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1 **First-time fathers' experience of childbirth: a cross-sectional study**

2

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10

11

12 **Abstract**

13 **Objectives:** The purposes of this study are to report first-time fathers' experiences of childbirth
14 through three dimensions (professional support, worries and prenatal preparation) and to
15 analyse the influence of sociodemographic, antenatal and obstetrical factors on the three
16 dimensions.

17 **Setting:** Participants were recruited in France and Switzerland from two university hospitals
18 that routinely manage high-risk pregnancies (level 3 – perinatal care level), with 4,000 to 5,000
19 annual births each.

20 **Methods:** This is a secondary analysis of a cross-sectional study. The data initially were
21 collected for the cross-cultural validation of the First-Time Father Questionnaire (FTFQ) into
22 French. Descriptive statistics were used to report the participants' characteristics and their
23 questionnaire responses. Multivariate linear regression analysis was carried out to stress the
24 positive or negative factors linked with fathers' experiences of childbirth.

25 **Findings:** Among 350 first-time fathers, 160 completed the FTFQ (response rate of 45.7%).
26 The average age of the participants was 33 years old. We observed 12 questionnaire items with
27 more than 20% unfavourable responses, seven of which involved the measurement of the worry

28 dimension. Antenatal education and the prenatal-preparation dimension were positive factors
29 linked with fathers' experiences. In addition, 57% of participants reported using one means of
30 antenatal education, and 45% accessed information from family or friends.

31 **Conclusions and implications for practice:** The results suggest that first-time fathers need
32 more professional support to foster positive experiences of childbirth. Their experiences of
33 childbirth are associated with considerable worry. Antenatal classes specifically for fathers
34 could reduce this worry and support the fatherhood process. Research should be carried out on
35 these topics.

36 **Key words:** first-time fathers, worry, childbirth, fathers' experience, fatherhood

37 **Introduction**

38 Pregnancy and childbirth represent important adjustment periods within a family, and parents
39 experience this transition to parenthood as a major psychological disruption. (Deave &
40 Johnson, 2008). Even if doing so was chosen and desired, becoming a father involves
41 significant life changes for a man (Goodman, 2005) and can affect their mental health, leading
42 to stress (Philpott et al., 2017), anxiety (Leach et al., 2016) or depression (Cameron et al., 2016;
43 Da Costa et al., 2017; Paulson & Bazemore, 2010). Professionals expect fathers to have active
44 roles during the prenatal, childbirth and postnatal periods, but fathers' own experiences of it
45 often are not considered. Fathers often say they feel useless, hopeless or anxious and that they
46 did not expect childbirth to be such a demanding period (for a review, see Genesoni &
47 Tallandini, 2009). Thus, considering fathers' experiences during childbirth is important.

48 While many studies have been conducted on women's experiences, few studies have considered
49 fathers' experiences of childbirth. Several studies have shown that the majority of fathers report
50 a positive experience of childbirth (Hildingsson et al., 2011; Margareta Johansson et al., 2012).
51 A Quebecer study investigated fathers' representations of how they experienced their child's
52 birth (de Montigny et al., 2015). They had either a positive or a traumatic experience. Positive
53 experiences were defined by having realistic and flexible expectations, being able to participate
54 actively, experiencing well-being emotions and being supported by competent healthcare
55 professionals. However, traumatic experiences were characterised by having unrealistic and
56 rigid expectations, experiencing distressing emotions and being looked after by professionals
57 who limited fathers' active participation . In another study conducted to observe fathers' and
58 mothers' birth experiences (Chan & Paterson-Brown, 2002), most of the fathers reported a
59 positive experience and indicated that their partners underestimated this positive experience.
60 Moreover, the mothers evaluated their partners as being more helpful than the fathers had felt.

61 Finally, both mothers and fathers reported that their relationship improved as a result of their
62 shared birth experience .

63 The evaluation of fathers' experiences of childbirth differs greatly by study. In some studies,
64 participants were asked to answer questions about their birth experiences on a Likert scale
65 ranging from very positive to very negative (Hildingsson et al., 2011). We found two
66 questionnaires specifically developed to assess fathers' experiences of childbirth that were
67 validated for their psychometric properties: the Kuopio Instrument for Fathers (KIF;
68 Vehviläinen-Julkunen & Liukkonen, 1998) and the First-Time Father Questionnaire (FTFQ;
69 Premberg, Taft, Hellström, & Berg, 2012).

