

RESEARCH PAPER (ORIGINAL)

# Adolescent pregnancy and local co-planning: a diagnostic approach based on the PRECEDE-PROCEED model

Gravidez na adolescência e coplaneamento local: uma abordagem diagnóstica a partir do modelo PRECEDE-PROCEED

Embarazo en la adolescencia y co-planificación local: una aproximación diagnóstica a partir del modelo PRECEDE-PROCEED

Hayda Alves\*; Irma da Silva Brito; Thamires Rodrigues da Silva\*\*; Andréa Araújo Viana\*\*\*; Rafaela Cristina Andrade Santos\*\*\*\*

## Abstract

**Background:** The article outlines the first phase of a community-based participatory research to reduce adolescent pregnancy. This approach aims to address the complexity of the phenomenon and the specific characteristics of the local settings.

**Objectives:** To apply the PRECEDE-PROCEED model to make a social and epidemiological diagnosis of adolescent pregnancy in a city of the State of Rio de Janeiro (RJ), with a view to contributing to interventions for its reduction.

**Methodology:** Quantitative and qualitative methodologies were used (descriptive analysis of epidemiological data, participant observation, talking-map, and conversation circles) in a medium-sized city of RJ (2014-2015).

**Results:** The diagnosis highlighted the association between early adolescent pregnancy and key social and healthcare vulnerabilities in this population segment. The model enabled the mapping of this scenario and the increasing engagement of local partners to address this issue, as well as the listing of priorities and commitments from an emancipatory and interdisciplinary perspective.

**Conclusion:** This study will contribute to the development of new interventions to engage adolescents and other stakeholders in the design of approaches to co-management, education, service, and community.

**Keywords:** pregnancy in adolescence; community-based participatory research

## Resumo

**Enquadramento:** O artigo expõe a primeira fase de uma pesquisa participativa baseada na comunidade para reduzir gravidez na adolescência (GA). Esta abordagem visa privilegiar a complexidade do fenómeno e a especificidade de contextos locais.

**Objetivos:** Aplicar o modelo PRECEDE-PROCEED para realizar o diagnóstico social e epidemiológico da GA num município do Estado do Rio de Janeiro (RJ) com vista a subsidiar intervenções para sua redução.

**Metodologia:** Utilizaram-se metodologias quanti-qualitativas. Análise descritiva de informações epidemiológicas, observação participante, mapa-falante e rodas de conversa, num município de médio porte do RJ (2014-2015).

**Resultados:** O diagnóstico evidenciou a gravidez precoce na adolescência e a sua associação com importantes vulnerabilidades sociais e na atenção à saúde deste segmento. O modelo empregado possibilitou mapear este cenário e fortalecer o engajamento de parceiros locais para enfrentar a problemática, além de elencar prioridades e compromissos numa perspectiva emancipatória e interdisciplinar.

**Conclusão:** Com este estudo foi possível desenhar novas intervenções para envolver adolescentes e diversos atores na concepção de aproximações de co-gestão, ensino, serviço e comunidade.

**Palavras-chave:** gravidez na adolescência; pesquisa participativa baseada na comunidade

## Resumen

**Marco contextual:** El artículo expone la primera fase de una investigación participativa basada en la comunidad para reducir el embarazo en la adolescencia. Este enfoque tiene como objetivo privilegiar la complejidad del fenómeno y la especificidad de los contextos locales.

**Objetivos:** Aplicar el modelo PRECEDE-PROCEED para realizar el diagnóstico social y epidemiológico del embarazo en la adolescencia en un municipio del Estado de Río de Janeiro (RJ) con el fin de subsidiar las intervenciones para reducirlo.

**Metodología:** Se utilizaron metodologías cuantitativas y cualitativas y se realizó un análisis descriptivo de las informaciones epidemiológicas, una observación participante, un mapa visual y ruedas de conversación en un municipio de tamaño medio de RJ (2014-2015).

