

Birthing outcomes from an Australian HypnoBirthing programme

Abstract

Background and aim: HypnoBirthing, which is steadily increasing in popularity both in Australia and overseas, is a set programme consisting of 10–12 hours of instruction for couples approaching the later stages of pregnancy and birth. A survey was carried out to investigate how Australian participants attending the HypnoBirthing programme between 2007 and 2010 compared to other studies where hypnosis was used for childbirth.

Results: The average length for both stages of labour was shorter in the HypnoBirthing group compared to general population figures. Caesarean section rates were lower, as was the use of gas and epidurals. Of the 81 participants, 46 (51%) did not use any pain medication at all and the overall discomfort level for labour and birth was 5.8 out of 10 with 32% of the participants scoring under 5.8, including two participants who recorded zero discomfort.

Conclusion: Women attending the HypnoBirthing programme demonstrated similar results to those found in other research in hypnosis for childbirth. However, the findings also demonstrated some added benefits of HypnoBirthing. The majority of women reported feeling more confident, relaxed, less fearful, focused, and more in control. They also commented on the ease and comfort of labour and birth and the satisfaction of having their partners involved and supportive.

Julie Phillips-Moore
Clinical hypnotherapist,
Counsellor and
HypnoBirthing
practitioner,
Sydney Essential Health,
Sydney

Hypnosis has been used in obstetrics for more than a century but fell into disfavour due to competition from chemical anaesthesia (Werner et al, 1982; Schauble et al, 1998). During the last two decades, however, there has been a revival in the use of hypnosis for childbirth and it is becoming more popular, both in Australia and overseas (Abbasi et al, 2009; Landolt and Milling, 2011; Howell, 2012). This revival may be a result of the increased medicalisation of birth, especially caesarean sections (Nguyen et al, 2010; Stavrou et al, 2011) and increasingly, more women are looking for alternative coping strategies for use during labour.

The HypnoBirthing programme is based on *Childbirth Without Fear*, by Dr Grantly Dick Read (1944). However, Marie Mongan (1992), recognised that Read's patients were entering into a state of hypnosis and therefore added hypnotherapy to his basic philosophy to create her HypnoBirthing programme.

Read's premise is that, to a large extent, Western civilisation and culture have influenced the way a woman thinks of childbirth and because of this, fear and anxiety concerning labour has been introduced.

This fear and anxiety results in natural protective tension in the body which gives rise to resistance and tension in the muscles in the womb and, ultimately, to the pain experienced in childbirth.

'Therefore, fear, pain and tension are the three evils which are not normal to the natural design ... If pain, fear and tension go hand in hand, then it must be necessary to relieve tension and to overcome fear in order to eliminate pain.'
(Read, 1944: 6)

Physiology of fear and stress

Researchers in the field of psychoneuroimmunology have provided evidence about the ways in which negative emotions generated by stressors can be translated into physiological changes (Padgett and Glaser, 2003; Misri et al, 2004; Vieten and Astin, 2008). In pregnancy, fear and stress have a negative effect on the physiology of the pregnant women and her developing fetus.

Perceptions of fear and stress activate the sympathetic branch of the autonomic nervous system and activate the 'fight or flight' response, thereby causing the secretion of stress hormones, which prepare the body to engage in a protection response which mainly results in both tension and a constriction of blood vessels. As a result of this protection response, blood flow is shunted from the reproductive organs and flows to the muscle and hindbrain, providing the nutritional requirements needed by the arms and legs and by the region of the brain responsible for life-saving reflex behaviour (Rice, 1992; Church, 2009).

As the woman is biochemically linked to the fetus, these chemicals enter the fetal bloodstream via the placenta, affecting the same tissues and organs in the fetus as they did in the mother. When passing through the placenta, the hormones of a mother experiencing chronic stress will profoundly alter the distribution of blood flow in her fetus and change the character of her developing child's physiology. For example, absorption of excess cortisol by the fetus results in the modification of fetal nephron formation plus a growth-inhibiting effect which causes a lower birth weight (Wadhwa et al, 1993).

