Fathers’ relations with their infants
A Danish Research Program
Copenhagen University Hospital, Rigshospitalet

Fathers’ relations with their infants are investigated in an extensive research program carried out by the Copenhagen University Hospital, Rigshospitalet and several partner institutions, including the Institute of Psychology at the University of Copenhagen. The main objective is to elucidate the parental and attachment processes of men becoming fathers and the nature and occurrence of possible difficulties in early fatherhood.

The research program consists of a main study and several sub-studies. A research team of many researchers from different areas, however mostly psychologists, are participating in the different studies. The research program and the main study was planned to be conducted in a five-year period lasting to the end of 2001. Since then new research projects have emerged and the program is still running and new projects conducted.

The Danish Research Council, The Danish Ministry of Health, The EU-Commission, The Danish National Board of Health and several other institutions and private companies as well as the participating institutions financially support the research program.

Background

In public life as well as in the world of science the interest in fatherhood has been growing in the last decades. Issues such as custody, paternal leave, the importance of early close relations between fathers and their infants, the consequences of absent fathers, services for fathers, psychological problems related with fatherhood, gender equality etc, have been studied and discussed.

Today a vast majority of fathers in many European countries as well as in USA, Australia, and Canada attend the deliveries of their children (in Denmark our research shows that app. 95% fathers attend the delivery of their child). More and more men (especially in the Nordic countries) take parental leave (although they are still few in comparison with women), and men’s engagement in child nurturing is increasing year by year. This reflects a tremendous development starting in the early 1970’s. However it seems that fathers in health and social areas are not always met with professional skills and services appropriate to their experience and concerns. The care and information is often not appropriate for men. There is a lack of investment and research in fatherhood sensitive health and psychology and there is a need to develop a better understanding of men’s attitudes to parenthood and the changes taking place these years.

While the psychological processes in motherhood and early mother-infant relations have been widely described in both theory and research - i.e. by the senior researchers of this research program - many questions about the fathers’ relations with their infants are still unanswered. While there are some positive although slow changes under way, not least in the Nordic countries, in public services to fathers, one phenomenon still seems to be nearly totally ignored: That is comprehension of the psychological impact on men on being a parent, becoming attached, and getting into close relationships with their infants. In public comprehension as well as in institutional services and research it is acknowledged that all women go through deep psychological transformations during pregnancy, childbirth, and the first months with
the newborn. It is also acknowledged that women can develop mood disorders during this transition to parenthood. The existence of similar deep psychological transformations and the occurrence of mood disorders during men’s transition to fatherhood have still to be uncovered.

**The Research Program:**
The aims of the present fatherhood research program are
- To obtain knowledge of the psychology of men becoming fathers
- To delineate the psychological processes of fathers’ relating to their infants
- To develop services appropriate for men becoming fathers

**Main Studies:**
- Fathers’ attachment with their infants
- Mood Disorders in Men Becoming Fathers
- Psychotherapy with men with parental depressions

**Sub-studies:**
- Fathers and Delivery
- Fathers and Pre-natal Courses
- Grandfathers’ Relations with their Sons Becoming Fathers
- Fathers’ ability to reflect their infants’ states of mind
- Fathers’ models of infant caregiving
- Fathers and Biological Fatherhood / Attitudes Towards Donor Insemination

**Designs and Participants in the Program:**
- Interviews with 72 fathers before and after the birth of the child - about expectations to and experiences with the infant and fatherhood
- Questionnaires from 250 fathers about expectations to and experiences with attending delivery
- Registration of the fathers’ presence at 700 deliveries
- Interviews with 10 mothers
- Interviews with 10 midwives
- Questionnaires from 200 fathers about being the biological father
- Questionnaires from 600 fathers about mood disorders
- Psychotherapy with 400 fathers (still accumulating)
- Questionnaires from 210 men undergoing ICSI treatment in three Danish public fertility clinics
- Screening of 3,000 new-born fathers by home nurses in 26 municipalities in 1st to 3rd month post partum
- Screening of 600 fathers to be by GPs in 24th gestation week.
- Analysis of treatment of 47 fathers to be/new-born fathers with perinatal depression.

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Summary reports of some projects:

Fathers’ Attachment with their Infants
The objective of the main study, Fathers’ Bonds to Their Infants, is to elucidate fathers’ subjective experiences of infant-fatherhood, to analyse the process of bonding from fathers to infants, and thereby to contribute to the theory building on fathers and attachment.

