

Material and Color Mood Boards for Birth Space Designs

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ABSTRACT

In the last sixty years in Spain, obstetric care has changed from a model of home care to hospital care, making the birth process much more technical, but with a significant loss of warmth and intimacy. For this reason, there is interest in reversing part of the model, betting on improving the birth experience, prioritizing the mother, the child, and the professionals who participate in the process, from the perspective of gender, accessibility, and safety of care. In the field of architecture and interior design, there is evidence of the importance of the physical environment in childbirth, which is a unique and unrepeatable experience in the life of every woman, couple and family. Scientific literature highlights some physical features and sensory requirements that contribute to positive experiences and satisfaction, with particular attention to color and light in birth space design. Members of the “Global Birth Environment Design Network” (GBEDN) have developed interesting exploratory proposals for embodied birth environments. The objective of this communication is to show and discuss the preference for some material and color palettes to be implemented in birth spaces, particularly in labor-delivery-recovery-postpartum units (LDRP). The methodology used consisted of a i) study of the existing color recommendations for birth spaces, ii) the development of color mood boards, and iii) the evaluation by a panel of specialists with mothers, midwives and architects. In general, experts opt for yellow-blue (NCS Y&B) and orange-turquoise combinations (NCS Y30R & B30G) and are less in favor of those with red and green hues, what is coherent with previous findings in lactation rooms, in which warm colors (yellow and orange) tend to score well for coziness but red gets bad assessments. These color palettes aim to be adequate to communicate subjective connotations influencing childbirth experience and recurrent in literature, such as the physical security, privacy, calmness, confidence, cosiness, etc.

1. INTRODUCTION

In the last sixty years in Spain, obstetric care has changed from a model of home care to hospital care, making the birth process much more technical, but with a significant loss of warmth and intimacy. For this reason, there is interest in reversing part of the model, betting on improving the birth experience, prioritizing what some authors name the *moving, feeling and dreaming body* of the mother (Lepori, Foureur, and Hastie 2008) the child, and the professionals who participate in the process, from the perspective of gender, accessibility, and safety of care. In the field of architecture and interior design, there is evidence of the importance of the physical environment in childbirth, which is a unique and unrepeatable experience in the life of every woman, couple and family (Dalke et al. 2006). Scientific literature highlights some physical features and sensory requirements that contribute to positive experiences and satisfaction (Bellini et al. 2023; Murray-Davis et al. 2023), with particular attention to color and light in birth space design (lit. rev. in Balabanoff 2023; Aroua and Hussein 2019). Members of the “Global Birth Environment Design Network” (GBEDN) have developed interesting exploratory proposals for embodied birth environments, together with other tools for the evaluation and proposition of new birth spaces (Balabanoff 2017).

The objective of this communication is to show and discuss the preference for some material and color palettes to be implemented in birth spaces, particularly in labor-delivery-recovery-postpartum units (LDRP) considering the recommendations extracted from the literature, the existing colors of a selection of LDRPs taken as case studies and the opinion of a panel of experts. These color palettes aim to be adequate to communicate subjective connotations

influencing childbirth experience and recurrent in literature, such as the physical security, privacy, calmness, confidence, cosiness, etc. (Kazemi, Beigi, and Najafabadi 2023; Nicoletta et al. 2022).

2. METHOD

The methodology used consisted of a 1) study of the existing color recommendations for birth spaces including: 1.1) a previous qualitative study with mothers and midwives, carried out by the The Biomechanics Institute of Valencia (IBV), in the facilities of the La Plana Hospital in Vila Real in Castellón; 1.2) the study of relevant cases developed by architectural studios such as Parra-Müller (Müller and Parra Casado 2015); 1.3) indications collected in scientific literature, with particular mention to papers by specialists from the GBEDN; 2) the development of 6 color moodboards were for the evaluation of possible color combinations in birth spaces, particularly an LDR and a hospital bedroom, and 3) the evaluation by a panel of specialists composed of 7 mothers, 7 midwives, and 6 architecture and interior designers, under the supervision of the IBV.