Fear and HypnoBirthing

In HypnoBirthing, fear is reduced by suggestions given to the woman to free her from the social and/or cultural conditioning she has received from family members, friends and colleagues, many of whom may have told 'horror stories' of either their own birth experience or those of others. She is also given positive suggestions in the form of imagery, where she sees her body working as nature intended, and by post-hypnotic suggestions of deep relaxation and calm which will take effect as soon as she goes into labour.

Apart from the fear generated by negative stories of childbirth, another source of fear mentioned by couples on the programme is fear of the unknown. Feedback from the women indicated that this fear was greatly reduced by having the HypnoBirthing practitioner explain the birth process, and by being trained to work with her body rather than fight against it. When in labour, the woman is taught how to enter into a state of hypnosis and use controlled breathing and visualisation with each contraction.

Fathers have also reported a lack of knowledge about the process and often feel helpless. They have expressed being fearful of observing their partner in pain, and fear the risks of interventions such as operative delivery and the safety of both mother and child (Hanson et al, 2009; Shibli-Kometiani, 2012). The HypnoBirthing programme provides the fathers with information about the birthing process and teaches them how to be part of the labouring couple during birth.

Hypnosis

A hypnotic state is a naturally-occurring experience and can spontaneously occur many times a day. Daydreaming, not being aware of the passage of time, 'automatic' driving, being absorbed in a book or movie, listening to music, being able to shut out one's surroundings by concentrating very hard on something else, are all examples of a hypnotic state (Olness, 1995; Roet, 1986). What separates hypnotherapy from the above activities is how the practitioner uses the hypnotic state.

In the hypnotic state, the power of criticism (which is restricted largely to the conscious mind), is either fully or partially suppressed, enabling the suggestions to bypass the conscious mind and enter the subconscious mind, which has little or no power of criticism. The effect the suggestions have on the person depends on how much criticism is suppressed and how much rejection from the conscious mind is removed (Hartland, 1979; McGill, 1996).

In a hypnotic state, a person is able to free him/herself from social conditioning, limiting inhibitions and opinions taught to him/her by others. The largely

unused potential of the subconscious mind is able to be explored by lifting these false restrictions, which enables the person to do things that previously they believed to be impossible (Frank and Mooney, 2002).

Suggestions are usually given in the form of guided imagery. Some suggestions can be given to the patient, post-hypnotically. These suggestions are given during the trance state and take effect either immediately after the patient has come out of hypnosis or at a future date with little or no interference from the conscious mind (Roet, 1986; Yapko, 2011).

Techniques used in HypnoBirthing

Mental rehearsal

Mental rehearsal is a technique used for self-improvement in a range of areas including business, health and sport (Bazzo and Moeller, 1999; Sheikh and Korn, 2008). This technique involves closing the eyes, relaxing the mind, and then vividly imagining a scenario that one would like to occur. When a scenario is repeatedly visualised, it mentally programmes the subconscious mind into creating the specific desired result. The brain makes no distinction between actual events and imagined events. A thought is just as important to the mind as an external event (Jeannerod, 1995). The body is thought to be unable to discriminate between sensory images in the mind and reality, and interprets these images as almost real events.

In HypnoBirthing, the woman is trained to relax the mind through self-hypnosis and to visualise the workings of the uterus and the process of birth (from the beginning of labour to holding the baby in her arms). This is rehearsed daily during the weeks leading up to the birth and any suggestions given by the hypnotherapist can be modified to suit each woman's idea of how she would like her birth to be.

Controlled breathing

Evidence suggests that conscious, controlled breathing alters the chemicals in the body in a positive way. Benson and Klipper (1975) showed that short periods of meditation, using breathing as a focus, could alter the body's stress response and Pert (1997) demonstrated how changes in the rate and depth of breathing produce changes in the quantity and kind of peptides that are released from the brainstem. Many of these peptides are endorphins, the body's natural opiates, as well as other pain-relieving substances; therefore, the end result is a reduction of pain.

