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The Design of a Maternal Education Program Based on Analysis of Needs and Collaborative Work

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Abstract

The article presents an analysis of the needs for maternal education associated with the stages of pregnancy, birth and post-partum and how these are transformed into a group maternal education program that is universally applicable. The investigation is carried out in Catalonia, one of the autonomous communities of Spain. The resulting product of the investigation is an educative program offered by the public health service to all women and their partners, if they have one, during pregnancy. The methodology is qualitative, in its cooperative action investigation aspect. The information is collected using the technique of discussion groups. In total there were 7 discussion groups in which a total of 70 people participated, of which 56 were midwives and 14 people who had received some kind of maternal education through the Public Health Agency of Catalonia. The needs detected were transformed into a universal program of group maternal education, based on scientific evidence, linked to the public health system of Catalonia. The professionals in charge of its application are principally the mid-

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wives. The program aims to strengthen parents' skills when dealing with pregnancy, childbirth and the first few months of the babies' upbringing (puerperium) and therefore reduce risks associated with each of these stages. The purpose of the program is twofold, to improve the overall welfare of the mothers, fathers and babies by promoting good treatment and good infant care.

Keywords: maternal education; antenatal education; childbirth education; needs analysis; health promotion through educational program; group intervention.

Introduction

Pregnancy, birth and postpartum affect the health of the mother and of course the development of the fetus and the later development of the child. In Catalonia (Spain) where the investigation is based, concern and sensibility for the subject of maternal education has meant that the practice of maternal education is now linked to the public health network throughout the whole of Catalonia. However, at the get-go of the present investigation, there was a marked heterogeneity in the praxis of maternal education, which meant too many objectives, too much organization of content, too many strategies and too much didactic material. This meant severely limiting the evaluation of the effects, efficacy and efficiency of the practices done, at the same time as leaving women at the mercy of the criteria of an individual professional making it much more difficult to guarantee the appropriate attention and treatment and adapt those to emerging needs. In the face of this, the professionals (the midwives) and the institutions responsible for maternal health both deem it necessary to revise maternal education practices in order to establish an agreed framework to act at the level required within a society that has public health services, and so be able to guarantee across the board quality attention permitting the collection of evidence to evaluate all maternal education practices. Social changes have also affected the way in which women have access to preparation for birth. If in earlier epochs knowledge was acquired basically through communication with other more experienced women in the family, "women's network", (where there was an exchange of information and also emotion), now, more frequently and in more areas of the world, this network no longer exists and its role has been substituted by public health services who offer a structured training (Nolan, 1997). Maternal education, also called preparation for childbirth education, preparation for maternity and paternity or prenatal or antenatal education (Martínez Galiano, 2012) has currently, according to Gagnon & Sandall (2007), as priority objectives, that future parents recognize their physical, psychological, emotional and social needs in pregnancy, in childbirth and in the exercising of parenthood in order to help them be able to confront them. Put another way, what prenatal education tries to do is strengthen the parents, making them gain in confidence and security in each of the stages. It is about

reducing the risks associated with pregnancy, to the viability of the pregnancy and of the mother's and child's health At the same time, personal care skills are promoted and parental skills to improve the health of the family members and in general, personal and family welfare. These educative activities are offered to future mothers and their partners in the prenatal stage and can either be as individual or group attention. The majority of programs deal with content related to pregnancy, labour and birth, the puerperium and parenthood (Gagnn & Sandall, 2007; Martínez Galiano, 2012). The latest tendencies in maternal education consider all these subjects as a continuum of interconnected content that form part of a system more than as watertight content dealt with in a segmental way (Svensson, Barclay & Cooke, 2009).

