

Marina Aguiar Pires Guimarães, Claudia Regina Lindgren Alves, Ana Amélia Cardoso, Márcia Gomes Penido, Livia de Castro Magalhães (2017) [Clinical application of the Newborn Behavioral Observation \(NBO\) System to characterize the behavioral pattern of newborns at biological and social risk.](#)

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Abstract

Objectives: To compare the behavior of preterm newborns (PTNs) and full-term newborns (FTNs) using the Newborn Behavioral Observation (NBO) and to evaluate the mothers' experience when participating in this observation.

Method: This was a cross-sectional study performed at a referral hospital for high-risk births, involving mothers and neonates before hospital discharge. The mothers answered the socio-demographic questionnaire, participated in the NBO session, and evaluated the experience by answering the parents' questionnaire at the end. The characteristics of the PTN and FTN groups and the autonomic, motor, organization of states, and responsiveness (AMOR) scores were compared. Linear regression was performed to test the association of the characteristics of mothers and neonates with the scores in the AMOR domains.

Results: The NBO was performed with 170 newborns (eight twins and 77% PTNs). Approximately 15% of the mothers were adolescents and had nine years of schooling, on average. The groups differed regarding weight for gestational age, age at observation, APGAR score, feeding, and primiparity. The linear regression adjusted for these variables showed that only prematurity remained associated with differences in the scores of the motor ($p = 0.002$) and responsiveness ($p = 0.02$) domains. No statistical difference was observed between the groups in the score attributed to one's own knowledge prior to the session ($p = 0.10$). After the session, these means increased in both groups. This increase was significantly higher in the PTN group ($p = 0.02$).

Conclusions: The NBO increased the mothers' knowledge about the behavior of their children, especially in mothers of PTNs, and identified differences in the behavior of PTNs and FTNs regarding the motor and responsiveness domains.
