

Educational intervention on teenage pregnancy in a community of the Armando García Aspuru Polyclinic

Intervención educativa sobre embarazo en la adolescencia en una comunidad del Policlínico Armando García Aspuru

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ABSTRACT

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Introduction: pregnancy bursts into the lives of adolescents at times when they have not yet reached physical and mental maturity. And it happens sometimes, in adverse circumstances such as nutritional deficiencies or a family environment that is not very receptive to accepting, accompanying and protecting it.

Objective: to modify the level of knowledge about pregnancy in adolescence, in young people between 14- and 19-years old belonging to office 25 of the Armando García Polyclinic in Santiago de Cuba, in the period from January to December 2022.

Methods: a quasi-experimental study of an educational intervention type was carried out in the period of January-December 2022, for which a sample of 40 adolescents was chosen and the work was divided into three stages: diagnosis, intervention and evaluation and control. The validation of the results was determined with the Mc Nemar test and subsequently, the variability coefficient was calculated in order to evaluate the impact of the process.

Results: the predominant sex was female with 22 adolescents for 55%. Before the intervention, 31 of them (77.5%) had inadequate knowledge, leaving only 9 with adequate knowledge. After applying the educational program, 97.5% (39) of adequate knowledge was achieved, which was statistically significant at $p < 0.05$.

Conclusions: the applied educational intervention managed to raise the level of knowledge about this problem in the adolescents studied.

RESUMEN

Introducción: el embarazo irrumpe en la vida de los adolescentes en momentos en que todavía no alcanzan la madurez física y mental. Y ocurre a veces en circunstancias adversas, como pueden ser las carencias nutricionales o un medio familiar poco receptivo para aceptarlo, acompañarlo y protegerlo.

Objetivo: modificar el nivel de conocimientos sobre el embarazo en la adolescencia, en jóvenes entre 14 a 19 años pertenecientes al consultorio 25 del Policlínico Armando García de Santiago de Cuba, en el periodo comprendido de enero a diciembre del 2022.

Método: se realizó un estudio cuasi-experimental de tipo intervención educativa en el periodo de enero-diciembre del 2022, para el cual se escogió una muestra de 40 adolescentes y el trabajo se dividió en tres etapas: diagnóstico, intervención y evaluación y control. La validación de los resultados se determinó con la prueba Mc Nemar y posteriormente, se calculó el coeficiente de variabilidad con la finalidad de evaluar el impacto del proceso.

Resultados: el sexo que predominó fue el femenino con 22 adolescentes para un 55 %. Antes de la intervención 31 de ellos (77.5 %) tenían conocimientos inadecuados, quedando solo 9 con conocimientos adecuados. Después de aplicar el programa educativo se alcanzó un 97.5 % (39) de conocimientos adecuados, lo que resultó estadísticamente significativo para $p < 0.05$.

Conclusiones: la intervención educativa aplicada logró elevar el nivel de conocimientos sobre esta problemática en los adolescentes estudiados.

INTRODUCTION

Adolescence (from the Latin *adolescere*: to grow, to develop) is a stage of transcendental importance in the life of a human being. It is classified by some specialists as a turbulent stage, which ranges between the ages of 10 and 19, full of great changes, confusion and rebellion, in which the transformations of the body are perceived with an exalting spirit because the individual is curious to discover what happens to him and he struggles to understand new experiences, a situation for which most are not prepared. This period can vary greatly in age and duration in each individual, as it is related not only to the maturation of the person's psyche but also depends on broader and more complex psycho-social factors, originating mainly within the family.^{1, 2} Worldwide, an increase in sexual activity among adolescents is recognized and, concomitantly, a decrease in the age at which sexual relations begin, thereby increasing the incidence of births in women under 20 years of

