

# Context Mapping – insights for designing products for immigrant pregnant women in The Netherlands

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## ABSTRACT

This essay describes the application of Context Mapping tools and techniques for product design with the goal of 'Enabling non-native pregnant women in The Netherlands to create a familiar socio-cultural environment surrounding their pregnancy.' It describes the emergence of an intended vision for interaction to be used as a basis for product design suitable within the context of these pregnant women in an alien culture.

## Keywords

Culture, Context Mapping, Cultural experience, Cultural artifacts, interaction vision

## Topic nr

1.1 Generative tools

## INTRODUCTION

If the idea behind the design of an artifact is to intervene at the level of culture, then it is important to understand how, in a given context, culture is experienced by an individual. For this project specifically, it was crucial to understand how the cultural differences were propagated through artifacts and technologies that could be considered typically Dutch. Artifacts impose a certain moral, ethical code of conduct upon the users [1]. They have the potential to shape beliefs and ideologies of society [2]. Designers can become aware of these dynamics, and use them to design objects that achieve a pre-defined behavioral effect and quality of interaction.

This essay describes the application of the process, tools and techniques used for the Context Mapping [3] exercise within the Exploring Interactions project, to identify such an intended interaction for product design in the context of immigrant pregnant women in The Netherlands.

## DESIGN GOAL

The Design Goal of the project was:

“To enable non-native pregnant women in The Netherlands to create a familiar socio-cultural environment surround their pregnancy.”

## RESEARCH SETUP

The researchers were male, and at the time of the study, were themselves foreign students studying in The

Netherlands. They had no previous personal experience related to pregnancy. However, they had only their personal experience, of being exposed to a foreign culture, to start out with while formulating the research plan.

## Research goal

The objective of the Research was:

“To find out how non-native mothers can be empowered through strengthening their socio-cultural environment, by understanding the causes of their anxieties during pregnancy.”

The research questions were:

- What are the main causes of anxiety in non-native mothers and when do they feel most powerless?
- What do mothers think about the cultural differences in child-birth? Can they think of any situations where they became aware of these differences?
- What objects, rituals belonging to their original culture do they utilize during their pregnancy?
- What are their fears and insecurities about giving birth in a foreign country?

## Research method

Pregnancy and the experience of pregnancy is a very personal topic. In the present study the researchers were male. They had little empathy with the pregnant women to begin with as none of them had any personal experience with pregnancy. This led the researchers to conduct exploratory interviews in order to get an overall understanding of the pregnancy experience.

7 in-depth interviews were conducted with women from France, Australia, Italy, USA and Argentina. The women were living in The Netherlands and had recently experienced pregnancy in The Netherlands. The interviews were conducted in their homes by a maximum of 2 researchers at a time. A day or two before the interview the mothers were asked to prepare artifacts that helped them during their pregnancy in terms of comfort, anxiety and communication. Each interview lasted for about 60 minutes.

Out of the 7 interviews, the first 4 interviews were exploratory and were meant to extract a general view of

pregnancy and its experience. The research team analyzed the data after every interview and modified their interview questions and focus to extract more socio-cultural aspects in the remaining 3 interviews.

### Results

The women contributed a significant amount of data about their own pregnancy experience in The Netherlands. Participants stated that the post-pregnancy feeling of joy made the memory of the unpleasant experiences blurred. In this situation, photo albums and blogs maintained by the women of their pregnancy days helped them recount their experiences. The women produced chiefly a selection of gift-items as cultural artifacts related to their pregnancy. These items were mostly exchanged with their families and friends back in their native countries.

Most anxiety arose from the perceived difference in the Dutch way of handling pregnancy. As a participant suggested, *“The Dutch don’t look at birth as a medical thing; to them it is a natural thing”*. The difference in outlook towards, and methods of addressing pregnancy was cited by all the participants as the chief source of anxiety: *“My mom was shocked [at the procedures in the Netherlands]. I could see it in her eyes.”*

Their general unfamiliarity with pregnancy and the local mechanisms of assistance also contributed to their anxiety: *“I had to wait for a month for an initial consultation with the midwife. I was very anxious. I was counting down the days.”*

Participants were able to identify some cultural differences between their native cultural and the Dutch approach to pregnancy. They identified the Dutch emphasis on natural (without pain medication), home-birth as a typical Dutch cultural expression that was different from all the participants’ native culture. Roughly half of the participants had been successful in asserting their native cultural methods during their pregnancy, while the rest had accepted the Dutch values concerning pregnancy. They did not state any medical complications that arose due to their decisions.