**Resultados:** El diagnóstico mostró que el embarazo precoz en la adolescencia se asocia con importantes vulnerabilidades sociales y con la atención a la salud de este segmento. El modelo empleado permitió mapear este escenario y fortalecer el compromiso de colaboradores locales para enfrentarse a la problemática, además de aumentar las prioridades y los compromisos en una perspectiva emancipatoria e interdisciplinar.

**Conclusión:** Con este estudio fue posible diseñar nuevas intervenciones para envolver a adolescentes y a diversos actores en la concepción de las aproximaciones de co-gestión, enseñanza, servicio y comunidad.

**Palabras-clave:** embarazo en adolescencia; investigación participativa basada comunidad

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\*Ph.D., Adjunct Professor, Fluminense Federal University, 28895-532, Rio de Janeiro, Brazil [haydaenf@gmail.com]. Contribution to the article: definition of the research objective, literature review, methodological design, data collection, analysis and interpretation, discussion of results, article writing and final revision. Address for correspondence: Rua Recile, s/n, Jardim Bela Vista, Rio das Ostras, 28895-532, Rio de Janeiro, Brazil.

\*\*Ph.D., Adjunct Professor, Nursing School of Coimbra, 3016-851, Coimbra, Portugal [jrmabrito@escnf.pt]. Contribution to the article: methodological design, data analysis and interpretation, article writing and final revision.

\*\*\*Bacharelato, Undergraduate student, Fluminense Federal University, 28895-532, Rio de Janeiro, Brazil [thamiresrodrigues\_nf@hotmail.com]. Contribution to the article: definition of the research objective, methodological design, data collection, analysis and interpretation, discussion of results, and article writing.

\*\*\*\*Bacharelato, Public Health Nurse, Specialist in Maternal-Child Management, Director of the Department of Health Programs, Municipal Health Secretariat, 28895-274, Rio de Janeiro, Brazil [andrea.viana.ar@gmail.com]. Contribution to the article: definition of the research objective, data analysis and interpretation, discussion of results, article writing and final revision.

\*\*\*\*\*Bacharelato, Undergraduate student, Fluminense Federal University, 28895-532, Rio de Janeiro, Brazil [rcas1992@hotmail.com]. Contribution to the article: definition of the research objective, methodological design, data collection, analysis and interpretation, discussion of results, and article writing.

## Introduction

Adolescent pregnancy (AP) occurs in people aged between 10 and 19 years (World Health Organization [WHO], 2015). In less developed countries, AP is a public health issue, given its magnitude and association with poverty and inequalities in health (United Nations Population Fund [UNFPA], 2013a). According to the 2010 population census, adolescents represent 17.9% of the Brazilian population, with 17 million teenage girls, and around one million pregnancies annually in the population aged under 20 years (Martins et al., 2011). According to the report by the United Nations Population Fund (UNFPA, 2013a), in developing countries, AP occurs in 19% of young women aged under 18 years, with 3% of them being under the age of 15. In Latin America and the Caribbean, these indicators are 18% and 2%, respectively.

AP is both cause and consequence of the violation of adolescents' rights, especially in education and health, which can perpetuate poverty and lead to social exclusion (UNFPA, 2013a). Several studies point to multiple AP-related negative aspects: increased obstetric and neonatal risks and increased rates of sexually transmitted infections (Flora, Rodrigues, & Paiva, 2013), that coexist with multiple social problems such as poverty, school dropout, unemployment, among others (UNFPA, 2013a), limited knowledge, access, and adherence to birth control methods, the desire for motherhood as a process of transition to adulthood, social recognition, and reference of female identity (Correia, 2014).

Based on this complex issue, the objective of this study was to apply the PRECEDE-PROCEED model to make the social and epidemiological diagnosis of AP in a city of the State of Rio de Janeiro (RJ), with the purpose of contributing to interventions for its reduction. This study was part of the theoretical-practical activities of the subject Health Policy, Planning, and Management of the Nursing Undergraduate Degree (PPGS-CGE/UFF) and is part of the project "Meanings attributed to adolescent pregnancy as a foundation for the practice of popular education in health", registered in the National Commission for Research Ethics (Protocol CEP/HUAP/UFF

- 1660955). The product of this study contributed to the co-planning of interventions aimed at promoting adolescent health and, more specifically, reducing AP, in partnership with the local public authorities.