70 The KIF evaluates the feelings of discomfort, pleasure and pride related to staff members as
71 well as feelings related to the maternity environment (Vehviläinen-Julkunen & Liukkonen,
72 1998). Fathers were invited to fill out the questionnaire during a period from immediately after
73 birth, in the delivery room, to before the mother and baby were discharged from hospital,
74 normally within three days. The midwives in charge of the births gave the questionnaire to the
75 young first-time fathers. These procedures could be discussed. According to previous studies,
76 the early postpartum period is not a good time to assess the experience of childbirth.
77 Waldenström et al. (2004) described this as a time when the halo effect (secondary euphoria or
78 traumatic denial) skews responses. In addition, the fact that the midwife in charge of the
79 delivery gave the questionnaire in person could have generated social-desirability bias in the
80 responses. Finally, this questionnaire was validated on a population of "young fathers" and
81 "first-time fathers". It seems like a delicate task to decide how old a man has to be to be
82 considered a young father. Sociologically, men and women become parents later in high-
83 income countries. Thus, the impact of being a first-time father seems to be the most relevant
84 variable.

85 The FTFQ measures worry, information, emotional support and acceptance (Premberg et al.,
86 2012). It is intended to be completed one month after childbirth, which seems to be a more
87 relevant time for assessing the experience of the childbirth among women (Green et al., 1990).
88 We hypothesised that men would be subjected to similar effects. In addition, fathers were
89 allowed to complete the FTFQ on their own, which avoids the social-desirability bias. Finally,
90 it is aimed at first-time fathers. This population is the correct target because they have been
91 described as being the most at risk of having bad experiences of birth. The FTFQ was written
92 in Swedish but has undergone cross-cultural adaptation into French (Capponi et al., 2016). For
93 the French version, 19 items were retained out of 22 for three dimensions of the four from the
94 questionnaire developed by Premberg et al. (2012): (1) professional support, (2) worry and (3)
95 prenatal preparation.

96 Among factors that can influence fathers' experiences of childbirth, the most important is the
97 mode of delivery. Indeed, fathers report experiences of childbirth that are more negative during
98 emergency caesarean sections or instrumented vaginal delivery than during physiological births
99 (Chan & Paterson-Brown, 2002; Margareta Johansson et al., 2012; Nystedt & Hildingsson,
100 2018). Dissatisfaction with the medical care provided to partners also affects the birth
101 experience (Margareta Johansson et al., 2012). Factors related to midwifery that influence birth
102 experiences positively include the support provided by the midwife, her continuous presence in
103 the delivery room and the information given about the progress of labour (Hildingsson et al.,
104 2011).

105 The purposes of this article are (1) to report on fathers' experiences of childbirth in terms of the
106 three dimensions (professional support, worries and prenatal preparation) of the French version
107 of the FTFQ and (2) to analyse factors that influence these variables.

108

109 **Method**

110 *Design*

111 This article is a secondary analysis of a cross-sectional study, and the objective was to analyse
112 fathers' responses from a clinical obstetrical point of view. The data initially were collected for
113 the cross-cultural validation of the FTFQ into French. However, during that transcultural
114 adaptation and its testing, the collected data were only used in a psychometric approach
115 (Capponi et al., 2016) and not analysed for their content.

116

117 *Sample*

118 The participants were first-time fathers who were present during their partners' stays in the
119 maternity units at University Hospitals of Geneva (HUG, Switzerland) or the Clermont-Ferrand
120 University Hospital (CFUH, France). These two university hospitals are in neighbouring border
121 regions of France and Switzerland and have a history of research collaboration. Both maternity
122 units routinely manage high-risk pregnancies (level 3 – perinatal care level), with 4,000 to 5,000
123 births per year each. Midwives are responsible for childbirths in these university hospitals. They
124 escalate to doctors on call when pathologies occur.

125 The inclusion criteria were as follows: father's first child was born from a single pregnancy,
126 without pathology, born at term (at greater than or equal to 37 weeks), not separated from their
127 mother for medical reasons during the postpartum period and spontaneous or instrumental
128 vaginal delivery or elective or emergency caesarean section. Fathers had to be over 18 years
129 old and be able to read and write in French.

