

1 **1. Abstract**

2 **1.1. Background**

3 As women's anxiety and the rate of medical intervention in labour and birth continue to
4 increase, it is important to identify how antenatal education can increase women's
5 confidence and their ability to manage the intense sensations of labour.

6 **1.2. Aim**

7 To report a Grounded Theory study of how the aims, language and actions of Yoga for
8 Pregnancy teachers may impact upon women's self-efficacy for labour and birth.

9 **1.3. Methods**

10 Yoga for pregnancy classes in three locations were filmed. Semi-structured interviews were
11 undertaken with the teachers to explore what they were trying to achieve in their classes,
12 and how. Interviews and classes were transcribed and analysed using grounded theory.

13 **1.4. Findings**

14 There was considerable consistency in the teachers' aims, the language they used in
15 classes and in their thinking about class structure. Four main themes emerged: creating a
16 sisterhood, modelling labour, building confidence and enhancing learning. Teachers see
17 yoga for pregnancy as a multi-faceted, non-prescriptive intervention that enhances women's
18 physical, emotional and social readiness for labour and birth, and supports women to make
19 their own decisions across the transition to parenthood.

20 **1.5. Conclusion**

21 Women's self-efficacy for labour is complex and multi-factorial. This study offers insights into
22 the factors which may be involved in increasing it. These include not only traditional
23 elements of yoga such as postures, breathing and meditation, but also the creation of safe,
24 women-only groups where anxieties, experiences and stories can be shared, and pain-
25 coping techniques for labour learned and practised.

26 **2. Keywords**

27 Yoga, pregnancy, self-efficacy, antenatal, labour, birth

28 **3. Introduction**

29 Women with higher self-efficacy beliefs have lower birth anxiety and pain perception and
30 increased confidence for labour.¹ Lower self-efficacy beliefs are associated with maternal
31 preference for epidural and caesarean.² Increasing pregnant women's self-efficacy beliefs
32 through antenatal education should lead to fewer obstetric interventions as anxiety and pain
33 perception are associated with increased use of pain medications and caesarean.^{3,4}

34 Yoga for pregnancy (YfP) may have the potential to increase women's self-efficacy by firstly
35 enabling women to manage the intense physical sensations of labour;^{5,6} and secondly by
36 increasing confidence which may enable ownership of care pathway decisions and enhance
37 the internal locus of control.⁷

38 Variable use of YfP is reported worldwide⁸, with a recent study showing it is accessed by
39 11% of pregnant women in the UK,⁹ but no study to date has identified specific factors of YfP
40 which actively promote self-efficacy for labour. This paper reports on the first part of a study
41 exploring how yoga in pregnancy may affect women's self-efficacy in labour by examining
42 yoga teachers' aims and the content of their classes. The second part of the study will be a
43 qualitative exploration of women's sense of how their self-efficacy has been affected by YfP.

44 **4. Literature Review**

45 Despite interest over many years in the relationship between antenatal education and birth
46 outcomes, the complex nature of this health intervention has made it difficult to assess its
47 effects accurately. A Cochrane systematic review of group antenatal education concluded,
48 'The effects of general antenatal education for childbirth or parenthood, or both, remain
49 largely unknown'.¹⁰ The body of research into YfP is limited with RCTs poorly compliant with
50 the CONSORT statement due to poor study design and lack of blinding. However, recent
51 systematic reviews show cautious support for benefits, including increased maternal

52 confidence, shorter duration of labour and less reported pain.^{11,12} There is a need for better
53 understanding of the mechanisms by which YfP leads to these reported effects and to inform
54 the debate about whether yoga is inherently a holistic intervention or whether a reductionist
55 approach could be taken to isolate its elements and employ them independently.¹²

56 **5. Setting**

57 The NCT (formally the National Childbirth Trust) has run a university-validated YfP teacher
58 training programme since 2005. Approximately 1,500 pregnant women each month attend
59 NCT YfP classes which are held in 50 locations across the four UK countries. Women attend
60 the classes in a private capacity in addition to their usual antenatal care which includes up to
61 four hours of midwife-led group antenatal education, usually accessed only by first-time
62 mothers. Participation in this study was restricted to NCT YfP classes in order to ensure a
63 degree of homogeneity in teacher training, class structure and content. NCT YfP classes
64 consist of an introductory name round followed by an hour of yoga postures, breathing and
65 relaxation, before refreshments and time for socialising, which often includes a visit from a
66 previous member of the class who has recently had a baby.