Sample and procedures:
42 randomly selected expectant fathers from the pre-birth ward at the University Hospital of Copenhagen were interviewed three times in two-hour long open-ended interviews. The first interview was conducted 3 months before the birth of the child, the second and third interview were conducted two weeks and five months after the birth of the child.

The results from the interviews were analysed together with transcripts of psychotherapy with 30 fathers who had psychological disturbances about the time of the birth of their infants. These 30 fathers who were treated in psychotherapy were recruited to the study by the departments at the University Hospital, from community health-nurses, and a few fathers made direct contact to the program.

Measures:
The following representations were derived and analysed from the interviews:
- The father’s representations of himself as a father
- The father’s representations of caregiving from his own childhood (from both his father and his mother)
- The development of the father’s representations of the infant before and after birth of the child
The father’s representations of the infant, measured as the father’s capability to recognize and respond to his infant’s feelings, and needs, as shown in the interview.

Summary of results:
The results from the interviews show a strong correspondence between

- The father’s representations of his mother as a caregiver and his capability to recognize and respond to his infant’s feelings and needs
- The father’s representation of his mother as a caregiver and the representations of himself as a father

There are significant relations (p< 0.001) between:
- Fathers having a model of caregiving from their parents characterised by proximity, compassion, and identification
- Fathers expressing a relational fatherhood
- Fathers being able to reflect their infant’s states of mind

The same correspondence is not found between the father’s representations of the infant and of his own father as a caregiver.

- The father’s representations of his infant seem to change through actual interactions and experiences with his infant: Most of the fathers’ representations of the child before the birth are representations of a pre-school child, who is capable of verbal contact and ball-playing. The representations change for almost all the fathers after the birth to representations of the actual infant. A small group of fathers’ representations do not change - they remain representations of the child as a pre-schooler. This group of fathers shows difficulties in recognising and responding to their infant’s feelings and needs.

These results underline the importance of focusing on the father’s representations of his mother as a caregiver in understanding the bonding process between fathers and their infants. It also stresses the importance of early interactions between father and newborn to establish the development of the father-infant-relationship in the father-bonding perspective.

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Fathers and Delivery

The sub-study on fathers and delivery was conducted in Denmark in 1998-99. Research results from this study are presented in summary below:

The expectations, thoughts, wishes, fears and actual experiences of the fathers as well as the midwives’ experiences of fathers attending the delivery process were investigated.

Methods and participants:
Consecutive registration in a three-month period (2,800 deliveries a year) of the fathers’ presence at delivery. In all 165 fathers completed questionnaires in the 38\textsuperscript{th} week of the women’s pregnancy and again following the delivery. A semi-structured interview was given to 23 fathers before and after the delivery. A fifth of the midwives randomly selected were given a semi-structured interview.

Results:
The fathers were present in 88.1% of all deliveries (n=698). The reasons for not participating seem related to either an upbringing in a Third World country (6%), special circumstances at the delivery, or the woman being single (3%). Subtraction of these aspects leads to a father participation rate of 97%.

The fathers stated that they wanted to be present for their own sake and not only to support their partners, and that they were satisfied to have been there (98%), and felt that they had played an important role.

75% of the fathers participated in pre-natal courses and 88% of the fathers participated in prophylactic consultations. Almost all of them found it beneficial. Two-thirds felt personally welcome, but 54% did not feel directly invited and 40% did not experience that the midwives directly addressed them during the consultations.

Discussion:
Our findings thus show a strong involvement from the fathers during pregnancy and delivery. At the same time our findings point to an apparent discrepancy between the attitudes of the official health authorities (The Danish Health Board) and the families, concerning the father’s role and the importance of his participation in the birth of his child.

The official health authorities hardly mention the father in their publications and general directives. Likewise, the traditional hospital routines do not allow the father to stay at the hospital overnight after delivery with the mother and their newborn infant in contrast to the wish of the fathers and their wives. Such a policy indirectly supports the view of the fathers’ presence as being of little importance, ignoring the involvement of the fathers, which is clearly shown in our study.

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Mood Disorders in Men Becoming Fathers
Fathers and Postnatal Depression:
Men’s Psychological Transition into Fatherhood

Overall Findings:
The study, which involved 600 men, indicates that around 7 percent of fathers suffer from postnatal depression.

