

Development of the ergonomics and usability of the birthing support is key to promoting midwives' well being at work

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Background

- A midwife's work involves plenty of physical stress and strain on her body, leading to musculoskeletal disorders
- New solutions are therefore required to ease and improve midwives' working conditions

Goal

- To assess the ergonomics and usability of the new birthing support in simulated and real birth situations

Method

- **Stage I:** The birthing support prototype was tested in simulated birth situations that were as close to real conditions as possible
 - Kätilöopisto Maternity Hospital
 - 10 midwives/doctors, 10 pregnant women in the last month of their pregnancy
- **Stage II:** The birthing support was tested with 10 real live births
 - 10 women whose babies were delivered without the birthing support were used as a control group
 - Kätilöopisto Maternity Hospital and Kanta-Häme Central Hospital
 - 8 midwives and 20 pregnant women in labour
- questionnaires, interviews, videos of the birth, OWAS posture analysis

Results

- In the opinion of the midwives, the use of the birthing support improved their working posture and gave them a better view of the emerging baby and perineum (Pictures 1 and 2)
- The midwives worked with a straight back during the pushing phase for 79% of their working time while using the birthing support (Picture 3)
- The midwives found the delivery easier and less physically stressful with the birthing support than during conventional deliveries. (Picture 4)

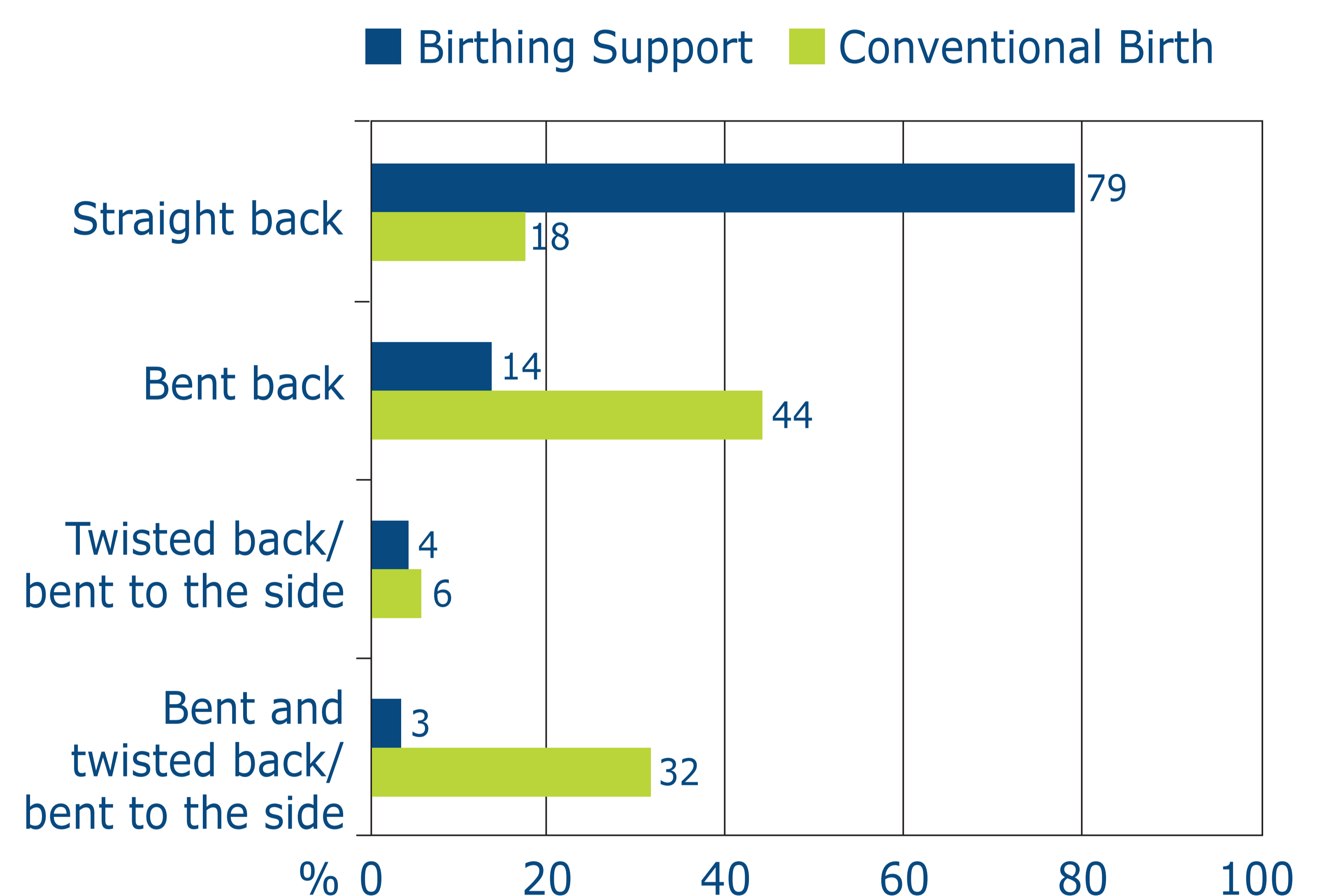
Conclusions

The results could be used:

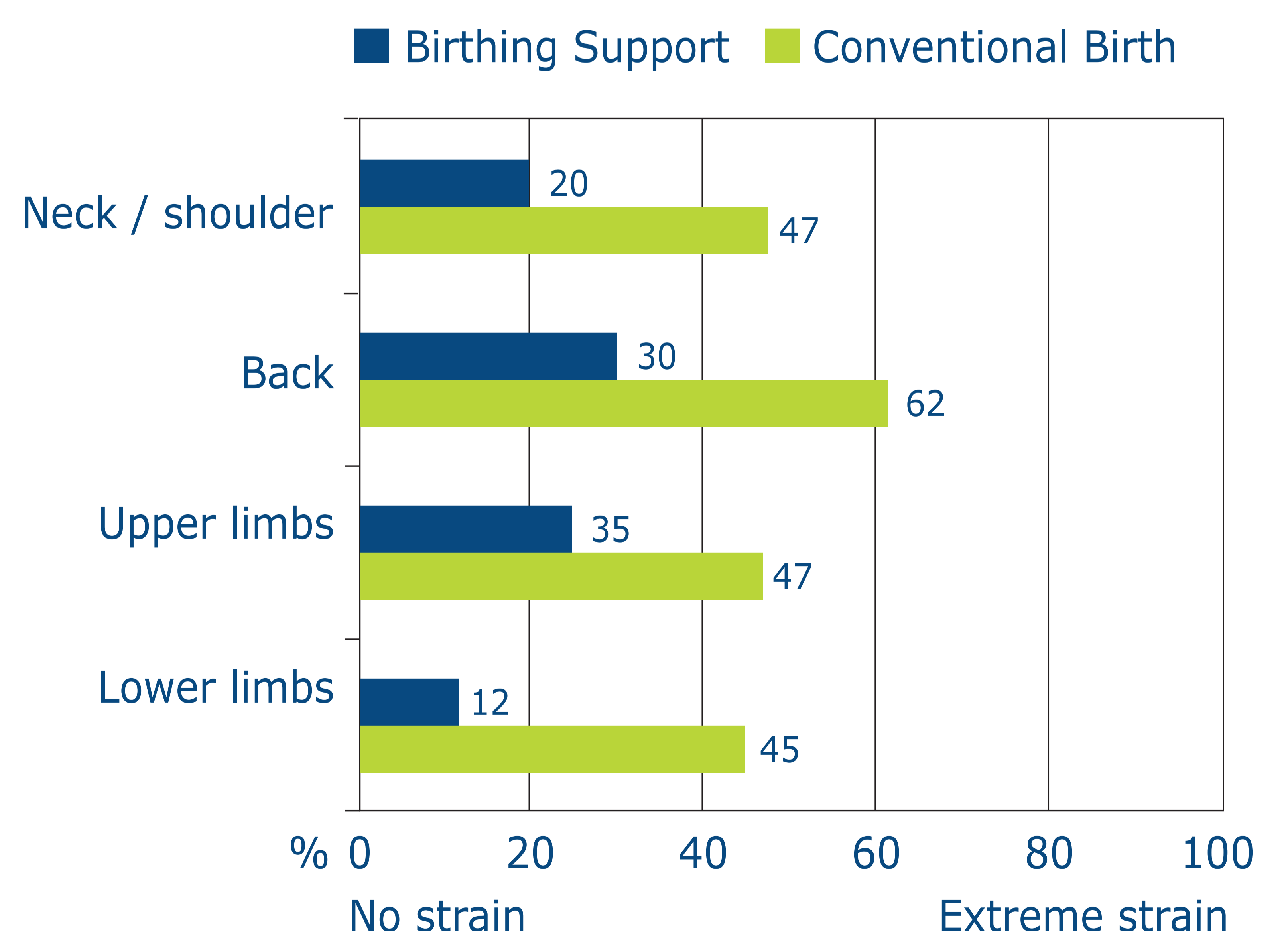
- in product development of the birthing support and in practical training
- in promoting the well being of medical personnel: midwives and doctors
- when making purchase decisions for medical instruments and equipment



Pictures 1-2. Relaxbirth® birthing support provides the midwife with a flexible and adjustable working environment and enables the mother to relax and find the right direction to push in.



Picture 3. The midwives' (n=8) back posture according to OWAS-analysis in the pushing stage of deliveries with 10 birthing support deliveries (1,274 observations) and 10 conventional deliveries (1,468 observations).



Picture 4. Midwives' (n=8) subjective experiences, on average, of physical strain (VAS) after a delivery with the birthing support (10) or conventional deliveries (10).