67 **6. Participants**

68 An invitation to participate in the study was published on an e-forum for NCT YfP teachers.
69 Six teachers volunteered of whom three were chosen on a convenience basis relating to the
70 timing and location of their classes. The teachers had been facilitating YfP for 1, 10 and 7
71 years, respectively.

72 **7. Methods**

73 Grounded Theory was chosen as it enabled incidents as well as people to be the main units
74 of analysis.¹³ Charmaz's constructed approach of flexible guidelines¹⁴ was used to reconcile
75 the various grounded theory approaches. Constructed grounded theory rejects the positivist
76 model of an objective reality documented by a neutral observer; instead recognising that

77 data analysis is contextually situated. A reflexive approach is taken, acknowledging the
78 inherent inclusion of researcher and participant values and beliefs within the created shared
79 experience. Two classes led by each YfP teacher were filmed, after which the teachers
80 participated in individual face-to-face, semi-structured interviews with the researcher (VC).
81 Filming and interviews took place between April and September 2013. During the classes,
82 the researcher occupied a middle ground position between non-participant and participant
83 described as *observer-as-participant* by Brink & Edgecombe¹⁵.

84 All interviews took place in the teachers' homes and lasted approximately two hours. Each
85 interview commenced with open questions from a topic guide, after which the class videos
86 were played and the teacher encouraged to comment on what she saw herself doing and
87 why. The teachers' aims for their classes and perceptions of how/whether they were
88 achieved were explored. As the research progressed, later questioning was modified to
89 ensure the emerging theory was developed fully.

90 Each interview and class recording was transcribed verbatim and iterative reading
91 undertaken to enable content familiarisation before systematic coding was carried out using
92 NVivo. Field notes and memos aided focus and theoretical sensitivity. Data were
93 concurrently gathered and analysed following constant comparative principles to create
94 intermediate codes from the more significant or frequent initial codes.¹⁴

95 The authors met regularly to discuss emerging themes and theoretical models.
96 Trustworthiness and rigour were ensured by a combination of manual scrutiny and
97 systematic software analysis of the codes and their inter-relationships. Transcripts were
98 revisited frequently as potential new codes and relationships emerged from the data.

99 A post-positivist stance¹⁴ was taken, acknowledging that the researchers' place within the
100 study may have affected the questioning, interpretation and co-creation of meaning. One of
101 the researchers (VC) is an NCT YfP tutor and one (MN) has no yoga training. Thus the
102 benefits of both insider and outsider status could be realised.¹⁶ As an insider, the researcher

103 had a better understanding of language and cultural norms and so was better able to
104 integrate herself unobtrusively into the class setting. In order to minimise the potential bias of
105 over-familiarity with the subject, reflexive memos drawing on the researcher's beliefs and
106 sense of 'place' within the study were created before observations, interviews and analytic
107 work.

108 Credibility was ensured by participating teachers' checking of transcripts and findings.

109 **8. Ethics approval and informed consent**

110 Ethics approval for the study was gained from The University of Worcester Institute of Health
111 and Society Ethics Committee and NCT Research Advisory Group. A primary objective was
112 to conduct research openly and without deception, with both teachers and pregnant women
113 acting as active not passive participants. Guiding principles of congruence and safeguarding
114 both the teachers and pregnant women's well-being were embodied in the study design and
115 process. The study adhered to the principles outlined in the Charter for Ethical Research in
116 Maternity Care.¹⁷

117 In the classes prior to filming, the teachers explained the study to the women and gave them
118 an information sheet emphasising their right to not participate. This was repeated verbally at
119 the start of each filmed class with the explanation that it was possible to set the camera up
120 so that an area of the room was not visible if any woman preferred not to be filmed. Written
121 informed consent was obtained before the class filming and participants' right to withdraw
122 without consequences was repeated prior to interviews.