130 In total, 350 fathers agreed to participate, of whom 160 completed the questionnaire a month
131 after their child's birth. Six of them did not meet the inclusion criteria, by not being fathers for
132 the first time, and were excluded from the study. In addition, three participants were excluded
133 from the study because they did not complete more than five items on the FTFQ. Thus, our
134 sample consisted of 151 participants: 121 at the HUG and 30 at the CFUH.

135

136 *Recruitment and data-collection procedures*

137 A research assistant at each hospital provided information about the present study to first-time
138 fathers by during the early post-partum period, when they came to visit the mother and baby
139 during their stay in the maternity units. The research assistants worked part-time for the study.
140 They gave information to fathers who were present and available to speak during their working
141 days. After checking the fathers' inclusion criteria, the research assistants provided information
142 and collected oral consent to participate. Depending on their communication preferences, the
143 participants received the FTFQ by email or mail one month after the birth, in accordance with
144 the deadline chosen by the authors of the original version of the questionnaire (Premberg et al.,
145 2012). Two reminders were sent, if necessary, up to six weeks post-partum. They could
146 withdraw from the study at any time. Participants who received the questionnaire by mail were
147 allowed to not send it back. Participants who received receiving the questionnaire by email had
148 the option to click on a link that would remove them immediately from the mailing list for this
149 study.

150 Most of the participants wished to complete the questionnaire online (96%). We used the Lime
151 Survey software package (<https://www.limesurvey.org>), which is an online survey program
152 commonly used for scientific research. The procedure lasted approximately seven months, from
153 July 2014 to February 2015.

154

155 *Measure*

156 The French version of the FTFQ (Capponi et al., 2016) includes 19 items grouped into three
157 dimensions: professional support (items 6– 9, 17, 18 and 20–22), worries (items 10–16 and 19)
158 and prenatal preparation (items 1 and 2). For each item, the participants were asked to mark
159 their level of agreement on a four-item Likert scale (quite, partly, not so much or not at all).
160 With these responses, an average score was calculated for each dimension, ranging between 1

161 and 4. Thus, three scores emerged: the first one reporting the degree of professional support
162 (the lower the score, the higher the support), the second reporting the level of worries (the higher
163 the score, the higher the worries) and the last one reporting the effectiveness of the prenatal
164 preparation (the lower the score, the better the prenatal preparation). Additional questions were
165 added to the FTFQ to allow for better interpretation of the fathers' responses. These variables
166 were related to the fathers' antenatal education, level of education, age and country of origin as
167 well as the professional pregnancy follow-up, mode of delivery, onset of labour and use of
168 epidural analgesia during labour.

169

170 *Statistical analyses*

171 The descriptive results are reported as percentages, and continuous data are reported as mean
172 (SD) for the demographic, prenatal and childbirth data. Responses according to the maternity
173 centre (University Hospitals of Geneva vs. Clermont-Ferrand university hospital) were
174 compared with t-tests for each item and each dimension of the FTFQ. Means and standard
175 deviations were reported for each of the dimensions. Multiple linear regression analyses were
176 conducted using a backward selection method to identify predictive factors related to the
177 fathers' experiences of childbirth. The influence of the additional variables listed above on the
178 three dimensions from the French version of the FTFQ was measured. For all of the analyses,
179 a p value of $< .05$ was considered significant. The statistical analyses were performed using
180 SPSS software (IBM Corp. Released 2017. SPSS Statistics for Windows, Version 25.0
181 Armonk, NY: IBM Corp.).

182

183 *Ethical considerations*

184 In accordance with the Swiss federal law on research on human beings (2014), the Geneva
185 Canton Ethics Commission president ruled that the protocol of our study was exempted from a
186 full review by the Ethics Commission because it carried low risk for the participants. This study

187 was also exempted from French institutional review approval according to the French law on
188 research on humans because it is not an interventional research study. Before November 2016,
189 the French law on biomedical research (Article L.1121-1-1 and Article R.1121-3 of the Public
190 Health Code) did not apply to this cross-sectional study. Standard data-coding procedures were
191 used to safeguard participants' confidentiality.

192

193 **Findings**

194 *Sample*

195 Our sample consisted of 151 participants aged 22 to 55 years old ($M = 33$, $SD = 5.10$). Most of
196 them had a university education (52.3%) and were born in Switzerland or France (69.7%). All
197 of the participants declared that they lived with their children's mothers and were present during
198 the childbirth to assist their partner. Almost all of them chose to receive the questionnaire by e-
199 mail (96%).

