Beliefs and needs of fathers of newborns hospitalised in a neonatal unit: A descriptive correlational study

Laura Rio, PhD, Research Collaborator a
Milena Donadeo Fadda, RN, MSc (Nurs) a
Sophie Lambert, RN, MSc (Nurs) a, b
Anne-Sylvie Ramelet, RN, PhD a, c, *

a Institute of Higher Education and Research in Healthcare (IUFRS), University of Lausanne, Lausanne, Switzerland
b Clinic of Neonatology, Department Woman-Mother-Child, Lausanne University Hospital, Lausanne, Switzerland
c Department Woman-Mother-Child, Lausanne University Hospital, Lausanne, Switzerland

ABSTRACT

Background: Transition to parenthood is a wonderful yet stressful period especially when it involves the newborn’s hospitalisation. To support and facilitate this transition, it is essential to understand parental beliefs and needs. The father’s perspective remains an understudied yet fundamental question.

Objectives: The objective of the study was to measure beliefs and needs of fathers of newborns hospitalised in a neonatal intensive care unit (NICU) and their correlations with sociodemographic variables.

Methods: Fathers with a newborn hospitalised for 4–15 days in a level III NICU in Western Switzerland completed the NICU Parental Beliefs Scale and the short form of the NICU Family Needs Inventory. For each item of the NICU Family Needs Inventory, fathers also answered with regard to their satisfaction level. Additional needs were collected with an added open-ended question. Simple linear regressions were used to correlate beliefs, needs, and the sociodemographic data.

Results: Seventy fathers were included. The average score for paternal beliefs was 68.44 (standard deviation = 10.29), indicating a good perception of their role. The majority (77%) considered all needs as very important or important, and 70% were very satisfied or satisfied. Fathers described communication as a very important, but unmet, need. Fathers’ beliefs were higher in those who were not first-time fathers (71.88 ± 8.27 vs 66.06 ± 10.97, p = 0.028), who had a maternity leave (72.68 ± 10.19 vs 66.05 ± 9.68, p = 0.014), and who were of foreign nationality (71.86 ± 9.39 vs 63.85 ± 9.80, p = 0.002).

Conclusions: Fathers with a newborn hospitalised in the neonatal unit had good paternal beliefs. Most of the listed needs were perceived as very important and had a good level of satisfaction. Significant differences between Swiss fathers and fathers of foreign nationality were measured. Reasons of these differences should be explored in a forthcoming study.

© 2021 Australian College of Critical Care Nurses Ltd. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

1. Introduction

The hospitalisation of a critically ill newborn to a neonatal intensive care unit (NICU) can be very stressful for parents. In addition to negative self-conscious emotions, such as shame, guilt, and fear, of death, factors inducing parental stress include the high-technological environment, the newborn's appearance, and the disruption in the parental role. In this context, it is essential to understand specific beliefs and needs of parents to better support them. Parental beliefs are parents' perception of their infants and beliefs/confidence about their parenting. They have been associated with parental stress, anxiety, and depression, often persisting well beyond discharge from the NICU. Parental needs can be defined as a necessity, which if satisfied relieves parents' distress and increases their sense of adequacy. Evidence shows that fathers of newborns in the NICU face unique challenges and struggle to balance work and family responsibilities. Because mothers are still recovering after delivery, fathers commonly accompany their newborn to the NICU, make initial decisions, support the mother, communicate with other family members, care for other infants, and increases their sense of adequacy. Evidence shows that fathers of newborns in the NICU face unique challenges and struggle to balance work and family responsibilities.
children, and sometimes have to return to work within a few days of the newborn's birth.\textsuperscript{12,13} Knowledge of fathers' needs in these situations to which they have not been prepared is limited. Most of the studies that include fathers report combined results from parents (mothers and fathers), and fathers are under-represented in the studies that include fathers report combined results from par-
situations to which they have not been prepared is limited. Most of
the studies that include fathers report combined results from par-
situations to which they have not been prepared is limited. Most of