The HypnoBirthing programme teaches the woman how to use controlled breathing for stages one and two of labour. Regular and rhythmical breathing reduces fatigue and pain and enhances the

woman's sense of control. During the second stage, it allows a mother to push longer when, and if, she needs to.

The HypnoBirthing breathing technique used during the second stage is in contrast to the Valsalva method of pushing. With the latter method, women can hold the breath for too long, and push with such force, that the small capillaries in the cheeks and face burst. It also causes a trapping of blood in the veins which, when the breath is released, causes a drop in the mother's intrathoracic pressure which produces tachycardia followed by an immediate reflex bradycardia. This creates a disruption of the blood flow to the uterus—and ultimately to the baby—resulting in fetal distress. This technique also results in altered body fluid pH which contributes to inefficient uterine contractions (Lemos et al, 2011; Brown, 1999).

Bloom et al (2006) found that the Valsalva method was of little use to women in labour. The researchers found no evidence that bearing down during contractions helped either the mother or the baby. They also suggested that women who were encouraged to push might be at a higher risk for urinary problems after delivery and encouraged women to do what feels natural.

Prenatal bonding

HypnoBirthing couples are made aware of the scientific evidence concerning the mental and emotional abilities of the unborn child. Studies suggest that while in utero, babies are constantly tuned in to the mother's actions, thoughts and emotions and that from the moment of conception, the experience in the womb shapes the brain and lays the groundwork for personality, emotional temperament and intelligence (Hopson, 1998; Granier-Deferre et al, 1985).

Couples are taught that all five of the baby's senses are developed before birth and are encouraged to connect with him or her. This can be done by reading stories, singing or speaking to the baby; having family and friends interact with the baby; rubbing, gently pressing, and massaging the abdomen; practising relaxation techniques; playing soft music; and by putting themselves in the baby's frame of reference.

Research

Numerous studies have been conducted on the effect of hypnosis on labour and birth but research examining the benefits of specific programmes for childbirth, such as HypnoBirthing, is limited.

In a study on the effect of hypnosis on pain relief during labour and childbirth, Abbasi et al (2009) found that women described their feelings as being more confident and less fearful. They also

experienced less pain, fewer complications, lower intervention rates, less need for medication, and had more energy.

Other research has shown a reduced need for pharmacological analgesia, augmentation and anaesthesia (Cyna et al, 2004; Cyna et al, 2006; Vandevusse, 2007; Smith et al, 2006); reduced surgical delivery (Harmon et al, 1990; Martin et al, 2001); reduced pain (Brown and Hammond, 2007); more satisfaction with pain management (Smith et al, 2006); reduced length of labour (Brown and Hammond, 2007; Jenkins and Pritchard, 1993); reduced hospital stay (Martin et al, 2001); more sense of control (Cyna et al, 2004); higher Apgar scores (Harmon et al, 1990; Vandevusse et al, 2007); less post-partum depression (Harmon et al, 1990); and fewer epidurals (Cyna et al, 2006).

Birth reports were gathered from 1303 HypnoBirthing couples, between October 2005 and January 2008, by the HypnoBirthing Institute in the US (Dolce, 2011). For comparison, HypnoBirthing data was compared to Listening to Mothers II (LTM II) (2006).

The data showed that HypnoBirthing mothers experienced a much lower rate of caesarean section (17%) than that reported by LTM II (32%) or the US Division of Vital Statistics (31.8%) (Dolce, 2011), used far fewer interventions during their labours than mothers in the control group, and reported a lower incidence of preterm births and low birth weight infants than LTM II.

Methodology

On completion of HypnoBirthing programmes held during the period from 2007 to 2010, 145 couples from Sydney, NSW were sent a questionnaire requesting specific information about their birth (e.g. vaginal birth or caesarean section, length of labour, Apgar scores, discomfort level). Participants were also asked to comment on their birth experience using the HypnoBirthing techniques. One hundred and seven couples (74%) responded. Only those participants who had had vaginal births were considered for the study ($n=81$). Of these participants, nine had more than one birth, thus the number of births in this study was 90.