age.^{3, 4} A simple definition of teenage pregnancy: it is one that occurs in women between the beginning of fertile age and the end of the adolescent stage, that is, in the first two years after menarche, and/or if you still depend on your family unit. It is one of the consequences of ignorance of sexual health at this stage of life. The importance of this lies in the fact that it has a negative impact on the health of the mother and her child. These risks are greater the younger the age of the pregnant woman, and especially when social and economic conditions make health care less than ideal, which is decisive in subsequent psychosocial development.²⁻⁴ Despite a significant effort by the media and sexual education campaigns, it is evident that pregnancy in adolescence responds to deficient information about sexuality and contraceptive means, and the issue continues to be largely taboo within many families. Obviously, it constitutes a problem in every sense, to solve it requires a coordinated effort between the factors of the community, the adolescents themselves, the family, the institutions, and as protagonists the Cuban educational and health models, which exercise a profound influence on the living conditions of adolescents.³⁻⁵ In Cuba, around 1,400,000 Cubans are between 10 and 19 years old, that is: 12% of the total are adolescents. 40% of women in developing countries give birth before their 20th birthday. Very few of these pregnancies are planned or desired by adolescents.^{6, 7} According to estimates by the World Health Organization (WHO), around 16 million adolescents between 15 and 19 years old give birth to a child, and one million girls under 15 years old become mothers. The Greater Antilles is not exempt from this situation, since high adolescent fertility also persists in the country, despite the political will to prioritize health and sexual and reproductive education of adolescents and young people.^{7, 8} More than 10% of the births registered annually in the world occur to teenage mothers. Every year 15 million children are born to teenage mothers; every day 41,095; 1,712 every hour. It is alarming to know that almost a third of the approximately 175 million pregnancies that occur annually are unwanted and that a large part of these are among adolescents.⁹

Cuba is among the nations with a low Global Fertility Rate; however, it is among the nations with a high General Fertility Rate and proportion of births in adolescent women.¹⁰ Here it is not usual, as in other regions of the world, to force a young woman to marry because she has become pregnant, but she is offered special medical attention even when her health is excellent, because the mere fact of being a teenager is already a risk factor. The Cuban reproductive health policy, based on principles of social prevention and a philosophy in which health is a right of every citizen, has managed to mitigate the impact that precocity can have on the health of the child and the mother, through a system to monitor the adolescent's maternal health from the first moments of her pregnancy.^{11, 12} That is why work with adolescents must be punctual, growing, patient and, above all, constant. Only in this way will we be in a position to improve the sexual and reproductive health of the new generations.

The health area of the Armando García polyclinic does not escape the negative influence that teenage pregnancy has worldwide. According to the Center's Department of Statistics, in recent years this negative trend in the adolescent population segment has increased, showing in 2021 an increase of 10% compared to the previous year, which represents 26.9% of the total pregnancies. The aspects described in this area of health are what motivate this investigative approach to the subject, since it is common to deal with adolescents with unwanted pregnancies, and even worse, to discover that their protagonists do not seem to have basic knowledge about the complications that this physiological process can bring them due to their age. The objective of this study was to positively modify the knowledge about pregnancy in adolescence, in young people between 14- and 19-years old belonging to office 25 of the Armando García Polyclinic, in the period from January to December 2022.

METHOD

A study was carried out quasi-experimental educational intervention, through the application of an instructional program to improve the knowledge that adolescents had about the consequences of pregnancy in adolescence, who belong to the medical office No. 25 of the Armando García Polyclinic, in Santiago of Cuba, in the period from January to December 2022.

The universe was made up of 89 adolescents between 14 and 19 years of age, of both sexes, belonging to the aforementioned clinic, who agreed to participate in the research, also taking into account that they remained in the area during the period that the study lasted. The sample consisted of 40 adolescents selected for the intervention process taking into account the inclusion, exclusion and exit criteria. Those who had a physical and/or mental disability that made it difficult for them to participate in the activities were excluded, as well as those who, for any reason, refused to attend classes. As an exit criterion, absence from two or more work sessions was defined, regardless of the reasons, to avoid information bias, as well as those who decided to abandon classes. The variables were studied: age (14-16 years, 17-19 years), sex (female, male) and level of knowledge (adequate, inadequate). For the present study, an educational strategy was designed; it was applied on the conceived date after prior coordination with the participants. The research was divided into three stages: 1. Diagnostic: In this stage, the survey was prepared and applied prior to the educational intervention, which consisted of 4 closed dichotomous questions about the research problem designed according to reviewed bibliography and proposed objectives. The general evaluation was established on the basis of 3 questions with adequate knowledge. to obtain the rating of adequate (75%), and inadequate if it did not reach this figure. 2. Educational intervention During this stage, 2 subgroups of 20 patients each were created to promote group work. The sessions lasted approximately 50 minutes each, with a frequency of once a week, with a total of 6 sessions of work: An initial session that corresponded to the diagnostic stage 4 class sessions

