

The Emotional Ramifications of Being Born in a Cesarean Delivery

Amy Lauren Shapira

Abstract: Cesarean delivery rates have been steadily rising and have reached startling rates worldwide. There is a consensus among pre- and perinatal psychology clinicians that prenatal and perinatal factors create a predisposition that may be exacerbated and adversely affect one's personality. Although a cesarean delivery is a lifesaving procedure, little attention and respect have been given to the cesarean born baby's emotional well-being. This article's aim is to investigate whether being born in a cesarean delivery can emotionally and behaviorally impact the cesarean born throughout life, by reviewing the existing pre- and perinatal psychology literature and the current medical literature.

Keywords: cesarean birth, personality traits, emotional development

Cesarean deliveries are the number one major surgery in the United States (Pfundner, Wier, & Stocks, 2013) where the rate has gone from two to three percent in the 1970s (Verny & Weintraub, 2002) to 32.3% in 2014 (Betrán et al., 2016), exceeding the recommendation by the World Health Organization that cesarean deliveries should make up less than 15% of all births (World Health Organization, 2015). Around the world, rates of cesarean sections have been increasing steadily since 1990 in both developed and developing countries (Betrán et al., 2016; World Health Organization, 2015). Betrán and her colleagues (2016) found that between 1990 and 2014, the average global annual rate of increase in cesarean deliveries was 4.4%. Their study found Brazil and Dominican Republic to be the countries with the highest cesarean rates in 2014 with a 55.6% and

Amy Lauren Shapira, M.A., is a physical therapist, childbirth educator, and lactation instructor. She holds a Master's degree in pre- and perinatal psychology from Santa Barbara Graduate Institute. Her master's project—*Prenatal and perinatal psychology: A review of the history, principles, clinical findings, scientific basis and applications*—is the basis for a Hebrew-language internet resource (www.ppn-info.net) for the Israeli public, and is the first Hebrew website on pre- and perinatal psychology. Amy had worked for years instructing couples before birth and has led infant massage courses for mothers and babies. She has lectured in childbirth educator and doula certification courses for over a decade and is currently a medical librarian at the Younes & Soraya Nazarian Library at Haifa University in Israel. Amy is married and has three children. She can be reached at: ashapira5@univ.haifa.ac.il.

56.4% rate, respectively. A Brazilian retrospective cross-sectional study found an 84.3% cesarean section rate in a private maternity clinic in Brazil (Almeida, Bettioli, Barbieri, Silva, & Ribeiro, 2008).

Interest in the experience of childbirth has increased enormously in the United States since the 1970s. Much emphasis has been placed on having an optimal childbirth experience and on early parent-infant bonding (Affonso, 1981). Still, the process of birth has never been so medicalized as well as regulated by state legislation, insurance companies, and other bureaucratic systems (Noble, 1993). The emphasis in the obstetrical health team has long been on the physiological outcome of cesarean childbirth both for the mother and the newborn (Affonso, 1981) and studies have emphasized the high maternal and infant morbidity and mortality rates that are associated with cesarean delivery (Gregory, Jackson, Korst, & Fridman, 2012; Villar et al., 2007; Xie, Gaudet, Krewski, Graham, & Walker, 2015). Groups such as the VBAC (Vaginal Birth After Cesarean) movement and C - sect have, for several years, been addressing the mother's perspective and the question of the politics of too many cesareans (English, 1993). Though cesarean deliveries save the lives of mother and child, little attention and respect have been given to the baby and the baby's emotional well-being by the obstetric health team (Oliver, 2000). The aim of this article is to investigate whether being born in a cesarean delivery can emotionally and behaviorally impact the cesarean born throughout life, by reviewing the existing pre- and perinatal psychology literature and the current medical literature.

Literature Review

There are two major kinds of cesarean deliveries: those done before labor starts—which are referred to as elective cesarean deliveries, and those done after some labor, often in emergency conditions—which are referred to as emergency cesarean deliveries. Cesarean delivery on maternal request is a specific type of elective cesarean delivery performed for a singleton pregnancy on maternal request at term in the absence of any medical or obstetric indications (Golan, 2009; National Institutes of Health, 2006). Since the usual medical terms, elective cesarean and emergency cesarean, focus on the doctor's and the mother's experience, and this paper focuses on the child's experience, I will use Jane English's (1985) definitions of the two kinds of cesarean born: "non-labor cesarean" defines the child who is born in an elective cesarean and "labor cesarean" defines the child who is born in an emergency cesarean.