Study subjects

The average age of the mothers was 33 (ranging from 24 to 42) and the average age of the fathers was 36 (ranging from 23 to 49). Two couples were same sex couples and one was a single mother accompanied by her mother. All women gave birth in hospital (73% in delivery suites or labour wards and 27% in birthing units). Nine couples had more than one birth using the HypnoBirthing programme—the

total number of births was 90 and the total number of babies born was 91 (51 males, including one set of twins, and 40 females).

Of the 90 births, 97% of the pregnancies were full-term and 3% were pre-term. The average weight of the babies was 7.6 lbs (3.4kg)—ranging from 5.5 lbs (2.5kg) to 10.6lbs (4.8kg)—and the average length of stay in hospital was 3.4 days (ranging from ½ day to 10 days).

Results

Length of labour

Participants were asked to rate the length of their labour from the first contraction to the birth as there may have been some confusion among participants as to when true labour had started. Of the 90 vaginal births, 68 (75.6%) were primiparous and 22 (24.4%) were multiparous. Of the multiparous participants, nine recorded two births and one recorded three births using the HypnoBirthing programme.

The overall average length of labour, from the first contraction to birth, was 10.4 hours, (ranging from 50 minutes to 37 hours) and the average length of stage two was 1.1 hours (ranging from one minute to four hours). Fifty-eight participants (64.4%) had their baby in under 10.4 hours of labour.

The average length of labour for the 68 primiparous mothers was 12.2 hours (ranging from 1.75 hours to 37 hours). Thirty-seven primiparous participants (53%) had their baby under 10.4 hours and 17 (46%) of these 37 participants had their baby within 6 hours.

The average length of stage two was 1.3 hours (ranging from 9 minutes to 4 hours). Thirty-six participants (41.4%) had their baby under 1.3 hours and of these 36 participants, 17 (47.2%) had their baby within half an hour.

For the 22 multiparous mothers, the average length of labour was 4.8 hours (ranging from 50 minutes to 12 hours). Of these 22 women, 9 (47.3%) had their babies in less than 4.8 hours.

The average length of stage two was 38 minutes (ranging from 1 minute to 3 hours); 11 (50%) participants had their baby in under half an hour (Figure 1).

Surgical delivery

Of the original 107 participants, 26 (22%) had caesarean sections (compared with 38.4% of the general public in NSW in 2008 (NSW Ministry of Health, 2009), four of which were scheduled. The reasons for the caesarean sections were:

- Baby overdue
- Fetal distress
- Failure to progress
- Malposition (breech presentation, posterior, deep transverse arrest)

- Vaginal birth after caesarean (VBAC)
- High temperature (mother)
- Pre-existing hypertension
- Unstable heartbeat (baby)
- Anatomical problem (pelvic bone too narrow and tight).

The reasons for the four scheduled caesarean sections were: malposition, pelvic bone too narrow and tight, breech presentation, and VBAC and overdue.

Although participants who had had a caesarean section were not included in the overall results of this study, the number of caesarean sections was much lower than the general population.

Of the participants who had a vaginal birth, 39 (43%) had some form of surgical delivery:

- 22 had an epidural
- 13 had a ventouse
- 4 had a forceps delivery.

The percentage of participants who had a ventouse was higher than that of the general population (14.4% and 7.6%, respectively) and also the use of forceps was slightly higher (4.4% compared to 3.6%, respectively) (Figure 2).

Pain medication

Forty-six (51%) of the participants did not use any pain medication. One participant had an analgesic, one used a transcutaneous electrical nerve stimulation (TENS) machine only, 15 used Entonox only, and the remaining participants used a combination of pain medication plus Entonox and/or an epidural (Figure 2).

Participants were asked to score the level of pain or discomfort they had felt during early labour (up to 6–8cm dilated), late labour, and birth, on a scale of zero to ten—ten being the most severe discomfort. The scores for those participants who had had an epidural in late labour and birth ($n=21$) were excluded from those stages but were included in the early labour scores.

The overall discomfort level for labour and birth was 5.8 out of 10 with 32% of the participants scoring under 5.8, including two participants who recorded zero discomfort.