(intervention stage) A final session to summarize what was learned (intervention stage) During the 4 class sessions the following thematic plan was taught: Topic 1. Pregnancy in adolescence Topic 2. Contraception Topic 3. Complications of early pregnancy Topic 4. What to do if I suspect a pregnancy? To carry out the training, the group discussion technique was used, which was developed by arranging the staff sitting in a room in the shape of a horseshoe or semicircle, so that everyone could see and hear each other. The main researcher served as moderator, whose function was to raise the topic or situation that was going to be discussed through key messages. In addition, he encouraged participation and maintained group discipline, intervening only to clarify errors or some aspect that was not explained. had analyzed. Other participation and animation techniques were also used during the sessions, such as brainstorming, where each of the participants presented an idea or criterion related to the topic discussed to give a starting point to the debate, in others On occasions, commented reading was used, where, after reading an article related to the topic, comments were made about it with the subsequent debate. In other cases, socio-dramas were performed (a representation performed by the course participants themselves in which a real situation is simulated) and role presentations to animate the activity. 3. Evaluation stage: Once the previous stage was completed, 6 months after the last work session for each group, the initial questionnaire was applied again with the same qualification criteria of the diagnostic stage. In this way, two results or evaluations were obtained: before and after the intervention. The changes found based on this period of time were interpreted as the effectiveness of the period of time, were interpreted as the effectiveness of the educational program used (see information processing techniques). An extensive bibliographic review was carried out, in accordance with the chosen topic and the proposed objectives, in the library of the Armando García polyclinic, as well as the virtual medical libraries using new information technologies (Medired, Infomed, Google, among others). The data were collected directly through the application of the instruments and processed computerized through the statistical package SPSS version 15, using descriptive statistics techniques such as absolute and relative frequency (percentage) to summarize the information, in addition to trend measures. central, such as the arithmetic mean, for quantitative variables and Mc Nemar test, with a significance level of 0.05 and 95% confidence, to evaluate the changes produced in knowledge, which allowed the results to be inferred to the rest of the the population and evaluate the effectiveness of the program used through hypothesis testing: H0: The educational program is not effective in increasing knowledge about pregnancy in adolescence in the population studied. ($p>0.05$) Hi: The educational program is effective in increasing knowledge about teenage pregnancy in the population studied. ($p<0.05$) The study was carried out in accordance with the provisions of the Declaration of Helsinki on research in humans. Participants in the study received adequate information about the objectives, methods, risks and benefits; prioritizing voluntariness, by filling out an informed consent

form, with prior authorization from their parents for participation in the research.

RESULTS

Table 1 shows the distribution of the research participants according to age and sex. Late adolescence is predominantly between 17-19 years old with 21 patients representing 52.5%; adolescents between 14-16 years old totaled 19 for 47.5%. The predominant sex was female with 22 adolescents for 55%.

Table 1. Adolescents by age and sex at the Armando García Polyclinic, January-December 2022. Santiago de Cuba.

Age	Sex				Total	
	Female		Male			
	No.	%	No.	%	No.	%
14-16 years	10	25.0	9	22.5	19	47.5
17-19 years	12	30.0	9	22.5	21	52.5
Total	22	55.0	18	45.0	40	100

Source: database

When analyzing the distribution of adolescents according to their knowledge about identifying the symptoms and signs of pregnancy in Table 2, it was noted that before carrying out the educational intervention, only 9, or 22.5%, were in the group of adequate and 31 with 77.5% inadequate, being significant that after the intervention the number of adolescents with adequate knowledge increased to 39 for 97.5% and only 1 maintained inadequate knowledge for 2.5%.

