ABSTRACT

Introduction: this study sought to answer the following research question: how to deal with pregnant women’s dependence on legal and illegal drugs in the context of ambulatory health services? Objectives: to identify, in the literature, care intervention strategies aimed at expectant mothers affected by use of legal and illegal drugs. Methodology: in accordance with the Joanna Briggs Institute, this is a scoping review. Searched databases: LILACS, MedLine, BDENF, PubMed, Web of Science and CINHAL. The main descriptors were: pregnant women, illegal drugs, standard of care, and ambulatory care. Results: a total of 939 articles were identified, and nine studies were selected from the PubMed database, all published in the United States, with a randomized clinical trial design, and conducted from 2007 to 2015. The pregnant women’s profiles were characterized by low income and social vulnerability. The care intervention strategies were composed of enhanced motivational interviewing, brief intervention and, especially, therapeutic intervention through work, whose purpose was to encourage abstinence in association with financial support for a better quality of life. Conclusion: the production of care towards the expectant mothers involved relational work such as welcoming, bonding, listening and sensitivity for a socio-historical-cultural approach, all associated with gender and time specificities.

Keywords: Ambulatory care, Pregnant women, Illegal drugs. Disorders related to substance use.

INTRODUCTION

Consumption of alcohol, tobacco and illegal drugs during pregnancy is a complex public health issue that causes serious harms to the health of both mother and baby. Studies point out that, in the United States, 8% (320,000) of pregnant women have used illegal drugs, and 13% (510,000) have used tobacco in the last trimester of their pregnancy. Similar patterns were identified in Europe. Following nicotine and alcohol, cannabis, opioids and cocaine are the most used drugs in the prenatal period. In Brazil, data are scarce with regard to pregnant women who use and are dependent on legal and illegal drugs. Consequently, there are no estimates as to the number of expectant mothers involved in this type of situation, which is a task to be faced in our country. In this sense, it is worth noting that an unprecedented study was found; it was conducted with 1,447 pregnant women in the city of São Luís, Maranhão state, and reported an estimated prevalence of 1.45% for use of illegal drugs, 22.32% for alcohol consumption, and 4.22% for cigarette smoking. Among Brazilian public policies, the “National Policy on Drugs” was launched in 2019, based on Law 11343 of August 2016, which guides actions seeking to establish cooperation between the social sector, healthcare, education and public security, aiming at promotion, prevention, treatment and the social reintegration of chemically dependent people, including pregnant women, in an integrated, intersectoral, interdisciplinary and transversal way. This regulation is found to be somewhat close to the North American prohibitionist policy based on intolerance and actions intended to repress drug use. In the Brazilian reality, the Caps [Centro de Atenção Psicossocial (Psychosocial Care Center)] was created precisely with the purpose of welcoming, caring for and providing treatment to chemically dependent people and those with mental disorders. In its thirty-year journey along with the Sanitary Reform, the Caps has been making efforts in the sense of expanding its care coverage and including these women, seeking to bring down barriers such as prejudices and stigmas, freeing them from “invisibility”.

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1Extracted from the dissertation entitled “Production of Care for drug-dependent pregnant women: a Scoping Review”, which was presented to the nursing graduate program of the University of São Paulo (Universidade de São Paulo) (USP) in 2017. *Nurse. Master in Nursing from the University of São Paulo. Boituva Caps II coordinator. Tabuá, São Paulo, Brazil. elenafiagama@gmail.com. ORCID ID: https://orcid.org/0000-0002-6826-9263.

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These issues motivated the present study, which aimed to identify, in the literature, intervention strategies for providing care and treatment to pregnant women affected by the use of legal and illegal drugs, through the actions of professionals who make up health teams at the ambulatory level.

It is important to point out that the term “production of care” was employed to emphasize the strength of intervention strategies that have a transformative impact on the target, counting on a possible collaboration on the part of the pregnant woman in the treatment of her chemical dependency⁷.

**METHODOLOGY**

This is a scoping review based on the standards of the Joanna Briggs Institute (JBI), which is an International Research Center at the Faculty of Health and Medical Sciences of the University of Adelaide, Australia⁸. Following the stages established for a scoping review, the following steps were taken: (i) identify the guiding question of the research; (ii) identify relevant studies; (iii) select studies; (iv) map data; and (v) compare, summarize and report results⁹. The PCC strategy was used to define the question, which stands for: P - Population: Drug-dependent pregnant women; C - Concept: Production of care; C - Context: Ambulatory health services. By adjusting the study object to the PCC strategy, the following guiding question emerged: how to deal with pregnant women’s dependence on legal and illegal drugs in the context of ambulatory health services?