In 2007 Gagnon & Sandall revised antenatal education and stated that it was not clear what the effect of the programs was or which method was the most effective. From this moment on studies appeared that demonstrate that participation programs of antenatal education affect certain aspects of the health and welfare of the mother and /or child. For example, when people attend antenatal education programs, their perception of self sufficiency in the carrying out of parenthood and their knowledge about the implications of parenthood is greater (Gognan & Sandall, 2007; Svensson, Barclay & Cooke, 2009), and the risk of abandoning maternal breastfeeding during the first month is less (Artieta-Pinedo et al. 2013), stress, social conflict and postnatal depression are reduced at the same time that the women's self esteem rises (Ickovics et al. 2011), knowledge of the risks of smoking during pregnancy increases, short-term SIDS (sudden infant death syndrome) is prevented (Hesselink, van Poppel, Eijsden, Twisk & van der Wal, 2012) and the mother's nutritional behavior is more appropriate (Shakeri, Mazlomzade, Mohamaian & Bateni, 2013).In spite of the benefits shown, these programs and educative activities have been subject to a continuous revision regardless of the country in which they are carried out (e.g. Ho & Holroyd, 2002 in the case of China, Donsante, Edgar, Gill, Thomson, Williamson & Walsh, 2013 in the case of Australia or Martínez Galiano, 2012 in the case of Spain). The studies look at critical areas and propose alternatives to improve training. The areas revised are: Inclusion or exclusion in terms of the theoretical population addressed and the real population reached, the answer to the women's needs and its transformation into content, educative methodology, the adherence of the participants to the program or to the educative activities and the role of the partner during classes.

The programs for maternal education have a universal vocation and because of this are directed at the whole pregnant population. It is well known that modern societies are becoming more and more plural and diverse. However, one of the criticisms they have received, is that for a long time antenatal education has been focused on a very specific segment of the population, that Cliff & Deery (1997) & Nolan (1997) defined as middle class. This curricular homogeneity could well be

successful in one area of the population, but at the cost of excluding and not treating the differential needs of other groups at social risk or which are culturally diverse (Nolan, 1997). Besides the investigation demonstrates that this fact influences attendance for antenatal education, with young working class mothers, without partners attending less (Cliff & Deery, 1997). Recently, this problem has been addressed by the creation of specific programs, such as, for example "Happy mothers, happy babies (HMHB)" designed expressly for ethnic minority women (Hesselin et al., 2012).

Regarding the themes dealt with in antenatal education, the investigations coincide over the convenience of revising them so that they address the needs of the women and their families. The needs expressed by pregnant women are related to: anticipating personal needs to be able to confront motherhood, having at their disposition a realistic training to prepare them to face the difficulties of breastfeeding, baby care and taking care of themselves (Bansah, O'Brien & Oware-Gyekye, 2009; Ho & Holroyd, 2002), dealing with the subject of sexuality during pregnancy and after, as well as learning about family planning methods (Bansah et al., 2009), overcoming the contradictory advice of professionals in charge of antenatal education (Ho & Holroyd, 2002) and the contradictory advice of professionals and their environment (Bansah et al., 2009), and promoting the transition to parenthood centering on relations between the couple and their baby (Nolan, 2012).

When these prenatal activities only centre on transmitting information their effects are reduced, they move away from the reality of childbirth and motherhood, so that the mothers who receive them do not feel prepared to face this important life stage (Ho & Holroyd, 2002; Nolan, 1997). The women who participated in the different investigations missed not having the possibility of developing practical baby care skills (Nolan, 1997). They feel that the education is too technical and does not include emotional or psychological issues (Cliff & Deery, 1997). Moreover, according to Nolan (1997) at the end of the 90's the methodology of antenatal education did not facilitate the creation of the much needed support groups. Neither did it foster the capacity for decision making during pregnancy nor in motherhood, converting the women into passive subjects dependent on the health care professionals. However, when the group methodology involves the participation of the women and their partners it is much more effective and it is transformed into a real social support (Nolan, 2012). To which one should add, according to Ickovics et al. (2011), its capacity to reduce psychosocial risks in the women who receive it. The group itself, when small and meeting up regularly over a period of between 4 and 8 weeks, becomes the best motivation for sticking with the program (Nolan, 1997). The parents able to have group maternal education conclude that it is satisfactory in that it allows them to share doubts and fears with other prospective parents, exchange opinions over the idea of being a parent and increase their social relations within the community (Nolan, 1997;

Cojocaru & Cojocaru, 2011). The main targets for antenatal education are, for obvious reasons, women.