Table 2. Adolescents according to knowledge of symptoms and signs of pregnancy

Before	After				TOTAL	
	Appropriate		Inappropriate			
	No.	%	No.	%	No.	%
Appropriate	9	22.5	0	0	9	22.5
Inappropriate	30	75.0	1	2.5	31	77.5
Total	39	97.5	1	2.5	40	100.0

Source: Database

 $p < 0.05$

When observing the distribution according to knowledge about contraceptive methods in Table 3, it was estimated that before the intervention 19 (47.5%) adolescents had adequate knowledge on this topic and 21 (52.5%) had inadequate knowledge. This was managed to be reversed after concluding the classes where 38 (95%) obtained adequate grades, only 2 of the adolescents were unable to improve their knowledge on this topic.

Table 3. Adolescents according to knowledge of contraceptive methods

Before	After				Total	
	Appropriate		Inappropriate		No.	%
	No.	%	No.	%		
Appropriate	19	47.5	-	-	19	47.5
Inappropriate	19	47.5	2	5	21	52.5
Total	38	95.0	2	5	40	100.0

Source: Database

 $p < 0.05$

In table 4, the results show that only 11 out of 27.5% knew adequately about some of the complications of pregnancy in adolescence, while 29 out of 72.5% showed inadequate knowledge when evaluated. After the intervention, only 1 maintained inadequate knowledge and the number of adolescents with adequate

knowledge increased to 39, 97.5%.

Table 4. Knowledge of adolescents about the complications of pregnancy in adolescence.

Before	After				TOTAL	
	Appropriate		Inappropriate		No.	%
	No.	%	No.	%		
Appropriate	11	27.5	-	-	11	27.5
Inappropriate	28	70.0	1	2.5	29	72.5
Total	39	97.5	1	2.5	40	100.0

Source: Database

$p < 0.05$

It should also be noted that before the educational activity, only 10 (25%) knew adequately about how to act in the event of a teenage pregnancy, and 30 (75%) showed inadequate knowledge when evaluated. After carrying out the educational intervention, the number of adolescents with adequate knowledge of the subject evaluated rose to 38 (95%) and there were only 2 (5%) with inadequate knowledge. Once all the aspects related to the educational intervention have been discussed, it can be considered that it was effective, since when analyzing and evaluating the knowledge of pregnancy in adolescents, it was observed that before the training, 31 of them, for 77.5%, had inadequate knowledge, leaving only 9 with adequate knowledge. After applying the educational program, 97.5% (39) of adequate knowledge was achieved, which was statistically significant at $p < 0.05$.

Table 5. Final evaluation of the knowledge of the adolescents studied

Before	After				TOTAL	
	Appropriate		Inappropriate		No.	%
	No.	%	No.	%		
Appropriate	9	22.5	0	0	9	22.5
Inappropriate	30	75.0	1	2.5	31	77.5
Total	39	97.5	1	2.5	40	100.0

