ADOLESCENCE PREGNANCY AND MATERNAL MENTAL HEALTH

Received:08.01.2021
Accepted:12.03.2021

Brindusa Ilinca MITOIU MD,Ph.D. [1,2], Roxana NARTEA MD,Ph.D.*[1,2], Adriana Sarah NICA[1,2] MD,Ph.D.

1. University of Medicine and Farmacy " Carol Davila" -9 Clinic Department,
2. National Institute of Recovery, Physical Medicine and Balneoclimatology III

Abstract

Background: Recently, both at national and European level, there is an increased social tolerance towards this serious social and medical phenomenon represented by pregnancy in adolescents. Underage mothers frequently face the problem of social isolation, being stigmatized and blamed by the community, they have little opportunity to continue their studies in order to obtain a profession and, implicitly, financial independence. In most cases, the birth of a child during this stage of a girl's life increases the risk of poverty and social vulnerability, both for the mother and her child.

The purpose of this study is to describe the variation and trend of births in the Department of Obstetrics of a state hospital in Bucharest and to assess the impact of birth on the psycho-emotional status of adolescent mothers in postpartum

Results: Adolescents who become mothers have a higher risk of occurence and developing an anxiety and depression disorder compared to adult mothers, whether we relate to pregnancy or to postpartum. The high percentage of adolescent mothers emphasizes, once again, the need for firm and clear measures in order to implement a national program on the introduction and study of sex education in school curricula. The approach of teenaged mothers must be done in a multidisciplinary team and there is a need to organize support groups, but also information campaigns on sex education.

Keywords:

mental health, pregnancy, adolescence, underage mothers, human body biology

*** Correspondence: * Roxana NARTEA MD, PhD; E-mail: nartea.roxana@yahoo.com**

Introdoction

Adolescence, a unique stage in an individual's life cycle, is associated with multiple developmental opportunities, but also with unpredictable barriers and events, some of which may have major consequences for that person's future.

The changes (physical and mental) that occur during adolescence achieve the proper development of the human body, by triggering the hypothalamic-pituitary-gonadal function, with the appearance of pulsatile gonadoliberin secretion, thus maturing the neuroendocrine system.

Adolescence is the period of transition to adulthood. This life stage is related to the awareness and choice of relational and sexual preferences regarding the teenager's future, but also of her role in society. The lifestyle, which marks the health of young people, is shaping since childhood, but especially at puberty and most of all in adolescence. [1,10,12].

Biological and psycho-behavioral fragility, the lack of education and experience on the initiation of sexual life and its consequences, require careful monitoring and communication of the phenomenon with major implications for society, followed by analysis and actions in a multidisciplinary professional context.

The historical period of the last 30 years, progressively, due to the advertising exacerbation of sexual vulgar forms, with uncontrolled access for children and adolescents, has led to major psycho-behavioral alterations, related to the interest and practice of the videos exciting moments.

In many groups of teenagers in the country, the idea is transmitted that "after 14 years, whoever does not have sexual contact is abnormal". These situations discussed among adolescent girls do not refer to the risk of sexually transmitted diseases or to an unpredictable pregnancy.

Correct information and knowledge must be adapted to the level of understanding of adolescents, requiring the support of sex education programs, avoiding vulgar or trivial connotations.

In the last 30 years, this subject has become a medical and social problem. The number of pregnancies in underage mothers has increased due to the presence of morally aberrant forms of sexuality, degrading through debauchery and sexual perversions, followed by the risk of unwanted and potentially tarnished resulting children due to the particular biological context of teenage mothers. [2]

At the heart of somatic, visceral and psycho-behavioral development, as in a volcano preparing for eruption activity, lies early sexual maturation, a period in which adolescents rediscover themselves and reconsider their position, their attitudes, actions and their perspectives in the context of the group to which they belong.

Sexual health and the capacity for procreation, as component parts of the individual's state of health, require the knowledge and understanding of minimal notions of biology, but also the observance of rules of protection and personal hygiene of the couple.