123 **10. Findings**

124 Four themes with sub-themes (Appendix A) emerged from analysis of the rich data produced
125 by the teacher interviews and class recordings:

- 126 • Creating a sisterhood
- 127 • Modelling labour

128 • Building confidence

129 • Enhancing learning

130 Quotes from teacher interviews (T1, T2, T3) are presented in italics; whereas extracts from
131 the class recordings (C1, C2, C3) are presented in shaded boxes.

132 **10.1 Creating a sisterhood**

133 The teachers wanted to create a sanctuary for pregnant women. This was more than just to
134 enable friendships but also to:

135 *[Give] them the space to be pregnant and to be with other pregnant women...*

136 *Women need to get together and talk to other women and that's how they learn about*
137 *being a mother. (T2)*

138

139 Four sub-themes emerged within this theme:

140 • Safe and supportive environment

141 • Shared and sharing experience

142 • Time for me and the baby

143 • Learning from each other

144

145 *10.1.1 Safe and supportive environment*

146 The teachers wanted to create emotional safety so that women were able to share their
147 feelings and thoughts, but importantly, did not have to do so. The teachers noted this was
148 particularly useful for women who had had previous difficult or distressing birth experiences.

149 *Sometimes you know something about a woman on week one and she doesn't*
150 *share... that information; and maybe by week 5 or week 6, in that introduction round,*
151 *she'll say something – she had a stillbirth or her birth before was really awful or that*

152 *she's really struggling with this baby – which means they've grown in that group*
153 *where they've got the support of the others. (T1)*

154

155 *10.1.2 Shared and sharing experience*

156 The teachers stressed the importance of the classes being exclusively for pregnant women
157 so that everyone in the group could relate to the others' experiences and concerns in a way
158 that friends and partners (even female partners) could not. Sharing experiences allowed all
159 women to get feedback from the group on current anxieties without seeming weak or
160 incapable.

161 *Women that have had babies enjoy having a safe place to talk ... And I think*
162 *sometimes there's a nice sense of being able to share, whether it's very positive or*
163 *being able to offload: 'This is what happened the first time and I want to do this, this*
164 *time.'* (T1)

165

166 *10.1.3 Time for me and the baby*

167 All the teachers described aiming to provide time for women to 'be' with their babies. In
168 contrast with traditional antenatal classes, which tend to have learning outcomes related to
169 knowledge of medical procedures and making informed decisions about pain relief options,
170 the YfP teachers described wanting to enable women to take time out from their busy lives to
171 focus on their bodies and babies.

172 *It's probably the only time they get where they just nurture themselves... Those who*
173 *have already got children; they admit they spend very little time thinking about the*
174 *current pregnancy... It allows them to think about how their own body works, their own*
175 *body's needs... (T1)*

176 For the teachers, time in classes was not just for relaxation, but also to build communication
177 between mother and baby, and to nourish and care for each woman and allow her voice to
178 be heard.

179 *I love the way they do connect with their babies... [their] hand's there [on the belly]
180 and it just makes that 'hello' thing go on... Somebody is listening to them... and isn't
181 rushing them through. (T3)*

182 Analysis of the class transcripts showed how the women's connection to their baby was
183 reinforced by regular references to taking the opportunity for reflection.

184 *Share your positive affirmation with your baby; spend the next few moments
185 relaxing together; sharing anything else that you might want to share. Just
186 enjoying the time with no one to interrupt the two of you together [calm music
187 plays]. (C2)*

188 *10.1.4 Learning from each other*

189 The classes aimed to model a way of learning about pregnancy, birth and mothering where
190 women could discover what they wanted to know from other women. Questions were often
191 asked of the more experienced mothers within the group.