The average discomfort level for early labour was 3.6 with seven participants recording zero discomfort; late labour was 6.4 with two participants recording a score of zero; and the birthing stage was 6.3 with four participants recording a score of zero discomfort.

In the comments participants made about their birth experience, most stated that the pain or discomfort they experienced was controllable.

Post-partum depression

Only two of the participants exhibited post-partum

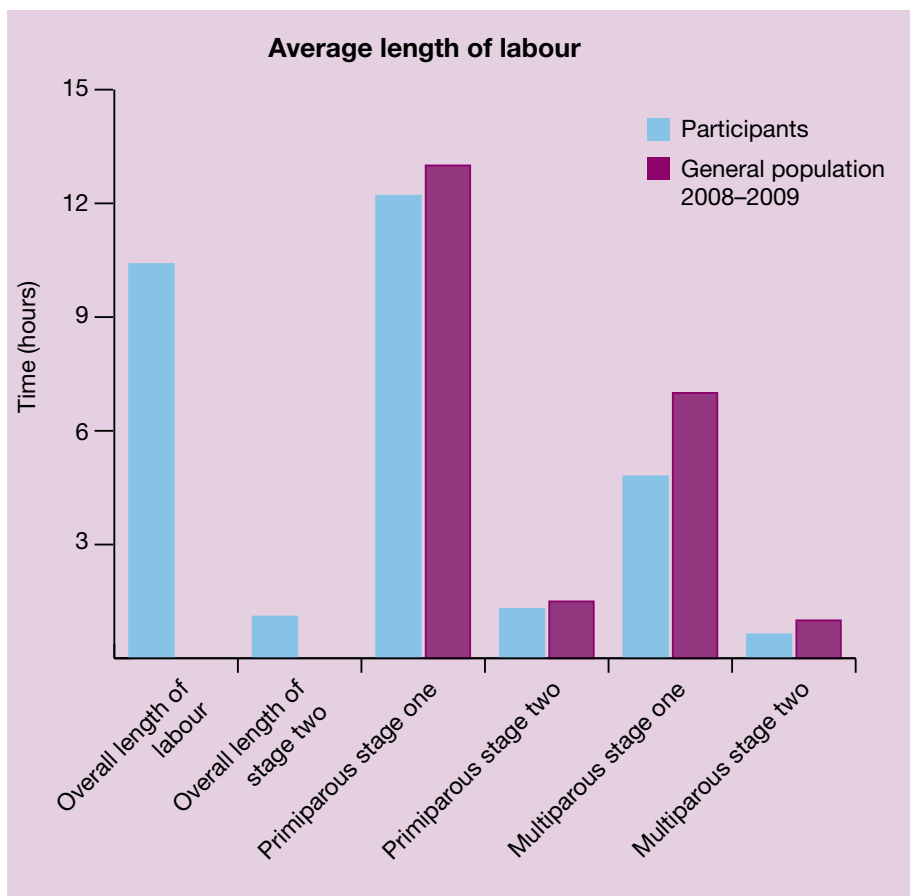


Figure 1. Average length of labour in participants and the general population (NSW Ministry of Health, 2009)

depression which, in both cases, was reported as not being severe.

Apgar scores

Fifty-nine participants (65.6%) were able to recall the Apgar score and of these, the average score was 9.2 with 91% of the participants recording scores of 9 or 10.

Anxiety

As part of the HypnoBirthing training is to reduce the fear and anxiety of childbirth, participants were asked to rate how calm they felt before and during birth, and also how calm the baby was after birth. The rating scale was from zero to ten, with ten being the most calm. The average rate of calmness before birth was 9.0, during birth it was 7.9, and the calmness of the baby after birth was on average 8.2.

Satisfaction

The HypnoBirthing programme provides the birth companions with information about the birthing process and teaches them how to be part of the birth experience. They help by keeping the labouring mother in a relaxed, focused state and by using a light touch massage to assist with pain relief.