This context has a special importance in the development of human capital, ensuring, together with a high-performance education system, sustainable socio-economic development and, implicitly, increasing the quality of life of a population. The right to health care is one of the fundamental human rights. [1]

Sexual health is one of the fundamental factors of wellbeing, and it represents more than reproductive health. The sexual intercourse, which in animals is subordinated to a primary, elementary and instinctive impulse, becomes in humans a complex neuro-psychic act, conscious and differentiated, based on neuro-endocrine interrelationships, partially known nowadays. [2]

By establishing horizontal and vertical connections between the cerebral cortex, the lower layers of the CNS and the endocrine system, especially through the connection of nerve fibers, but also humorally, with the pituitary gland and gonads, important acquisitions have been made in the area of knowledge on the influence of sexuality on the human body, on the sexual activity typology, on age-related sexual intercourse or on endogenous and exogenous factors that may influence sexuality.

Sexual health encompasses several aspects related to minimal anatomical and physiological informations, general and local changes in the body during puberty and adolescence, requiring access to education and depends on the level of knowledge about sexuality in the general population. [1-3]

The World Health Organization has formulated, since 1948, the definition of health and returns in 2018 with the definition of sexual health: "a state of physical, mental and social well-being, and not just the absence of disease or infirmity." [3]

In Europe, reproductive and sexual health among adolescents is considered optimal, relative to the number of births in the target group, but with uneven European regional distribution, according to the latest reports. The incidence of pregnancy in adolescents is higher in Eastern Europe (41.7 /1000 births), compared to Northern Europe (30.7 /1000 births), Western (18.2 / 1000) or Southern (17.6/1000). [5]

If the data on adolescent births are much easier to obtain, the abortion rate or contraceptive methods used in this category of the population are very difficult to find out precisely because they depend very much on each country's health policy, and especially on abortion regulations. .

The value of these indicators is closely linked to the policy and approach to sex education in the educational programs of each country of the European Union. An example of this is Sweden, the first European country to introduce, since 1955, the school curriculum called "sex and relationship education". Since 1970, this type of education has approached a new vision, from which emerged the idea of supporting sexual and reproductive education, so that "it no longer supports abstinence from sex, but encourages young people to take responsibility for their sexuality." [6]

On the other hand, in Romania, sexual health is still a controversial topic, long disputed, often ignored or exaggerated, much theorized today in various academic fields (research in education, health, psychology, sociology), politics and not lastly, within the general population-through social networks.

The subject, which is closely related to the demographic dynamics of the Romanian population and to the worrying medium and long-term socio-economic perspective, requires critical analysis and the application of realistic solutions adapted to Romanian society.

The large number of adolescent mothers in Romania (12.7 per 1000 pregnancies - the second in Europe) and the worrying number of pregnant children resulting from these pregnancies are convincing indicators and arguments that information on sexology and sex education needs to be included in the school curriculum. [7,11,12]

In recent years, family planning has been in the attention of the Romanian Ministry of Health, regarding the correct information and knowledge regarding both the protection of the mother and the child, as well as the school and university medicine curricula.

The international literature emphasizes that in order for an education focused on contraception and family planning to be effective, it must be preceded by a sex education prior to the onset of adolescence, adequately presented to different age groups. It is known that only the continuity and progressiveness of sex education guarantees its effectiveness. [6.12]

Sex education becomes a useful tool only if it encourages dialogue, the expression of doubts and desires, thus achieving the framework in which adolescents manage to find their own answers.

Since 2009, UNESCO has argued that "the main goal of sex and relationship education is to equip children and adolescents with the knowledge, skills and values necessary to make responsible choices about sexuality and relationships." Learning has four components, which are represented by learning objectives: correct information; adoption of values, attitudes and social norms; developing skills and interpersonal and social relationships; supporting and promoting accountability. [4]

The purpose of this study is to identify, analyze and describe the variation and trend of births in the Department of Obstetrics of a state hospital in Bucharest. In this context, we also evaluated the impact of birth on the psycho-emotional status of adolescent mothers in postpartum.