## Background

According to Brito (2014, p. 34), "goodwill, intuition, or creativity are not enough when planning health promotion interventions for community groups." It is necessary to identify risk behaviors, intervening factors, and their impact on health. The PRECEDE-PROCEED (Figure 1), a health promotion planning model by Green and Kreuter (1991), allows analyzing such elements through well-defined phases, and, consequently, developing effective and long-lasting interventions with the participation of the actors involved in the process. Therefore, it enables the allocation of resources, and the key involvement and mobilization of the community in the approach to complex phenomena.

In the same way as a clinical diagnosis precedes treatment, this model considers that the diagnosis phase is the first step for intervention (Ransdell, 2001).

Since it prioritizes interventions supported by the collective voice of those involved in a specific issue, it is a suitable model to be used with groups that require unique interventions based on their own perceptions and visions of the world, such as adolescents. After our literature review on AP prevention, we also concluded that the PRECEDE-PROCEED model has proven to be an effective model for building this type of interventions with adolescents (Rezapour, Mostafavi, & Khalkhali, 2016).

Given the potential of this model (Tabak, Khoong, Chambers, & Brownson, 2012), this study presents the results from the application of the first diagnosis phases that allowed us to begin the process of co-planning interventions aimed at reducing AP in the city under analysis.

PRECEDE-PROCEED is the acronym for *Predisposing, Reinforcing, and Enabling Constructs in Educational/Ecological Diagnosis and Evaluation and Policy, Regulatory, and Organizational Constructs in Educational and En-*

*vironmental Development.* It is based on the principle that health promotion programs aim at reducing the risk factors associated with behaviors or the environment, and divides the

factors that determine the health problems into three major groups: predisposing factors, enabling factors, and reinforcing factors (Brito, 2014).

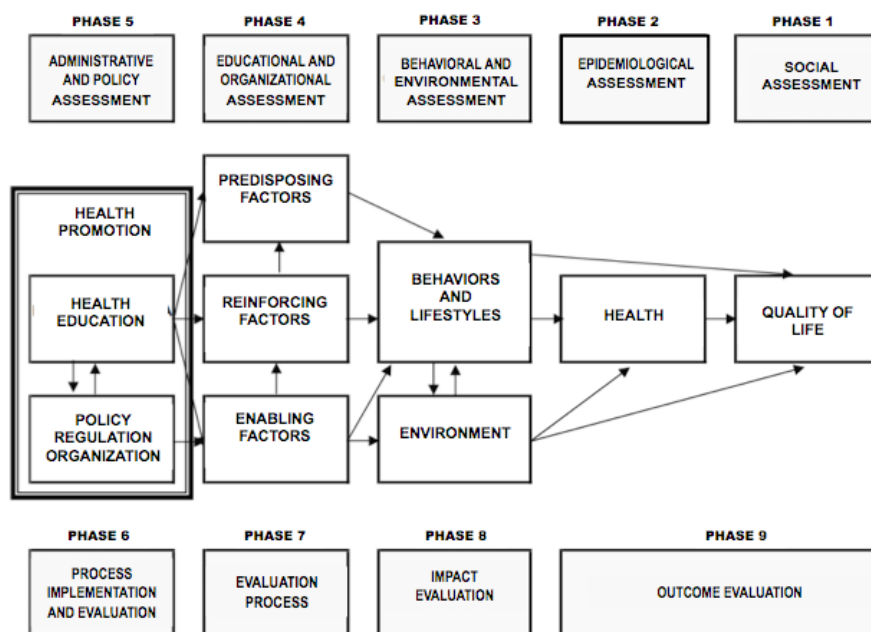


Figure 1. Scheme for the PRECEDE-PROCEED Model, adapted by Brito (2014, p. 49).

