

ORIGINAL

Methodology with an integrative approach for the work of the family doctor in the prevention of pregnancy in adolescence

Metodología con enfoque integrador para el trabajo del médico de familia en la prevención del embarazo en la adolescencia

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ABSTRACT

Introduction: in Cuba, comprehensive adolescent care and the prevention of early pregnancy are priorities within public policy. Despite ongoing efforts in primary healthcare, adolescent pregnancy remains a problem requiring special attention from a preventive and promotional perspective.

Objective: to develop an integrated methodology for improving adolescent pregnancy prevention efforts, based on an assessment of the family physician's prevention competency.

Method: a developmental research study was conducted in the Comprehensive General Medicine specialty at the Faculty of Medical Sciences of Isla de la Juventud, during the 2022-2024 academic year. The study population consisted of 23 professionals, including a purposive sample of 7 health area managers who served as Basic Work Group Leaders and faculty members in the health area where the study was conducted. The adolescent population included 530 adolescents, representing 18,8 % of the study population. Methods at the theoretical level (analytical-synthetic, inductive-deductive), empirical level (document analysis, observation, modeling, surveys, and expert consultation), and statistical methods were used for data collection and information processing.

Results: the functioning of the adolescent support group is inadequate, according to observations made in 56,5 % of cases. The specialty program demonstrates an insufficient approach to the competency of adolescent pregnancy prevention. 65,2 % of the physicians surveyed showed theoretical inconsistencies in this regard. Preventive training for family physicians requires strengthening the educational and community dimensions (30 % of the indicators), resulting in insufficient preparation for a comprehensive approach to adolescent care, with a predominantly curative focus in their professional practice.

Conclusions: the proposed methodology is based on pedagogical, philosophical, psychological, and medical education principles for comprehensive adolescent care through intersectoral collaboration and biopsychosocial integration. Validation by specialists indicates its viability for contributing to positive changes in the practice of family physicians for this purpose.

Keywords: Family Physicians; Adolescent Pregnancy; Prevention; Methodology.

RESUMEN

Introducción: en Cuba la atención integral a los adolescentes y la prevención del embarazo precoz constituye

prioridad dentro de las políticas públicas. A pesar de los esfuerzos mantenidos en la atención primaria de salud, el embarazo adolescente es un problema que requiere especial atención desde el enfoque preventivo promocional.

Objetivo: estructurar una metodología con enfoque integrador para el perfeccionamiento del trabajo de prevención del embarazo en la adolescencia, a partir del diagnóstico de la competencia de prevención del médico de familia.

Método: se realizó una investigación de desarrollo en la especialidad de Medicina General Integral en la Facultad de Ciencias Médicas de la Isla de la juventud, curso 2022-2024. El universo estuvo constituido por 23 profesionales, incluyendo una muestra intencional de 7 directivos del área de salud que se desempeñaban como Jefes de Grupo Básico de Trabajo y docentes del área de salud donde se realizó el estudio; en el caso de los adolescentes se trabajó con una población de 530 adolescentes para un 18,8 %. Se emplearon métodos del nivel teórico (analítico-sintético, inductivo-deductivo), métodos del nivel empírico (análisis documental, observación, modelación, encuesta y consulta a expertos) y métodos estadísticos para la obtención de los datos y el procesamiento de la información.

Resultados: el funcionamiento del círculo de adolescentes es inadecuado según la observación realizada en un 56,5 %, el programa de la especialidad muestra un insuficiente abordaje de la competencia de prevención del embarazo en la adolescencia. El 65,2 % de los médicos encuestados muestra inconsistencias teóricas al respecto, la formación preventiva del médico de familia requiere fortalecer las dimensiones educativas y comunitarias (30 % de los indicadores) resultando insuficiente la preparación para el abordaje integral en la atención de los adolescentes con proyección mayoritariamente de acciones curativas en su desempeño profesional.