Involving parents in the preparation for birth, responds to the conception of parenthood as a voluntary exercise where both parents, to the same extent, take responsibility for the tasks of upbringing and build affective relations with their children (Neyrand, 2008). Parental involvement has positive effects on the development of the child and it is recommended that parents be trained before the birth of their child (Deave & Johnson, 2008; Cojocaru, Cojocaru & Ciuchi, 2011; May & Fletcher, 2013). Nevertheless, there is a real difficulty in recruiting parents to voluntary parenting programs (Bayley, Wallace & Choudhry, 2009). Amongst the possible barriers we found some related to internal motives, such as a lack of awareness (Bayley et al., 2009), but also others related to external reasons, such as the ignorance professionals have about the needs of parents (May & Fletcher, 2013), the lack of agreement that exists on the role that parents should have in antenatal education (Deave & Johnson, 2008) and services very oriented only towards women (Bayley et al., 2009). Ultimately, it seems that the satisfaction of those who receive the training and its effectiveness is linked to their capacity for identifying and answering their own needs, adapting to the cultural changes that affect society and to offer a training methodology that is consistent with and adequate for adults (able to recognize their own needs, share their knowledge and experiences with others) (Gagnon & Sandall, 2007; Ho & Holroyd, 2002; Nolan, 1997, 2012). In this sense, the new antenatal education programs are based on needs analysis (e.g. "Having a Baby" evaluated by Svensson, Barclay & Cooke, 2009), in different interdisciplinary contributions that increase the content on parenthood (e.g. "Preparation for Birth and beyond" described by Nolan, 2012), in fostering a sense of community and in empowering the women and their partners to increase their decision making skills during labour and birth (e.g Mindfulness-based Child Birth Education (MBCE) described and evaluated by Fisher, Hauck, Bayes & Byrne, 2012).

Objectives

The investigation aims to detect the educational needs associated with the three stages of maternal education; pregnancy, birth and puerperium, to make them into a program for maternal education directed at all pregnant women, and their partners, if they have one.

Method

To reach our objectives, we opted for a cooperative methodology of investigation, creating a team of 7 investigators from the University of Barcelona and of 5 midwives from the Catalan Association of Midwives. This type of methodology has given the professionals an active role, in this case the midwives, who together with the investigators have participated in the phase of identifying needs as well as that of designing the program.

Participants

In the investigation a total of 70 people took part, 56 midwives (distributed into 5 discussion groups) and 14 people (distributed into 2 discussion groups) who had received some kind of preparation during pregnancy. With regard to the midwives, 39 represent health centres in Catalonia (15 from the province of Barcelona, 10 from the province of Girona, 10 from Lleida, and 4 from Tarragona). Out of a total of 56 participants, only 2 are men, the rest are women. The average age of the midwives is 43.71. The average number of years of experience as midwives (in pregnancy care and birth) is 16.68, (min. 1-max 35, SD =10.32), and in maternal education the average is 13.7 years (min. 10 months - max. 30 years, SD =8.52). With regard to the group of people who have received some kind of maternal education, 13 are mothers and 1 is a father. The average age of the mothers is 33.15 years (min. 20 – max. 41, SD =5.1). The only father was 36. Out of the total, 11 of the participants had children and the rest were pregnant.

Instruments

The collecting of information was done through the technique of group discussion, for which two question guides were devised, one for the midwives and the other for the mothers. The guides were accompanied by: (1) an identification form with the basic profile of both male and female participants; (2) a summary file with the main group contributions, the dynamic process and the atmosphere generated.

Procedure

In compliance with the methodology of cooperative investigation, from the outset we formed a mixed investigation group of academics and professionals. This group was in charge of carrying out the collecting of data, analyzing it and transforming the needs found into a viable maternal education program. 7 discussion groups were created. Of these, 5 were midwives and 2 groups were people who had received some kind of maternal education in the provinces of Barcelona

and Girona. To access the midwives we went through "The Catalan Association of Midwives" and to access the people who had received training during pregnancy we went through the professionals who had treated them.

The criteria for selecting the participants of the discussion groups followed a series of general criteria. In the case of the midwives, the criteria were to be actively linked to maternal education experiences and geographic representation (from the health services of the 4 Catalan provinces). In the case of the users of maternal education, the main criteria was to have participated at some stage in a maternal education resource or activity, as well as other more general ones which aimed for participants' diversity, such as cultural origins, family structures and number of children.