200

201 *Data related to the antenatal education and prenatal preparation dimensions*

202 Four types of antenatal education were offered to first-time fathers: antenatal classes (59.6% of
203 fathers), information given by family and friends (45% of fathers), personal research (27.2% of
204 fathers) and information found on the Internet (19.2%). Of the participants, 57% reported using
205 one type of antenatal education, 19.9% used two, 17.9% used three and 5.3% used four types,
206 while 20.5% reported not using any form of education.

207 In addition, for item 1 of the FTFQ concerning the prenatal preparation dimension, 59.6% of
208 the participants reported that they felt well prepared for the birth, 20.5% very well prepared,
209 17.9% felt somewhat unprepared and 2% did not feel well prepared at all. Regarding
210 professional pregnancy follow-ups, 62.3% of them were done by a doctor, and 33.1% were
211 done by a midwife. Finally, 9.3% of the participants reported having experienced a difficult

212 event during pregnancy (the death of a loved one, loss of a job, diagnosis of a serious illness in
213 themselves or the child's mother, powerlessness under medical orders, fear of a stillborn baby,
214 the mother's mood, amniocentesis or absence from home for personal reasons).

215

216 *Data related to childbirth*

217 Regarding the mode of delivery, 54.3% of the births were spontaneous vaginal deliveries,
218 20.5% were instrumental deliveries (vacuum or forceps), 4.6% were planned caesarean sections
219 and 20.5% were emergency caesarean sections. In addition, the onset of labour occurred
220 spontaneously in 53% of the cases, and 85.4% of women received epidural analgesia during
221 childbirth.

222 In addition, 53.3% of the fathers reported that the experience of childbirth matched their
223 imagined scenarios. Regarding the reasons for their participation in childbirth, 34.5% of fathers
224 reported that they attended the birth because they wanted to, 2.8% did so because their partners
225 asked them to and 62.8% did so both out of personal desire and at their partner's request. On a
226 scale from 0 (not at all useful) to 10 (extremely useful), the participants reported usefulness was
227 an average of 7.0 (SD = 2.49) during labour and 6.75 (SD = 2.94) during delivery. On a scale
228 from 0 (very poor) to 10 (very good), the fathers' experience of childbirth was an average of
229 8.03 (SD = 2.54).

230 When asked about their ideal birth, 40.7% of the participants reported that the ideal birth would
231 be a spontaneous labour, 28.6% a vaginal delivery, 21.4% a painless delivery, 7.1% a delivery
232 with the chosen professional, 1.4% an induced labour and 0.7% a planned caesarean delivery.
233 Notably, 94.5% of the fathers reported that they wanted to attend births during future
234 pregnancies.

235

236 *FTFQ responses*

237 With scores ranging between 1 and 4, the averages for all of the items ranged from 1.50 (item
 238 7) to 2.98 (item 18). The professional support dimension had a mean of 2.01 (SD = .53), as
 239 compared to 2.33 (SD = .72) for the worries dimension and 1.74 (SD = .64) for the prenatal
 240 preparation dimension.

241 Looking more closely at the responses given by the fathers to each item from a clinical
 242 perspective, we observed an important proportion of unfavourable responses (i.e. “somewhat
 243 true” or “not true at all” chosen for the normal items, and “partly true” or “completely true”
 244 chosen for the reversed items). Items with unfavourable responses were considered as such
 245 when the rate of these answers was above 20% (in bold in Table 1). Of the 12 items with
 246 unfavourable responses reported by fathers, seven belonged to the worries dimension, and five
 247 belonged to the professional support dimension (Table 1).