This is the equivalent of around 225-250 fathers of babies born at Rigshospitalet who are suffering from postnatal depression on a yearly basis. Around 3,400 births take place at Rigshospitalet annually.

The current annual no. of births in Denmark is around 65,000. Hence on a national level the numbers indicate that roughly 4-4,500 fathers suffer from postnatal depression.

About the study:
The study used two different scales to detect depression: 1) the ‘Edinburgh Postnatal Depression Scale’ (EPDS), traditionally used to screen for postnatal depression, and 2) the ‘Gotland Male Depression Scale’ (GMDS), normally used to assess so-called masculine states of depression.

The two scales list the following conditions as possible indicators of depression:
## EPDS (‘Traditional’ depression) vs. Gotlandskala (‘Male’ depression)

<table>
<thead>
<tr>
<th>EPDS (‘Traditional’ depression)</th>
<th>Gotlandskala (‘Male’ depression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unable to laugh or be humorous</td>
<td>• Lowered stress tolerance/feeling more stressed</td>
</tr>
<tr>
<td>• Unable to look forward to things</td>
<td>• Feeling aggressive/outward-reacting/low impulse control</td>
</tr>
<tr>
<td>• Blaming myself unnecessarily when things go wrong</td>
<td>• Feeling burned out and empty</td>
</tr>
<tr>
<td>• Feeling anxious or worried for no good reason</td>
<td>• Inexplicable fatigue</td>
</tr>
<tr>
<td>• Feeling scared or panicky for no good reason</td>
<td>• Feeling irritable, restless and frustrated</td>
</tr>
<tr>
<td>• Things get on top of me</td>
<td>• Difficulty making everyday decisions</td>
</tr>
<tr>
<td>• Have been so unhappy that I have had difficulty sleeping</td>
<td>• Sleeping too much/too little/sleeping fitfully</td>
</tr>
<tr>
<td>• Feeling sad or miserable</td>
<td>• Difficulty falling asleep/early waking</td>
</tr>
<tr>
<td>• Feeling so unhappy that I have been crying</td>
<td>• Feeling agitated/anxious/uncomfortable</td>
</tr>
<tr>
<td>• The thought of harming myself has occurred to me</td>
<td>• Excessive use of pills and/or alcohol</td>
</tr>
<tr>
<td>• Feeling anxious or worried for no good reason</td>
<td>• Excessive activity/working hard, incessantly/ jogging etc.</td>
</tr>
<tr>
<td>• Feeling burnt out and empty</td>
<td>• Altered behaviour makes me difficult to be around</td>
</tr>
<tr>
<td>• Feeling sad or miserable</td>
<td>• Feeling that you perceive yourself/others perceive you as gloomy, negative</td>
</tr>
<tr>
<td>• Feeling burnt out and empty</td>
<td>• Feeling that you perceive yourself/others perceive you as moaning, self-pitying</td>
</tr>
<tr>
<td>• Feeling so unhappy that I have been crying</td>
<td></td>
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The 600 men who participated in the study were recruited through antenatal classes and midwife consultations at Rigshospitalet. The response rate among the men who received the questionnaire was 91%.

The study was carried out from February to December of 2005 and included 600 fathers whose child was born at Rigshospitalet. The men’s condition was assessed by asking them to fill out a questionnaire roughly 6 weeks after the birth of their child.

Up to this point the Fædreforskningstræning programme - at Rigshospitalet has received about 70 fathers for psychotherapeutic treatment for postnatal depression. In the course of this work it has become apparent that postnatal depressions may arise both before the birth and for a significant period afterwards.

The project receives funding from the EU-Commission under ‘Community Framework Strategy on Gender Equality 2001–2005’. The Project has been carried out by a research group consisting of Chief Psychologist Svend Aage Madsen, Ph.D., Psychologist Tina Juhl and Midwife Ann Louise Vestergaard – all members of Rigshospitalet’s Psychological and Psychosocial Research Unit.

### Further Details:

When we used the questionnaire traditionally used to identify postnatal depression in women – EPDS – it was estimated that 5,0 % of men examined suffer from postnatal depression. Using a specific scale for ‘Male depression’ – the Gotland Scale – an estimated 3,4 % of men were found to be suffering from postnatal depression.