2. Materials and methods

2.1. Study design, setting, and patient eligibility

This was a prospective, observational study, using self-
completed questionnaires. This study was conducted in a level III
NICU of a tertiary referral neonatology centre in Western
Switzerland. Yearly, more than 700 newborns require hospital-
isation in this NICU; of which, about 500 remain hospitalised for 4
days or more. We recruited, using a convenience sampling method,
adult fathers who were able to speak, read, and write in French.
Their newborns had to be between 4 and 15 days old, so fathers had
time to internalise the fact of becoming a parent and were not in a
situation of prolonged hospitalisation that could possibly result in
additional or different needs. Fathers with a newborn with end-of-
life care were excluded because their needs are very specific to their
situation. Data collection took place from September 19, 2018, to
January 3, 2019. The recruitment times were mainly between 4:00
pm and 8:00 pm, but other times were possible depending on the
family availability and daily organisation.

2.2. Ethical approval and consent

The study was accepted by the centre's ethical committee.
Written informed consent was obtained from participants at the
time of enrolment.

2.3. Data collection and questionnaires

The selection of eligible fathers was carried out using the hos-
pital software containing the patient's nursing record, in which all
clinical and sociodemographic information about the newborn and
his/her family is stored. The researchers went to patients' bedside
to meet fathers directly. If the father was absent, the researchers
made arrangements with the mother of the newborn or with the
patient's nurse to obtain information on the father's visiting hours
and to be able to approach him more easily.

When meeting with the fathers, the researchers gave an oral
presentation of the study and distributed the information sheet for
the participants along with the informed consent form.

At enrolment, fathers' sociodemographic data, including age,
nationality, marital status, educational background, occupational
status, number of children and age, number of newborns hospi-
talised, term of the hospitalised newborn, and perception of the
seriousness of the situation, were collected through a
questionnaire.

Fathers completed two additional questionnaires: the NICU
Parental Beliefs Scale (NICU-PBS), to measure their paternal beliefs,
and the short form of the NICU Family Needs Inventory (NFNI), to
measure the importance of their needs.

The NICU-PBS is a validated instrument for assessment of beliefs
of parents with a newborn in the NICU.\textsuperscript{6} It consists of three sub-
scapes (parental role confidence, parent–child interaction, and
knowledge of the NICU) and has 18 items in total. Each item is
classified as not applicable, if the participants had never experi-
enced one specific need; it was then considered as missing data for
the analysis. Satisfaction for each item was also evaluated and
scored in a similar manner from 1 (“not satisfied”) to 4 (“very satisfied”) or not applicable. Finally, an open-ended question was
added at the end of the questionnaire to allow fathers to present
needs not listed in the questionnaire: “Are there important needs
that have not been listed yet? If so, which one(s)?”

The questionnaires were completed in the neonatology
department using a paper and pencil and hand-delivered to sci-
entific collaborators. When it was not convenient to fill in the
questionnaires, a sealable envelope was enclosed for return to the
nurses by the fathers. All the data were coded using a unique
identifier for each participant that was only known by the research
team and that was kept separated from the collected data.

2.4. Outcome measures

Primary outcomes were the scores generates by the NICU-PBS
and the short NFNI questionnaires. Secondary outcomes were the
needs identified by participants as important to them but those
that were not directly assessed by the short form of the NFNI.

2.5. Statistical analyses

Analyses were carried out using Stata/IC software, version 15
(StataCorp LLC, College Station, Texas USA). Descriptive statistics
were used for the variables relating to the demographic data,
paternal beliefs, and needs. We calculated means, standard deviations, and ranges for all the quantitative variables and frequencies and proportions for qualitative variables. The few missing data were not replaced, and the values were calculated based on the number of responses given. To correlate the importance of needs with the satisfaction, the importance of needs was dichotomised into 0 “not very important” (combining the notions of not important, slightly important, and important) and 1 “very important”, and the level of satisfaction was dichotomised into 0 “not very satisfied” (combining the notions of very dissatisfied, somewhat dissatisfied, and somewhat satisfied) and 1 “very satisfied” as recommended by Alves et al. Responses “not applicable” were treated as missing data. Wilcoxon–Mann–Whitney rank-sum tests were conducted to assess the correlations between the beliefs and needs and sociodemographic data.