Material and method:

The studied group included a number of 306 patients, hospitalized in the Obstetrics-Gynecology Department of the Clinical Hospital "Nicolae Malaxa" between June and November 2017. Based on the study's inclusion and exclusion criteria, were selected the two groups of teenaged mothers (between 15-20 years old) and, respectively, that of mothers aged between 20 and 45 years old.

Inclusion criteria: hospitalized patient, expressed desire to participate in the study, vaginal or cesarean delivery without complications.

Exclusion criteria: refusal of the patient, illiterate patients or with a poor level of education, which did not allow them to complete the self-questionnaires used in the study, vaginal or cesarean delivery with complications.

To conduct the research, we used tools developed and adapted for this in order to collect socio-demographic and clinical data: postpartum sheet for socio-demographic data, pregnancy history, clinical data and standardized tools for collecting information needed to assess depression risk (Edinburgh Scale for assessing the risk of postpartum depression, in two moments, represented by early and late postpartum).

The Edinburgh scale was developed by Cox et al. (1987) to help physicians identify women at risk for postpartum depression (Fig. 1), [13]. The scale has been designed and tested in Livingston and Edinburgh health centers and consists of 10 questions by which the woman tested must choose an answer from four contingencies provided by the relevant scale the way she felt in the last week.

The maximum score is 30, and a score over 10 betrays a possible depression; a score over 13 suggests depression with a degree of severity moderate to severe. The evaluator is invited to always look at question no.10 about suicidal thoughts, to detect in advance a possible risk.

Validity studies show that the scale identifies correctly 92.3% of women suffering from postpartum depression.

The scale manages to discern these cases of those with anxiety disorders, phobic or with personality disorders [13].

The program was used for data processing Microsoft Excel and the IBM programSPSS Statistics 20.0.

In the data analysis we have observed the following elements: variables quantitative data were processed according to distribution, dispersion indicators (value minimum and maximum, standard deviation) and indicators of central tendency (medium, median), and in the case of qualitative variables we calculated absolute and relative frequencies.

Results:

The 306 patients in the research were, at the time of inclusion in the study, aged between 15 and 43 years, with a mean age of the total group of 28.5 ± 6.37 years.

Out of the total of 306, we mention the fact that 23 postpartum patients were under 20 years old (7.52%), (Fig. 2).

In terms of marital status, 58.88% of patients included in the study are married, 29.61% live in cohabitation, and 11.51% are single. (Fig. 3)

The differences are greater if we relate the marital status of the patients to the age category. Of the 306 postpartum patients, 23 (ie 7.51%) are under the age of 20, and of these, 12 state that they are single, 9 live in cohabitation, and 2 are married.

On the other hand, mothers aged between 30 and 35 and over 35 are respectively 79.1% and 88.89% married, respectively. Thus, we find that most mothers under the age of 20 are single, without such socio-emotional support

From the point of view of the origin envi-

*Edinburgh Postnatal Depression Scale (EPDS)

If you are pregnant or have given birth in the last year, we want to know how you feel. The questionnaire below (known as the Edinburgh Scale for postpartum depression) is a screening test, not a medical diagnosis.

Please tick the answer that comes closest to how you felt in the last few7 days, not just on the day you fill out the questionnaire.

1. I have been able to laugh and see the funny side of things:
As much as I always could
Not quite so much now
Definitely not so much now
Not at all

2. I have looked forward with enjoyment to things:
As much as I ever did
Rather less than I used to
Definitely
less than I used to
Hardly at all

3. *I have blamed myself unnecessarily when things went wrong:
Yes, most of the time
Yes, some of the time
Not very often
No, never

4. I have been anxious or worried for no good reason:
No, not at all
Hardly ever
Yes, sometimes
Yes, very often

5. *I have felt scared or panicky for no good reason:
Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

6.*Things have been getting to me:
Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever

7.*I have been so unhappy that I have had difficulty sleeping:
Yes, most of the time
Yes,sometimes
No, not very often
No, not at all

8.*I have felt sad or miserable:
Yes, most of the time
Yes, quite often
Not very often
No, not at all

9.*I have been so unhappy that I have been crying:
Yes, most of the time
Yes, quite often
Only occasionally
No, never

10. *The thought of harming myself has occurred to me:*
Yes, quite often
Sometimes
Hardly
Never

TOTAL YOUR SCORE HERE: .....