For the initial stage of article selection, the researcher counted on the participation of two scientific initiation scholarship holders. Following the JBI protocol, the participation of external judges was requested for the final assessment of the 9 selected articles. Researchers from the Center for Studies and Research on Nursing in Addictions: Alcohol and other drugs [Núcleo de Estudos e Pesquisas em Enfermagem em Adições: Álcool e outras drogas] (NEPEAA) and an external person took on the role of judges. The judges read and assessed the relevance and consistency of the texts, in accordance with the inclusion and exclusion criteria. The results were obtained through searches in the Virtual Health Library (VHL) Portal and in the databases presented in Table 1. Throughout the search, the “OR” and “AND” Boolean system was used, with the “Full text available” filter. The languages used during the searches in the VHL Portal were Portuguese, English and Spanish, as this portal comprises databases from Latin America, such as LILACS. In the other search websites, only English terms were used, given their specificities, as shown in Table 1 below:

<table>
<thead>
<tr>
<th>DATABASE</th>
<th>CONTROLLED DESCRIPTORS</th>
<th>UNCONTROLLED DESCRIPTORS</th>
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<th>Web of Science, CINAHL</th>
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<td>LILACS, BDENF, MedLine</td>
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The search period for titles and records in the databases was started by the researchers in December 2016 and ended in January 2017. The inclusion criteria were: a. Time scope: the search was limited to studies dated from 1990 to 2016, a period marked by an institutional arrangement on the part of the State for the provision of health services, after the Brazilian Unified

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Health System [Sistema Único de Saúde] (SUS) was implemented; b. Languages: English, Portuguese and Spanish; c. Availability: full studies; d. Theme: drug-dependent pregnant women. The exclusion criteria, previously determined for the present study, were: same article found in more than one database; studies not available online; studies with non-pregnant women; pregnant women in jail; pregnant women in the hospital; pregnant women with HIV; studies addressing abuse of and dependence on legal psychotropic drugs. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was used, which consists of a checklist and a four-step flowchart whose goal is to help authors improve their reporting of systematic reviews and meta-analyses.

RESULTS

In the selection process, using the first search strategy, 939 studies were identified. The screening covered the stages of analysis by title and by abstract. Based on the title, 755 articles were excluded, with 181 being left for analysis of abstracts. Nine articles were included in the review. The PRISMA of the study is shown below in Figure 1.

![Figure 1. PRISMA flowchart (adapted)](9)

Given the objective of this study, the results were organized in accordance with the intervention modalities and tools identified for the care focused on pregnant women’s drug dependency, namely: therapeutic intervention through work, brief intervention, enhanced brief motivational intervention (BMI), and incentive-based contingency (financial rewards). All articles selected for the present study were extracted from the PubMed database. Among them, 88.8% were carried out in the medicine field, 22.2% had the participation of nursing, and only one study, accounting for 11.1%, was conducted by a professional from the nutrition field. The time scope of the analyzed and selected publications comprehended 2007 and 2015, with productions centered in the USA, involving researchers from different American universities. Methodological studies, of the randomized controlled clinical trial type (100%), were prevalent. Pregnant and puerperal women participated in the studies. As for the profile of the studied expectant mothers, most were between the ages of 18 and 50 years old, 50% were single, 18.75% were married, and 31.25% had no information.

Only one study had partners involved in the therapeutic follow-up. When it comes to socioeconomic conditions, although the studies do not provide much detail, it was possible to identify that 50% of the women were low-income or unemployed. The substances referred to in the studies were methamphetamine, marijuana, cocaine, opiates, alcohol, tobacco and
heroin, with most of the women being poly-drug users. It is interesting to note that all projects were developed in specialized-treatment healthcare centers for women and expectant mothers. The following care tools were identified:

A) Therapeutic intervention through work

Only one study operationalized the proposal of a therapeutic intervention through work, designed to care for low-income, drug-dependent pregnant women. All 40 participants were received through a simulated hiring mechanism, and means of payment for the completion of the assigned work were used. In order to continue working and be paid maximum compensation, the participants had to prove their abstinence by means of urinalysis results. The research was divided into two phases. In the first, intensive training was carried out for the development of work skills. In the second, the participants were hired by a service company to input data into computers. The pregnant women in the control group and in the therapeutic work group were initially enrolled in the study for a period of six months, and repeatedly re-enrolled in the program in blocks of six months over eight years. The participants were given vouchers that could be exchanged for goods and services based on their attendance, performance and professional behavior during the three-hour work shifts. At first, they were paid US$ 7.00 a day, with a US$ 0.50 raise for each day of consecutive successes, reaching a maximum value of US$ 27.00 per day.