Evidence of birth memory, especially associated with trauma, has been reported frequently in the last seventy years (Noble, 1993) and the

importance of the birth experience in formation of self-image and worldview has been documented in works by Feher and Grof (English, 1993). Freud was the first to propose that birth can be remembered and that it can influence personality (Feher, 1981; Verny & Weintraub, 2002) and Otto Rank believed all neurotic anxieties were repetition of the physiological phenomenon of birth (Feher, 1981). Dr. Leslie Feher (1981) in her book, *The Psychology of Birth: Roots of Human Personality*, states that “all patterns in life are metamorphic re-enactments of birth” (p. 68). Feher, who is a psychotherapist, claims that studies of case histories, work with patients, and broader surveys have all led her to believe that certain personality structures relate to specific birth experiences. Still, Feher admits that much of this material can be considered hypothetical and that there is a need for large controlled trials to scientifically validate her observations and assumptions (Feher, 1981).

In their book *Tomorrow's Baby*, Verny and Weintraub (2002) stress that although a cause-and-effect relationship between mode of birth and personality is not suggested, there is a consensus among the findings of clinicians working in the field of pre- and perinatal psychology that prenatal and perinatal factors create a predisposition that may be exacerbated and adversely affect one's personality. As they discuss the influence our birth can have on our life they eloquently state that “birth is a transformative psychological event, a psychic pacemaker that unconsciously motivates our subsequent life. How we enter this world plays a crucial role in how we live in it” (p. 70).

In light of these works and the worldwide soaring rates of cesarean deliveries, it is imperative to examine what are the emotional ramifications of being born in a cesarean delivery. Many questions arise: what it is like for a child to be born via a cesarean? Do cesarean born individuals differ in their basic personality, life attitudes and strategies, and interpersonal relationships from vaginally born individuals? Do cesarean born individuals have distinct personality traits that are associated with the way they entered the world?

Jane English (1985) was one of the first to address these issues in her book, *Different Doorway: Adventures of a Cesarean Born*. In her book, English—an artist, translator, and photographer who has a PhD in subatomic particle physics—describes her ten-year journey of self-discovery and exploration of the personal, social, and spiritual implications of having herself been born non-labor cesarean. During her journey, English followed practices such as mindful meditation, rebirthing, Gestalt therapy, and more. Her book consists of excerpts from her journal offering dreams, imagery, and insights into being cesarean born as well as informative interviews she had conducted with other cesarean born

individuals. English's work represents a pioneering venture and apparently she is so far the only individual who has self-explored the effect of her cesarean birth so extensively and published her findings.

Prior to this book, most of the literature on cesarean birth viewed it as being abnormal, pathological, or unfortunate (English, 1993). English (1985) indicates that her intention in her book was to show that a cesarean birth is neither more nor less intense than vaginal birth but that it is simply different. In *Different Doorway*, English has sketched the first map of cesarean born experience but stresses the fact that the material presented is subjective and anecdotal rather than scientific and that the map is not intended to categorize all cesarean birthed people but to offer a conceptual framework.

The Perinatal Experience of the Cesarean Born

In her article, *Being Born Cesarean: Physical, Psychosocial and Metaphysical Aspects*, English (1993) presents a map describing the perinatal experience of the non-labor cesarean outlining each step of the cesarean delivery and how these could be subjectively experienced by the baby being delivered. She then explains how this experience of being delivered by cesarean differs from the experience of being born vaginally which could account for distinct habits, expectations, and personality traits in the cesarean born.

Before any procedure is begun, English (1993) describes the subjective experience of the unborn child as "primal oceanic union" with the mother. This union is disturbed by general anesthesia used in surgery which could be experienced by the unborn child as being poisoned and attacked (when regional anesthesia is used there may be less sense of aloneness as the mother's consciousness is still present). The next procedure is the incision made in the mother's abdomen and uterus. This, English states, could be shocking to the baby who is still unified both physically and psychically with the mother.

The obstetrician then abruptly pulls the baby, who is still very much in a state of cosmic union, out of the womb (English, 1993). Noble (1993) and Odent (2006) state that the non-labor cesarean is not physiologically ready for delivery at this point since his systems have not gone through the hormonal changes vital for preparing him for birth. In addition, the baby may experience lack of oxygen as he is lifted up above his blood supply (English, 1993; Noble, 1993). Delivery of the baby is followed by cutting of the umbilical cord (English, 1993).

