Beliefs and dietary practices in pregnancy and the puerperium: application of the Health Traditions Model
Creencias y prácticas alimentarias en embarazo y puerperio: aplicación del Modelo de Tradiciones de Salud

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ABSTRACT:
Objective: To describe the cultural beliefs and practices related to food during pregnancy and the puerperium in adult women (over 60 years old) in two different cultures by applying the Health Traditions Model.

Method: A qualitative study was carried out with the participation of 16 women resident during their pregnancy / childbirth / puerperium in a rural area of Braga (Portugal), and León (Spain). The information collection technique was the semi-structured interview. A content analysis was made, following the Health Traditions Model.

Results: Beliefs and dietary practices related to feeding were identified, aimed at protecting, maintaining and recovering the health of the mother / newborn, from the physical / mental / spiritual sphere (9 interrelated dimensions).

Conclusion: Eating beliefs and practices in pregnancy / puerperium of older women were described, confirming the role of culture in them. 9 interrelated dimensions were considered, as well as the relevant role of family / relatives. These data can help us plan for current, participatory (family / community) maternal health actions, correct certain practices, and provide care consistent with the culture of women. This can help transform beliefs, or values and attitudes that embody a certain cultural form in nursing.

Key words: Nursing Model; Nursing care; Culture; Maternal and Child Nursing

RESUMEN:
Objetivo: Describir las creencias y prácticas culturales relacionadas con la alimentación durante el embarazo y puerperio en mujeres adultas (mayores de 60 años) en dos culturas diferentes, aplicando el Modelo de Tradiciones de Salud.
Método: Se llevó a cabo un estudio cualitativo. Participaron 16 mujeres residentes durante su embarazo/parto/puerperio en un área rural de Braga (Portugal), o León (España). La técnica de recogida de información fue la entrevista semiestructurada. Se hizo un análisis de contenido, siguiendo el Modelo de Tradiciones de Salud.

Resultados: Se identificaron creencias y prácticas relacionadas con la alimentación, encaminadas a proteger, mantener y recuperar la salud de la madre/recién nacido, desde la esfera física/mental/espiritual (9 dimensiones interrelacionadas).

Conclusión: Se describieron creencias y prácticas alimentarias en embarazo/puerperio de mujeres mayores, constatando el papel de la cultura en las mismas. Se consideraron 9 dimensiones interrelacionadas, y el rol relevante de familiares/allegadas. Estos datos pueden ayudarnos a planificar acciones de salud maternal en la actualidad, participativas (familia/comunidad), corregir ciertas prácticas, y proporcionar cuidados congruentes con la cultura de las mujeres. Ello puede ayudar a transformar creencias, o valores y actitudes que incardinan una determinada forma cultural en la enfermería.

Palabras clave: Modelo de Enfermería; Cuidados de Enfermería; Cultura; Enfermería Materno-Infantil

INTRODUCTION

Primary Care, as an integral part of the health system, is a set of global care, through which the population can actively participate in their own health process to acquire new knowledge. If we understand it within the context of the socio-critical paradigm, health professionals consider themselves as agents of socio-sanitary change, in which process they involve the individual and the community(1). In this framework, the pregnant woman and her family participate in this action towards change, and personalized attention will allow them to conceive this stage in a positive way(2).

Health care allows to determine a social and human relationship between the midwife and the pregnant woman, which requires knowing her history of social, family and cultural life. In this sense, cultural care is understood as the set of cognitively structured and well-known values, beliefs and expressions that help, support, facilitate or empower people or groups to maintain their health or well-being, improve their situation or way of life, prevent disease or deal with disability or death(3).

The pregnancy and puerperium integrate a significant stage in the life of the woman and her family. In most societies, it is a link to the cultural diversity of each generation(4), and the health and well-being of women will then depend on the cultural context in which they live. Pregnant women often possess cultural knowledge based on life stories and social experiences transmitted from woman to woman(5), so the teachings of the ancestors are incorporated and considered important, due to experience and shared knowledge(6-8). Various studies show how the role of women (mothers / grandmothers) is relevant, for example, when making health decisions(9,10).

