

What is hindering research on psychological aspects of fathers of premature infants?

Dear Editor,

Most research projects and current support programs in the area of infant prematurity have concentrated mainly or exclusively on infants and mothers. The few studies which have also focused their investigations on fathers have all recognized the crucial role played by fathers, both in supporting their partners and in the infant's psychological development,¹⁻⁷ and suggest the need to consider the emotional state and behavior of *both* parents in relation to the wellbeing of infant and partner.^{8,9} We must, therefore, ask the question, why are there so few studies of this kind?

Our investigation^{10,11} of the literature has allowed

us to identify the three factors which constitute most, if not all, of the reasons.

1. Insufficient recognition of the problem: even where the term "parents" is used in the titles and abstracts of articles on prematurity, the participants are often exclusively, or almost exclusively, mothers.

2. The relative invisibility of the fathers' emotional difficulties and their need to be supported, because the symptoms of emotional discomfort in new fathers are different from, and less easily observable than, those of the mothers.^{12,13} Fathers of premature infants are constantly preoccupied with the management of their own feelings, in an attempt not to be a burden to their partner,¹⁴ and to reconcile their own emotional state with what they feel is expected of them by others.¹⁵ For this reason, the emotional state of the father often manifests itself outside of the neonatal intensive care unit (NICU).¹⁶ Furthermore, their anxieties and depressive disorders show up at a later stage than those of mothers.¹⁷

3. Methodological limits in those studies that do focus on the fathers of preterm babies: these limits indicate difficulties in recruiting and engaging fathers, and they inevitably influence the validity of the results. This leads, for instance, to underestimations of the fathers' emotional distress.

3.1. Several qualitative studies conducted through interviews have focused on both mothers and fathers, but whereas the number of mothers interviewed was almost always sufficient for acquiring reliable data, the number of fathers interviewed was almost always too few, often less than ten.¹⁸

3.2. Most of the quantitative studies have used self-report tools, which do not take into consideration gender and culture differences, with possible negative consequences for the validity of the results. Support for this type of criticism comes from a series of studies that were conducted to validate the Edinburgh Postnatal Depression Scale (EPDS) on fathers: four of the five studies conducted to date have identified cut-off points for fathers which are substantially lower than those for mothers.¹⁹⁻²² These studies indicate another aspect which should not be overlooked: the cultural one.²³ Societies in Western Europe and North America are multi-ethnic, and premature births to parents with cultural backgrounds very different from the host culture are increasing quick. This has important implications both for the detection and evaluation of the emotional state of fathers (and mothers) from diverse cultures, and for the types of intervention programs that could be helpful for them.²⁴ With regard to the use of self-report questionnaires, various authors have recognized the need for a follow-up clinical interview to complement the questionnaires. According to the author of the EPDS: "a cut-off can only indicate the likelihood of clinical depression, not its severity or duration. A clinical interview is therefore necessary to determine the nature of the association of paternal depression with infant behavior and the quality of the parental relationship".²⁵ Furthermore in view of the

© 2016 EDIZIONI MINERVA MEDICA
Online version at <http://www.minervamedica.it>
Minerva Pediatrica 2018 April;70(2):204-6
DOI: 10.23736/S0026-4946.16.04618-1

possible problems of reliability and validity in the evaluation,²⁶ they indicate the need for clinical interviews (note the plural) conducted by trained and certified clinical researchers.

3.3. Extremely little direct observation has been reported of the behavior of fathers in the NICU, or of their interactions with the preterm infant, whether in the NICU or in the months/years following the infant's discharge. This is a significant limitation, because observation makes it possible to see aspects of the father-infant relationship which could not emerge from questionnaires or interviews, most importantly the real-time dynamics of father-infant interaction, which must not be overlooked when considering the preterm infant behavior *per se*. Focusing attention on these relational dynamics, using video microanalysis (*i.e.*, a frame-by-frame observational technique which enables to see the moment-to-moment communication between partners, and to obtain measures of the process of dyadic co-regulation)²⁷⁻²⁹ and a theoretically oriented perspective, would also, crucially, allow us to detect and monitor indices of possible risk for the parents' emotional health, the quality of attachment, and the child's emotional, behavioral and cognitive development.