After eight years of study, the researchers concluded that the therapeutic intervention through work contributed to maintaining the participants’ abstinence in the long term. They presented better negative-urine results for cocaine and opiates compared to the participants in the control group.

B) Brief intervention

From the search, three studies (23%) pointed to Brief intervention as a care strategy for pregnant women. Among said studies, one compared two interventions: one called Early Start (ES), integrated with prenatal care focused on abstention (n = 298), and another one called Early Start Plus, (ESP), for which a computer was used as a tool to assess drink amount, focusing on reducing alcohol consumption (n = 266). The control group was made up of untreated alcohol users (n = 344) and presented higher rates of adverse neonatal and maternal outcomes. It is concluded, in this research, that there was no significant difference between ES and ESP. However, ESP provided clinicians with an innovative assessment tool that allowed for an open dialogue on alcohol consumption during pregnancy.

The second study applied the brief intervention to 304 pregnant women and their partners, in accordance with the following structure: 1) knowledge evaluation with feedback, 2) contract and goal setting, 3) behavioral change and 4) summary. The one-session brief intervention was chosen due to its efficiency and history of success, but was improved in that study with the inclusion of partners. The results revealed that the brief intervention proved to be more efficient in reducing alcohol consumption frequency among those women who were drinking higher amounts at the time they were included in the study. Furthermore, the effects of this care strategy significantly improved when a support partner of the women’s choosing also joined the brief intervention.

The last study counted on the participation of 345 pregnant women divided into two groups: pregnant women subjected only to alcohol consumption assessment (n = 183) and pregnant women who were assisted through brief intervention (n = 162) in sessions with 10 to 15 minutes of counseling from a nutritionist. Women under the brief-intervention condition were found to be five times more likely to report abstinence after the intervention compared to those subjected to alcohol consumption assessment. The newborns whose mothers undergone brief intervention showed higher birth weight and anthropometric measures, and their fetal mortality rates were three times lower (0.9%) compared to those of newborns under the condition of alcohol consumption assessment (2.9%).

C) Enhanced brief motivational intervention
This strategy was applied to 200 pregnant women and presented in 4 studies\(^{14-17}\) by means of a partnership between the authors. The studies extended from 2003 to 2006. Motivational interviewing was applied during three meetings that lasted approximately one hour and a half to two hours. The first session began with open-ended questions concerning how the women felt about their pregnancy, along with reflective listening, a moment when the professional would state and summarize what the participants revealed. In addition, the pros and cons of substance use were explored in order to identify possible adverse effects on the fetus in the expectant mother’s view. The second session was dedicated to personal and individualized feedback on the consequences of substance use, both for the participant and her gestational process. The extent to which she engaged in activities that promote a healthy pregnancy was taken into account. The third session was dedicated to the development of a change plan for those participants who expressed readiness and strengthened commitment. The first session lasted approximately two hours, while the other two sessions took place in the course of one hour each\(^{14-17}\).

The first study\(^ {14}\) revealed that Motivational Enhancement Therapy showed no significant differences compared to the usual treatment, which led the second study to better examine the participants’ stage of change and baseline motivation. At the end of the study, the researchers concluded that brief motivational interventions can be very useful for many but not all individuals, and that an initial motivation can sometimes moderate results while such approaches are tested\(^ {15}\).

The third study intended to assess the engagement of pregnant women in healthy activities such as use of multivitamins, consumption of calcium-rich foods, at least two nutritious meals, hours of sleep, etc., by applying a questionnaire at the beginning and at the end of the project\(^ {15}\).

One of the dimensions of the study associated the enhanced brief motivational intervention with the use of financial incentives, and concluded that the pregnant women showed greater compliance with the treatment as a result of the financial aid. Without the financial incentive, however, the treatment was not more effective than the usual therapy (individual care already provided by the institution)\(^ {17}\).