The social diagnosis phase aims at identifying the quality of life and the health problems, providing those involved (individuals/community) with a broad understanding of the phenomenon, in an attempt to establish priority issues, identify their needs and aspirations, and raise awareness about community concerns and objectives from a social, economic, cultural, and environmental perspective. The epidemiological diagnosis allows describing and characterizing the main health problems of a community and their magnitude, i.e. clarifying their association with the health status of a population (Brito, 2014). Here, community mobilization becomes one of the major facilitators of the health promotion process (Brito, 2014, p. 47).

## Research question

The pre-intervention diagnosis of the complexity of this AP was essential to ensure the effectiveness of interventions aimed at promoting adolescent health with a focus on the prevention of pregnancy. We formulated the

following question to guide this stage based on the application of the PRECEDE-PROCEED model: Which socioepidemiological and healthcare access conditions can guide community-based interventions for the prevention and control of AP in the city under analysis?

## Methodology

Given the need to promote strategic and multi-dimensional interventions for reducing AP, we established a teaching-service partnership to make a social and epidemiological diagnosis, based on the first components of the PRECEDE-PROCEED model. To this end, this study used quantitative and qualitative approaches and participatory methodologies for data collection and analysis. These were consistent with the diagnosis phases of this model and were operationalized in two moments for diagnosis: (i) epidemiological diagnosis, aiming to create a profile of the number of infants born to adolescent mothers in the region and the city, based on available statistical data and a sample

of 364 reported cases; (ii) social and organizational diagnosis, which included the collection and analysis of qualitative data and the engagement of local partners. The consolidation of an intentional sample composed of relevant actors (22 participants) for the co-planning of interventions aimed at adolescents in the public network enabled the completion of this phase and the establishment of the necessary mediation for the implementation of a participatory project. In the qualitative analysis, mixed methods were used: conversation circles, talking-map, and participant observation.

The study was conducted in a medium-sized city (RO), with 105,676 inhabitants (Instituto Brasileiro de Geografia e Estatística [IBGE], 2015), located in the interior region of the state of Rio de Janeiro, Brazil. In December 2014, RO had 32.7% of family health coverage (*Saúde da Família* - SF), according to the 2014 Information System of Primary Care and a municipal initiative centered on adolescent health - the Comprehensive Adolescent Healthcare Service (*Núcleo de Atenção Integral à Saúde do Adolescente* - NASAD), which is connected to the Department of Health Programs (*Departamento de Programas de Saúde* - DEPSA). The NASAD was created in 2005 with the purpose of promoting comprehensive healthcare for adolescents and young people aged 10-19 years through health promotion, risk prevention, and reduction of morbidity and mortality. It is composed of a team of physicians, gynecologists/obstetricians, nurses, psychologists, dentists, nutritionists, and social workers. The program provides specialized prenatal service since 2008, and has become a reference for healthcare delivery to this segment of the population. This study was formally authorized by the interinstitutional partnership between the Fluminense Federal University (UFF) and the City Hall of the city under analysis. Even so, prior to its implementation, meetings were held between the project team and the DEPSA, NASAD, and the managers of the family health unit to discuss the intervention's objectives and interests.

First, we selected the family health unit with the highest percentage of AP cases in the city being followed-up by the NASAD. The social diagnosis was made between March and June 2014 based on interactions with employees of this health unit. For this diagnosis, direct, unsys-

tematic participant observation was used during weekly meetings over the course of 3 months, in addition to a conversation circle.