248

249 Table 1: Descriptive analysis of the unfavourable responses for all the items in the FTFQ

Items	N = 151 n (%)	Mean (SD)
Item 1: I felt well informed.	17 (11.3)	1.64 (.70)
Item 2: I felt well- prepared.	23 (15.2)	1.83 (.76)
Item 3: We were admitted to the maternity unit we had chosen.	10 (6.6)	*
Item 4: I felt welcome when I called the maternity unit.	2/62 answers	*
Item 5: I was treated well on arrival at the maternity unit.	5 (3.3)	*
Item 6: I felt I was given positive attention by the staff.	21 (13.9)	1.56 (.83)
Item 7: I was given enough information.	18 (11.9)	1.50 (.76)
Item 8: I was given guidance on how to support my wife/girlfriend.	37 (24.5)	1.86 (.97)
Item 9: There was some information I lacked.	55 (36.4)	2.89 (.96)

Item 10: There were situations I would rather not have gone through.	35 (23.2)	1.78 (1.01)
Item 11: I was worried about my wife/girlfriend.	101 (66.9)	2.84 (1.05)
Item 12: I was worried about the baby.	89 (58.9)	2.68 (1.09)
Item 13: I was worried that something would go wrong.	98 (64.9)	2.77 (1.03)
Item 14: I was worried that I wouldn't be able to provide support.	71 (47.0)	2.38 (1.08)
Item 15: I was worried about the unknown.	85 (56.3)	2.58 (1.05)
Item 16: I was worried about how I would react.	51 (33.8)	2.07 (.98)
Item 17: I felt that the midwives and other staff were interested in how I felt.	42 (27.8)	1.93 (.96)
Item 18: The staff offered to support my wife/girlfriend so that I could take a break.	101 (66.9)	2.98 (1.20)
Item 19: There were things that frightened me during childbirth.	24 (15.9)	1.56 (.90)
Item 20: I was hugged and comforted when I was upset.	29 (19.2)	1.80 (.97)
Item 21: I was shown how to hold the baby.	45 (29.8)	1.90 (1.09)
Item 22: I was encouraged to hold the baby.	29 (19.2)	1.62 (.97)

250 * These items are part of Premberg et al.'s FTFQ in Swedish. However, they were not validated
251 for the French version of the test; therefore, their means were not calculated.

252
253 Comparing the responses between the two hospitals, only one item was statistically different:
254 item 1, "I felt well informed", with somewhat true/not true at all representing 10/128 (7.8%)
255 for Switzerland and 8/32 (25%) for France, $p = 0.011$. In total, 12% reported an unfavourable
256 response for this item.

257
258 *Factors influencing fathers' experiences of childbirth*

259 Regarding the professional support dimension, the results show no correspondence between the
260 predictors and the dependant variable, $F(8,125) = 1.55, p = .15$. Table 2 below details the results
261 for all pf the predictors.

262

263 Table 2: Summary of the regression analyses for variables predicting professional support

264 (model 1)

Factors	B	SE	β	R²
Antenatal education	.12	.12	.09	
Mode of delivery	.10	.04	.23	
Level of education	.09	.06	.15	
Age	-.01	.01	-.13	
Origin	.05	.07	.07	.10
Professional pregnancy follow-up	.18	.11	.16	
Labour induction	.04	.10	.04	
Epidural analgesia during childbirth	-.20	.16	-.12	

265

266 The results for the worries dimension show no correspondence between the predictors and the
267 dependant variable, $F(8,125) = 1.4, p = .20$. Table 3 below shows the detailed results for all of
268 the predictors.

269

270 Table 3: Summary of the regression analyses for variables predicting worries (model 1)

Factors	B	SE	β
Antenatal education	.14	.16	.08
Mode of delivery	.09	.06	.15
Level of education	-.13	.08	-.15
Age	-.01	.01	-.10
Origin	-.13	.10	-.14
Professional pregnancy follow-up	-.28	.15	-.19
Labour induction	.06	.13	.04
Epidural analgesia during childbirth	.12	.21	.05

271

272 Regarding the prenatal-preparation dimension, the results show a significant correspondence
 273 between the predictors and the dependant variable, $F(5,131) = 2.35, p = .04$). As detailed in
 274 table 4 below, the results were significant for antenatal education, $t(126) = -2.16, p = .03$, and
 275 level of education, $t(126) = -2.06, p = .04$.

276

277 Table 4: Summary of the regression analyses for the variables predicting prenatal preparation
 278 (model 1)

Factors	B	SE	β	R ²
Antenatal education	-.30	.14	-.19	.09
Level of education	-.15	.07	-.19	
Age	.004	.01	.03	
Origin	-.13	.08	-.15	
Professional pregnancy follow-up	.03	.12	.02	

279

280

281 Discussion

282 Numerous studies have focused on mothers' experiences of childbirth, without taking into
 283 account the fathers' experiences. The aim of the present article is to close these gaps in the
 284 literature by analysing fathers' experiences of childbirth. This study looked especially into
 285 fathers' experiences during two specific periods: the prenatal period and childbirth. The results
 286 show that fathers associated the experience of childbirth with many worries, while results linked
 287 to the prenatal experience were very positive.