Responses to the open-ended question were analysed using content analysis with inductive and deductive methods as described by Mayring. Domains of patient- and family-centred care were used for deductive coding.

3. Results

3.1. Participant demographics

Study enrolment is summarised in Fig. 1. Of the 256 fathers during the recruitment period, 120 did not meet the inclusion criteria. The main reasons for exclusion included the newborn’s length of stay outside the 4- to 15-day period (n = 69) and fathers who did not speak French (n = 44). Of the 136 fathers who were eligible, 70 (51%) fathers were enrolled and completed the three questionnaires, 54 (40%) could not be approached for logistical reasons, and 12 (9%) refused to participate.

Baseline characteristics are described in Table 1. More than half of the fathers (60%, n = 42) surveyed were married. The majority had secondary school education (70%, n = 49). More than three-quarters of the participants worked full-time (87%, n = 57). Almost half of the fathers were on parental leave (42%, n = 29), and more than half of the participants (57%, n = 40) were first-time fathers. Half of the newborns hospitalised in the neonatology department were born premature (51%, n = 36). More than half of the participants (57%, n = 40) rated the severity of their newborn’s situation as stable to mild.

3.2. Fathers’ beliefs

NICU-PBS scores are reported in Table 2. The mean overall perception of the father’s belief score was 3.80 ± 0.57. Perception varied amongst participants, with mean scores ranging between 2.39 and 4.89. The domain with the highest mean item scores by order of importance was parental role confidence (3.92 ± 0.59), the parent–baby interaction (3.81 ± 0.62), and the knowledge of the NICU (3.61 ± 0.81). The items that were rated the lowest were the ones in relation with knowledge of newborn characteristics and behaviours. The items that were rated the highest were those assessing confidence in asking questions to the medical team or in parental behaviour with their child.

3.3. Parental needs

NFNI scores are reported in Table 3. Most needs were perceived as very important or important by participants with a mean item

---

Fig. 1. Flow chart of participation. LOS, length of stay.
score of 3.11 ± 0.47. Newborn-centred needs were considered more important than parent-centred needs, with mean item scores of 3.55 ± 0.36 and 2.59 ± 0.7, respectively. In fact, 11 of the 12 newborn-centred needs were the top needs when newborn- and father-centred needs were combined and ranked together. The most important need was “To be able to visit the neonatal intensive care unit (NICU) at any time”, followed closely by the needs to have information about their newborn’s health and what was being done for their newborns’ health.

The least important need was “To have a support group of other families available”. “To talk about the possibility of my infant’s death”, and “To have a pastor, clergy, or other person from my church visit”. The total mean item score for the satisfaction of the needs was 3.48 ± 0.37, with a mean item score of 3.58 ± 0.38 for the newborn-centred needs and a mean item score of 3.31 ± 0.47 for the parent-centred needs. The satisfaction of the needs followed closely the trends of the importance of the needs. For more than half of the fathers, “To have a support group of other families available”, “To talk about the possibility of my infant’s death”, and “To have a pastor, clergy, or other person from my church visit” were not applicable for 41, 43, and 55 fathers, respectively. The relationships between the fathers’ beliefs, needs, and the sociodemographic characteristics are presented in Table 4.

3.4. Relationship between importance and satisfaction of needs

By dichotomising the answers, we could couple the importance of needs with their satisfaction in Table 5 (supplementary material). We found that the items that were very important and not satisfied were the following: “To have comfortable chairs at my infant’s bedside” for 18 fathers; “To know which staff members could give information about my infants’ health and general well-being” and “To talk to the doctor caring for my infant every day” for 16 fathers; and “To be given information about individuals that could help with problems concerning my situation”. “To know exactly what is being done for my infant”, and “To talk to the same nurse most of the time” for 15 fathers.