In the observation phase, the objective was to experience the educational and care interventions developed by the family health teams and NASAD with adolescents, as part of the theoretical-practical activities of the subject of PPGS-CGE/UFF. The observations aimed at capturing the daily life at the unit, without being limited to a pre-established script, and were recorded in a collective field diary (of the class). Observation is a step in the nurses' work process for the joint development and co-planning of an intervention with health professionals. At the end of the observation period, a conversation circle was held with the participation of four community health agents, three physicians, three nurses, and two nurse technicians of that health unit, with a view to discussing AP in the territory and co-planning prevention or mitigation interventions. This step allowed for the collective development of a talking-map to graphically represent a problematic situation. In addition, the graphical representation of the territory allowed for the identification of AP cases being followed-up by NASAD in that service and the discussion of its magnitude. The talking-map is the expression of a territory which considers the objective and symbolic representation of the living space, allowing for the visualization of information about a location and the representation of areas of relevance and interest to a group of people involved. It is also a product of collective participation that assigns importance in the design and use of the map to influence key processes (Goldstein, Barcellos, Magalhães, Gracie, & Viacava, 2013).

Then, the epidemiological diagnosis was performed. We conducted a descriptive analysis of the statistical data available and the 364 live birth certificates (*declarações de nascidos vivos* - DNV) of infants born to adolescent mothers living in the city in 2014. The DNV were obtained from the Department of Epidemiology of the city, compiled and analyzed using the software Epi Info 3.5.1™. It is worth noting that DNV feed the Live Birth Information System (*Sistema de Informações de Nascidos Vivos* - SINASC), a public database of the Department of Informatics of the Unified Health System (*Departamento de Informática do Sistema Único de Saúde* - DATA-SUS 2015) which provides health information.

However, the system only provided data until 2013. To access 2014 records, we obtained formal authorization from the Municipal Health Secretariat and the Department of Health Surveillance of the city under analysis.

The conversations with municipal health and education managers were also essential at this phase. To this end, a conversation circle and meetings were held with municipal health and education managers to assess the interventions developed and analyze DNV data. These moments had the participation of the DEPSA director, four NASAD employees (physician, nurse, social worker, and psychologist), five coordinators of health programs in cross-cutting themes to adolescent health (Program of Sexually Transmitted Diseases - acquired immune deficiency syndrome [AIDS] and Viral Hepatitis; Family Health Strategy; Child Health Program; Women's Health Program, and School Health Program), and a representative from the Department of Education of the city under analysis. The meeting was convened by the DEPSA directors, as part of the working group's agenda to promote collaborative and intersectoral work. Data obtained in these meetings were compiled into minutes, validated by all those attending the meeting, added to the daily research diary, and subjected to content analysis.

This research was not funded and had no conflicts of interest.

## Results and discussion

With regard to the epidemiological conditions of AP in the municipality under analysis, data obtained from DATASUS showed a decrease in the percentage of births to adolescent mothers, following a state and national trend (Figure 2). This decrease was more marked after 2000 (from 22 to 16%), followed by the stability of this indicator. Nowadays, there is approximately one birth to an adolescent mother in every six births in RO, revealing indicators close to the national figures: almost one in every five births (Departamento de Informática do Sistema Único de Saúde, 2015). This scenario may reflect a global trend or be associated with the interventions of NASAD in the city, according to the 2014 Annual Management Report of the Department of Health Programs. It is worth emphasizing that its implementation in 2005 was accompanied by a reduction in AP indicators, despite the population growth in the city under analysis (379% growth between 1996 and 2010; IBGE, 2015) and the difficulties experienced by health and education services in ensuring the access to new residents.