Source: Database

$p < 0.05$

DISCUSSION

In the present study, more women agreed to participate actively. As can be expected, in late adolescence there is a proportion of pregnancies almost three times higher than that observed among the youngest, who have a higher frequency of induced abortions and pregnancies that end in stillbirths, which corresponds to the approaches on the mortality of pregnancies at very early ages according to Nolazco in his literature.¹³ Most of the adolescents in the sample are unaware of the initial symptoms of pregnancy. These results coincide with Moreno, Albizus et al^{14, 15} who managed to modify knowledge favorably on this topic. When Franco et al¹⁶ worked with adolescents during 2018, initially a significant percentage did not know how to adequately identify the symptoms and signs of pregnancy, but after the intervention 83% showed adequate knowledge. It is very important for the adolescent to know the symptoms of pregnancy so that she can go to the health services at the right time and receive early diagnosis and treatment. This aspect is very important since, in many cases, due to lack of knowledge of the symptoms, uptake is late and follow-up faces complications such as high blood pressure, non-contraction of the uterus that can trigger hemorrhages, and cervical cancer. It became evident that before the educational intervention, the adolescents surveyed did not have sufficient knowledge about the use of contraceptives. The consequences that determine the occurrence of pregnancies in young couples are varied, but many of the studies reviewed agree that lack of knowledge about the use of contraceptives plays a fundamental role. The need to prevent pregnancy in adolescence is a constant in Cuba, where different family planning services have been developed with the aim of providing them to the population, and making contraceptive methods available in the necessary quantity and variety, in addition to offer medical advice to help select, together with the couple, the most appropriate and effective method.^{17, 18} Another approach related to the problem of interest refers to the irregularity in the use of contraceptives and the alternation with abortion to regulate fertility. Some specialists have suggested that Cuban adolescents generally resort to contraceptives only after they have experienced pregnancy. The information from the National Fertility Survey seems to corroborate, to a certain extent, this statement, since around half of the women aged 15 to 19 who have sexual relations and have not had pregnancies do not use contraceptives, while only less than third of those who have had a pregnancy do not resort to any method.^{19, 20} Due to its easy and complete access, a kind of “abortion culture” has developed and, sometimes, the tendency to naturalize this interruption as a another contraceptive method and not as a last resort solution to an unwanted pregnancy.²¹ These results coincide with Moreno, Albizus et al^{14, 15} who managed to positively modify knowledge on the subject in their intervention studies with adolescents. When analyzing different investigations, it is not uncommon to find risks associated with pregnant teenagers. Those related to alterations of the mother or newborn are very well known; but continuing the pregnancy presupposes cutting off life plans, abandoning the educational system, abandoning or rejecting their partner and becoming an economic burden for the family or their partner.²² In

accordance with this work there are research carried out by Gomez Suárez *et al* ²³ that manifest the frequent lack of knowledge of adolescents to face aspects related to sexuality and pregnancy and everything that it entails for the family nucleus and society. Alfaro González ²⁴ and Nolazco ¹³, assure that the unpleasant consequences that most frequently accompany pregnancy in adolescence are: the interruption of studies and technical-professional preparation. The possibility of becoming a single mother later makes it more difficult to establish a stable home and thus begins a succession of short-term unions. It is common for these pregnancies to be presented as an unwanted event, which determines an attitude of rejection and hiding of the condition for fear of the reaction of the family group. It is necessary to increase efforts to reduce teenage pregnancy and replace pregnancy interruptions with the use of contraceptive methods in a safe, efficient and responsible manner. This shows the need to promote educational actions that promote better knowledge about essential aspects of sexuality. After the educational intervention, it was found that a greater number of adolescents had better knowledge about the method of action in the event of pregnancy. These results coincide with Fleites and Soto ^{25,26} when they highlighted that with greater knowledge of how to act during a pregnancy, various future complications for the mother and her baby would be prevented. Dialogue with adolescents is important in seeking information about motivations, conflicts, doubts and interests related to their age; Their participation is significant in the development of educational, preventive or guidance programs, as well as in behavioral research on sexual and reproductive life, with the professional technical help that this activity requires. Despite the results obtained, our adolescents are not prepared biologically, psychologically and socially for conception, so we cannot rely on increasing the number of them who achieve adequate knowledge after the intervention, if this is not reversed. in non-risky sexual behavior or conduct. To do this, they must be provided with the ways and procedures that help them face the different situations of daily life in relation to pregnancy prevention and so that they can find a suitable solution independently and creatively.

CONCLUSIONS

The applied educational intervention managed to raise the level of knowledge about this problem in the adolescents studied.

DECLARATION OF CONFLICT OF INTEREST

The authors declare that they have no conflict of interest in the preparation of the research.

FINANCING DECLARATION

The authors declare that they have not received funding to carry out this research.

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