English (1993) believes it is necessary to include the encounter with the obstetrician as part of the birth. This encounter, she claims, can be

perceived in conflicting ways simultaneously. On the one hand, the encounter consists of a struggle with the obstetrician who suctions the baby's airways (because the amniotic fluid is not squeezed out of the lungs as occurs in a vaginal delivery) and then forcefully stimulates the baby's breathing. But on the other hand, the encounter also includes an experience of bonding with the obstetrician, who is the first to touch the baby and make eye contact with him. However, this new bond is soon broken as the baby is taken away to the nursery (English, 1993) and could be separated from the mother for as long as 24 hours (Noble, 1993).

It should be noted that this experience may be different for babies delivered by cesareans more recently as some hospitals' cesarean protocols may be advanced. For example, some hospitals may use regional anesthesia enabling the mother to be awake during the delivery. Some may permit the father to be present in the operating room and so forth. The experience is also partially different for the labor-cesarean, who experiences some labor before being delivered by cesarean section.

Clinicians' Report of Cesarean Birth Emotional Trauma and Related Psychological Profile

Over the years there has been an accumulation of pre- and perinatal psychotherapists' reports on unconscious scenarios, belief systems, and personality traits that, from their clinical experience, are evident in cesarean born individuals (Verdult, 2009).

Unconscious Scenarios

Dr. William Emerson, who has 25 years of experience as a psychotherapist treating birth trauma in adults, maintains that being born in a cesarean delivery can cause considerable psychological trauma in babies with long term effects into adulthood. He stresses that "the effect of cesarean deliveries cannot be predicted without a knowledge of other interventions that accompany them (such as fetal monitoring and epidurals) or without knowledge of integrating traumas" (Emerson, 1998, p. 35) and points out that emergency cesarean deliveries, which are more likely to involve birth complications and related distress, tend to be more traumatic (Emerson, 1997). Emerson (1998) contends that obstetrical birth trauma prevails unconsciously throughout life and can become activated during life situations that are similar in a symbolic way to birth. Moreover, people can unconsciously recreate or, in Emerson's words, "recapitulate" their traumatic birth experience later on in life in an attempt to deal with it in the present and cathartically release it. He notes

three types of recapitulation: direct, avoidant (which is subdivided into the elimination and the identification types), and confrontive. The following are the three most common long-term symptomatic effects that are related to being born in a cesarean delivery according to Emerson (1998):

Bonding deficiencies. These are caused by unidentified trauma and tactile defensiveness. The latter is a result of the type of touch that the cesarean born may experience during delivery: one that could be abrupt, impersonal, and painful often in association with the fear and anxiety involved in the surgery or prolonged post-birth examinations. Tactile defensiveness becomes an “unconscious shadow” of the cesarean-born that could be carried into childhood and cause avoidant recapitulation, i.e., the child totally withdraws from touching and hugging or experiences anxiety during touch. When tactile defensiveness is carried into adulthood it might negatively affect sexual contact and therefore compromise intimacy and relationships. But cesarean deliveries, Emerson emphasizes, could at the same time create a deep need to bond and be touched (Emerson, 1998).

Cesarean shock. In *Shock: a universal malady – prenatal and perinatal origins of suffering*, Emerson (1999) differentiates between shock and trauma, which he claims are wrongfully used interchangeably. He defines shock as “negative and distressing life experiences that are overwhelmingly painful and which powerfully affect the physiology and psychology of the victim” (p. 1). The victim has little or no control over these unexpected and frightening experiences. In the case of trauma, the victim has some ability to change its course or severity and the experience can be coped with and will not have physiological or psychological effects. Emerson believes shock is caused by extreme stress levels and requires extensive and specialized care (1999). Cesarean shock is related to an abrupt and unexpected birth experience during which the baby’s personal space is invaded and his body swiftly handled. It could have a lasting surreptitious effect on the autonomic nervous system and is marked by elevated stress hormones when recapitulated. In addition, the parasympathetic system can become hyperactive in an effort to balance potential shock from being activated. Cesarean shock can be activated during situations that are similar either symbolically or actually to the traumatic birth scenes. Conversely, inadvertent unconscious efforts could be directed to avoid it from being activated (Emerson, 1998).