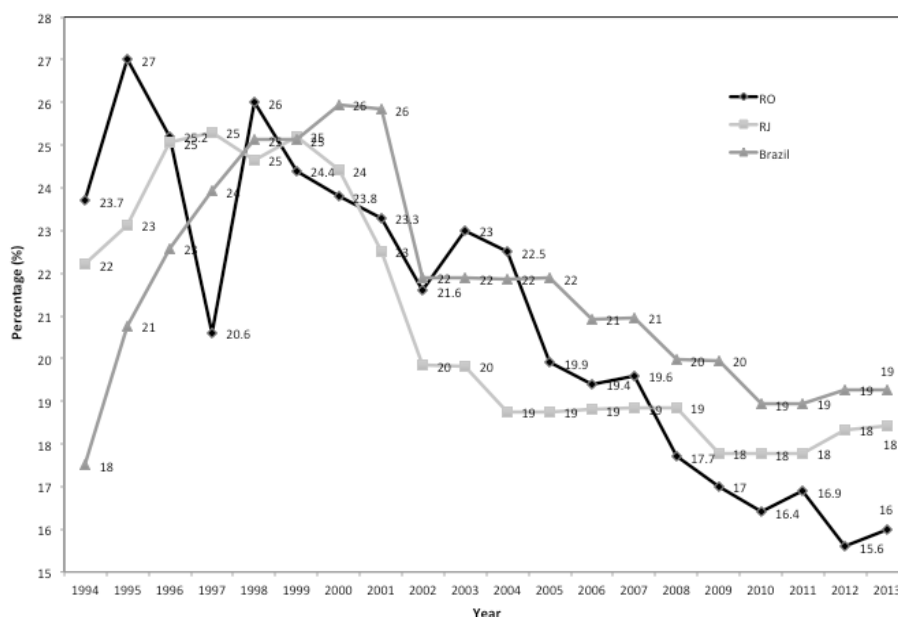


Figure 2. Historical series of the percentage distribution of live births to adolescent mothers, RO, RJ, and Brazil, 1994 – 2013. Source: Department of Informatics of the Unified Health System (2015).



The percentage of live births to adolescent mothers has declined worldwide (represents on average 11% of deliveries), even considering the increase of this group in the general population (WHO, 2012; Departamento de Informática do Sistema Único de Saúde, 2015). This trend was also a result of this study; however, data put into evidence the young age of pregnant ado-

lescents and the care weaknesses that should be targeted by interventions.

Table 1 shows the characteristics of the 364 DNV of infants born to adolescent mothers living in the city under analysis (100% of the DNV in this segment) in 2014; it includes information on sociodemographic data, obstetric conditions, and prenatal care.

Table 1

*Distribution of live births to adolescent mothers living in the city under analysis in 2014*

	Variables	Class/Stratum	Percentage (%)
Sociodemographic characteristics	Mother's age (years)	15 to 19	94.2
		10 to 14	5.8
	Education (years of study) <sup>a</sup>	≤ 8	59.3
		≥ 9	38.2
	Occupation <sup>a</sup>	Student	23.4
		Homemaker	63.5
		Works outside the home	11.7
	Marital status <sup>a</sup>	Without a partner	90.9
		With a partner	7.7
	Race/Skin color <sup>a</sup>	White	32.8
		Black	14.0
		Brown	49.3
	Neighborhood of residence	RA	20.6
		CP	11.8
		CN	9.4
		NE	8.5
		P	6.9
		CBM	6.0
		L	4.9
		R	4.4
		Others and Ignored	< 1% each (total: 45.6%)
Obstetric conditions and prenatal care	Previous pregnancies <sup>a</sup>	0	77.0
		1	18.1
		2 or more	4.5
	Abortions	0	93.7
		1	5.4
		2 or more	0.9
	Trimester onset of prenatal care	1 <sup>st</sup>	62.8
		2 <sup>nd</sup>	33.2
		3 <sup>rd</sup>	4.0
	Type of delivery	Eutocic	47.3
		C-section	52.7
	Number of prenatal appointments	0 to 6	49.4
		7 to 14	50.6

*Note.* N = 364 DNV. <sup>a</sup>Variables that together with the quantitative Others and Ignored reach a total of 100%.

More than 90% of the 364 adolescent mothers identified were aged between 15 and 19 years, lived in neighborhoods with different social vulnerabilities, were single, and had migrated from another city in Brazil. It should be noted that some of them had some kind of marital relationship (5.8% were married and 2.5% had a stable

relationship). More than half of them had less than 8 years of schooling, and did not work or study. In this group, 22.6% were not primiparae, and 49.4% of them had less than seven prenatal consultations. Of these, 65% were less than 14 years old and started prenatal care late in their pregnancy, with 60% of them starting it after

the first trimester of pregnancy. We also found a high rate of cesarean sections (55%) and that 6.3% of the adolescents reported having had at least one previous abortion.