288

289 *Prenatal experience*

290 The results related to antenatal education were very positive; more than half of the fathers
 291 reported feeling being well prepared. In looking at the fathers' responses to the FTFQ,
 292 importantly, the mean score obtained on the prenatal preparation dimension was very low,

293 indicating that the fathers mostly felt well informed and well prepared. Moreover, regarding the
294 variables predicting prenatal preparation, the results show a correspondence between the
295 predictors and the dependant variable. More specifically, the results were significant for
296 antenatal education and level of education. The literature suggests that future fathers need
297 information about pregnancy and childbirth throughout the course of pregnancy (Deave &
298 Johnson, 2008; Poh et al., 2014). However, most previous studies have only focused on the
299 period of childbirth to evaluate the information given to fathers, always linking information and
300 support from professionals. Indeed, most of these studies have found that fathers reported a lack
301 of information and support during childbirth, making them feel excluded from health services
302 (for a systematic review, see Baldwin et al., 2018). Thus, our article establishes important
303 results regarding the information available during this specific period and emphasises an
304 important difference between information during the prenatal period and support from
305 professionals during childbirth.

306 In addition, more than half of the fathers in this study reported using one type of antenatal
307 education and that when they used two means of education, these most often were participation
308 in antenatal classes and information from family and friends. These findings are congruent with
309 previous studies, suggesting that 90% of fathers in the USA participate in prenatal activities
310 and often seek information and advice from their partners, parents, friends and colleagues (Poh
311 et al., 2014). However, the literature provides no consistent results about antenatal classes, and
312 the experience of them varies by study. While some studies have concluded that participants
313 felt excluded in classes (Deave & Johnson, 2008), other studies have established that
314 participants found such classes useful and informative (Rosich-Medina & Shetty, 2007). Taken
315 together, these results suggest that it seems to be important for fathers to participate in birth-
316 preparation classes, but it is currently impossible to evaluate the effectiveness of these classes
317 because the experiences are so different for each father.

318

319 *Childbirth experience*

320 The results related to childbirth show that the onset of labour mostly occurred spontaneously,
321 that the main delivery mode was spontaneous vaginal delivery and that most mothers had
322 epidural analgesia during labour. The fathers' responses to the FTFQ, especially in the worries
323 and professional support dimensions, showed high mean scores, indicating that fathers reported
324 many worries and low professional support. All of the unfavourable responses reported by
325 fathers belonged to these two dimensions and represented a majority of the items (12/19).
326 Moreover, the results for these two dimensions show no correspondence between the predictors
327 and the dependant variable in predicting worries and professional support.

328 Regarding the worries dimension, a systematic review by Baldwin and collaborators (2018)
329 reported similar findings, suggesting that fathers reported negative feelings and fears. These
330 feelings and fears can be classified into five categories: fear of the unknown, feelings of
331 helplessness, feeling pushed out of the relationship and struggling to find a role, fears related
332 to labour and birth and concerns about their partner's and baby's well-being.

333 The literature provides ample information about the professional support dimension. One of the
334 fathers' needs during childbirth is to be supported (Poh et al., 2014). However, literature shows
335 that fathers feel excluded and unsupported by the healthcare system (Baldwin et al., 2018;
336 Deave & Johnson, 2008; Poh et al., 2014; Vallin et al., 2019; Widarsson et al., 2012). These
337 results are in congruence with our findings. They are all the more important because literature
338 shows that receiving little or no professional support from a midwife during childbirth is linked
339 to increased stress and anxiety for fathers (Poh et al., 2014) as well as increased feelings of
340 helplessness (Johansson et al., 2012). In contrast, professional support is presented as an
341 important factor for creating a positive birth experience (Hildingsson et al., 2011; Johansson et
342 al., 2015; Vallin et al., 2019).