192 *That sense of the 'senior woman' in the group. They look up to the women that have
193 already had babies and they can ask them questions. (T1)*

194 The more experienced mothers in the group also took on a mothering or nurturing role in
195 relation to the newer mothers.

196 *I have a woman coming back this week... she's had her baby, her fifth baby, and she
197 was a bit like a mother hen but in a really lovely way; and she was always really
198 happy to be the voice of reason and sense to the first timer. (T3)*

199 The teachers spoke about how learning happens in many ways: from stories, discussion of
200 medical conditions and hopes for (and fears of) particular birth experiences. Birth news was
201 read out at the beginning of classes and women who had recently given birth came back a
202 few weeks later with their babies to 'show and tell'.

203 *What they get in the classes is a variety of stories; whether that's from the mothers in*
204 *the class at the time or from mothers coming back with their babies to share their*
205 *experiences. (T2)*

206

207 **10.2 Modelling labour**

208 Modelling labour emerged as a strong theme with the most densely populated NVivo codes.
209 The teachers aimed not only to teach techniques for coping with labour, but also to prepare
210 the women by helping them visualise the labour environment.

*Maybe picture yourself in labour in this position with support around you;
creating that stillness that we've got in the room today... Begin to think about
what it might feel like to be in labour and those feelings of calm, of being in
control and feeling empowered. (C1)*

211

212 The sub-themes were:

- 213 • Breathing
- 214 • Listening to your body
- 215 • Practising for labour

216

217 **10.2.1 Breathing**

218 When asked what their YfP classes did that might affect birth outcomes, all the teachers
219 gave similar answers.

220 *I think it's just the ability to breathe, to be in control of that breath. (T1)*

221 The teachers emphasised the link between breathing, control and confidence, saying that
222 although breathing strategies were useful for managing labour pain, they had value beyond
223 this.

224 *It's all about breath... if the woman is in control of her breathing then everything else*
225 *tends to follow; she's more calm, she's more relaxed, more inward. Then the body*
226 *just becomes more instinctive. (T1)*

227 A word frequency analysis showed 'breath' and related words (*breathing, breathe*) were
228 used nearly 1000 times in three two-hour classes, often linked to positive imagery, and
229 described as *easy* or *powerful*.

*This is a time when feelings of worry and anxiety may overwhelm you. As you²³⁰
breathe out, allow those worries and anxieties to leave your body and replace
them with feelings of calm, of relaxation, of trust. (C1) ²³¹*

232

233 *10.2.2 Listening to your body*

234 Analysis showed an average of 35 reminders in each session for the women to notice how
235 they were feeling, to make themselves more comfortable and only to do what was right for
236 them.

*Thinking about your body this evening and how it's feeling and what it's saying²³⁷
to you... adjusting that movement and position as you need to... Not worrying
about anybody else, just tuning into your body and what you need this evening.²³⁸
And if at any point you need to change positions then please do. (C2)*

239

240 The teachers acknowledged and celebrated individual differences. All the teachers said they
241 were pleased when women chose *not* to join in, or to do something differently, taking this as
242 evidence that the classes were effective in helping women listen to their body and take

243 control of their decisions.

244 *Some of them don't do everything, but they've made the choice not to do that, which*
245 *is really empowered isn't it? 'I know I don't want to do that today for whatever reason*
246 *and I'm not going to.'* (T1)

247

248 *10.2.3 Practising for labour*

249 The teachers wanted to give women practical strategies for helping to manage the
250 sensations of labour. They encouraged the women to learn and practise 'the breathing' while
251 modelling the rocking and repetitive movements women sometimes make in labour.

252 Throughout the observed classes, the teachers made implicit and explicit links between
253 movements and positions that might help in labour and the standard elements of yoga
254 classes: postures, breathing and relaxation.

255 *At this point I'm beginning to link some of those things into labour. So it's: 'Could you*
256 *imagine yourself being in this position in labour? Think about how lovely your baby*
257 *feels with this extra space. How the movement might help with your labour.'* (T1)

Lean against the wall and just make some lovely figure of eights with your 258
pelvis... this is one for labour for opening the pelvis and working with the
sensations of labour . (C1) 259

260

261 The teachers stressed that teaching these positions as part of yoga practice over many
262 weeks built the women's confidence and made it natural to employ them during labour.