3.5. Additional needs described

Twenty-one fathers (30%) responded to the open-ended questions:

“Communication” between healthcare professionals and parents appeared to be important, especially regarding information related to their newborns’ health. “I would have appreciated receiving some sort of simplified medical record describing the main elements of my daughter’s hospitalization in neonatology …” (ID 70). Communication about the newborn’s health and daily care also appeared important for fathers. “I find that there is a lack of information about how much time to spend with our child and how to behave …” (ID 69). “Too many

Table 1
Participants’ sociodemographic characteristics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N = 70 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18–29 years</td>
<td>18 (26)</td>
</tr>
<tr>
<td>30 years and older</td>
<td>52 (74)</td>
</tr>
<tr>
<td>Nationality</td>
<td></td>
</tr>
<tr>
<td>Swiss</td>
<td>31 (44)</td>
</tr>
<tr>
<td>European</td>
<td>29 (42)</td>
</tr>
<tr>
<td>Dual nationality</td>
<td>7 (10)</td>
</tr>
<tr>
<td>African</td>
<td>3 (4)</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>42 (60)</td>
</tr>
<tr>
<td>Not married</td>
<td>28 (40)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Compulsory school</td>
<td>21 (30)</td>
</tr>
<tr>
<td>Secondary school</td>
<td>49 (70)</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>57 (81)</td>
</tr>
<tr>
<td>Not full-time</td>
<td>13 (19)</td>
</tr>
<tr>
<td>Paternity leave</td>
<td>29 (42)</td>
</tr>
<tr>
<td>Number of hospitalised newborns</td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>64 (91)</td>
</tr>
<tr>
<td>Two or more</td>
<td>6 (9)</td>
</tr>
<tr>
<td>First-time fathers</td>
<td>40 (57)</td>
</tr>
<tr>
<td>Had already had a child hospitalised in the NICU</td>
<td>7 (10)</td>
</tr>
<tr>
<td>Term of the newborn at birth</td>
<td></td>
</tr>
<tr>
<td>Premature (24–36 weeks)</td>
<td>36 (51)</td>
</tr>
<tr>
<td>Full-term, near full-term (37–42 weeks)</td>
<td>26 (37)</td>
</tr>
<tr>
<td>Perception of the seriousness of the situation</td>
<td></td>
</tr>
<tr>
<td>Stable to mild</td>
<td>40 (57)</td>
</tr>
<tr>
<td>Mild to severe</td>
<td>30 (43)</td>
</tr>
</tbody>
</table>

NICU, neonatal intensive care unit.

Table 2
NICU-PBS scores.

<table>
<thead>
<tr>
<th>NICU-PBS items</th>
<th>Item mean (M ± SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICU-PBS total scale (n = 70) (18 items)</td>
<td>3.80 ± 0.57</td>
</tr>
<tr>
<td>Knowledge of the NICU subscale (three items)</td>
<td>3.61 ± 0.81</td>
</tr>
<tr>
<td>I know what characteristics and behaviors are common in premature babies hospitalized in the NICU. (n = 69)</td>
<td>3.33 ± 1.11</td>
</tr>
<tr>
<td>I know what characteristics and behaviors to expect in my baby while he/she is in the NICU</td>
<td>3.56 ± 0.99</td>
</tr>
<tr>
<td>I know why my baby has the characteristics and behaviors that he/she does in the NICU.</td>
<td>3.94 ± 0.93</td>
</tr>
<tr>
<td>Parental role confidence subscale (seven items)</td>
<td>3.92 ± 0.59</td>
</tr>
<tr>
<td>I am sure that what I do for my baby will be what is best to help him/her deal with being in the NICU.</td>
<td>4.16 ± 0.79</td>
</tr>
<tr>
<td>I feel comfortable in caring for my baby in the NICU.</td>
<td>4.07 ± 0.95</td>
</tr>
<tr>
<td>I am sure about what things I can do to best help my baby get through the NICU experience. (n = 69)</td>
<td>3.84 ± 0.88</td>
</tr>
<tr>
<td>I am sure that I can meet my baby’s emotional needs while he/she is in the NICU.</td>
<td>3.97 ± 0.83</td>
</tr>
<tr>
<td>I feel confident in telling the nurses and doctors about what will best help my baby while he/she is in the NICU.</td>
<td>3.87 ± 1.07</td>
</tr>
<tr>
<td>I am clear about how to help take care of my baby in the NICU.</td>
<td>4.00 ± 0.85</td>
</tr>
<tr>
<td>I know how my baby will probably respond to me while he/she is in the NICU.</td>
<td>3.63 ± 0.85</td>
</tr>
<tr>
<td>Parent–baby interaction subscale (eight items)</td>
<td>3.81 ± 0.62</td>
</tr>
<tr>
<td>I am sure about how my emotions will affect my baby while he/she is in the hospital.</td>
<td>3.76 ± 1.08</td>
</tr>
<tr>
<td>I am clear about how my baby will react when he or she is getting too much stimulation in the NICU.</td>
<td>3.57 ± 1.06</td>
</tr>
<tr>
<td>I am sure about the things that I can do to make my baby feel most secure while he/she is in the NICU. (n = 69)</td>
<td>3.85 ± 0.93</td>
</tr>
<tr>
<td>I know how my baby’s appearance and behaviors are different from a full-term baby’s appearance and behaviors. (n = 64)</td>
<td>3.44 ± 1.19</td>
</tr>
<tr>
<td>I know the best times to communicate with or interact with my baby.</td>
<td>3.96 ± 0.82</td>
</tr>
<tr>
<td>I am confident in asking the doctors and nurses questions about my baby's medical condition.</td>
<td>4.77 ± 0.46</td>
</tr>
<tr>
<td>I know what my baby will do when he or she is stressed.</td>
<td>3.64 ± 1.04</td>
</tr>
<tr>
<td>I am clear about what my baby will look or act like when he or she is ready to communicate with me.</td>
<td>3.61 ± 0.98</td>
</tr>
</tbody>
</table>