This stage is full of physical, psychological and emotional transformations, with their corresponding care, full of restrictions / prohibitions. The acquired knowledge / practices, which play an important role for group identity and survival, can become obstacles, with beliefs, attitudes and behaviours that can negatively influence health(2,3,11,12).

Food during the pregnancy-puerperal cycle is impregnated, in addition to the nutritional dimension, of the cultural one(13). We found examples of research that show traditional beliefs about harmful/beneficial foods for women during pregnancy(14),
as well as sociocultural beliefs/norms regarding the act of eating, beneficial to the mother and her child\(^{(15)}\).

For all these reasons, we believe that identifying cultural beliefs and practices of our ancestors, regarding to maternal care related to food, can help us understand the keys to planning participatory health actions (considering women/family/community), correcting practices, and provide care considering the cultural beliefs of women.

To answer this question, various nursing researchers have created models and theories, with interesting applications in nursing practice\(^{(11,16-19)}\). The aim has been to be able to deepen the contributions of the culture it has in the sphere of health. Among them, we rescued the Health Traditions Model. This model, created by Spector\(^{(11)}\), explains from a traditional perspective, how people from most cultures, seek balance with the family, community and forces of nature, creating cultural patterns related to prevention, protection, maintenance and recovery of your health on a physical, mental and spiritual level (nine interrelated dimensions). Applying this model to dietary care in the pregnancy and puerperium stage, in different cultures, can help us see how culture intervenes when configuring beliefs and practices related to eating, and the dimensions involved.

Based on these considerations, the general objective of this study was: to describe the cultural beliefs and practices related to food during pregnancy and the puerperium in adult women (over 60 years of age)\(^{(20)}\) in two different cultures, applying the Health Traditions Model.

**METHOD**

Since the objective of the research was to describe the beliefs and practices related to food during pregnancy and the puerperium, qualitative methodology was used.

The location (rural areas of the Concelho de Amares (Braga, Portugal), and Almanza and Ceibanico City Councils (León, Spain)) and the participants / data (selected by means of a convenience sampling) were taken from two investigations already carried out\(^{(2,12)}\), for having common aspects to be able to compare, and which we will detail.

The selection criteria applied in both studies had been: women over 60, native (one of the areas), residing there during pregnancy / childbirth / puerperium, capable of providing relevant information. The reasons for exclusion: not wanting to participate in the study, difficulties in communicating.

Two of the investigators, people known there, had overseen access to the area and collection of information (rapport). In each area, women were selected (meeting criteria) and invited to participate. Using the snowball technique, the rest was accessed. All the invited women accepted to participate. Information was collected until saturation was reached. The final sample consisted of 16 women.

The information collection technique was the semi-structured interview. The topics addressed in the interviews were part of two larger studies\(^{(2,12)}\), taking for this work the answers related to the object of this study. Interviews were conducted at the
participants' homes (45-60 minutes each). Voice recorder was used. Subsequently, the participants were contacted to confirm the data.

Regarding the data analysis, already specific carried out for the study that is now presented, a literal transcription of the interviews and manual analysis of the content of the two areas were carried out, following the proposal of Bardin\(^{(21)}\): i) pre-analysis, ii) exploration of material and iii) treatment of the results by inference and interpretation. Subsequently, the sharing was carried out. The Health Traditions Model\(^{(11)}\) was used to organize the information, using its dimensions as categories.

On ethical aspects, each participant signed a consentment form. The recommendations of the Declaration of Helsinki and the Oviedo Convention were followed. The approval of the Ethics Committee was obtained (UA-2015-08-18).

RESULTS

The study participants were 16 women. Table 1 shows the sociodemographic characteristics of the same.