The answers are evaluated with 0, 1, 2 and 3 depending on the increase in severity symptom. Questions marked with an asterisk (*) are rated in reverse order (eg 3, 2, 1 and 0). The total score is calculated by summing the scores of all the questions. Your doctor will record this survey and discuss the results wiyh you.

* Fig.1 Adapted from the British Journal of Psychiatry, June, 1987, vol. 150,782-786, by J.L. Cox, J.M. Holden, R. Segovsky.

ronment, almost three quarters of the patients included in the research come from urban areas and only 26.14% are from rural areas.

Within the category of patients aged under 20, 14 of them come from rural areas, 13 have completed only high school, 1 has only 4 classes graduated, while 9 have finished or are in the process of completing high school. Two of them are already in their second birth and 7 are smokers and smoked during pregnancy.

The means of the Edinburgh score assessed in the late postpartum period differ statistically significantly ($p < 0.001$) depending on the age group, (Fig. 4).

In the age group 15-19 years, the average Edinburgh score is 13.08 meaning a moderate risk of depression.

In the age category 20-24 years, the average is 11.33 representing a risk of depression that requires follow-up.

In the categories over 30 years of age, the Edinburgh average score was significantly lower, at about 7, indicating a reduced risk of postpartum depression.

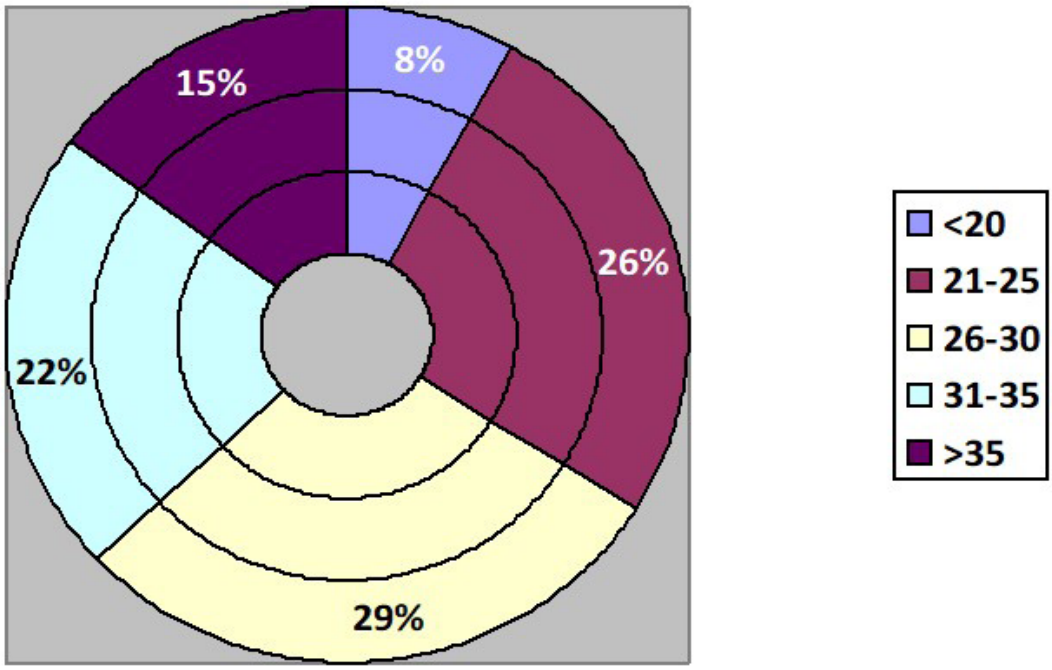

Fig. 2 Distribution of patients according to their age

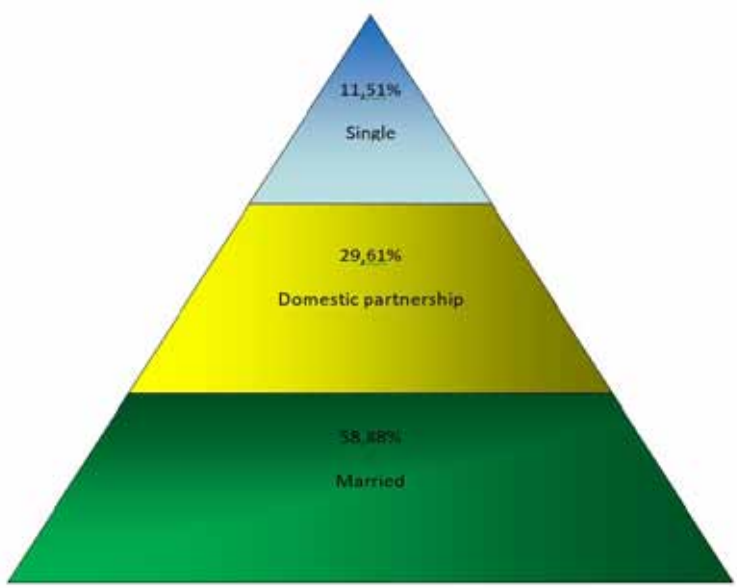

Fig. 3 Distribution of patients according to marital status

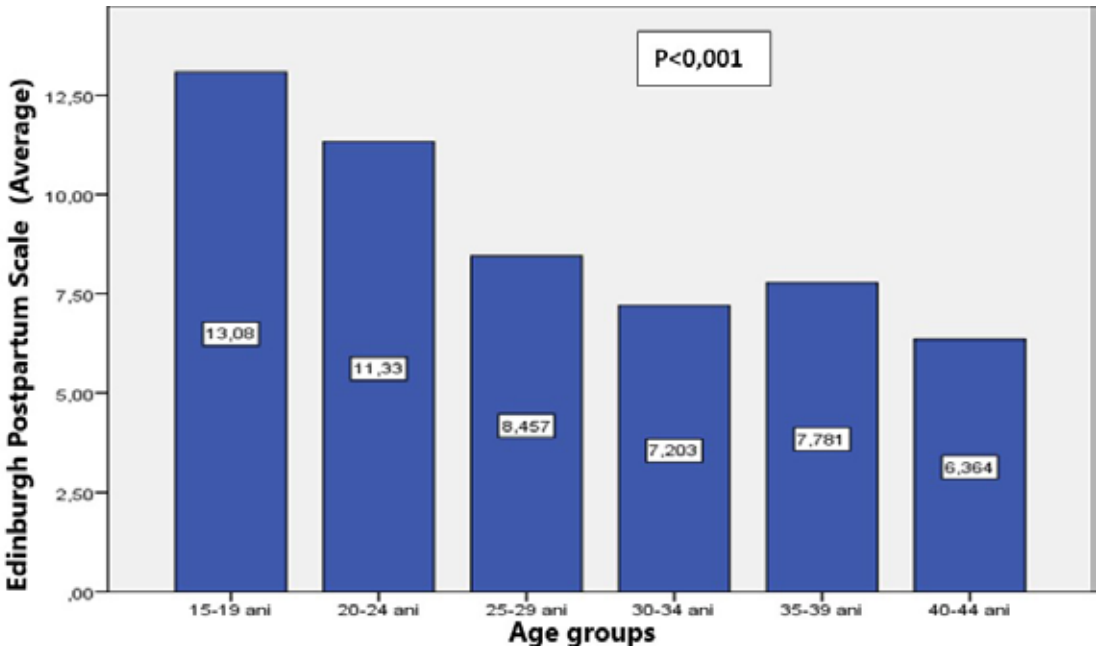

Fig. 4 Edinburgh Score in the late postpartum

Discussions:

Starting from the identification, analysis and processing of three research criteria (age, presence of pregnancy and type of pregnancy, postpartum evolution and mental health), the study obtained significant information related to the dynamics of psycho-behavioral context of the new mothers and how this locates on the curve of adaptation to the new social status and beyond.