The groups were formed according to the province in which the midwives carried out their activity or where the mothers resided and they engaged their activities in the hospitals and public health centres where the participants were. Each discussion group was dinamized by two people, in which each had a different role; one was in charge of the dynamics and the other of collecting the identificatory data of the participants and of the technical aspects (like recording the group). All the participants were informed of the purpose of the investigation and collaborated freely and willingly.

Data analysis

Only information collected in the discussion groups was analyzed. So, all the recorded information was literally transcribed. As the information collected was of a qualitative nature and our purpose was to identify and improve understanding of educational needs, according to Cavanagh (1997) the most adequate procedure was the analysis of content.

To form the analysis, a deductive "bottom-up" process was used, that is to say, we started from the revision of the scientific literature in maternal education for the creation of the analysis codes. This process was combined with another inductive "bottom-down" one to be able to pick up the midwives' feedback and also from the people who had used maternal education services. The emerging categories were also analized as were the surprising and insightful answers that came up and went beyond the initial code established by the theoretical revision. The final analysis code identified 4 large categories, the first three following the logic of the life process (pregnancy, birth and puerperium) and the fourth centering on psycho-physical training. At the same time, these categories were divided up into a group of subcategories (see *Table 1*). The analysis of the content from the discussion groups was done through Atlas ti 5.0 software.

Table 1: Categories and subcategories used in the analysis of content

Category	Subcategory	
Pregnancy	Diagnosis of the pregnancy: signs and symptoms	
	Changes experienced in pregnancy	Physical
		Psychic
		Social
	Hygiene in the pregnancy period	
	Alimentation in the pregnancy period	
	Sexuality during pregnancy	
	Usual discomforts during pregnancy	
	Uterine contractions and fetal movement	
	Danger signs during pregnancy	
	Partner's role during pregnancy	
	Emotions during pregnancy	
Birth	Anatomy of the birth canal: perineum, pelvic floor, pelvis bone	
	Going into labour: pre-natal, dilatation, second stage labour and delivery	
	Types of delivery	
	Types of analgesia and anesthesia	
	Recognition and identification of contractions.	
	Hospitalization	
	Factors that help	
	The partner's role	
	Emotions related to birth	
	Risks of birth	
	Birth and relatives	
Puerperium	Physical aspects of the puerperium	
	Psychological aspectos of the puerperium	
	Social and family aspects of the puerperium	
	Baby Care: characteristics of the baby, first stay in hospital, general cures s for the baby, aspects to consider at home	
	Aspects related to breastfeeding: typology, breastfeeding problems, promotion of maternal breastfeeding.	
	New born's behavior (crying, sleep, attachment)	
	Role of the partner in the puerperium	
	Emotions related to the puerperium	
Psycho-physical Training	Physical training: physical exercises to compensate the changes during pregnancy, prepare the musculature for birth and breastfeeding.	
	Respiratory training: Types of respiration, learning of breathing techniques and for birth.	
	Learning relaxation for the birth and the contractions in dilatation period.	

Results

The development of the investigation has shaped the organization of the results into four differentiated phases: a) identification of needs; b) identification of themes and structure; c) curricular development and d) implementation.

Identification of needs

In the first phase we identify the training needs consistent with the categories that form the analysis code, around four main issues: (1) pregnancy, (2) childbirth, (3) puerperium and (4) psychophysical training. Then we will present the most relevant detected needs.