343

344 **Strengths and limitations**

345 Data reporting on fathers' experiences of childbirth are beginning to be better documented in
346 the scientific literature but are still rare. This study contributes to increasing this knowledge,
347 thus allowing better support for men throughout their fatherhood process. The experiences of
348 151 fathers were investigated, which is a good sample size for this type of study. A validated
349 questionnaire with adequate psychometric properties was used, and each father's experience
350 was evaluated at the optimal time for doing so after birth. The results of this study could initiate
351 awareness among professionals and stimulate creativity to better support fathers throughout
352 their fatherhood process.

353 However, this study has some limitations. It relates to data collected 5–6 years ago and might
354 not be completely up to date. Another point is that the participants were from two hospitals
355 located in two countries. Hence, even though these hospitals provided the same level of
356 management for high-risk pregnancies and had the same annual birth rates and geographical
357 proximity, we cannot exclude cultural effects or differences in local guidelines and protocols
358 influencing the childbirth experience.

359

360 **Conclusions and implications for the practice**

361 Childbirth is a worrying experience for men. Implementing specific antenatal classes for first-
362 time fathers could support the fatherhood process. In addition, the results suggest that
363 professionals providing more support would allow fathers to experience childbirth in a more
364 positive way. Training healthcare professionals and adjusting the postpartum pathway by
365 including support for partners need emphasis. Further research could evaluate the best means
366 for providing specific antenatal classes for fathers. A spectrum of actions by which men would

367 feel more supported and included in the birth could be developed. Measuring the level of
368 worries during the post-partum period would also be interesting.

369

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373

374 **Conflicts of Interest**

375 The authors declare that they have no conflicts of interest.

376

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378 **Bibliography**

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380 Baldwin, S., Malone, M., Sandall, J., & Bick, D. (2018). Mental health and wellbeing during

381 the transition to fatherhood : A systematic review of first time fathers' experiences.

382 *JBIS Database of Systematic Reviews and Implementation Reports*, 16, 2118-2191.

383 <https://doi.org/10.11124/JBISRIR-2017-003773>

384 Cameron, E. E., Sedov, I. D., & Tomfohr-Madsen, L. M. (2016). Prevalence of paternal

385 depression in pregnancy and the postpartum : An updated meta-analysis. *Journal of*

386 *Affective Disorders*, 206, 189-203. <https://doi.org/10.1016/j.jad.2016.07.044>

387 Capponi, I., Carquillat, P., Premberg, Å., Vendittelli, F., & Guittier, M.-J. (2016). Vécu de

388 l'accouchement par les pères : Traduction et validation transculturelle du First-Time

389 Father Questionnaire sur un échantillon francophone. *Gynécologie Obstétrique &*

390 *Fertilité*, 44(9), 480-486. <https://doi.org/10.1016/j.gyobfe.2016.07.011>

391 Chan, K. K. L., & Paterson-Brown, S. (2002). How do fathers feel after accompanying their

392 partners in labour and delivery? *Journal of Obstetrics and Gynaecology*, 22(1), 11-15.

393 <https://doi.org/10.1080/01443610120101628>

394 Da Costa, D., Zelkowitz, P., Dasgupta, K., Sewitch, M., Lowensteyn, I., Cruz, R., Hennegan,

395 K., & Khalifé, S. (2017). Dads get sad too : Depressive symptoms and associated

396 factors in expectant first-time fathers. *American Journal of Men's Health*, 11(5),

397 1376-1384. <https://doi.org/10.1177/1557988315606963>

398 Deave, T., & Johnson, D. (2008). The transition to parenthood : What does it mean for

399 fathers? *Journal of Advanced Nursing*, 63(6), 626-633. [https://doi.org/10.1111/j.1365-](https://doi.org/10.1111/j.1365-2648.2008.04748.x)

400 [2648.2008.04748.x](https://doi.org/10.1111/j.1365-2648.2008.04748.x)

401 de Montigny, F., Gervais, C., & Tremblay, J. (2015). L'expérience de pères québécois de la

402 naissance de leur enfant. *Recherches Familiales*, 12(1), 125.