The reasons outlined in points 2 and 3 have led to an underestimation of the fathers' distress levels (anxiety, stress and depression) and, more generally, have limited our knowledge of how the fathers' internal world re-organizes itself when faced with a premature birth. Meanwhile, the reason described in the first point has functioned as a smokescreen obscuring — at least partially — the need to identify the connections if any between, on the one hand, the emotional state of fathers in the perinatal period and during the child's first year of life and, on the other hand, a range of other factors. These factors include the quality of the couple's relationship, the support given to the mother-infant relationship, the interaction between father and infant and the infant's attachment to the father. Removing the smokescreen will also allow us to examine the connections between these relationships and the emotional, behavioral and cognitive development of the premature infant.

Being aware of these limitations — not, at first glance, entirely obvious — is the first step towards overcoming them and advancing scientific research.

Alberto STEFANA *, Manuela LAVELLI

Department of Human Sciences,
University of Verona, Verona, Italy

*Corresponding author: Alberto Stefana, Via Fratelli Bandiera 10, 25122 Brescia, Italy. E-mail: alberto.stefana@email.it

References

1. Yogman M, Kindlon D, Earls F. Father involvement and cognitive/behavioral outcomes of preterm infants. *J Am Acad Child Adolesc Psychiatry* 1995;34:58-66.
2. Levy-Shiff R, Hoffman M, Mogilner S, Levinger S, Mogilner M. Fathers' hospital visits to their preterm infants as a predictor of father-infant relationship and infant development. *Pediatrics* 1990;86:289-93.
3. Ramchandani PG, Domoney J, Sethna V, Psychogiou L, Vlachos H, Murray L. Do early father-infant interactions predict the onset of externalising behaviours in young children? Findings from a longitudinal cohort study. *J Child Psychol Psychiatry Allied Discip* 2013;54:56-64.
4. Ramchandani PG, O'Connor TG, Evans J, Heron J, Murray L, Stein A. The effects of pre- and postnatal depression in fathers: a natural experiment comparing the effects of exposure to depression on offspring. *J Child Psychol Psychiatry* 2008;49:1069-78.
5. Ramchandani PG, Stein A, O'Connor TG, Heron J, Murray L, Evans J. Depression in men in the postnatal period and later child psychopathology: a population cohort study. *J Am Acad Child Adolesc Psychiatry* 2008;47:390-8.
6. Huhtala M, Korja R, Lehtonen L, Haataja L, Lapinleimu H, Munck P, *et al*. Parental psychological well-being and cognitive development of very low birth weight infants at 2 years. *Acta Paediatr* 2011;100:1555-60.
7. Huhtala M, Korja R, Lehtonen L, Haataja L, Lapinleimu H, Rautava P, *et al*. Associations between parental psychological well-being and socio-emotional development in 5-year-old preterm children. *Early Hum Dev* 2014;90:119-24.
8. Zekowitz P, Bardin C, Papageorgiou A. Anxiety affects the relationship between parents and their very low birth weight infants. *Infant Ment Health J* 2007;28:296-313.
9. Gutierrez-Galve L, Stein A, Hanington L, Heron J, Ramchandani P. Paternal Depression in the Postnatal Period and Child Development: Mediators and Moderators. *Pediatrics*. 2015;135:e339-e347.
10. Stefana A, Lavelli M. I padri dei bambini nati pretermine: una risorsa su cui investire. *Psicologia Clinica dello Sviluppo* 2016;2.
11. Stefana A, Lavelli M. Parental engagement and early interactions with preterm infants during the stay in the neonatal intensive care unit: protocol of a mixed-method and longitudinal study. *BMJ Open* 2017;7:e013824.
12. Baldoni F, Facondini E, Romeo N, Minghetti M, Landini A, Crittenden P. Attachment relationships and psychosomatic development of the child in families with a preterm baby. A study in DMM perspective. In: 2nd Biennial Conference of the International Association for the Study of Attachment (IASA). St. John's College, Cambridge, UK; 2010 August 29-31.
13. Stefana A. La Terapia Intensiva Neonatale, uno spazio per i padri? *Psicologia Clinica dello Sviluppo* 2016;20:485-91.
14. Tracey N. Parents of premature infants. Their emotional world. London: Wiley and Sons; 2000.
15. Hugill K, Letherby G, Reid T, Lavender T. Experiences of Fathers Shortly After the Birth of Their Preterm Infants. *JOGNN - J Obstet Gynecol Neonatal Nurs* 2013;42:655-63.
16. Lundqvist P, Westas L, Hallström I. From distance toward proximity: fathers lived experience of caring for their preterm infants. *J Pediatr Nurs* 2007;22:490-7.
17. Shaw RJ, Bernard RS, Deblois T, Ikuta LM, Ginzburg K, Koopman C. The relationship between acute stress disorder and posttraumatic stress disorder in the neonatal intensive care unit. *Psychosomatics* 2009;50:131-7.
18. Provenzi L, Santoro E. The lived experience of fathers of preterm infants in the Neonatal Intensive Care Unit: a systematic review of qualitative studies. *J Clin Nurs* 2015;1784-94.
19. Massoudi P, Hwang CP, Wickberg B. How well does the Edinburgh Postnatal Depression Scale identify depression and anxiety in fathers? A validation study in a population based Swedish sample. *J Affect Disord* 2013;149:67-74.
20. Matthey S, Barnett B, Kavanagh DJ, Howie P. Validation