263 *It's just one of our sequences ... so... it's not a strange thing that I'm getting into a labour*
264 *position; it's more like: 'I'm getting into a position where I know that I'm comfortable.'* (T1)

265 The teachers reported that women returning to the classes postpartum described using the
266 techniques they had learned in the classes in labour, but not always as they might have
267 expected.

268 *She'd joined something we'd done with a visualisation of her 'special place', and*
269 *that's how she breathed through both of her labours... She'd taken something we do*
270 *every week and adapted it as a coping mechanism for her labour. (T2)*

271

272 **10.3 Building confidence**

273 The third theme arose from the teachers' aim to:

274 *Build women's confidence and trust in their innate ability to give birth to their babies.*
275 *(T3)*

276 Every teacher voiced a deep sense of caring about the individual women in her classes and
277 a desire to help them gain, or regain, confidence.

278 *I want them to feel beautiful because they are beautiful... I want them to feel good*
279 *about themselves. (T2)*

280 *[She] had been made to feel, for so many different reasons, that her body can't do*
281 *this... She's older, she's struggled to get pregnant, struggled to carry a baby and*
282 *[here] she looks really strong and lovely. (T1, watching the film of her class)*

283

284 The teachers spoke of aiming to build the women's confidence by respecting their choices
285 and being non-judgemental about their decisions.

286 *So it's not about saying: 'You have to have a straightforward vaginal birth and that's*
287 *the ideal birth and that's what you should all strive for'... You are not there to judge*
288 *them or to try and change their mind, you are there just to honour what they say and*

289 *support them ... It's not 'You and your husband' here ... it's 'Who's supporting you?'*
290 *(T1)*

291

292 The sub-themes related to building confidence were:

- 293 • Being in control
- 294 • Being positive
- 295 • Changing beliefs

296

297 *10.3.1 Being in control*

298 Emphasis was placed on encouraging and enabling the women to take control of all aspects
299 of their birth experience if they wanted to. Various strategies were employed to achieve this;
300 including telling stories of women who had made choices outside 'the norm', and teaching
301 active birthing positions that might impact the progress of labour.

302

She had twins but both of them were breech and so they had chosen to have a caesarean; but she wanted to wait until she went into labour if possible. (Birth story read out in C3)

303

304

Roll your hips and move your pelvis, encourage your baby to come down into the birth canal. (C1)

305

306

307 *10.3.2 Being positive*

308 During the classes, there was constant use of reassuring, positive language. Imagery and
309 affirmations were used to emphasise how strong and capable the women's bodies were and
310 how beautiful birth can be.

You already know everything you need to give birth to your baby, and know that you can trust in your body, trust in yourself to give birth to your baby... you are the best person, the only person who knows what is right for you and what is right for your baby. (C1)

311

312 *I definitely think that... The language I use and the way that I express things in the*
313 *yoga class... talk(s) about birth in a really different way... It just says natural,*
314 *instinctive, joyous, fabulous, exciting. It says all those really positive things about*
315 *birth. (T3)*

316

317 *10.3.3 Changing beliefs*

318 The teachers spoke of women arriving at their classes believing birth to be a frightening or
319 negative experience. They aimed to offer an alternative perspective: that birth can be
320 positive and the women can cope with it.

321 *[Give] them the belief that birth is possible, that it can be beautiful, it can be an*
322 *enjoyable experience; or they can be in control as much as they want. (T1)*

323 The teachers described enabling change in the women's beliefs, firstly by increasing the
324 women's confidence through repeated practice of pain-coping strategies; and secondly, by
325 confirming the efficacy of these strategies through stories told in class.