2.1 Existing color recommendations for birth spaces

Previous studies demonstrate that, in birth spaces, the presence of artwork in an LDR reduces the request for epidural analgesia 7% (Duncan, 2011), and non-monochromatic schemes are associated with positive effects (Aroua & Hussein, 2019). The color composition for hospitals usually uses colour-coded for wayfinding and visual contrast, like in the Central Manchester hospital (Haller 2017: 339-41) and pursue a sense of domesticity in birth spaces. Some design features that promote domesticity include walls painted in soft earthy colors, textile curtains, birth tubs, comfortable furniture, and soft rugs and ottomans (Lit rev. in Nilsson et al. 2020: 229). Following the colour associations related with the different Chakras, Lepori et al. (2008) suggested the use of red for its association with “home, security, sense of self survival and trust,” but in studies of color associations in lactation rooms, red was the color with the worst assessment and had negative scores for “coziness” and “safety”(López-Tarruella et al. 2019).



Figure 1: The six mood boards with suggested colors and materials for birth spaces

2.2 Color moodboards

Each of the six moodboards consisted on a grey cardboard with the dimensions of 841×594 (DIN A2), and the disposition of physical color and material samples glued on the surface. The colors were chosen according to the Natural Color System (NCS) with perceptual opposite hues on the color wheel: 1) two neutral colors, with low blackness and chromaticity, which would occupy most of the interior surfaces such as floors, ceilings or walls (NCS 0505/0510 nuance);

2) two dominant colors, somewhat more chromatic, that would occupy intermediate surfaces of the room such as a wall, a closet, etc. (NCS 0540/1040); and 3) two accent colors, very chromatic, that would occupy small surfaces such as a chair, a textile, a lamp, etc. (NCS 1060/2060). The materials of the moodboards included original color samples from NCS, high pressure laminated wood by Formica, and materials from the RAL Colour Feeling Trendbox 2025+ (<https://www.ral-farben.de/en/trendreport-2025>) including metal, carpet and textile samples from Covestro, TIGER Coatings, Object Carpet and Gabriel.

2.3 Evaluation by a panel of experts

Each of the six color moodboards was evaluated by every member of the panel of experts using a likert scale with five steps from 1 (completely disagree) to 5 (completely agree), with 8 terms related with the birth space requirements highlighted by Bellini et al. (2023) and the final question: Would I like to find this aesthetic in my labour and delivery room?.

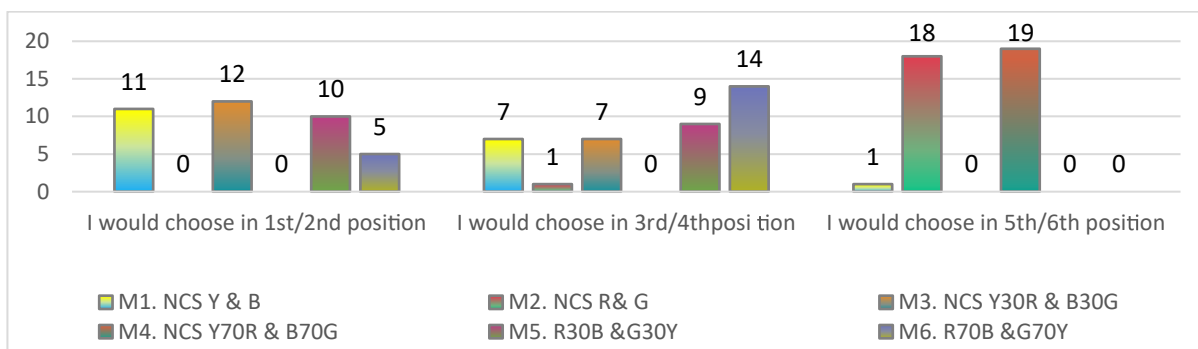


Figure 2: Preference for the 6 color mood boards for birth spaces

3. RESULTS AND DISCUSSION

The assessment of the color options presents high consensus among the groups. The color options chosen by the majority are proposal 1 (NCS Y & B) and 3 (NCS Y30R & B30G), followed by 5 (R30B & G30Y) and 6 (R70B & G70Y), being 2 (NCS R & G) and 4 (NCS Y70R & B70G) the least preferred. In general, experts opt for yellow-blue and orange-turquoise combinations and are less in favor of those with red and green hues, what is coherent with previous findings in lactation rooms, in which warm colors (yellow and orange) tended to score well for coziness but red got negative assessments. (López-Tarruella et al., 2019)

4. CONCLUSIONS

In a study of color preferences for birth spaces (LDRs and a hospital bedroom), with the assessment of a group of mothers, midwives, and architecture and interior designers (20 members), the most preferred color combinations were NCS Y & B and Y30R & B30G, while those with green and red hues R & G and Y70R & B70G were the least preferred.

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