1. Pregnancy: The theme of risks in pregnancy take up most of the talks' content, whether from the maternal education users or from the midwives. Both these groups shared the vision of risk, (understanding by risk a situation that supposes the loss of the fetus or complications that call into question its viability). However, we see there is a definite need for information to be able to detect risk symptoms and assess the degree of risk. The analysis perceives this to be a critical area that limits the women's independence. With regard to feeding there is a consensus over the need to deal with the basic approaches of a balanced diet suited to pregnancy due to the direct repercussions that it has on the fetus's and mother's health and for the future repercussions it has on establishing a healthy diet for the family. In the same way, unhealthy habits prejudicial to one's health are dealt with (e.g. smoking) as well as habits that promote well-being and health. In terms of the changes during pregnancy, (physical, psychic and social) training needs are also detected referring to the capacity to identify them and understand the repercussions that they have on a personal level for the woman, fetus and partner in the preparation for motherhood-fatherhood (e.g. general discomfort, physical limitations, emotional sensibility, new life rhythms or new social possibilities). Specifically, in the discussion groups they repeatedly mentioned training needs in the emotional area. The importance attributed by the participants to this came from the emotional intensity of their own experience and from the hormonal changes in women during pregnancy. Clarifying these questions helps pregnant women understand what is happening to them and for their partners to be able to place the emotions into a specific context makes relations easier and more fluid. Connected to the former, we have identified the need to clarify the role of the partner during pregnancy, so this can convert into a source of support by playing a positive supportive role to the woman, while the experience itself helps the father move towards his role as father and helps them build a family. On the other hand, the midwives feel the mothers have educative needs on the subject of sexuality, as they observe that the knowledge and beliefs the pregnant women have are based on myths and false beliefs that restrict the sexual activity of the

couple. However, in the mothers' talks the subject of sexuality is tangential, and their manifested needs are to do with: improving their knowledge on aspects that favor or prejudice the development of the pregnancy and the fetus, overcoming the discomforts of pregnancy and dealing with their fears and insecurities. The only subcategory that does not appear explicitly, either in the narratives of the mothers, or those of the midwives, is the one on the needs related to the contractions connected to pregnancy (different from birth labors) and fetal movement. However, given that this theme is central to empowering women in their decision-making capacity and in their risk detecting capacity, the investigation group thought it best to integrate it as a central theme, after talking to the professionals and revising the literature.

2. *Child Birth:* Both women and midwives agree that birth is the issue that most concerns them from the outset of pregnancy. So one of the identified areas requiring most attention is the birth plan, where amongst other subjects dealt with, is the subject of the typology of birth and the analgesia or anesthesia to control the pain. Clarifying the birth plan and knowing how to communicate it to those attending the birth is fundamental. But it is also important to know that it is not always possible to carry out the plan due to the circumstances of how the birth develops or due to lack of resources available to the hospital. Therefore, the need detected is about having sufficient information so that the woman can decide on the alternative for birth that suits her most and about knowing how to transmit it so that it is adhered to and respected as much as possible. In this way women are empowered in the birth process and in the taking of decisions on the typology of the birth they want to have, whether natural or with analgesia or anesthesia. The emotional and psychological needs related to the birth are also significant. The women expressed fears about not being sufficiently prepared to be able to identify birth contractions, about being able to be calm at birth, they also had doubts about how to breathe, how to push and fear of not being able to withstand the pain. The midwives coincide that these needs are permanently manifested at every maternal education meeting and as pregnancy advances and is about to culminate in birth, almost fills their every waking thought. However the women do not openly express a specific need over the probability that there might be complications at birth. And conversely, the midwives believe that there exist the need to help the mothers be aware of these possible complications or problems in order to be able to face up to them if they do appear. The body of the woman and baby at the moment of birth is fully active. The midwives state that the majority of women are ignorant about the anatomy of the birth canal (perineum, pelvic floor, pelvis, bony pelvis) and the expulsion process and that knowing all this could help the woman visualize the process and thus facilitate the birth. With regard to being accompanied at the birth, both midwives and women feel that the mission of the person accompanying the woman should principally be to make the woman not feel alone and help her to feel secure and relaxed. The partners also have fears

about not knowing how to accompany her, of not being able to stand seeing her in so much pain. Involving them in the birth plan and helping them understand that what happens at birth is part of a natural process and that it is a key moment in their lives will help them gain in confidence and security to maintain their resolution to accompany her and attend the birth. Normally, this is a role that the partner carries out, but sometimes that is not always possible or wanted. Whoever the person is who accompanies the woman, has that same function.