Despite the stability of AP in the city, there was an increase in the number of cases among adolescents younger than 14 years: from 9 (0.43% of births), in 2012, to 20 and 18 in 2013 and 2014, respectively (approximately 0.89% of births). This result suggests the association between AP and violence and other social vulnerabilities that affect the adolescents' health and interfere with the development of their life projects (Brahmbhatt et al., 2014; Krugu, Mevissem, Prinsen, & Ruiter, 2016). We believe that this situation is consistent with the literature that indicates an association between AP and determinants of social vulnerability, such as: low schooling, migration, and residence in peripheral neighborhoods with low urban infrastructures and a high violence rate (Brahmbhatt et al., 2014; Krugu et al., 2016). In addition, the 2014 National Household Sample Survey shows that Brazilian adolescents with at least one child have fewer years of schooling (7.7 years) when compared to others in the same age range but without children (8.9 years). Almost 60% of them did not study or work and 92% performed household chores for more than 27 hours a week (IBGE, 2015). Despite the difficulty in establishing a causal relationship between AP and school dropout, these data are important since a late and interrupted schooling has a potential impact on these

young women's insertion into the job market and income (United Nations Population Fund, 2013b). In addition to the mentioned items, multiparity and AP should be a priority in public agenda, since the prevalence of a new pregnancy in adolescence is of 30% within one year after the first childbirth and 25% to 50% within two years (Nery, Mendonça, Gomes, Fernandes, & Oliveira, 2011). These rates are higher in low-income populations who do not study or work (Silva et al., 2011). The risk of pregnancy within one year after the first childbirth is a fact in the city under analysis since the data showed a high incidence of recurrent pregnancy: 22.6% in the year under review.

During this study, we found weaknesses in the completion of DNV items (Table 2), which led us to strengthen monitoring of AP based on DNV records and use the information obtained from this instrument in the co-planning of intersectoral interventions. In the case of adolescents, the lack of information in the DNVs is an aggravating factor that hinders the understanding of AP, and its social determinants and impact. Despite the importance of the data obtained from the analysis of DNVs, we should take into account that this instrument does not exclusively reflect the interests of this research. However, although these problems reflect the study limitations, they also point to the importance of strategies for workers' lifelong education so as to improve the collection and use of epidemiological information.

Table 2

*Distribution of the DNV of infants born to adolescent mothers living in the city under analysis in 2014, according to incomplete items*

Incomplete items	Percentage
Congenital anomaly	93.7
C-section before labor	70.3
Labor induction	66.5
Fetal position	8.2
Race/Skin color	3.6
Mother's level of education	2.5
Professional providing assistance during labor	1.6
Mother's occupation, Marital status	1.4
Neighborhood of residence	1.1
Previous pregnancies, Type of pregnancy, Infant's gender	0.3

*Note.* N = 364 DNV.

When epidemiological information about the profile of births to adolescent mothers in the city (Figure 2; Tables 1 and 2) were discussed at the healthcare unit, during the development of the talking-map and the conversation circles, we identified some critiques to the management of this type of care in the city, since the professionals reported having difficulties in accessing these data. They also reported that they were unaware of the number of pregnant adolescents and their profile in the unit's catchment area, as well as in the whole city. Thus, the debate followed by data presentation and preparation of the talking-map emphasized the need for the healthcare unit to further develop local planning and preventive actions aimed at adolescents.

The NASAD team also pointed out problems related to DNV data collection at the hospitals, emphasizing the limited quality of the information produced (Table 2). Despite these differences, it is important to highlight that AP is an important issue in the healthcare agenda and that it must be discussed based on objective realities and involving the whole health team and professionals from other sectors who develop actions targeting adolescents, such as health and social care professionals.