NICU, neonatal intensive care unit; NICU-PBS, NICU Parental Beliefs Scale.

Please cite this article as: Rio L et al., Beliefs and needs of fathers of newborns hospitalised in a neonatal unit: A descriptive correlational study, Australian Critical Care, https://doi.org/10.1016/j.aucc.2021.02.012
different staff and inconsistency in advice on diet and care” (ID 67). Some fathers demonstrated “positive engagement” by proposing digital tools for communication improvement and keeping contact with their newborn“online medical monitoring via a smartphone application or web page” (ID 70) and “having the possibility of seeing my baby from home (videoconferencing)” (ID 20).

“Satisfaction with care” emerged as a theme. “Very satisfied with the quality of listening and empathy of the nurses and doctors.” (ID 52). The “NICU environment” seemed to be an issue for some fathers. Equipment used to care for their newborn (e.g., skin-to-skin contact) and the level of noise appeared unsatisfactory. “Chairs are not very comfortable during long use” (ID 24). “Rather unsatisfied for the baby: the noise in the room during the Kangaroo moment with the child” (ID 53). “There’s no place for the father-to-be to rest ...” (ID 56). The need for “peer support” also emerged as an important need. “I think parents of sick children can help each other. So, a way to get to know each other could be interesting” (ID 45).

3.6. Beliefs, needs, and sociodemographics

Correlations between beliefs, needs, and sociodemographics are reported in Table 5. Beliefs of fathers were significantly higher in fathers of foreign nationality than in Swiss fathers (71.86 ± 9.39 vs 63.85 ± 9.80, p = 0.002). They were also higher in fathers who had a paternity leave than in those who did not have one (72.68 ± 9.39 vs 66.05 ± 9.68, p = 0.014) and higher in those who already had a child than in those who were first-time fathers (71.88 ± 8.27 vs 66.06 ± 10.97, p = 0.028). Regarding fathers’ needs, no significant differences were observed.

4. Discussion

Fathers’ perception on their beliefs and needs remains an understudied yet fundamental question. In this study, we have shown that overall beliefs were good, especially when considering parental role confidence. Beliefs related to what being hospitalised in a NICU entails were lower, indicating that there is room for improvement in this domain. Notably, explaining fathers what characteristics and behaviours are common in premature infants hospitalised in the NICU could be improved. Amongst the 22 needs presented to the fathers, most were considered very important or important, especially those that were centred on their newborn. In fact, 11 of the 12 newborn-centred needs were the top needs when newborn- and father-centred needs were combined and ranked together.