403 <https://doi.org/10.3917/rf.012.0125>

- 404 Genesoni, L., & Tallandini, M. A. (2009). Men's Psychological Transition to Fatherhood : An
405 Analysis of the Literature, 1989–2008. *Data Collection*, 13.
- 406 Goodman, J. H. (2005). Becoming an involved father of an infant. *Journal of Obstetric,*
407 *Gynecologic & Neonatal Nursing*, 34(2), 190-200.
408 <https://doi.org/10.1177/0884217505274581>
- 409 Green, J. M., Coupland, V. A., & Kitzinger, J. V. (1990). Expectations, Experiences, and
410 Psychological Outcomes of Childbirth : A Prospective Study of 825 Women. *Birth*,
411 17(1), 15-24. <https://doi.org/10.1111/j.1523-536X.1990.tb00004.x>
- 412 Hildingsson, I., Cederlöf, L., & Widén, S. (2011). Fathers' birth experience in relation to
413 midwifery care. *Women and Birth*, 24(3), 129-136.
414 <https://doi.org/10.1016/j.wombi.2010.12.003>
- 415 Johansson, M., Fenwick, J., & Premberg, Å. (2015). A meta-synthesis of fathers' experiences
416 of their partner's labour and the birth of their baby. *Midwifery*, 31(1), 9-18.
417 <https://doi.org/10.1016/j.midw.2014.05.005>
- 418 Johansson, Margareta, Rubertsson, C., Rådestad, I., & Hildingsson, I. (2012). Childbirth – An
419 emotionally demanding experience for fathers. *Sexual & Reproductive Healthcare*,
420 3(1), 11-20. <https://doi.org/10.1016/j.srhc.2011.12.003>
- 421 Leach, L. S., Poyser, C., Cooklin, A. R., & Giallo, R. (2016). Prevalence and course of
422 anxiety disorders (and symptom levels) in men across the perinatal period : A
423 systematic review. *Journal of Affective Disorders*, 190, 675-686.
424 <https://doi.org/10.1016/j.jad.2015.09.063>
- 425 Nystedt, A., & Hildingsson, I. (2018). Women's and men's negative experience of child
426 birth—A cross-sectional survey. *Women and Birth*, 31(2), 103-109.
427 <https://doi.org/10.1016/j.wombi.2017.07.002>

- 428 Paulson, J. F., & Bazemore, S. D. (2010). Prenatal and postpartum depression in fathers and
429 its association with maternal depression : A meta-analysis. *The Journal of the*
430 *American Medical Association*, *303*, 1961-1969.
431 <https://doi.org/10.1001/jama.2010.605>
- 432 Philpott, L. F., Leahy-Warren, P., FitzGerald, S., & Savage, E. (2017). Stress in fathers in the
433 perinatal period : A systematic review. *Midwifery*, *55*, 113-127.
434 <https://doi.org/10.1016/j.midw.2017.09.016>
- 435 Poh, H. L., Koh, S. S. L., Seow, H. C. L., & He, H.-G. (2014). First-time fathers' experiences
436 and needs during pregnancy and childbirth : A descriptive qualitative study.
437 *Midwifery*, *30*(6), 779-787. <https://doi.org/10.1016/j.midw.2013.10.002>
- 438 Premberg, Å., Taft, C., Hellström, A.-L., & Berg, M. (2012). Father for the first time—
439 Development and validation of a questionnaire to assess fathers' experiences of first
440 childbirth (FTFQ). *BMC Pregnancy and Childbirth*, *12*(1).
441 <https://doi.org/10.1186/1471-2393-12-35>
- 442 Rosich-Medina, A., & Shetty, A. (2007). Paternal experiences of pregnancy and labour.
443 *British Journal of Midwifery*, *15*(2), 66-74.
444 <https://doi.org/10.12968/bjom.2007.15.2.22783>
- 445 Vallin, E., Nestander, H., & Wells, M. B. (2019). A literature review and meta-ethnography
446 of fathers' psychological health and received social support during unpredictable
447 complicated childbirths. *Midwifery*, *68*, 48-55.
448 <https://doi.org/10.1016/j.midw.2018.10.007>
- 449 Waldenstrom, U., Hildingsson, I., Rubertsson, C., & Radestad, I. (2004). A Negative Birth
450 Experience : Prevalence and Risk Factors in a National Sample. *Birth*, *31*(1), 17-27.
451 <https://doi.org/10.1111/j.0730-7659.2004.0270.x>

452 Widarsson, M., Kerstis, B., Sundquist, K., Engström, G., & Sarkadi, A. (2012). Support
453 Needs of Expectant Mothers and Fathers : A Qualitative Study. *The Journal of*
454 *Perinatal Education*, 21(1), 36-44. <https://doi.org/10.1891/1058-1243.21.1.36>
455
456