Making use of both scales the results show roughly 7% of fathers to be suffering from postnatal depression (the fathers who register as depressive according to both scales are counted only once). The number includes both first-time fathers and some who have previously had children.

The numbers show the following distribution amongst the 544 fathers who responded:

<table>
<thead>
<tr>
<th>EPDS ('Traditional' depression)</th>
<th>Gotlandskala ('Male' depression)</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 (5,0%(^1))</td>
<td>18 (3,4%(^2))</td>
</tr>
<tr>
<td><strong>Postnatal Depression including EPDS + Gotland</strong></td>
<td><strong>34 (6,5%(^3))</strong></td>
</tr>
</tbody>
</table>

Valid answers: \(^1\)537, \(^2\)524, \(^3\)520

In comparison, international research shows that 10% of women suffer from postnatal depression as registered by the EPDS about 6 weeks after the birth.

Comparing postnatal depression with other forms of depression, recent Danish research shows that 3,5% of 20 to 50-year-old men suffer from depression of mod-
erate to medium severity at any given time. Twice as many women as men are di-
agnosed as suffering from some from of depression.

There are a number of indicators that men’s psychiatric problems are generally
under-diagnosed and that they hence receive insufficient treatment in this area.

Perspectives:
The fact that men do suffer from postnatal depression was demonstrated from the
results of the research project ‘Fathers’ Bonding with their Infants’ (2) and was first
publicly announced in Denmark in 2002. Since then work has been going on at
Rigshospitalet to investigate this phenomenon, including i.a. psychological treatment
of men suffering from this condition.

The current survey indicates the necessity of training health-care staff -who
come into contact with families during pregnancy, birth and infancy - to also be
aware of the psychological state of fathers and to identify those suffering from post-
natal depression.

Furthermore the method utilized here to identify postnatal depression in men
will also be useful in developing tools to improve general diagnosis of depression in
men.

It appears that for now Rigshospitalet is the only place in Denmark offering
specific treatment – and the therapy we have been able to offer here at Rigshospita-
let is underwritten by EU project-funds for a limited period of time only. Thus the
survey also implies a need to procure treatment for the roughly 4-4.500 men a year
who are estimated to suffer from this condition nationwide.

This finally indicates a need for training treatment providers for men suffering
from postnatal depression.

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Psychological aspects of male infertility in a Scandinavian
ICSI population


Introduction:
The interest in male reproduction and psychological reactions related to ART has in-
creased during recent years, coinciding with the use of intracytoplasmic sperm injec-
tion (ICSI). Previous studies have shown that male infertility may cause a loss of
self-esteem and impaired gender identity. Moreover, male patients are inclined to
ignore their own needs in order to show consideration for the partner, as focus will
invariably be on the female partner. The aim of this study was to document the ex-
periences of infertile Danish men as individuals, partners and patients, respectively,
when ICSI treatment was the only possible way to establish fatherhood. Further-
more, to identify the possible need for additional psychological communicative sup-
port of the infertile man in the care process.

Materials and methods:
A self-report questionnaire with structured and open-ended questions was completed by 210 men, undergoing ICSI treatment in three Danish public fertility clinics. The questionnaire consisted of 69 questions in total, including three issues: individual perception of reduced sperm quality, marital consequences and communication with health professionals in the clinic. All questionnaires were completed in private in the clinic, while the female partner rested after the oocyte retrieval.

Results:
Among the 210 participants, 95.7% found fatherhood to be important, and the need for ICSI was not important for the perception of fatherhood. 41% claimed that the need for fertility treatment did not negatively affect the relationship with their partner; on the contrary 51% found that it had strengthened the relationship. Interestingly, in 37% of the participants the reduced sperm quality affected their perception of masculinity. Participants were generally satisfied with the care, and only 21% expressed concerns about ICSI. However, 62% found that there was a need for a deeper dialogue with the staff concerning the experience regarding reduced sperm quality, and 72% lacked information regarding psychological consequences of male infertility in general. Participants wished health professionals to show openness in questions concerning reactions to infertility, infertility treatment and the role of the male partner.

Conclusions:
Infertile men wish to be met by health professionals on equal terms with their female partner. The ICSI procedure per se is of no importance for the perception of fatherhood. Interestingly, the reduced sperm quality affected one third of the participants negatively in the perception of their masculinity. Our data suggest that infertile Danish men are prepared to a greater degree of openness and information regarding male infertility and the relating psychological consequences.