Participants were asked to rate their satisfaction with both the HypnoBirthing techniques and with their birth companion (husband, partner, mother etc) on a scale of zero to ten, with ten being the most satisfied.

The average satisfaction rate for the HypnoBirthing techniques was 8.8 with 49% of the participants rating their satisfaction as 10. Participants gave their birth companions an average rating of 9.5, 73% rated their companions a 10.

When births take a different path

The HypnoBirthing programme is intended for a complication-free birth but some of the women were still able to use the techniques they had learnt when their births took another path.

Participants gave the following examples of using the self-hypnosis and breathing techniques to keep calm and cope with complications in the birthing process. They reported birthing a posterior baby without pain relief; being able to lower blood-pressure; using the breathing techniques while having an epidural; listening to a HypnoBirthing relaxation CD and entering into a hypnotic state while having a caesarean section; lasting until 8cm without drugs while birthing a posterior baby, and using hypnosis to help with post-surgical pain. One participant had been suffering the after-effects of ciguatera poisoning for a long time (at one stage confined to a wheelchair). There was a high risk

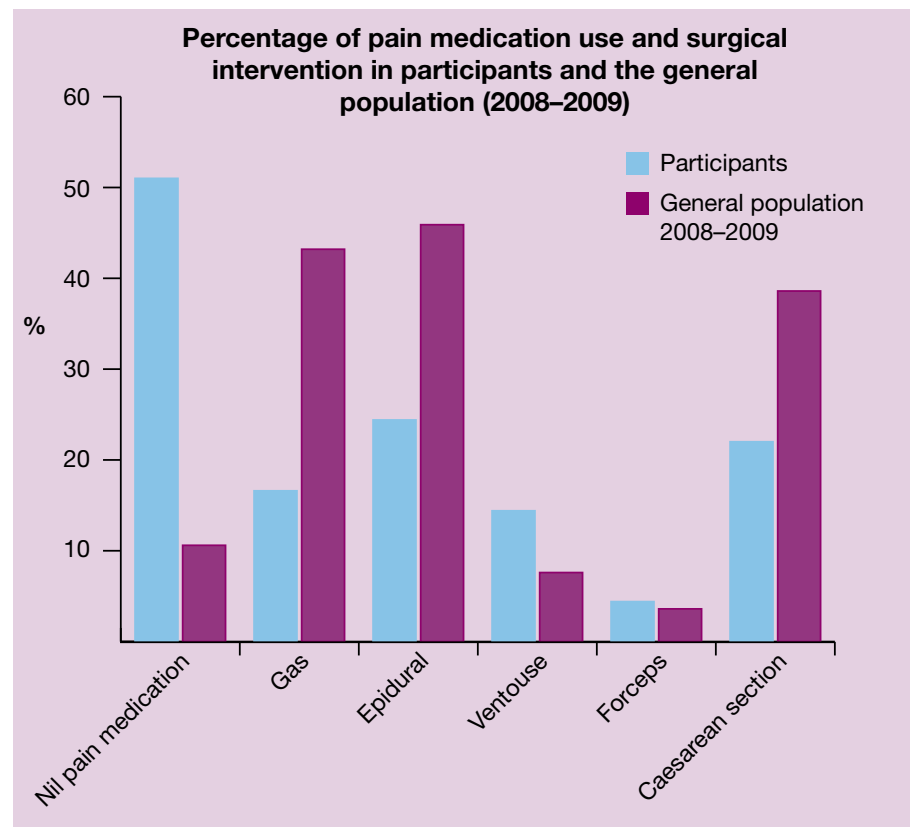


Figure 2. Percentage of pain medication use and surgical intervention in participants and the general population (2008-2009) (NSW Ministry of Health, 2009)

that she would react to the anaesthetic and she was feeling very nervous about the birth but she remained calm throughout.

Limitations

The sample size in this study was small and may have affected the results. The question on the length of the labour was not clearly defined. An explanation as to what is meant by 'true labour' would have possibly influenced the outcome as some mothers stated that although the labour was long, the contractions were erratic and didn't really become regular until the last few hours. Hence, had the 19 participants who stated the length of their labour to have been between 15–37 hours known the definition of 'true labour', the results may have been different. Another limitation was that there was not enough information gained about the birth companion's experience of the birth, considering that the birth companion's role is one part of the HypnoBirthing programme that distinguishes it from others which use hypnosis for childbirth.