Conclusiones: la metodología que se propone está basada en fundamentos pedagógicos, filosóficos, psicológicos y de la educación médica, para la atención integral a la adolescencia desde la intersectorialidad y la integración biopsicosocial. La validación por especialistas indica su viabilidad para contribuir a cambios favorables en la actuación del médico de familia para esta finalidad.

Palabras clave: Médicos de Familia; Embarazo Adolescente; Prevención; Metodología.

INTRODUCTION

Adolescent pregnancy is a widespread problem worldwide and nationally that requires special attention from a preventive and promotional perspective. Evidence shows that its origin is due to the interaction of various factors, including psychological factors such as temporary changes in personality and emotional instability; biological factors such as anatomical and functional changes in the reproductive organs; and social factors such as the acquisition or change of risky behaviors encouraged by the immediate environment, such as school, friends, and family.⁽¹⁾

In Latin America and the Caribbean (LAC), lower rates of pregnancy before the age of 18 (18 %) are observed than those reported in Africa and Asia (28 %) and similar to those in the United States of America (19 %); however, the percentages are pretty high compared to Europe and Central Asia (8 %) and data from East Asia (4 %).^(2,3) Globally, the frequency of this condition varies, ranging from 1,9 % of all births in Scandinavian (developed) countries to 26 % in some poorer countries, with higher proportions when data from rural areas are analyzed.⁽⁴⁾

Studies conducted in Cuba, according to Rodríguez and Molina, Peña, Álvarez, Gálvez, Rodríguez A., and Rodríguez S., Rodríguez et al., and López, show that there is an increase in fertility from the age of 14 and in induced abortion in women under the age of 20, which, according to this study, is related to poor sex education.⁽⁴⁾

Cuba is no exception to this reality, reporting a national rate of 19,7 % in 2023, up from 17,8 % in 2022. The provinces of Granma, Holguín, Las Tunas, and Sancti Spíritus, as well as the special municipality of Isla de la Juventud, had the highest rates, exceeding the national average. It is striking that, despite the National Health System's strategies, high medical coverage, the development of various programs aimed at adolescents, and the average level of education of the population, pregnancy rates remain high at this stage. There is also the paradox that, despite being the Latin American country with the lowest overall fertility rate, adolescent fertility has not declined at the same rate.^(5,6)

The adolescent pregnancy prevention programs implemented to date have helped facilitate access to contraceptive methods and improve adolescent women's knowledge about their sexual and reproductive health. However, they are not effective in modifying sexual behavior because they focus on the cognitive dimension of women and do not involve the psychosocial dimension that influences decision-making that transcends knowledge. Nor do they actively include adolescent males, who play a decisive and indispensable role in the romantic involvement, sexual activity, and pregnancy of teenage mothers.^(7,8)

This important task, which falls to doctors and the basic primary health care team in the provision of adequate care and monitoring of adolescents, as well as the development of systematic educational work with their families and other members of the community, is vitally essential in curbing this scourge that hurts the lives of adolescents, their families, their children, the community, and society in general.

Teenage pregnancy is a global public health problem that requires a comprehensive and multidisciplinary approach to the contributing factors, and it is necessary to address the need to improve strategies. The prevention of risky behaviors that lead to teenage pregnancy has multiple causes, which is why there is a need for an accurate diagnosis, contextualized to the realities of these groups in the country's regions and health areas, and a multidisciplinary and intersectoral approach to mitigate or solve the problem.⁽⁹⁾

The systematization carried out by the authors, the results of other research related to this topic, and the findings of the exploratory stage conducted at the primary healthcare level have shown that family doctors play a role in preventing teenage pregnancy. However, in the authors' opinion, there are still weaknesses in the development of professional competencies in prevention activities, as confirmed in the preliminary study they conducted through document analysis, observation of adolescent circle activities, and interviews with family doctors and adolescents in a health area of the Leonilda Tamayo Matos University Polyclinic on the Isle of Youth.