3. *Puerperium*: Both multiparous women and midwives rate the most important needs at this stage as mainly breastfeeding and baby care. Regarding breastfeeding, the first need manifested by midwives is that of making women aware of the benefits of breastfeeding. On the other hand, the women express their insecurity, above all at the beginning, when they are alone with the baby and have to feed it. Both women and midwives point to the need to work the breastfeeding technique(s) to avoid problems and be able to consolidate it. Beyond learning the techniques, the mothers perceive certain social pressures (social acceptation of breastfeeding, lack of public spaces to breastfeed) and contradictory messages about the way in which one should breastfeed the baby (on demand, with a timetable, combined with other foods, exclusive) that make them doubt and sometimes switch from one system to another. The need that emerges is to give sufficient information to the mother so she can assess her option and maintain her decision beyond social pressures. Baby care worries mothers a lot, and especially when she's a *primipara*. In the same way as for breastfeeding, the mother receives a lot of advice from her family and friends (e.g. do not pick up the baby when it cries, because otherwise you will spoil it, when the mother feels she has to take it) that contradict each other as well as what they worked on in maternal education. These messages far from helping the new parents confuse them and sow the seeds of insecurity within their parenthood. The new parents manifest they need a degree of intimacy to experience their new role, as well as spaces to be able to share experience and doubts. Moreover, the mothers recognize that they are overwhelmed when they get home and claim that good support would be if the people surrounding them would get involved in household logistics (doing the shopping, meals, administrative tasks, etc.). So the needs are related to the possibility of sharing the experience with other people who are in a similar situation, the capacity to define what family limits are, at the same time as being able to ask help from family and friends. The baby's behavior and how to respond to it is another one of the worries of mothers and fathers, how to respond to crying, how to calm the baby and how to deal with the sleep issue are needs openly expressed in the groups. It is about beginning to put into practice parental competencies, where previous preparation is a great help. The role of the couple in the puerperium begins to define itself as they assume parental responsibilities. The emotions of the puerperium are much related to the idea, more or less realistic, that one has of maternity and the accompanying of the partner. The midwives state

that not until the women get back home, will the reality of motherhood hit them and therefore begin the social and psychological adaptation to this new stage. The changes at a social level that derive from baby care, entail assuming changes in routines, in the disposition of the couple and in social relations. On the other hand, if the housework becomes too much for the mother it generates anxiety, but if shared with the partner, the emotions and the experiences are more positive. Social isolation and not accepting the changes that this new stage entails increases the risk of experiencing post-partum depression. Thus the needs centre on being able to have information that helps adjust the image of maternity to the reality, at the same time as promoting the creation of a social network. Finally, needs related to the physical changes in the women's bodies and social changes are mentioned. The mothers demand information on how to recover physically after birth, as they manifest that at this stage assistance is very orientated towards the baby and very little towards them.

4. *Psychophysical training*: The women associate physical training and body awareness with birth. However, the midwives state that physical training, relaxation and breathing are useful in three specific areas (pregnancy, birth and puerperium). The most relevant need detected by the midwives is to raise women's awareness that psychophysical training should not just be now and again but form part of continuous routine work. The most substantial need manifested by the mothers was to get to know relaxation techniques.

Themes and structure of the program

The second phase centered on transforming the needs of the themes that make up the program and organizing them sequentially. For this, we triangulated the needs detected with the experience of the members of the cooperative investigation team (formed by the midwives and the academics in the field of pedagogy), with the revision of the theory and with the methodological suggestions of the mothers and midwife participants in the discussion groups. As a result the general objectives of the program were defined and it was proposed that the program be structured into 8 sessions.

The program pursues a comprehensive training for the women and their partners favoring the exchange of experiences, satisfactions and doubts in the group and promoting reflection on their own attitudes and reactions to new situations and extending their knowledge on specific aspects of pregnancy, birth and postpartum. From an ecological perspective, the training's approach is based on the three axes developed in the model for family education programs by the GRISIJ group: the emotional attitudinal dimension, the behavioral and cognitive (e.g. Amorós, Balsells, Fuentes-Peláez, Pastor & Mateos, 2012; Balsells, Fuentes-Peláez, Mateo, Mateos & Violant, 2010; Fuentes-Peláez, Amorós, Balsells & Pastor, 2010). In this case, the themes related to each dimension are specified in:

"Attitudinal and emotional dimension related to each phase of the process of birth: predisposition to accept the changes in her own body, sexuality and the relation with her partner, disposition to help the newborn to establish emotional bonds, as well as being able to deal with her needs within an emotional climate, acceptation of the emotional implications in the birth mode and in the chosen alimentation for the baby. Behavioral dimension that considers the development of skills that permit them competently face the process of pregnancy, birth and post-partum; strategies to face pain, relaxation techniques, relaxation skills, skills in relaxation and communication. Cognitive dimension related to the process of birth and its implications in the different stages: pregnancy, birth and post-partum. Knowledge of the stages of pregnancy and birth, the indications for alarm, the alimentation and hygiene of the baby, the attention to her own body, the birth plan" (Amorós et al.: 2009:21).