The concept of a *kraamzorg* (home-nurse) was considered beneficial and was highly praised by the participants: *“[Dutch home nurse] should be exported to the rest of the world.”*

Most participants dealt with moments of anxiety by indulging in relaxing activities like reading, socializing, and taking care of their bodies through exercise. *“... reading lots of books, went to library and talking to people helped a lot.”*

The participants expressed their lack of a local social network as a problem and stated that this caused feelings of loneliness and anxiety: *“When you live abroad, you can’t send tons of pictures to your family and friends”,* or, *“I miss the small talk that I would have shared with my friends if I were in Australia. We*

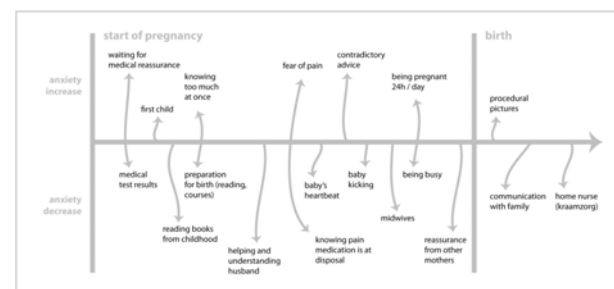
*would have talked of other things and not just our pregnancy.”*

Their husbands and their pregnancy group were the main actors that helped them through reducing their stress and anxiety levels during pregnancy, while satisfying their need for information and emotional security: *“My husband helped a lot on a daily basis. And by visiting a pregnancy group once a week I could complain or ask questions.”*

### Qualitative analysis

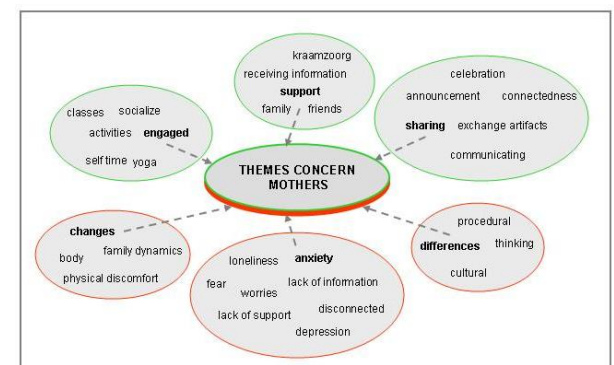
Recorded audio files and text transcripts of all the interviews were available for analysis. Prominent quotes were selected from the interview transcripts and, together with their interpretations, put on separate cards. These cards were then mapped.

In the first instance, the cards were distributed over a timeline representing the 12 months of pregnancy. The timeline was divided into 4 segments, namely, 0-3, 3-6, 6-9, and birth to 3<sup>rd</sup> month after birth, to coincide with the 4 predominant phases of pregnancy. The map [Figure 1] displayed the possible relationship between the period of pregnancy and the nature and quality of the participant’s experience.



**Figure 1. A figure showing the map of quality of experience at different stages of the pregnancy.**

The second map consisted of cards categorized by theme. Each category represented a possible cause for increase/decrease in anxiety during pregnancy [Figure 2].



**Figure 2. A figure showing the themes connected with anxiety experienced during pregnancy.**

Finally, in order to retain a maximum of data in consideration, all the interview audio recordings (average time 60 minutes each) were broken into parts of 3 minute duration and the play-list was played in random order. This data bank was used later in the process as a source of inspiration for design.

### **Conclusions from the analysis**

From the analysis it was evident that the systemic and cultural differences related to pregnancy did cause anxiety and stress in non-native pregnant women in The Netherlands. The effects of this confrontation with an alien system were observed across the physical, psychological, and social dimensions. Majority of the pregnancy stress and anxiety derives from the difference in technical procedures, unknown language, a diminished social support system, and physiological changes.

The women were able to identify 'Natural vs. Mediated pregnancy' as a cultural difference between the Dutch and their native cultures. They identified abstinence from pain medication, home birth, and other instances where they were confronted by this difference in ideology.

Apart from gifts, the women were not able to of other specific experiences with cultural artifacts. They could not identify artifact or rituals that they had accepted or resisted from the Dutch culture, and the ones that they had maintained from their native cultures. The main strategy used by the women to deal with cultural conflict was to form, or join, organized pregnancy groups where they could go for information and occasional social support. Their husbands and closest

family played a critical role in sustaining them emotionally. The lot of information exchange takes place via the internet, photos, telephone, and postcards.

### **CONCLUSION**

From the context mapping exercise with the immigrant pregnant women, it was clear that the social situation of these women could be improved considerably in the alien culture. These women needed something that would lower the barrier for social interaction, increase the size of their social circle, give them an opportunity to exchange stories, and reflect upon their place in this alien culture.

With this as an intended vision for interaction, it is now possible to design products that appropriately address the contextual needs of the immigrant pregnant women in The Netherlands, and enhance the quality of their pregnancy experience.

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