All of the above allowed us to establish the following problem situation:

There are shortcomings in the training of family doctors for the prevention of teenage pregnancy, making it difficult to improve the health situation in relation to this negative indicator at the primary health care level, which leads to the following scientific question:

How can we contribute to improving the work of family doctors in preventing teenage pregnancy?

The objective of this study was to develop a methodology with an integrative approach to improve the work of preventing teenage pregnancy at the Leonilda Tamayo Matos Polyclinic on Isla de la Juventud.

METHOD

A qualitative development study was conducted in the specialty of Comprehensive General Medicine at the Faculty of Medical Sciences of Isla de la Juventud, academic year 2022-2024, with an intentional sample of seven health managers, who served as heads of basic work groups and deputy teaching directors, family doctors (23) belonging to a basic work group at the Leonilda Tamayo Matos Teaching Polyclinic, and a population of 530 adolescents.

Documents related to the training of family doctors in pregnancy prevention (Comprehensive General Medicine Specialty Program) were reviewed. Educational technology was utilized to identify problems and potential opportunities. To this end, theoretical methods of analysis-synthesis, inductive-deductive reasoning, and the systemic structural and functional approach were employed, as well as empirical methods such as an observation guide for the performance of family doctors in prevention work and a survey of family doctors and adolescents.

Distribution and classification of the variables under study

Professional category: 1st, second, and 3rd year residents of MGI, MGI specialists (quantitative ordinal)

Prevention skills: theoretical, practical, and experiential knowledge that physicians have in relation to the subject. This is evaluated through 10 questions in the survey, which have been validated using expert criteria. The level of knowledge can be determined from the survey responses.

Observations were made of workplace education activities in the care of adolescents (adolescent circle), field visits, and outpatient consultations, framing the results of the preventive work of these professionals observed in different categories of compliance: Adequate (A) when fully compliant, Somewhat adequate (SA) when compliant to some extent, Inadequate (I) when compliance is not apparent during the activity.

A methodology with an integrative approach was designed to enhance the work of family doctors in preventing teenage pregnancy, the feasibility of which was assessed by 10 professors specializing in Comprehensive General Medicine.

The inclusion of experts was determined by non-probabilistic sampling, following the following criteria:

Characteristics and qualities of the experts, including years of experience, mastery of the research topic, work experience, analytical skills, effectiveness of their professional activity, postgraduate academic training, and/or teaching category, were considered. The application of expert criteria began with a self-assessment survey to determine the competence coefficient (K), calculated by combining the knowledge (Kc) and argumentation (Ka) coefficients, which served as the basis for the final selection of experts.

Based on the three criteria defined by the authors, categorized as Yes and No, it was considered accepted if at least four (80 %) of the specialists considered Yes in the indicators:

- Methodology structure: whether the design contributes to improving care and prevention of teenage pregnancy.
- Usefulness: it guarantees the preparation of the family doctor.

Descriptive statistical procedures (absolute and relative frequencies) were used to analyze and interpret the results obtained.

Ethical aspects: the ethical requirements for scientific research were met in the conduct of this study.

RESULTS

Results of the document review:

- The specialty program does not sufficiently address the issue of preventing teenage pregnancy and does not cover the minimum content required to develop the preventive and integrative work skills of family doctors. Educational and preventive work are aspects that are not discussed or modeled in current training programs.
- Teenage pregnancy is recognized as an issue to be studied, with its multifactorial causes, but no guidelines, educational actions, or strategies are presented for family doctors. The methods, procedures, and specialized means that should be used in their preventive work are not addressed, leaving the issue to spontaneous action, which means that this educational and preventive process with an integrative approach has limitations related to its active and permanent nature.