<table>
<thead>
<tr>
<th>Interviewed</th>
<th>Age</th>
<th>Studies</th>
<th>Profession</th>
<th>Nº of children</th>
<th>Birthplace</th>
<th>Marital status</th>
<th>Geographical area</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1e</td>
<td>80 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>3</td>
<td>Hospital</td>
<td>Married</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E2e</td>
<td>72 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>5</td>
<td>House/Hospital</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E3e</td>
<td>82 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>3</td>
<td>Home</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E4e</td>
<td>84 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>5</td>
<td>Home</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E5e</td>
<td>86 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>5</td>
<td>Home</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E6e</td>
<td>82 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>2</td>
<td>Home</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E7e</td>
<td>80 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>17</td>
<td>Home</td>
<td>Married</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E8e</td>
<td>94 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>5</td>
<td>Home</td>
<td>Widow</td>
<td>Almanza/Cb (S)</td>
</tr>
<tr>
<td>E1p</td>
<td>85 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>5</td>
<td>Home</td>
<td>Widow</td>
<td>Amares (PO)</td>
</tr>
<tr>
<td>E2p</td>
<td>86 years old</td>
<td>Primary</td>
<td>Housewife / traditional birth attendant</td>
<td>3</td>
<td>Home</td>
<td>Widow</td>
<td>Amares (PO)</td>
</tr>
<tr>
<td>E3p</td>
<td>60 years old</td>
<td>Primary</td>
<td>Housewife</td>
<td>4</td>
<td>Home</td>
<td>Widow</td>
<td>Amares (PO)</td>
</tr>
<tr>
<td>E4p</td>
<td>80 years old</td>
<td>Cannot read/write</td>
<td>Housewife</td>
<td>4</td>
<td>Home</td>
<td>Widow</td>
<td>Amares (PO)</td>
</tr>
<tr>
<td>E5p</td>
<td>64 years</td>
<td>Cannot read/write</td>
<td>Housewife</td>
<td>3</td>
<td>Home</td>
<td>Widow</td>
<td>Amares (PO)</td>
</tr>
</tbody>
</table>
The results obtained were classified into 3 main categories, and 9 interrelated, corresponding to the dimensions described in the Health Traditions Model (Table 2).

**Table 2. Application of the Health Traditions Model, nine interrelated aspects of Health and community and personal methods of maintaining, protecting and restoring health, in pregnancy and the puerperium**

<table>
<thead>
<tr>
<th>PREGNANCY / PUERPERAL</th>
<th>Physical</th>
<th>Mental</th>
<th>Spiritual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEALTH protection</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breastfeeding quality promotion</td>
<td>→ →</td>
<td>→ →</td>
<td></td>
</tr>
<tr>
<td>Newborn colic prevention</td>
<td>→ →</td>
<td>→ →</td>
<td></td>
</tr>
<tr>
<td>Pregnant cravings or desires</td>
<td>← ←</td>
<td>← ←</td>
<td></td>
</tr>
<tr>
<td>Newborn evil eye prevention</td>
<td>← ←</td>
<td>← ←</td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH maintenance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding newborn first hours</td>
<td>→ →</td>
<td>→ →</td>
<td></td>
</tr>
<tr>
<td>Feeding in case breastfeeding is not possible</td>
<td>→ →</td>
<td>→ →</td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH recovery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postpartum feeding</td>
<td>→ →</td>
<td>→ →</td>
<td></td>
</tr>
</tbody>
</table>

*S: Spain / PO: Portugal
Regarding beliefs and practices related to feeding related to protecting the health of the mother or newborn, on a physical level, the first mentioned was related to promoting the quality of breastfeeding. Participants commented on how certain foods helped milk production:

*Eating too much cod and too many sardines is very good ... if I ate a little cod, I had more milk that night* (E4p).

*The broth was light ... for milk it was better* (E4e).

Likewise, they mentioned drinks such as wine:

*At night the traditional birth attendant (my aunt, my mother’s sister) would leave me a glass of sweet wine, and 3 or 4 cookies for when I was breastfeeding the child* (E8e).

*As for breastfeeding, they say that it is very good to drink a little wine with sugar and a crust of hot bread inside* (E1p).

Harmful behaviours were also mentioned:

*If a breastfeeding woman throws her leftovers in the trash and a pregnant woman eats them, the mother will run out of milk* (E5p).

*Leftovers could be consumed by animals that are pregnant and then our milk would dry up* (E2p).