The most important need was being to able to visit the NICU at any time. Visiting is not only a fundamental right for parents of hospitalised newborns but also a fundamental need to establish parent—infant bonding that is crucial for a healthy infant’s development. It also a fundamental part of family-centred care; the presence of parents is indeed essential for them to be able to participate, be engaged, and be empowered. Being present means, they can communicate with their newborn and with staff and participate in care. These are the prerequisite for being engaged and empowered. One father in our study mentioned new digital ways of maintaining the link with their infant and the staff, which has particular relevance in this pandemic context.

Satisfaction of needs followed the trend of the importance with the same items being the most and the least satisfied. For more than half of the participants, “To have a support group of other families available”, “To talk about the possibility of my infant’s death”, and “To have a pastor, clergy, or other person from my church visit” were perceived as not applicable to their situation. This could be linked to the fact that most fathers do not see the life of their child at risk and/or that fathers do not feel at ease thinking of the possibility of death in their children. This is not surprising considering that despite the high morbidity and mortality in the NICU population, palliative care is not consistently applied and embraced in the NICU. The most important needs that were not satisfied were also found in the additional needs expressed by
fathers. They were related to the physical environment of the NICU, and could be improved. This has been also pointed in other studies to improve with family comfort in addition to the clinical care of the infant. Most needs were centred on communication and information, notably regarding what was being done for their child in the hospital and also regarding treatment to follow-up after discharge. It has been demonstrated that the need for accurate and honest information is the most important need for parents, as evidenced in a recent systematic review, but is also an area of improvement.

The only need that was considered unimportant was “To have a pastor, clergy, or other person from my church visit”, and this was consistent with other studies. 

Beliefs were higher in fathers on paternity leave and those who had other dependent children. Taking a paternity leave has been positively associated with subsequent father involvement. Involvement with children helps establish father identities that emphasise parent–child interactions. Our results indicate that fathers who were on paternity leave were more confident in all of the three domains investigated: knowledge of the NICU, parental role confidence, and parent–baby interaction. Whether this difference was due to increased preparation to become a father or to having more time exclusively dedicated to fatherhood was not investigated here. Unsurprisingly, a father’s beliefs were higher in men who had already children, especially in the parent–baby interaction domain. It has been demonstrated that becoming a father for the first time is associated with finding new fatherhood identity and its associated challenges, which can lead to negative feelings, fears, and increased levels of stress. These challenges have already been overcome in fathers who had other dependent children, thus increasing their level of knowledge and confidence. Interestingly, beliefs of fathers of foreign nationality were ranked higher than those of Swiss fathers. This difference might be related to several socio-economics and religious and cultural factors that were not explored in this study.

Limitations of this study include the small sample size and the fact that fathers needed to speak and understand French to participate, which creates a bias in sample representativeness. The lack of cut-offs in the scales used and the fact that they are recent and have not been used extensively in other studies limits our interpretation of the results. Factors such as socio-economic status and cultural and religious orientations were not collected and explored in this study but might be of importance in the needs and beliefs of fathers as recently published. The results of a review of psychosocial interventions and support programs for fathers of NICU infants will also inform us on the way to tailor the response to fathers’ needs.

5. Conclusion

In this study, we show that knowledge of the NICU and characteristics and behaviours of the NICU child could be improved. More broadly, fathers would like to have more communication with healthcare professionals and more information during hospitalisation and also at discharge. The physical environment could also be improved for more comfort and proximity with their child.

These elements should be improved and implemented into the clinics to better fathers’ experience in the NICU, reduce fathers’ distress, and improve their wellbeing. Interestingly, we noted that parents of foreign nationality had higher beliefs than Swiss fathers. Reasons for these differences should be explored in a future study.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CRediT authorship contribution statement

L.R. contributed to the conception and design of the work analysis or interpretation of data for the work, drafting of the article, and final approval of the version to be submitted and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. M.D.F. contributed to acquisition, analysis of data for the work, drafting of the article, and final approval of the version to be submitted and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. S.L. contributed to acquisition, analysis of data for the work, drafting of the article, and final approval of the version to be submitted and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Table 4