Table 1 shows the results of the observation of family physicians' work in the prevention of teenage pregnancy, where it can be seen that the majority of physicians are aware of the risks and consequences of teenage pregnancy (60,8 %). However, the work in the adolescent circle is inadequate (56,5 %), and in some clinics it is non-existent. They do not fully utilize the characteristics and potential of the adolescent circle, and have difficulties in considering the results of the diagnosis and the needs of adolescents to carry out educational work effectively. Educational intervention activities for families and communities are unsystematic and lack guidelines or methodologies, as well as integrated actions or procedures that would enable them to achieve their objectives. This supports the social relevance of designing a methodology to prepare doctors for preventive and educational work on teenage pregnancy.

Criteria observed/activities	Adequate (A)	Somewhat adequate (SA)	Inadequate (I)
Preparation regarding the risks of teenage pregnancy	14 (60,8 %)	4 (17,3 %)	5 (21,7 %)
Systematicity in preventive activities (teen circle)	4 (17,3 %)	6 (26,0 %)	13 (56,5 %)
Systemic educational interventions in families and communities, education at work	6 (26,0 %)	3 (13 %)	16 (69,5 %)

DISCUSSION

Research shows that working to prevent teenage pregnancy involves strengthening protective factors such as family and education, encouraging every teenager, male or female, to have a life plan and to follow it, and ensuring that they are capable of making informed decisions.⁽¹⁰⁾

78,2 % of physicians demonstrate adequate knowledge about teenage pregnancy; there were no poor responses, and 65,2 % of physicians are satisfied with the training they have received on this topic. These results have reinforced the authors' opinion that one of the specific competencies of family and community physicians is adolescent care and the ability to guide PHC on sexuality education in order to prevent teenage pregnancy, hence the importance of adequate training.

Regarding the knowledge of biological, sociological, and psychopedagogical categories of adolescents, behavior, and risk factors, 65,2 % of the surveyed physicians exhibited theoretical inconsistencies, resulting in insufficient preparation for a comprehensive approach to adolescent care. The majority focus on curative actions is evident in their professional practice. Given this problem, analysis of the specialized literature reveals the need to strengthen educational efforts and equip them with multiple tools to enrich their knowledge on the subject.

Basic skills and attitudes for prevention work with an educational focus are limited (48 %), with only 13 % considering theoretical argumentation necessary for a multifactorial and multidimensional understanding of adolescent pregnancy prevention. Ramos⁽¹¹⁾ and Trujillo et al.⁽¹²⁾ think that family doctors should have the ability to combine knowledge and skills that allow them to carry out preventive actions in individuals from health services, extending to the home and community, with a comprehensive participatory approach, and with negative consequences for health when not carried out, a position shared by the authors of this study. Primary care services should consider the demands and needs of adolescents related more to psychosocial than

biological aspects, most of which can be prevented with appropriate, timely, and committed intervention by health personnel.

72,4 % state that family and community educational interventions involving teamwork and intersectorality are insufficient; In the authors' opinion, these arguments reveal the magnitude of the problem, with a very low perception of risk by both families and adolescents, as well as previous studies related to the topic, allowing for a methodological analogy to be established when they warn of the need to integrate the family, school, and community as social decision-making entities in the comprehensive education of adolescents into prevention actions.^(13,14)

Similar results are found in studies by Vera et al.⁽¹⁵⁾, who identify deficiencies in intra-family communication that affect the sexual and reproductive education of adolescents. The authors therefore consider that the information provided to adolescents is insufficient; when it comes to making decisions, the information is not enough, because it must be accompanied by the education they gradually receive from their families and other agents, such as teachers, health personnel, and civil society agents involved in the Cuban social project in the community. Each of these agents acts in different ways, influencing the formation of the adolescent's personality.

Seventy-eight percent of adolescents find the functioning of adolescent circles inadequate. Demographic and health surveys conducted in 37 countries show that there is a great deal of ignorance about the risk factors for teenage pregnancy.⁽¹⁶⁾ There is an apparent lack of information among adolescents about pregnancy at this age, its causes, its risks, the changes it brings for them, their families, society, and the role they must necessarily assume.