326

327 **10.4 Enhancing learning**

328 The teachers' views on *how* they aimed to reach their goals rather than *what* they aimed
329 to achieve emerged as a strong fourth theme comprising three sub-themes:

- 330 • Creating the atmosphere
- 331 • Ensuring class rhythm and balance
- 332 • Learning in a different way

333

334 *10.4.1 Creating the atmosphere*

335 The teachers gave attention to lighting and music to enable the women to relax and become
336 familiar with a positive birthing ambience. They often spoke repetitively and rhythmically, and
337 were aware of doing this deliberately.

338 *I like to keep the lights low and I use fairy lights. I want that sort of... almost womb
339 like... environment that you hope that they will labour and give birth in. So I always
340 use music, I usually use a lavender room spray... I want them to feel safe and
341 comfortable. (T3)*

342 *It's the language, the words I use, the way I speak, the tone of voice. I hope that feels
343 soothing to them... What I hope is that the voice washes over them like some kind of
344 blanket to lull them into that relaxed state. (T2)*

345 As well as the physical atmosphere, all the teachers cultivated a nurturing community by
346 arranging the women in a circle or horseshoe shape, and performing a 'mothering' role -
347 checking that they were comfortable, offering blankets and cushions and making drinks.
348 Work in pairs was used to enhance group bonding, support and 'togetherness'.

349 *Physically I like to give them enough space to move... but I don't want them to be too
350 far away from each other because I actually want them to share. I want that bonding
351 thing. (T3)*

352 *This sitting together with our drinks is really important. And it's not a drink that they've
353 had to make themselves... I've made them a drink... they're safe, they're warm. (T1)*

354 The intention to build a supportive group culture was emphasised to the women.

Come into a circle together and do a supported tree. So make sure you have got enough space and you can just touch the person's shoulders...You can do this individually but it's so lovely to do it as a group. It's good to know that your support is keeping the women either side strong and steady and their support is doing the same for you. (C1)

355

356 *10.4.2 Ensuring class rhythm and balance*

357 Each class had a clear structure. The teachers emphasised the rhythm of each section and
358 the balance of social time versus quiet reflection.

359 *It's important for them to talk to each other... but have a good balance... enough*
360 *quiet stillness that they can focus on themselves, their baby, their breathing. (T2)*

361 The teachers described two ways in which the women's ability to learn was enhanced by a
362 familiar structure. Firstly, the women were able to relax more easily as they knew the 'shape'
363 of each class. Secondly the constant repetition of words, postures and techniques enabled
364 them to become embedded in the women's minds.

365 *It's that positive reinforcement: if you hear it enough then you believe it... If people*
366 *tell you breathing is really good in enough different ways and you get to try it out*
367 *yourself and it works, then you will believe that the breathing is good. (T3)*

368

369 *10.4.3 Learning in a different way*

370 Birthing concepts were introduced from a variety of perspectives but with very little didactic
371 teaching. For example, a topic such as 'managing contractions' might be introduced in the

372 opening name round, where the women would share their experiences and views. It would
373 then be addressed again practically through visualisations, posture work, practice
374 contractions and relaxation exercises before perhaps being discussed during the
375 refreshment break or visitor time. This process enabled women to absorb information and
376 skills in different ways. The teachers explained how knowledge became embedded without
377 being formally taught and contrasted this with traditional couples' antenatal courses.

378 *When I teach [non YfP] antenatal classes, I know that there's a certain amount of*
379 *information that they expect to learn and I'm expected to give... but this is in a far*
380 *more subtle way... You reinforce the same message every week so you know it's*
381 *going in, but just in a very different way. (T2)*

382 *There's not a curriculum for the classes; there's no head stuff, there's no learning in*
383 *the traditional way. It's a different kind of learning; it's a physical learning rather than*
384 *a mental learning. (T2)*

385 **9. Discussion**

386 This study responds to the 'urgent need' expressed by the Cochrane systematic review by
387 Marc et al. ¹⁸ to reduce pregnant women's anxiety. It set out to explore YfP teachers' aims
388 and their perceptions of the mechanisms by which their classes might affect women's self-
389 efficacy for labour and birth. Interview data was enriched by virtue of the fact that teachers
390 were talking about their classes while watching them on video. The three NCT YfP teachers
391 who participated in the study aim to increase women's self-efficacy for labour through an
392 integrated approach combining not only the benefits of yoga, but the creation of a safe
393 space where pregnant women can learn from each other and gain confidence through the
394 use of story-telling, sharing experiences, positive affirmation and teacher-led exercises to
395 facilitate the use of pain-coping strategies in labour.