<table>
<thead>
<tr>
<th>Sociodemographics</th>
<th>n (%)</th>
<th>NICU-PBS, mean (SD)</th>
<th>p-value</th>
<th>NFNI, mean (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18–29 years</td>
<td>18 (26)</td>
<td>70.56 (10.99)</td>
<td>0.34</td>
<td>14.26 (5.18)</td>
</tr>
<tr>
<td></td>
<td>30 years and older</td>
<td>52 (74)</td>
<td>67.69 (10.05)</td>
<td></td>
<td>12.49 (4.77)</td>
</tr>
<tr>
<td>Nationality</td>
<td>Swiss</td>
<td>31 (44)</td>
<td>63.85 (9.80)</td>
<td></td>
<td>11.70 (4.84)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>39 (56)</td>
<td>71.86 (9.39)</td>
<td></td>
<td>13.92 (4.78)</td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>42 (60)</td>
<td>69.14 (10.67)</td>
<td></td>
<td>12.84 (5.19)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>28 (40)</td>
<td>67.37 (9.81)</td>
<td></td>
<td>13.09 (4.51)</td>
</tr>
<tr>
<td>Level of education</td>
<td>Primary education</td>
<td>21 (30)</td>
<td>71.47 (9.53)</td>
<td>0.12</td>
<td>14.17 (5.13)</td>
</tr>
<tr>
<td></td>
<td>Secondary education</td>
<td>49 (70)</td>
<td>67.07 (10.44)</td>
<td></td>
<td>12.41 (4.75)</td>
</tr>
<tr>
<td>Employment</td>
<td>Full-time</td>
<td>57 (81)</td>
<td>69.43 (10.04)</td>
<td></td>
<td>13.20 (4.76)</td>
</tr>
<tr>
<td></td>
<td>Part-time</td>
<td>13 (19)</td>
<td>64.42 (10.78)</td>
<td></td>
<td>11.78 (5.51)</td>
</tr>
<tr>
<td>Paternity leave</td>
<td>No</td>
<td>41 (58)</td>
<td>66.05 (9.68)</td>
<td></td>
<td>13.46 (5.43)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>29 (42)</td>
<td>72.68 (10.19)</td>
<td></td>
<td>12.42 (4.46)</td>
</tr>
<tr>
<td>Number of hospitalised newborns</td>
<td>One</td>
<td>64 (91)</td>
<td>68.07 (10.48)</td>
<td></td>
<td>13.06 (5.05)</td>
</tr>
<tr>
<td></td>
<td>Two or more</td>
<td>6 (9)</td>
<td>71.83 (8.30)</td>
<td></td>
<td>11.66 (2.86)</td>
</tr>
<tr>
<td>First-time father</td>
<td>Yes</td>
<td>40 (57)</td>
<td>66.06 (10.97)</td>
<td>0.028</td>
<td>13.38 (4.24)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>30 (43)</td>
<td>71.88 (8.27)</td>
<td></td>
<td>12.36 (5.69)</td>
</tr>
<tr>
<td>Had already had a child hospitalised in the NICU</td>
<td>No</td>
<td>63 (90)</td>
<td>68.35 (10.40)</td>
<td>0.83</td>
<td>13.13 (4.83)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>7 (10)</td>
<td>69.33 (10.07)</td>
<td></td>
<td>11.27 (5.65)</td>
</tr>
<tr>
<td>Perception of the seriousness of the situation</td>
<td>Stable</td>
<td>40 (57)</td>
<td>69.23 (9.97)</td>
<td>0.49</td>
<td>12.88 (4.96)</td>
</tr>
<tr>
<td></td>
<td>Instable</td>
<td>30 (43)</td>
<td>67.38 (10.82)</td>
<td></td>
<td>13.02 (4.90)</td>
</tr>
</tbody>
</table>

NICU, Neonatal Intensive Care Unit; NFNI, NICU Family Needs Inventory; NICU-PBS, NICU Parental Beliefs Scale; SD, standard deviation.
The bold values are highlights the p-value < 0.05.
approval of the version to be submitted and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. A.-S.R. contributed to the conception or design of the work and revising it critically for important intellectual content and final approval of the version to be submitted and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

The authors have no conflicts of interest to declare.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.aucc.2021.02.012.

References

[40] https://doi.org/10.1097/ANC.0000000000000767. PMID: 32769372.