The second popular custom collected was related to the prevention of colic in the newborn:

*He could not eat cabbage soup with beans because it could pass onto the baby and it could harm him, colic* (E1p).

In the mental and spiritual spheres, we collected beliefs related to cravings or nutritional desires during pregnancy that had to be satisfied to avoid harm to the baby. Its compliance provided tranquillity and well-being in the pregnant woman on a mental and spiritual level (and also physical well-being).

*If I saw something that I liked, if it did not fill the stomach it was not comfortable ... if the stomach was not fulfilled a stain would come out ... the child* (E2e).

*If a pregnant woman has not satisfied her eating desires, eating as she pleases, she risks her child being born with open mouth and curly hair* (E1p).
Some desired or beneficial foods mentioned were sardines, fruits, or drinks:

My mother-in-law used to tell me, take a drink (of wine) to have a handsome boy (E4p).

Drinking brandy on an empty stomach throughout pregnancy in order to "kill the animal" prevents the foetus to be born in the form of an animal (E5p).

On the other hand, prohibited foods were mentioned, such as oranges (to avoid a child with orange skin (E6p)), chicken feet (because the baby can be born with six fingers (E1p)), or fish:

You cannot eat fish ... babies can be born ... with the shape or appearance of the animal or with small eyes ... or with spots ... abortion (E4p).

A practice related to the evil eye was also collected:

My mother-in-law poured water into her small mouth to prevent the evil eye (E8p).

Regarding health maintenance, the first collected practice related to physical health made mention of feeding the newborn during the first hours. Some of the participants recalled that colostrum was not considered nutritious, and the first 2-3 days, the child was fed with substitutes such as:

The first day there was no milk ... (my mother gave me) a little chamomile ... linden or chamomile ... with a little sugar (E3e).

Another practice mentioned feeding in case breastfeeding was not possible:

Milk (cow) reduced with toasted flour ... mashed potatoes with an egg yolk (E8e).

On beliefs and practices related to the recovery of health at the physical level of the puerperal, the diet of the first days was based on foods such as:

I would eat chicken broth ... I would throw some noodles (my mother, when I was preparing it), a little rice or things like that ... I would reserve to eat a little of the many substances, two days (E7e).

You should eat chicken soup after delivery because it is good for the mother's womb (E8p).

Regarding mental and spiritual health, some participants mentioned that when you went into labor, the family took care of killing the chicken and preparing the broth, which helped them recover:

A sister-in-law came and said, I am going to make you the chicken broth that is very good for you (E2e).

My aunt had already killed a chicken because I had already suffered something (revolt) (E5e).
The woman in labor received a visit from neighbours, showing her support, which had an impact on her well-being:

*Then they would come see us ... the neighbours, (brought) chocolate, or half a dozen eggs, the visit (E6e).*

**DISCUSSION**

If we compare some of the beliefs and practices identified here with those that exist in other communities, we could also establish certain similarities. In this regard, for example, in the sphere of health protection, at the physical level, the participants mentioned beliefs and practices related to promoting the quality of breastfeeding. Breast milk is the ideal food for the baby due to its nutritional and immunological properties, and is therefore considered a fundamental practice to promote, protect and support its health. In this sense, the concern for the production of breast milk (quality and quantity) is also reflected in other studies carried out in other communities\(^4,22\).

Wine, a drink mentioned by the women in the study, has been present in the same way in other cultures\(^23,24\), as an eating habit. Its consumption has rarely been questioned and has even been considered as a strong tonic. The wine soups (*sopas de cavalo cansado*) given to children in Portugal confirm this idea\(^4\). However, it is known that this negatively affects the health of infants in the short and long term, and reduces milk production in the mother\(^23\).

Another belief mentioned in our study, in this case related to the prevention of colic, is also found cited in other works, such as that of Kidd et al.\(^25\), in which the mothers' belief that colic from her newborn was related to feeding-related abdominal pain, and food had to be eliminated from her diet. In this regard, authors Miranda et al.\(^5\) warn that the use of tea in the newborn is harmful, due to the immaturity of the kidneys and excess fluids (breast milk, teas and water), which can cause injuries, as well as reduce suckling, stimulation, and production of breast milk.