- of the Edinburgh Postnatal Depression Scale for men, and comparison of item endorsement with their partners. *J Affect Disord* 2001;64:175-84.
21. Edmondson OJH, Psychogiou L, Vlachos H, Netsi E, Ramchandani PG. Depression in fathers in the postnatal period: assessment of the Edinburgh Postnatal Depression Scale as a screening measure. *J Affect Disord* 2010;125:365-8.
 22. Tran TD, Tran T, Fisher J. Validation of three psychometric instruments for screening for perinatal common mental disorders in men in the north of Vietnam. *J Affect Disord* 2012;136:104-9.
 23. Shwalb D, Shwalb B, Lamb M. *Fathers in Cultural Context*. New York: Routledge; 2013.
 24. Stefana A. Mourning the death of a foreign child. *Ind J Pediatr* 2017;84:245.
 25. Cox J. Postnatal depression in fathers. *Lancet* 2005;366:982.
 26. Freedman R, Lewis D, Michels R, Pine DS, Schultz SK, Tamminga CA, *et al*. The initial field trials of DSM-5: new blooms and old thorns. *Am J Psychiatry* 2013;170:1-5.
 27. Beebe B. My journey in infant research and psychoanalysis: Microanalysis, a social microscope. *Psychoanal Psychol* 2014;31:4-25.
 28. Cohn JF, Tronick EZ. Mother-infant face-to-face interaction: influence is bidirectional and unrelated to periodic cycles in either partner's behavior. *Develop Psychol* 1988;24:386-92.
 29. Lavelli M, Fogel A. Interdyad differences in early mother-infant face-to-face communication: real-time dynamics and developmental pathways. *Dev Psychol* 2013;49:2257-71.

Conflicts of interest.—The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

Manuscript accepted: October 12, 2016. - Manuscript revised: September 9, 2016. - Manuscript received: April 5, 2016.

(Cite this article as: Stefana A, Lavelli M. What is hindering research on psychological aspects of fathers of premature infants? *Minerva Pediatr* 2018;70:204-6. DOI: 10.23736/S0026-4946.16.04618-1)