

Results from the Evaluation of Sensory Delivery Rooms at North Zealand Hospital



THE PROJECT

1 OBJECTIVE

To create better birth experience for mother, partner and staff.

2

THE INTERVENTION

Sensory experience, using light, sound and imagery.

3

RESULTS

Significance effect on, the SDR for the birth experience.

4

STAFF EXPERIENCE

For the midwives in the study, the Sensory Delivery Room created an atmosphere that was much more subdued, calm and reassuring than a typical delivery room.

5

Conclusion

The overriding objective of the project is to create better birth experience for the mother/partner and newborn.

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We wished to test whether the use of dynamic light, sound and images in the delivery room could support women's' experience of comfort and security during childbirth, and in so doing, contribute to creating a good birth experience for both mother and partner.

The project also has a clinical purpose in that it is hypothesized (suspected?) that the experience of perceived safety may have a positive effect on the body's ability to secrete the labor inducing hormone Oxytocin-thus aiding the women in giving birth more quickly and more 'safely' with regard to fewer medical interventions (complications?) and perhaps a decreased use of pain medication.

Background

Today most women and couples in Denmark choose to give birth in hospitals. We live in a time when safety and professionalism factor heavily in the decision regarding choice of hospital for childbirth.

There is an expectation that "the system" will provide for a safe delivery for mother and child. Today's technology helps to provide this security and with

this in place, there is room to focus on "the good birth experience".

Therefore, there are often at least two concerns for the expectant mother as well as the midwife.

- A safe birth for mother and child.
- A good birth experience for mother and her partner.

For several years, in different regions of the world including Denmark, design and health practitioners have worked on developing projects which use light, sound, and images in connection with patient treatment.

In the maternity ward at North Zealand Hospital, an PPI project started in August 2013, has been using sound, light, and moving images in two delivery rooms. It is the first time that all three parameters (interventions?) (sound, light and moving images) have been used in a maternity ward in Denmark. The two delivery rooms used in the project are referred to as Sensory Delivery Rooms.

Intervention

The idea of using sound, light and moving images was developed in cooperation with two private companies:

Philips developed the hardware for the installation. Philips is one of the world's leading suppliers of solutions and equipment to the healthcare sector, and has worked for many years on improving the patient experience.

Wavecare developed the sensory experience via its audiovisual themes. Wavecare has developed, among other things, calming themes for Philips Healthcare for many years now, and specializes in producing solutions for relaxation during medical procedures for several areas of the healthcare sector.

Each sensory delivery room is equipped with a large Philips Luminous Textile screen installed on one wall and Dynamic LED lighting at the entrance, along the walls, and around the delivery area with a Touch control panel.



The Sensory Experience with sound and moving images consists of three Wavecare programs:

1/Welcome Program: consisting of scenes from a bonfire by a lake and selected MusiCure music with the aim of providing a calm and welcoming atmosphere.

2/Relaxation Program: consisting of various scenes from nature, incorporating in particular, blue, green and warm colors. The images are accompanied by selected MusiCure music. The aim of this program is to provide a sense of relaxation and comfort (security) for the women in labor.

3/Breathing Program: helps the woman maintain a beneficial breathing rhythm during contractions. This rhythm is established via images of and sounds of lightly breaking, foamy waves. The midwife can actively use the program to stimulate the woman's regular and smooth respiration.

Results

The study consisted of:

A survey of 102 women/couple participating regarding their satisfaction with the Sensory Delivery Room

A qualitative assessment of the participants perception of the impact (influence, effect) of the Sensory Delivery Room, measured on a number of parameters. This component of the study was conducted via observation of the participants and individual interviews with 5 woman/couples that had experienced childbirth in a Sensory Delivery Room.

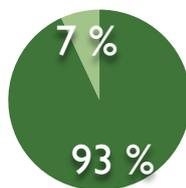
A Qualitative assessment of the midwives experiences working in the Sensory Delivery Room, conducted via observations of participants and a focus group interview with 5 midwives.

Results

Questionnaire on Patient Satisfaction with the Sensory Delivery Room

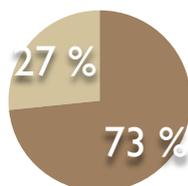
Significance influence of the SDR for the birth experience.

93 % of the women reported that the Sensory Delivery Room as having a very positive impact on the birth experience.



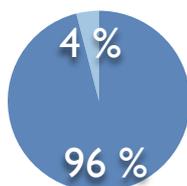
Significance influence of the SDR for the experience of pain.

73.5% of women reported that the Sensory Delivery Room had a very positive impact on their experience of pain during childbirth.



Significance influence of the SDR for the experience of security and well-being.

96% of women reported that the Sensory Delivery Room had a very positive impact on their feelings of security and well-being during childbirth.



94% of the partners responded similarly

Qualitative investigation into the participants' perception of the Sensory Delivery Room's impact.

Home-like environment

The Sensory Delivery Room can help create a more homelike and comfortable space, which contributes to a feeling of security and to the woman's feeling of having a sense of control. The room seems less clinical and more homey, helping to shift the focus from it being a hospital environment. As one study participant responded:

“ When you walk into the room, you also enter an atmosphere...in some way the room became a bit more...it was our’s “

Pain Management

Being in the Sensory Delivery Room can help the women manage their pain. When the space is experienced as home-like, pleasant, and with a calm, relaxed atmosphere, it is easier to maintain control and work more effectively during labor.