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Psychotherapy with men with parental depressions
Up to now – end of 2015 – 300 men with parental depressions have been treated in our clinic.

<table>
<thead>
<tr>
<th>Time of referral</th>
<th>%</th>
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<tbody>
<tr>
<td>During pregnancy</td>
<td>25</td>
</tr>
<tr>
<td>Around delivery &amp; confinement (&lt; 1 month)</td>
<td>25</td>
</tr>
<tr>
<td>Infancy &gt; 1 month</td>
<td>50</td>
</tr>
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</table>
From the therapeutic work and with the background results from the Fædreforskningsprogrammet (Fatherhood Research Program) (Madsen, Lind & Munck 2002; Madsen 2009), we have found that the fathers are characterized by meeting up with the conditions, issues and reactions listed below:

- Anger - the man’s extroverted, negative states of mind often find expression in aggression, sometimes against himself
- Withdrawal – often withdrawal from close relations is seen as a way to relieve pain
- Past and present relations with caregivers – the man often feels uncared for
- Relations with the his infant – often the aggressions are directed towards the child
- Relations with spouse – sometimes the aggressions are directed towards the wife
- Ambivalence between longing for closeness and attachment on the one hand and autonomy and detachment on the other
- Images of masculinity related with the infant’s need for care.

The method developed is called ‘Minding the parent-child-relationship’.

Treatment modalities:
A two-pronged psychotherapy working with
- the man's past and present relations with caregivers
- alternating with his relations with the infant

The treatment model is tested for effects on the men’s symptoms and og the father-child-attachment.

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Early detection at the GP’s of perinatal depression in mothers and fathers to be

Background
The Danish Board of Health states (2013): "The incidence of postpartum depression has been found to be about 10% in mothers up to 6 months after birth and about 6% in the fathers". Men and women’s pre- and postnatal depression may have impact on a child’s social-emotional development. There is a need to detect and treat the depression as early as possible to avoid negative effects on the child.

Objectives
The objectives of the project were to investigate whether
- perinatal depressions are detectable during pregnancy
- it is possible to identify fathers with perinatal depression,
- it is possible to conduct a screening at the GP's in the 24th week of pregnancy,
- the mothers and fathers to be, who score above the cut off, want to be offered psychotherapy. Finally, it was the aim to compare figures and symptom profiles from this study with results from screening of mothers and fathers 6 to 8 weeks after the birth of their child.
Finally, it was the aim to compare prevalence and symptoms of perinatal depression among parents to be with parents 6 to 8 weeks after the birth of their child.
Material/Methods

30 practitioners in the City of Copenhagen have in a 1½ year period screened 1,200 expectant mothers and fathers for perinatal depression in the women's 24th week of pregnancy. The screening instrument for both parents were a combination of the Edinburg Post-Natal Depression Scale (Cox et al., 2003) and the Gotland Scale of Male Depression (Rutz et al., 2002) with selected questions from The Masculine Depression Scale (Magovcevic et al., 2009) and the Father Attachment Interview (Lind et al., Unpublished manual)

All responders who scored above the cut off were referred to psychological treatment before the child's birth. At the same time, statistical data were collected for exploration of the occurrence of depression, symptom profiles and gender differences.

Results and Conclusion

In 1204 screenings in the 24th week of pregnancy a total of 9.8% scored above cut off, i.e. 11.1 % of women and 8.0 % of men. The project is unique internationally in examining whether it is possible in general practice to detect signs of postpartum depression during pregnancy and in screening fathers to be for perinatal depression. We conclude that it is possible to detect postpartum depression already during pregnancy. After completing analyses, it is expected to form a basis for introducing screening parents to be for perinatal depression in general practice.

Literature


Authors

Svend Aage Madsen, Birgitte Bibow, Anette Sonne Nielsen, Sarah Tranekær Rasmussen, Hans Christian Møller,
Index List: Prevention of mental problems, parenting, infants, postnatal depression

**Publications from the research program (selected):**


Madsen S.Aa. (2005). Male sensitive communication on illness, lifestyle, and being a parent in a hospital setting. World Congress on Men’s Health and Gender. 1st October, Vienna, Austria.


The Web-site: http://www.european-fatherhood.com/