Future research

Future research should involve a larger population sample attending a HypnoBirthing programme with, ideally, a control group receiving traditional prenatal care only. However, since many pregnant women also attend yoga classes for birthing and have acupuncture treatment towards the end of their pregnancy, these variables should be taken into consideration. Further research could also investigate differences in outcomes between doulas and male partner support, and include an analysis of cost-saving benefits.

Conclusions

HypnoBirthing is a natural, alternative way of approaching the later stages of pregnancy and birth and is steadily increasing in popularity. The HypnoBirthing programme consists of five 2–2½ hourly sessions where the fear of birth is reduced by explaining the birth process to the woman and teaching her how to work with her body. She is trained in mental rehearsal and imagery to prepare for the labour and birth, and is taught self-hypnosis and relaxation as well as breathing techniques to assist in the birthing process.

This investigation of birthing outcomes of women attending HypnoBirthing sessions in an Australian population demonstrated similar results to previous studies in hypnosis for childbirth (Harmon et al, 1990; Jenkins and Pritchard, 1993; Martin et al, 2001; Cyna et al, 2004; Cyna et al, 2006; Smith et al, 2006; Brown and Hammond, 2007; Vandevusse, 2007; Aggasi et al, 2009). The studies found HypnoBirthing led to a reduction in pain or discomfort during birth,

a reduction in pain medication, fewer deliveries by caesarean section, shorter labours, high Apgar scores and less post-partum depression.

The findings also demonstrated some added benefits of HypnoBirthing. The level of calmness before and during the birth was very high—as was the calmness of the baby after the birth. The majority of women reported feeling more confident, relaxed, less fearful, focused, and more in control. They also commented on the ease and comfort of labour and birth and the satisfaction of having their partners involved and supportive. The partners found that the HypnoBirthing sessions provided them with confidence and useful strategies on how to work together as a couple, enabling them to be more involved in the birthing experience.

Some of the women stated that the HypnoBirthing programme made them feel more connected and in tune with their body and that learning about the mind-body connection helped on a physical, emotional and spiritual level. Others found that practising self-hypnosis and the breathing techniques beforehand made them feel more confident and prepared, some women used the techniques they had learnt even though their births took a different path, and others said that they were using self-hypnosis in other areas of their lives—especially when they were experiencing stress. The majority said that they would do HypnoBirthing again and would highly recommend it to other expectant mothers.

HypnoBirthing depends, to a large extent, on couples making the effort to practise the skills they are taught and making sure that the person instructing them is a qualified practitioner. Many hypnotherapists teach hypnosis for childbirth but the HypnoBirthing programme teaches the woman self-hypnosis, breathing techniques, visualisation, mental rehearsal and an understanding of how the uterus works in labour and birth. The birth companion is also involved and is taught how to keep his or her partner relaxed, calm, and focused during the birth experience.

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Key points

- HypnoBirthing is a natural, alternative way of approaching the later stages of pregnancy and birth and is steadily increasing in popularity
- To a large extent, Western civilisation and culture have influenced the way a woman thinks of childbirth and because of this, fear and anxiety concerning labour were introduced
- The fear of birth is reduced by explaining the birth process to the woman and teaching her how to work with her body. The mother-to-be is trained in mental rehearsal and imagery to prepare for the labour and birth, and is taught self-hypnosis and relaxation as well as breathing techniques to assist in the birthing process
- This investigation of birthing outcomes in an Australian population demonstrated a reduction in pain or discomfort during birth, a reduction in pain medication, shorter labours, fewer Caesarean sections, high Apgar scores and less post-partum depression
- The majority of women reported feeling more confident, relaxed, less fearful, focused, and more in control. They also commented on the ease and comfort of labour and birth, and the satisfaction of having their partners involved and supportive

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