Regarding the relationship between age and the beginning of sexual life, the initiation and realization of sexual intercourse imposes the human body to go through a complex process of neurosomatic development, especially during puberty. Other medical and sociological studies have shown that individuals with low education and low socio-economic status start their sexual life earlier. For the onset of sexual intercourse, the age of 16-18 years is recommended for both sexes. Various studies conducted in Romania have shown that the percentage of girls who have their first sexual experience between 14-16 years of age is increasing. [14]

Sex education done within the family, at school and in the media requires the initiation of sexual activity according to the rigors of medical science and Christian morality, but the reality experienced by these young women rarely intersects situations of reflection and application.

The incriminating factors for the early initiation of sexual life can be:

-the degree of neuro-psychic maturation,

-the intensity of the person's sexual impulse,

-specific hormonal transformations that induce excessive and obsessive concern for erotic content (movies, photos, internet, magazines etc.),

-cultural and religious level, socio-economic conditions, peristasis elements. [2,13]

At the same time, the birth of a child is followed by major biological endocrine-metabolic changes, but also psycho-behavioral, ranging from joy to continuous fear and depression. Both the lack of information and instruction of the pregnant woman, and the absence of proper medical follow-up of her pre- and post-partum can lead to the development of pathological situations that are difficult to manage later.

Many new mothers experience a certain sadness („baby blues") after giving birth, emotional lability being considered normal after birth. Identified in the first days after onset, this condition is characterized by seemingly unexplained crying, sudden mood swings, difficult sleep, manifestations that disappear over a variable period of time depending on biological age, family support, socio-economic status and psychological field pre-existing pregnancy. From this group, some mothers may develop postpartum depression, as a complication of childbirth, possibly in severe longer-lasting form of depression, which, in extreme situations, takes the form of postpartum psychosis.

Regardless of the initial mode of evolution, the new mother must also be monitored psychologically. The psychological and behavioral state determines the mother-fetus relationship, organically, physiologically and psychologically, in the context in which the baby is totally dependent on the mother, so that a mother-child cannot raise another child.

The adolescent mother has an important psycho-emotional lability that changes her

affectivity with increased irritability or anger, with the presence of guilt, difficulties in attachment to the child, decreased milk secretion, changes in appetite and quality of sleep, all symptoms that interfere with the necessary ability the young mother to perform maternal obligations.

Medical and psychological neglecting of this situation can have severe consequences for both mother and child. Children whose mothers have untreated depression may develop behavioral problems and speech disorders, sleep or eating disorders and can be are hyperreactive, more often than others.

Postpartum depression is not a condition that a new mother can manage or treat on her own.

The appropriate treatment begins with psychological or psychiatric evaluation, followed by counseling (adopting a healthy lifestyle and maintaining realistic expectations, socializing within the family or the community) and possibly the administration of antidepressants.

Conclusions:

The study was intended to be an alert signal on an extremely sensitive subject for the Romanian society, related to the ways of initiating and maintaining the sexual life in adolescent girls and, respectively, to the appearance of a pregnancy, without preparation or desire to procreate from these teenagers.

Facing this new reality and the neglect of the subject by civil society that would be apparently open to discussion, the study reveals the heterogeneity of information needed for the young future mother, lack of information and continuous communication on adolescent sex education and couple hygiene. In this context, there is a risk of the occurrence and development of maternal depression, as a psycho-behavioral entity with a tendency to chronicity. The following emerged from the study:

• Adolescent mothers have a higher risk of depression in the late postpartum period compared to the period of childbirth, but also to mothers older than 20 ;

• The high percentage of underaged mothers indicates the need for clearer and firmer measures in the implementation of sex education, by introducing it in school curricula;

• The need to early identify the presence of pregnancy and approach adolescent mothers in a multidisciplinary team, to analyze each case and objectively identify health problems, economic and social, educational level, quality of the couple's relationship home of the child) and to issue realistic solutions, in the context of the group to which the underaged mother belongs and of the objective conditions in Romania;

• There is a need to set up support groups and information campaigns on sex education;

• It is necessary to develop information campaigns among teachers and educators.