The 8 sessions last approximately 2 hours and are grouped in the following way: 1 is a general introduction to the program, 2 on pregnancy, 2 on the birth, 1 dedicated to puerperium and 2 dedicated to the newborn. Table 2 demonstrates the distribution of the maternal education themes. Body awareness and physical training are dealt with crosswise throughout the program proposing the appropriate exercises for each theme.

Table 2. Themes and structure of the maternal education program

Introduction to the program	Session 0. We begin!
Pregnancy	Session 1. Pregnancy and changes
	Session 2. Pregnancy and welfare
Birth	Session 3. The big moment has arrived : the birth process
	Session 4. Different situations, different births
Puerperium	Session 5. El puerperium
Returning home with the newborn	Session 6. Feeding the newborn: breastfeeding
	Session 7. Care for the newborn

Curricular development

The third phase is centered on the curricular development of the program. For each session we follow the same pattern where objectives are defined, activities described, the time expected for the duration of the activity is noted, as are the necessary teaching resources, and the closing of the session with key ideas and then the session's self-assessment.

The program is presented in printed form and is accompanied by teaching materials expressly created for it. As back-up for the activities we attach an orientation guide for the midwife, a CD, where there are slides for the theoretical explanations and the work files for the participants in the program and a DVD with animated stories corresponding to the description of cases or situations, videos of witnesses (pregnant women and their partners) and characteristic situations of pregnancy and puerperium, a video on childbirth and a video on breastfeeding.

The techniques or strategies used for the development of the group learning activities are: oral presentations, Pencil and paper exercises, brainstorming, simultaneous dialogues, directed discussion, group work, case studies, role play, video forum and guided fantasy. These methodological strategies at the service of the defined objectives also encourage the participation of the people who come to the training sessions giving them an active role in the learning process where they can express concerns, feel emotions and try to solve cases. It is a perspectivist methodology allowing reflection on general situations so that afterwards each person can transfer what they have learnt to their own situation, allowing them to reflect and then make decisions. In other words, the methodologies proposed in the program are the antithesis of those that basically just transmit information and lecture a subject audience. For the development of the physical training activities, exercises are devised, on occasions with the help of materials (e.g. balls) that are supervised by the midwife.

Implementation of the program and evaluation

The fourth phase was dedicated to the implementation of the program. The Catalan Midwives Association of Catalonia and the Public Health Directorate launched a wide range of free training directed at all midwives in charge of maternal education, whether sexual and reproductive health programs or from hospitals. The basic objectives of this training were to familiarize the midwives with the program, group methodology and up date and revise their practices on awareness and bodywork. The members of the investigation team, in mixed pairs (midwives and pedagogues), as well as a professional expert in psychophysical training taught the course throughout Catalonia. The training lasted 30 teaching hours, of which 22 were dedicated to group learning and 8 to body training. The training methodology focused on working the theoretical aspects of the program, but above all practical aspects that permitted the midwives to familiarize with strategies of group learning. For this, microteaching was used, which consists of pair-work who were in charge of preparing and developing specific aspects of the program, the rest of the participants played the role of pregnant women and acted as such when receiving information. Also, two observers were designated (from the course participants) outside of the dynamic and gave feed-back on the

simulation along with the teachers. The teachers besides the feedback clarified theoretical aspects or the application of the specific methodology. For the awareness and bodywork the program's exercises proposed for pregnant women were put into operation. In total, 240 professionals have been trained. The design of the program's implementation also includes the evaluation of its own processes, to assess its effectiveness, but above all, to have information on the evolution of the group and help the midwife to introduce corrections while the program is being applied. For this reason, after each session, the program itself suggests two instruments, one open to reflect on a series of items that deal with the structure of the program, the objectives of the session, the dynamics of the group and aspects to consider for the next session and the other closed and composed by a series of items in the format of a Likert scale that assess the general development of the session and how those activities went.