### D) Incentive-based contingency (Financial rewards)

In this study, carried out with 102 women, incentives could be received weekly, with payments being subjected to the achievement of tobacco-related reduction and abstinence goals set as follows: week 1: any reduction; weeks 2-4: 10% reduction; weeks 5-7: 25% reduction; weeks 8-9: 50% reduction; weeks 10-11: 75% reduction; abstinence should extend until week 12 (measurement of baseline levels of carbon monoxide CO < 4 ppm). The participants had the opportunity to win a US$ 7.50 voucher for the first tobacco smoking reduction target, with the voucher value raising by US$ 1/day for each consecutive target over the entire 12-week period, and with the maximum incentive reaching US$ 41.50. The results revealed that 48% of the participants in the cash-based intervention (CBI) group achieved the 75% reduction goal, and 31% achieved the abstinence goal (nicotine < 4ppm) in the twelfth week. Only 2% of the participants in the usual-treatment group achieved the 75% reduction, and none of the women reached the target abstinence. None of the participants in the non-cash-based intervention (NCBI) reached the 75% reduction target or abstinence\(^ {18}\).

### DISCUSSION

The authors expected to find works with a qualitative methodology due to the theme involving women in situations of social vulnerability\(^ {19}\). It was a surprise to find that the studies were conducted with a randomized population, and the results of some of them were remarkable – for instance, systematic emotional support as one of the bases to stimulate the participants’ emancipatory capacity, showing the effectiveness of the applied strategies\(^ {10}\).

Analyzing the profile of the drug-dependent pregnant women, the studies evidenced their precarious parenting relationship in childhood,
as well as a gap in the school education that is required for one to face life in society. Considering the complexity of the context that precedes the gestational period of these women, it is possible to understand and redefine their condition of staying on the margins of society, being invisible and difficult to be reached by social and health services. The panorama of production of the selected articles showed that the studies were limited to specific academic initiatives that lasted on average 2 to 4 years; the longest study went on for 8 years, which suggests a fragility as to policies aimed at assisting and socially supporting these women, thus evidencing that welcoming or caring for this population goes beyond a strictly technological approach.

As for the study of therapeutic intervention through work\textsuperscript{10}, it should be noted that its objective proposed abstinence from cocaine and opiates, but that the process was composed of activities that went much further than the support and incentive to reduce the consumption of these substances. For 8 years, there was an intense investment in training those pregnant women to master the work of inputting data into computers. Based on performance, the project provided financial incentives, on the basis of emotional support and the development of personal skills towards strengthening autonomy and personal confidence. Consequently, this established a process of learning and acquisition of skills that would enable opportunities for insertion in the labor market. These singular compensation mechanisms rendered the participating subjects autonomous as individuals. Thus, it was possible to identify similarities with the human labor theory developed by Engeström\textsuperscript{19}, of double stimulation, under Vygotsky’s cultural and historical approach. Double stimulation is understood as a vector of intervention aimed at developing the voluntary and intentional action of a given subject by providing external, sensory or verbal stimuli, which act as potentiators, mediating the mobilization of the cognitive process of a human action\textsuperscript{19}. In our view, the extended period of the project was decisive in the construction of each participant’s journey, giving them space for maturing as a subject of the process. They assimilated the systematic external stimulus and were able to work on an internal psychic process, in a gradual relationship with themselves. In this sense, it seems that the team fostered a work of an educational and relational nature, aiming to strengthen the participants’ transformative capacity. Thus, it is pondered that bonding was one of the constituent elements in the humanization process involving the work between the professionals in the team and the participants\textsuperscript{20-21}. This way, it is possible to understand the deep meaning of the historical and cultural recollection of the drug-dependent pregnant women as one of the determinants in a production of care\textsuperscript{22} that is aligned with the goals of the Caps’s multiprofessional actions and with the Mental Health Care Network [Rede de Atenção à Saúde Mental] (Raps)\textsuperscript{23}.

We will now address the use of the following strategies: motivational interviewing enhanced for pregnant women\textsuperscript{14-17}, brief intervention\textsuperscript{11-12} and incentive-based contingency\textsuperscript{19}.

It is noteworthy that, regardless of the tools used, all interventions promoted opportunity for a relationship of varying intensity between professionals and drug users. Taking this component as the basis of the brief intervention modality, it was possible to observe that, despite the short time of interaction with this alcohol-consuming population, success was achieved. Another common characteristic among intervention tools refers to the proposal focused on changing individual behavior, most likely because behavior is something noticeable. In combination with this approach, the pregnant women undergone toxicological urine tests and had their baseline levels of carbon monoxide measured. Despite the satisfactory effects, reported in the findings of the investigations, it is not known for how long the followed-up women were able to maintain their results.

The studies also evidenced the importance of gender relations with a view to carrying out work in centers specialized in assisting women, considering the need for a specific care that requires knowledge, skills and decision making based on evidence, thus promoting their capabilities\textsuperscript{24}.

