by the respondents. It is noteworthy that at a factual number of one child, every fourth student has pointed three and more children. At a factual number of two children, the ideal number concentrates on two children, but every fifth student considered three or more kids as an ideal number. At a real factual number of three children, the number of students who have pointed this number as an ideal one decreases significantly. It is worth noting that students whose mothers have the biggest number of children pointed the least ideal number.

The mothers' educational level has an impact on their daughters' views about the ideal number of children. Contrary to expectations, students with mothers who have

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primary education indicate the smallest ideal number of children and the biggest number was pointed by the daughters of mothers with higher education.

The mothers' residence, like in the planned number of children by the daughters, does not have a statistically significant influence on the ideal number of children.

CONCLUSION

The students' sexual culture and reproductive behaviour are in a statistically significant dependence on their mothers' realized family plans.

With the increase of the mothers' age of marriage, the age of marriage pointed by their daughters increases.

The basic indicators for the realization of a future family are the planned and the ideal number of children. They depend statistically significantly on the mothers' factual number of children and education.

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Формирование репродуктивного поведения среди студентов в сфере здравоохранения в зависимости от реализованных планов их матерей

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Резюме

Введение: Социально-демографический анализ брака и семьи требует глубокого исследования, чтобы проникнуть в природу процессов среди населения. Проблема «рождаемости» является основным фактором, определяющим воспроизводство населения, занимающим центральное место в демографических исследованиях. Изучение влияния репродуктивного поведения матерей на репродуктивные установки их дочерей представляет несомненный интерес. В этом исследовании рассматриваются реализованные планы матерей как фактор планирования семьи их дочерей.

Материалы и методы: Это секционное исследование было проведено в 2018 году путём прямого группового анонимного опроса среди 395 учащихся в системе высшего образования женского пола. Статистическая обработка данных проводилась с помощью описательного, альтернативного и корреляционного анализа, а также анализа среднего отклонения.

Результаты: Репродуктивное поведение учащихся является статистически значимым в зависимости от реализованного планирования семьи их матерей. Образование матерей и фактическое количество детей являются статистически значимыми факторами для мнения их дочерей относительно идеального и планируемого количества детей.

Заключение: Это исследование репродуктивного поведения учащихся улучшает знания в этой области, выявляя тот факт, что оно статистически значимо зависит от реализованных планов их матерей.

Ключевые слова

рождаемость, планирование семьи, родители, студенты