Conclusions

The program presented is one directed at the whole of the Catalan population attended to by the public health service. It is therefore universal, but at the same time is potentially a preventive tool in as much as it permits the detection and prevention of situations of risk. In the line of Ocampo (2008) it is universal care capable of focusing on groups at risk. The program includes those aspects discovered by bibliographical revision that contribute to improving the effectiveness of antenatal education programs and the satisfaction of those who receive them. In this sense, needs analysis is one strong point of the program that answers to the most recent approaches in maternal education (Gagnon & Sandall, 2007; Ho & Holroyd, 2002; Nolan, 1997, 2012).

In the majority of the categories the contributions of mothers and midwives coincide, although important discrepancies can be detected in the perception of needs. The mothers are more centered on the moment of birth, whilst the midwives have a more complete vision of the whole process. As a whole, the detection of needs coincide with the revised bibliography (Bansah et al., 2009; Ho & Holroyd, 2002, Nolan, 2012), it only differs in family planning needs described by Bansah et al. (2009) which do not appear in our investigation and which is surely explained because it is an issue addressed by health services in individual emotional and reproductive health consultancies. On the other hand, the investigation provides the detection of new needs centered on the knowledge of women's anatomy, risk assessment during pregnancy, the identification of the uterine contractions and fetal movement during pregnancy, emotional and social needs and those linked to the partner's role. The needs linked to the parental role appear in the discussion groups but are not the ones that concern mothers or midwives the most. However, following the recommendations of Nolan (2012) and recognizing the preventive

value that preparing parents for parenthood has, it has been incorporated as training content. Moreover, it is confirmed that there are some differential needs associated with the partners that suggest specific attention (May & Fletcher, 2013) and that would need to be explored at greater depth.

Another strong point of the program is its group methodology and the central role that the participants are given. "The women must be the focus of maternity care" (Nolan, 1997:1200) which in the program has meant giving the women and their partners, sufficient leadership that the training lets them identify their own needs, connect them to their experiences and empower them in their personal processes. That is to say, the challenge of the program is to strengthen the women and their partners, increase their competencies and their active role in making decisions that affect their own care and that of their babies, but at the same time assume responsibility for their decisions, empower them to face those vital moments and push away any proposal that Nolan (1997) would call indoctrination. It is about offering the possibility of receiving information but also of interacting and discussing what interests and concerns them and exchanging experiences. That is why it is expected that the program will become a real source of social capital (just as Gognan & Sandall, 2007 suggest) linking the women and their partners to the social network.

Another of the program's particularities considered a strong point is its own process of design and implementation. The collaborative interdisciplinary work of the investigative team, together with the supervision of a numerous committee of experts is a guarantee of its quality and of the transfer of the program made to the midwives collective in charge of antenatal education. Currently, the program has been implemented in the whole of Catalonia.

Gagnon & Sandall (2007) emphasize the need to propose studies that systematically assess the effects of the maternal education programs. Therefore, one of the current challenges would be to do a systematic evaluation of its effects, on the level of satisfaction of the people that receive them and those that give them. Moreover, we know that knowing about and answering the needs of collectives at risk, is a matter of interest to the public health services (Gognan & Sandall, 2007). Hence, we need to add another challenge to the former, which is checking up to what point the program answers the specific needs of the collectives that are at risk, like for example, collectives that have experienced a considerable growth in Catalonia such as teenage mothers or women immigrants (Jané, Vidal, Tomás & Cabezas, 2009).

Finally, bearing in mind the time of application (third trimester of pregnancy), we can state that only a part of the content that they work on is used at the time of reception, an important part of the training goes into anticipating future situations such as birth, post-partum and motherhood. So, what happens when the antenatal courses finish? The literature informs us that the programs directed at assisting

the parents in the first moments of the postnatal period are considered to be potentially positive (Svensson, Barclay & Cooke, 2009). Accordingly, to continue in the preventive line of promoting women's welfare, of children's and of the family's, and the implementation of educative programs directed to offer support during this stage would be a tool of incalculable value.

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