“ ..if you come into a place and everything is new, there are new people, etc, it can be difficult to get a hold of oneself, and it can be difficult to relax and concentrate on the labor and all the other things. It requires a certain degree of calm “

Empathy

The home-like and secure environment in the Sensory Delivery Room helps the women to a greater degree feel that the room is theirs, and they experience the midwives to be more attentive to their needs. A participant giving birth to her third child described the difference between this delivery and her other two in this way:

“ This time I felt like they {the midwives} talked to me when there weren't contractions. I don't know if they were aware of it, but last time, I felt that I was spoken to every time there was a lot pain... “

A Sense of Continuity

The Sensory Delivery Room can provide a sense of continuity for women and their partners, which can help carry them through the process.

“ There was a kind of calm in the background, above all of that tangle of technical discussion and doctors, and evaluations, and data , and decisions taking place around oneself..and then there’s that calm like a base “

“ I would almost say, that you could describe it as a little like having a velvet glove underneath. It was like having a bit of softer packaging for something that is a bit harsh at times. So you could lie down and rely on that sometimes “

Midwives’ perceptions of the Sensory Delivery Room

For the midwives in the study, the Sensory Delivery Room created an atmosphere that was much more subdued, calm and reassuring than a typical delivery room.

An atmosphere that was important and even possible to maintain in acute and dramatic situations.

People that came and went from the area, for example- obstetrics department midwives, social workers, doctors, anesthesiologists - quickly learned to adjust to this more subdued environment when they came into the room.

The times it was perceived to work really well, it was reported that the Sensory Delivery Room environment created a rapport (synergy) among the midwives, the patients and their partners. When the midwives reacted calmly and in a relaxed fashion, the women and their partners also relaxed which helped maintain the generally calm atmosphere-this, in turn, was felt to have had positive effects on the labor/delivery experience.

Pain Management

There was also a perception among the midwives that the expectant mothers were better able to relax in the Sensory Delivery Room and therefore had delivered their children more quickly.

Additionally, it was felt the SDR helped the women manage their pain better because they were more relaxed. This doesn’t necessarily mean that the woman in labor experienced less pain, perhaps the opposite. When they were more relaxed, their contractions might even be felt as stronger. But it was thought they could react more constructively to that pain.

There was a perception that the SDR had its greatest impact on pain management in the dilation phase of labor. It was felt that the midwife could use the SDR as a kind of tool to help the woman better regulate her breathing.

But there was also a feeling among the midwives that even in the intense labor phase when women in labor are generally least aware of their surroundings, that the women still benefitted unconsciously from the SDR. Though the women often shut their eyes in this phase, there were many who later said that although their eyes were shut, they could still sense the soft light.

” the Waves” can-when they match the rhythm- help maintain the breath control “

How the Sensory Delivery Room Supports Midwives' Professional Identity

The midwives working in the SDR felt they had an opportunity to work in a more alternative fashion, but in a way that was much more aligned with traditional midwifery arts-which have more to do with the relational, building rapport and intimacy.

"It's about how conscious we are of ourselves as midwives. And the Sensory Delivery Room can help us with this so we are not so instrumentally oriented...yes, one goes a bit back to the past, and becomes a bit more like the old midwives..where it's about wiping sweat off the brow, drying tears away, massaging backs, and giving a hug."

To work in precisely this paradigm is to help give the midwife professional satisfaction because in this paradigm, it is felt, she is a 'authentic' midwife.

Firstly, the midwives felt that in the SDR environment they were able to provide a better birth experience for the mother and partner, but also that the midwife's satisfaction with her own work took on new significance.

To 'be useful' in working as a midwife means the midwife feels that she made a difference, that she with her professional knowledge, experience and particular "midwifery" skills made a difference for the woman in labor.

The midwives in the study felt the Sensory Delivery Room helped them make this difference.

The study showed midwives are much more creative in the SDRs and do things they usually 'forget' to do in the typical delivery rooms.

Observation from the midwives is that in the Sensory Delivery Room one is better at engaging with the women, that the focus becomes more on the woman in labor as a person and not just on the birth itself.

..in an ordinary delivery room, it's more the contractions one focuses on. And in the SDR it's actually the breaks in between that become the focus...that's actually the difference.

Even though the midwife is reacting and attentive to everything that is happening, she may be a bit more composed in the SDR, she doesn't feel the need to fill in the silences. Respondents felt it was easier to take a step back and be more deliberate, and that one had the space and peace to read the women's signals.

Regarding work shifts and the SDR, Midwives at North Zealand Hospital work in 3 shifts, including night shifts. To work in alternating shifts is physically and psychologically taxing. But a nightshift in an SDR is perceived to be easier than one in a typical delivery room.

"..previously on a busy shift I might think: Ohh, it would be nice to come out and just have a hot cup of tea with my colleagues"

"And here at the Sensory Delivery Room I think more:

Let me just stay in my sensory room..it's nicer here.."

Conclusion

Women who delivered their children in a Sensory Delivery Room reported great satisfaction with the experience. The women experienced the surroundings as more home-like, which created more security, comfort and a sense of control for the women. This, in turn, helped them feel they were better able to manage their pain. The rooms also provided a sense of continuity or a comfortable base for the women during the labour/delivery period. Especially in acute situations, the rooms were found to be of help in maintaining a calm atmosphere.

Midwives working in a Sensory Delivery Room also reported great satisfaction with the experience. They reported feeling greater professional satisfaction and a bolstering of their identity as midwives. It was felt the Sensory Delivery Room was useful in supporting 'good old-fashioned midwife values', and the work environment was perceived to be clearly better.