The results obtained in this diagnosis phase were also discussed in a joint meeting with health and education managers, as well as NASAD workers. In these meetings, the professionals established the priority actions related to health promotion and AP prevention in strategic areas: taking into account the need to reduce the stigma associated with AP, health professionals' ability to incorporate in the debate the vulnerabilities that compromise adolescents and young people's future and choices to develop practices that favor an understanding of the world, their unique needs, and ways of learning how to use health-related information. All the professionals agreed that the engagement of professionals and young people, especially those who experienced AP, in participatory methodologies in subsequent stages to the application of the PRECEDE-PROCEED model (for the clarification of the predisposing, enabling, and reinforcing factors) may provide important data to: the development of more efficient communication and health education strategies; the co-planning of health interventions, beyond the institutional space of health care services, capable of pro-

moting the mediation of actors and structural policies in health, such as health education and social action; processes of education in services that consider information systems and their instruments (e.g., adequate completion of DNVs) to be important sources of epidemiological information and substrate for public policies; and community mobilization that explores the ability of those involved, especially people who have influence on adolescents, to access and use health services (gatekeepers) and to promote the development of adolescents' cognitive abilities and skills (health literacy) to understand and use health information. The professionals at the meeting also established that these actions should involve practices of popular health education in schools that address broad topics such as communication skills and assertiveness, relationships and life values, peer pressure and decision-making, human development and sexuality, safe sex, and prevention of sexually transmitted diseases. These interventions should be implemented through a partnership between the university (researchers and students) and local health and education managers, thus implementing the following stages envisaged in the PRECEDE-PROCEED model.

The social-organizational diagnosis showed that the difficulties in understanding and appropriately intervening with pregnant adolescents go beyond data production.

## Conclusion

The application of the PRECEDE-PROCEED model revealed important aspects for intervention, by highlighting vulnerabilities associated with AP that compromise adolescents and young people's future and choices. The following research products should be emphasized: the increasing incidence of pregnancy among young people aged less than 14 years; weaknesses in these mothers' prenatal care; multiparity among adolescents; and the increasing concentration in more peripheral neighborhoods with different social problems, such as violence and inadequate primary care services. Most school-aged adolescent mothers remain out of school or the job market. Another significant percentage of adolescent mothers have still not completed their studies or experience age-grade delays. The



idea of AP as a cause and/or effect is yet to be explored in this scenario.

The aspects identified in this study highlight important social determinants associated with AP that require intersectoral actions, as well as collaborative, participatory, and networking studies.

This study also showed that the engagement of adolescents, young people, university professionals, and local public authorities, particularly health and education services, contributes to evidence-based outcomes, relational practices, and the production of valid and reliable knowledge for the context in which they are produced.

The implementation of this project generated a reflection-action process at the university and among health and education professionals, which contributed to the co-planning of future empowering and intersectoral interventions for AP prevention. In this way, the impact of the knowledge produced goes beyond the development of strictly academic outcomes with an impact on the community and social value.

In this regard, the need to promote health professionals' training on making a diagnosis as part of lifelong education strategies should be highlighted. It is also one of the commitments and responsibilities set out in this study to further implement the subsequent stages of the PRECEDE-PROCEED model so as to clarify the predisposing, enabling, and reinforcing factors of AP. This requires the participation of professionals and young people, especially those who experienced AP, in participatory interventions and studies.

We believe that this is essential to encourage the engagement of these actors in the co-planning of interventions beyond the institutional space of health care services. In addition, community mobilization must be promoted in order to enhance the ability of those involved, particularly people able to influence adolescents, to access and use health services, as well as to promote the development of adolescents' cognitive abilities and personal and social skills.

It is also worth noting that the use of this model as a pedagogical strategy promotes the nurses' education and work. Therefore, its application offers an approach to the experienced social reality, and the opportunity to implement a col-

legiate co-management in health services and educational practices based on active pedagogies and peer education.

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