These directions of influence of attitudes, behavior and decisions related to sexual life and the consequences on pregnancy, birth and the postpartum period in adolescents are still lines of scientific research in an inter- and multidisciplinary context.

Conflicts of interest:

The authors have no conflicts of interest to declare. They also had full access to all study data and assume responsibility for the accuracy of the analysis of the data presented.

Bibliografie

1. Avery, L., & Lazdane, G. (2008). What do we know about sexual and reproductive health of adolescents in Europe? European Journal of Contraception & Reproductive Health Care, 13(1), 58–70. doi:10.1080/13625180701617621
2. Nițescu Vasile, Treaty of Clinical Sexology,The Publishing House of the Romanian Academy; 2018, ISBN 978-973-27-2574-0.
3. World Health Organization (WHO). (2018b). Sexually transmitted infections (STIs). Retrieved from http://www.who.int/mediacentre/factsheets/fs110/en/
4. United Nations Educational Scientific and Cultural Organization (UNESCO). (2009). International technical guidance on sexuality education: An evidence-informed approach for school, teachers and health educators. Paris, France: UNESCO.
5. Part, Kai & Moreau, Caroline & Donati, Serena & Gissler, Mika & Fronteira, Inês & Karro, Helle. (2013). Teenage pregnancies in the European Union in the context of legislation and youth sexual and reproductive health services. Acta obstetricia et gynecologica Scandinavica. 92.10.1111/aogs.12253.
6. Tikkanen, R. H., Abelsson, J., & Forsberg, M. (2011). Ungkab09-kunskap, attityder och sexuella handlingar bland unga [ungkab09- knowledge, attityder and sexual acitivites amoung young people]. G€oteborg, Sweden: G€oteborgs universitet.
7. Allen, L. (2007a). 'Pleasurable pedagogy': Young people's ideas about teaching 'pleasure' in sexuality education. Twenty-First Century Society, 2(3), 249–264. doi: 10.1080/17450140701631437
8. Helmer, J., Senior, K., Davison, B., & Vodic, A. (2015). Improving sexual health for young people: Making sexuality education a priority. Sex Education, 15(2), 158–171. doi: 10.1080/14681811.2014.989201
9. Macintyre, A. K. J., Montero Vega, A. R., & Sagbakken, M. (2015). From disease to desire, pleasure to the pill: A qualitative study of adolescent learning about sexual health and sexuality in Chile. BMC Public Health, 15(1), 1–14. doi:10.1186/s12889-015-2253-9
10. Nartea Roxana, Mitoiu Brindusa Ilinca, Nica Adriana Sarah Correlation between Pregnancy Related Weight Gain, Postpartum Weight loss and Obesity: a Prospective Study; Journal of Medicine and Life Vol. 12, Issue 2, April-June 2019, pp. 178–183; DOI: 10.25122/jml-2019-0015;
11. Mehedintu Claudia, Nanu Dimitrie et all;, Study Regarding tje Correlation between Delivery Mode and the Risk of Postpartum Depresion – et all; Proceedings of SOGR 2018 ; Filodiritto International Proceedings; ian 2019; pg 507-512; ISBN 978-88-85813-33-5 ;
12. Allen, L. (2007b). Doing 'it' differently: Relinquishing the disease and pregnancy prevention focus in sexuality education. British Journal of Sociology of Education, 28(5), 575–588. doi:10.1080/0142569070150536
13. Levis B, Negeri Z, Sun Y, Benedetti A, Thombs B D. Accuracy of the Edinburgh Postnatal Depression Scale (EPDS) for screening to detect major depression among pregnant and postpartum women: systematic review and meta-analysis of individual participant data BMJ 2020; 371 m4022 doi:10.1136/bmj.m4022
14. https://www.schooleducationgateway.e
15. Cox J.L., Holden J.M.,Segovsky R.-Edinburgh Postnatale Depression Scale, British Journal of Psychiatry, Vol.150, 782-786, June,1987.