The four Enhanced Motivational Interviewing projects and the incentive-based contingency study involved broad activities seeking to meet the needs of the expectant.
mothers in their particular gender-related circumstances, such as adequate space for their children to stay during the appointment, home visits in case of inability to go to the clinic, etc. This defense of the notion of gender is understandable when one recognizes the situation of social vulnerability in which these women find themselves, since chemical dependency can interfere with and hinder the execution of the roles they are expected to play and take on socially\(^{(24)}\). These conditioning elements strengthen abstention or makes their access to the health service network even harder\(^{(6)}\).

Producing care for these pregnant women means, first of all, establishing a relationship of trust, favoring the construction of meaning in action proposals, and promoting the identification of their needs in the assistance process. There is a clear need to recognize the historical-cultural process that has marked their life journeys, based on the construction of relational care, on bonding, and taking into account the gender specificity. Moreover, the perspective of time must presuppose a medium- and long-term care in order to include, if possible, family members in the follow-up, which will thus broaden care in the social context.

In order to guarantee assistance coverage and the care processes that this population needs, the strategy must be capable of operating a systemic health diagnosis to identify this vulnerable population and include them in the care system. In the Brazilian context of the SUS, it is worth highlighting the importance of nursing professionals as agents able to incorporate research potentials aimed at innovation in the care process. As members of multiprofessional teams, they are responsible for the articulation between pregnant women, family and intersectoral public policies, contributing to expanding the access of drug-dependent expectant mothers to health services and to the entire social assistance network\(^{(25)}\).

**CONCLUSION AND FURTHER CONSIDERATIONS**

Recognizing drug use as a worldwide problem, the complexity raises when women in the condition of expectant mothers are taken into account, bearing in mind the interference of social stigma, in addition to neglect from public policies and these individuals’ invisibility in health services. These women in the literature presented profiles characterized by difficult compliance with care actions and follow-up, mainly due to the struggles of their living conditions. As for the tools used to assist the expectant mothers, among the several technological combinations, the women’s relational and transformative work is noteworthy and enhances the production of care. Relationships with people develop over time; for this reason, the time invested in the users emerged as a category for bonding and trust building from the perspective of being human as a historical and cultural individual. That said, the possibility of applying a qualitative methodology to the object in question increases. Lastly, the present study allowed reflecting on a proximity to the Brazilian reality, which gives rise to two dimensions: the first one refers to the possibility of qualifying interventions in ambulatory practice based on the evidence in the searched literature, while the second one refers to the feasibility of a training process for the professionals involved in assistance.
intervención breve e, especialmente, de un proyecto de intervención terapéutica por el trabajo, cuya finalidad era el estímulo a la abstinencia asociada al apoyo financiero para mejorar la calidad de vida. **Conclusión:** La producción del cuidado a las mujeres embarazadas involucró trabajo relacional como acogida, vínculo, escucha y sensibilidad para abordaje socio-histórico-cultural asociados a las especificidades de género y tiempo.

**Palabras clave:** Atención ambulatoria. Mujeres embarazadas. Drogas ilícitas. Trastornos relacionados al uso de sustancias.

**RESUMEN**

**Introducción:** Este trabajo buscó contestar a la siguiente pregunta de investigación: ¿cómo cuidar la dependencia de drogas, lícitas e ilícitas, de embarazadas en contexto de servicio ambulatorio de salud? **Objetivo:** Identificar en la literatura las estrategias de intervención de cuidados de las embarazadas afectadas por el consumo de drogas lícitas e ilícitas. **Metodología:** se trata de un estudio de revisión del tipo revisión de alcance según el Instituto Joanna Briggs. Bases de datos seleccionadas: LilACS, MedLine, BDENF, PubMed, Web of Science CINHAL. Los principales descriptores fueron: gestantes, drogas ilícitas, padrón de cuidado y asistencia ambulatorial. **Resultados:** fueron identificados 939 artículos siendo seleccionados nueve estudios de la base de datos PubMed, publicados en los Estados Unidos, condición del tipo ensayo controlado aleatorizado, en el período de 2007-2015. Las embarazadas presentaban perfil de bajos ingresos y de vulnerabilidad social. Las estrategias de intervención de cuidados fueron de entrevista motivacional perfeccionada, intervención breve y, especialmente, de un proyecto de intervención terapéutica por el trabajo, cuya finalidad era el fomento a la abstinencia asociado al apoyo financiero para mejorar la calidad de vida. **Conclusión:** La producción del cuidado a las mujeres embarazadas involucró trabajo relacional como acogida, vínculo, escucha y sensibilidad para abordaje socio-histórico-cultural asociados a las especificidades de género y tiempo.

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