We find current mentions in the literature\(^26\), which are similar to those narrated by our participants, regarding the fulfilment of cravings, and which were intended to protect and provide physical, mental and spiritual well-being to the future mother, and to the newborn.

Dietary restrictions appear to be aimed at protecting the individual from situations where his body is more exposed to the risks of external aggression and there is an awareness of the need to protect him. Along these lines, we found in our study how many of the pregnancy's dietary prohibitions were related to the fear of causing changes in children. Jacques\(^27\) defines the law on contagion with the idea that those who have been in contact will stay in contact. Ingested foods have imaginary properties that will transform the body of the pregnant woman and the fetus. Therefore, the mother-to-be should select food based on its effects, with the aim of making a beautiful and healthy baby\(^2\).

In the area of health recovery, we also found studies that mentioned dietary restrictions and recommendations (such as hypercaloric foods) similar to those mentioned by the participants, which aimed to restore health at the physical level of
mother and baby. For example, Mao et al.\textsuperscript{(28)} pointed out that in the puerperium there were restrictions on some foods and increased consumption of others.

Miranda et al.\textsuperscript{(5)} pointed out that eating pork, fish, eggs, cabbage or cauliflower could cause fever, uterine infections or inflammations; acidic fruits, cut the bleeding; and pumpkin and cassava, edema and breast problems. It seems that these actions, full of symbols and meanings, had a double purpose: to express the perception of health and disease and to define or redefine social roles. In relation to the aforementioned and famous chicken / chicken broth soup, its success may be due to the easy access of the food (economic), lightness and richness of nutrients\textsuperscript{(2)}.

Finally, the food received by the relatives in the postpartum period, the visit, mentioned by the study participants, and which were considered symbolic in other cultures\textsuperscript{(29)}, were part of a ritual to regain strength after childbirth. Food therefore became a basic requirement to promote and protect health\textsuperscript{(30)}. On the other hand, these moments were important to verify the role of those close to them in maintaining family well-being. The support (exchanging goods and services between individuals) was aimed at maintaining or improving their well-being\textsuperscript{(2)}, and helping them face the new situation of being a mother.

This work is not without limitations, related to location (specific areas) and the lack of similar studies. We do find in the literature applications of other cultural models of health, although not this one. Therefore, as future lines, this model could be applied to other cultures, in order to be able to establish comparisons, and compare it with other models\textsuperscript{(31,32)}.

To finish, we will say that the objective of the work has been met, describing the cultural beliefs and practices related to food during pregnancy and the puerperium in adult women, in two different cultures, applying the Health Traditions Model. We see how culture intervened when configuring some of its beliefs and practices. These were related to prevention, maintenance and recovery of the health of the mother or newborn, physically, mentally or spiritually, in an interrelated way (9 dimensions). Both the family and relatives (including their elders) played an important role in shaping or maintaining some of the guidelines followed, with maternal care acquiring a community dimension. The beliefs and practices identified in the areas under study shared some essential aspects with those of other more remote areas.

These results can help us understand some keys to plan, at present, maternal health actions related to food at this stage, participatory (in which to consider women, but also the family and / or community), correct certain harmful beliefs or practices, and provide care consistent with women’s culture\textsuperscript{(6,7,9,10,33)}, considering that there may be 9 related dimensions. All this can help transform beliefs, values and attitudes that embody a certain cultural form in nursing.

**CONCLUSION**

Through the application of the Health Traditions Model it has been possible to describe the beliefs and practices related to food during pregnancy and the puerperium in adult women (over 60 years old) in two different cultures.
The application of cultural models such as the Health Traditions Model, can be an interesting tool for health professionals to verify the role that culture has in configuring health-related care; discover popular practices and beliefs related to health prevention, maintenance, and recovery; and its interrelation with the physical, mental and spiritual dimensions of people.

Discovering beliefs and practices of our ancestors can help us understand some keys to planning participatory health actions today, in which to involve family and community, correct certain harmful practices, and provide care consistent with women’s culture. This can help transform the beliefs, values and attitudes that embody a certain cultural form in nursing.

REFERENCES