More than half of the adolescents surveyed reported that they are not included in promotion and prevention activities (65 %). Virtually all adolescent reproductive health issues are linked to the tendency to engage in risky sexual behavior, as stated by Della and Landoni, a position shared in this study, including: increasingly early onset of sexual activity, little recognition of the risks, unplanned sexual relations occurring in inappropriate places and situations, no consideration of pregnancy control, and little guidance on or use of contraceptives.

Previous studies have highlighted that biological and physiological maturity is often acquired before psychosocial maturity. Consequently, many young people have not yet matured or developed the capacities and skills necessary to cope with adverse situations, which, combined with a low risk perception, can have serious repercussions on their physical and psychological health. Hence, the importance of motivating adolescents. They can be motivated to consciously participate in pregnancy prevention when they can attribute meaning and usefulness to the topic and the proposal, which depends on several personal factors, including self-esteem, beliefs, attitudes, expectations, and how the learning situation is presented to them. The more attractive and interesting they find it, the more involved they will be.⁽¹⁷⁾

The time devoted to them at home, at school, and in the community is deemed inadequate in terms of both quantity and quality by 59 %. The results obtained in this research align with those of numerous authors, including Hernández, who observed a similar situation in adolescents under the age of 15 in his study.⁽¹⁸⁾ In this regard, it is assumed that the growing distance between parents and children, the independence of the latter, and the loss of power of the former, giving them more freedom to dispose of their space, often influence this situation. Special emphasis is placed on the basic health team with reproductive risk control.

They recognize that schools do not play their proper role in caring for adolescents (60 %). The family is a fundamental link in the education and transmission of values that enable a complete and responsible approach to sexuality, as well as its promotion in schools, a position that is assumed, insofar as PHC is based on preventive educational work in the community. To the extent that adolescents have a deeper understanding of the process of sexual maturation and receive proper guidance that facilitates appropriate behavior and helps them see sexual relations as something beautiful, linked to love, the problems identified will be much less significant.

Methodological triangulation enabled the authors to identify the potentialities and main problems characterizing the state of adolescent pregnancy prevention in family medicine training, which were taken into account in the development of the methodology.

Based on the research interests of the background and situations identified that made it possible to establish the contradiction, the methodology was defined with an integrative approach to the prevention of teenage pregnancy, starting from the concepts provided by the authors Álvarez, Álvarez de Zayas, and Addine, who refer from different points of view to the procedures and approaches to be taken into account in arguing for the proposed methodology, from the perspective of medical education sciences, which ensure its scientific and systemic nature.⁽¹⁹⁾

It consists of two structural components: the theoretical or cognitive component and the methodological or instrumental component. The theoretical-cognitive apparatus comprises the categorical body, which in turn encompasses categories and concepts. In contrast, the legal body refers to the rules that regulate the process of applying methods, procedures, techniques, actions, and means, expressed through the principles, requirements, or demands that were taken into account for its design or practical application.

Fundamentals of methodology

To form the structure of the methodology, theoretical foundations are drawn from philosophical, sociological, pedagogical, psychological, and medical education science perspectives, which allow for coherence, scientific character, and organization of the proposed methodology.

Objective

To improve the work of family doctors in preventing teenage pregnancy through a system of coordinated and integrated actions, involving various sectors, and taking into account the psychosocial sphere.



Figure 1. Graphical representation of the methodology

In structuring the integrative methodology for preventing teenage pregnancy, four fundamental stages are conceived: the first focuses on diagnosis, the second on planning, the third on implementation, and the fourth on evaluating results.

Diagnosis

Determine the training needs of family doctors for comprehensive care of adolescents and the prevention of teenage pregnancy.