396 The study adds to the body of work around YfP conducted in groups. Most YfP research^{5,6}
397 does not discuss the benefits of women-only learning environments but stresses instead
398 aspects of yoga practice such as postures, breathing, meditation and relaxation.

399 The findings of the present study resonate with the work of other researchers. Doran &
400 Hornibrook in their study of a pre and postnatal yoga group¹⁹ in Australia identified similar
401 themes of *Feminine nurturing space* and *Watching and learning the mothering*. The
402 importance of safe, nurturing female spaces for pregnant women is well described in
403 antenatal education and midwifery literature.²⁰ Findings that pregnant women like to learn in
404 small peer groups, gaining emotional insight and reassurance from sharing experiences,
405 hints and tips with other women have been presented by Renkert & Nutbeam²¹ and Deave *et*
406 *al.*²². Nolan *et al.*²³ describe how the unique friendships formed in antenatal classes confer
407 multiple social and psychological benefits. Rakhshani *et al.* found that YfP enhanced quality
408 of life and personal relationships²⁴, the latter also supported by studies of psychiatrically at-
409 risk women²⁵.

410 Our findings regarding YfP teachers' estimate of the importance of sharing stories supports
411 the work of researchers who have found that stories enable a sense of connection with other
412 women, pass on women's birthing culture and significantly affect beliefs about birth.²⁶

413 Embedding the teaching of various pain-coping strategies within yoga practice was one of
414 the main methods employed by the YfP teachers to increase women's self-efficacy for
415 labour. Their approach reflects the findings that pain in labour is a subjective, multi-faceted
416 experience affected by the interplay of physical, emotional, social and intellectual factors²⁷
417 and that coping strategies used by women in labour are complex and multidimensional.²⁸

418

419 **12. Limitations**

420 To the best of our knowledge, this is the first in-depth study exploring YfP teachers'
421 perceptions of what they are trying to achieve in their classes and how. The study makes a

422 contribution to the literature in an under-researched area. The use of pharmacological pain
423 relief in labour is associated with higher rates of surgery and lower postnatal mental and
424 physical wellbeing scores for women and their families^{29,30}. The present study, together with
425 the second part which explores women's accounts of attending the same three YfP groups,
426 will give a 360 view of the experience of delivering and receiving this antenatal intervention.
427 The findings aim to inform strategies for reducing the rate of intervention in labour and birth
428 which has continued to increase and has been significantly resistant to change.

429

430 The study is limited by the small number of participants and the fact that all the YfP teachers
431 had been trained by the NCT. Future studies should aim to include a larger number of
432 teachers with backgrounds in different yoga philosophies.

433

434 **13. Conclusion**

435 As a holistic intervention affecting the physical, psycho-social and spiritual domains, yoga
436 appears to be ideally placed to influence women's ability to manage labour pain. This study
437 adds to the debate around how YfP may facilitate an increase in women's self-efficacy for
438 labour and birth and highlights the need for further research into whether YfP can be
439 'dismantled' and if so, which underlying mechanisms are effective. Findings suggest any
440 changes to women's self-efficacy beliefs after YfP classes may not be due purely to yoga
441 practice but also to time spent with other women in a safe environment where hopes, fears
442 and practical aspects of managing labour and birth can be discussed in a positive way. A
443 follow-on study will explore women's experience of YfP classes to ascertain which aspects
444 they find helpful in labour. Their lived experiences will be compared with the teachers'
445 understanding of how YfP classes enhance women's self-efficacy for labour and birth.

446

447 **14. Acknowledgments and Disclosures**

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