Actions

Identify the competencies (knowledge, skills, and attitudes) required by family doctors to prevent teenage pregnancy, identify risk factors (early sexual debut, knowledge of contraceptive use, alcohol/drug use), determine family problems or depression that may influence risk behaviors, environmental problems, needs, motivations, interests, skills, knowledge, and values in adolescents, identify barriers and facilitators for prevention in the community, in addition to the theoretical-methodological diagnosis of family doctors and raising awareness of the work of specialists (teachers).

To implement these actions, the following are proposed:

- Characterization of adolescents, taking into account their main problems, identifying individual, family, and social risk factors, and comprehensive diagnosis based on the biopsychosocial changes of this

stage; for the study of the family, the following characteristics will be taken into account: composition or structure, the life cycle in which it finds itself, and the crisis, whether normative or paranormative, that it is going through, according to an analysis of the health situation of the community, family relationships, and functioning.

- Characterization of intersectorality that allows for the harmonious coordination and deployment of interventions by the various sectors of society involved in the health, well-being, and quality of life of adolescents.
- Evaluate the current competencies of physicians.
- Diagnosis and training of teachers.

Planning

Design training and educational activities with an intersectoral and interdisciplinary approach for comprehensive care for adolescents.

Actions to be completed

- Analysis of the information collected related to the competencies of family doctors, technical knowledge, and communication skills from a gender and diversity perspective; develop and organize the actions to be implemented in each office, flowcharts, and select the scenarios where the activities will be carried out.

Execution

Implement the prevention methodology with an integrative approach, adapting it to the specific context.

Actions to be completed

- Carry out activities for the development of educational and preventive skills, updating on contraceptive methods and sexual health counseling, group and participatory techniques for teachers, effective communication techniques, training activities for comprehensive care of adolescents in the home environment, presentation and discussion of audiovisual material created with adolescents, identification of biopsychosocial risk factors, workshops for training in educational work with families, schools, adolescent circles, and intersectoral participation, conscious, precise and collegial participation of the teaching community as actions are implemented, and constant evaluation of the performance of each participating physician according to the development of the process.

In intersectoral participation, training is conducted by political and mass organizations, as well as administrative institutions, in communities, taking into account the social context in which adolescents develop, and involving adolescents in the interpretation of results.

- Actions to strengthen family planning services, with certified human resources and contraceptive coverage; maintaining the continuity of schooling for pregnant adolescents; updating the comprehensive sexuality education policy; organizing the functioning of adolescent circles by clinics.

Evaluation of results

Assess the process based on ongoing evaluation of the results and impacts generated by the implementation of actions to address the prevention skills identified as problematic.

To this end, the following actions will be carried out:

- Develop records of experiences with meanings and significance. Family doctors will record the experiences they gain from assessing the role and significance of applying an integrative approach to adolescent care and the prevention of teenage pregnancy in their training. In these records, they will assess the impacts on the family and the community, the implementation of the proposed actions, the successes and failures, as well as the progress of their training in preventive skills. They will also make proposals to teachers and tutors on how to address the difficulties they face in this component from their initial training.

The proposed methodology was evaluated by specialists based on the defined criteria, with 100 % stating that its design contributes to the development and improvement of the integrative preventive work that family doctors must carry out in the prevention of teenage pregnancy, and that it is helpful to implement (usefulness). Therefore, it was considered acceptable for the application.

CONCLUSIONS

The study reflects shortcomings in the knowledge and preparation of family doctors in terms of preventing

teenage pregnancy, which limits their professional performance. The study and analysis of the theoretical references made it possible to propose a methodology with an integrative approach to their healthcare and educational functions, taking into account social complexities (management of sexuality seen from the new perspective of current times, as well as social changes in the family and community environment with intersectoral participation). The proposed methodology is based on principles from pedagogical, philosophical, psychological, and medical education, aiming for comprehensive care for adolescents through an intersectoral and biopsychosocial integration perspective. Validation by specialists indicates its viability in contributing to favorable changes in the performance of family doctors for this purpose.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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