Invasion/control complexes. These are also a result of the way the baby is handled during the cesarean delivery: “the sudden appearance of

hands, forceps, cold air, and physical manipulations. Cesarean babies have to be dislodged, rotated, lifted, suctioned, examined, and tested (all in a short period of time)" (Emerson, 1998, p. 40). They are invaded, interrupted, and cannot react by running or hiding. Cesarean born individuals may therefore find themselves repeatedly involved in interruptive situations or manipulated interruptive situations. Aversive feelings toward cutting instruments or a fascination by them can be a result of confrontive recapitulation, while feeling interrupted regularly can be a result of direct recapitulation (Emerson, 1998).

Belief System

In his article, "Ruminations on Being Labor Cesarean Born," Robert Leverant (2000), a somatic pre- and perinatal, and archetypal depth psychotherapist born himself in a 60-hour labor cesarean, defines the following belief matrix that may be present in cesarean born people: "Self-support is not possible; Completion is in someone else's hands; I expect to be rescued; Life is an unconscious activity; Violence is normal; I am fundamentally flawed; Through drugs I can return to life" (p. 313-314).

Psychological Profile

Cesarean personality traits. Personality traits of the cesarean born have been described and addressed by numerous authors (Feher, 1981; Leverant, 2000; Noble, 1993; Ray, & Mandel, 1987; Verny & Weintraub, 2002). Feher (1981) states that the cesarean born encounter difficulty dealing with complications leading to goals since they never experienced the conflict of birth as vaginally born do. According to Feher, the cesarean adult expects things to be handed to him and needs the help of others to accomplish anything. In case of failure, the cesarean will blame others for not helping enough. Similarly, Leverant (2000) talks about a cesarean born attitude of "expecting help or rescue, in order to complete projects, studies, relationships, and even spoken and written sentences" (p. 313) due to being programmed at birth to anticipate and rely on external intervention. Verny and Weintraub (2002) state the cesarean born tend to get into difficult situations and hope to be rescued. Cesarean born individuals tend not to know how to push through barriers, as their birth script is often looking for a savior because that is what happened during birth (Noble, 1993). Feher (1981) also claims that the cesarean born have difficulty understanding processes in general, having missed experiencing the transitional phases during contractions. This makes frustrations and

responsibilities difficult to deal with. She adds that people born via cesarean delivery, in general, have problems in learning.

Having missed out on the initial massage the walls of the birth canal provide at birth, the cesarean born craves physical affection (Ray & Mandel, 1987; Verny & Weintraub, 2002). If one doesn't get it as a child, they may still need what seems like an excess of caressing as adults (Ray & Mandel, 1987). Not experiencing the high pressure squeezing of contractions and the journey down the birth canal, non-labor cesareans have a different learning experience in terms of personal space. They may not have a strong sense of boundaries and limits and they tend to continuously test them. Many cesarean born are "put in place" over and over, and are told not to be intrusive by people who expect them to have an inborn sense of limits (English, 1993). Because the baby is separated from the mother's womb very abruptly in a cesarean birth, a procedure which sometimes involves an emergency operation accompanied by much fear and tension, cesareans are prone to be hypersensitive about issues of separation and abandonment (English, 1985; Noble, 1993; Verny & Weintraub, 2002).

When a birth doesn't happen naturally, the baby doesn't feel responsible for it. This may set up a need to find someone who will constantly "give birth" to them (Noble, 1993). English (1993) points out that cesarean birth is not limited in time to the removal of the baby from the mother, but continues for years. English (1985) writes, "Birth, on the physical level for a caesarean is much quicker than for the vaginally born. But paradoxically, caesarean birth can also be seen as taking much longer. Many physiological, psychological, and maybe even spiritual processes that occur in labor and delivery for the vaginally born happen for the caesarean born, if they happen at all, in their encounters with the world and with people" (p. 59).

Cesarean born in relationships. In their book, *Birth & Relationships* (1987), Sondra Ray and Bob Mandel discuss how birth influences the dynamics of relationships. Relating to cesarean relationships they write:

A cesarean's relationships tend to be characterized by conflicts of will, changes of heart and mind, and constant disruptions ... usually they are looking for someone outside the relationship to tell them which way to go in life, then resenting it and doing the opposite. If one partner is cesarean and the other is not, the latter can be set to be the obstetrician – which happens in many relationships (p. 83-84)

English (1985, 1993) talks about cesarean born relationships as being colorful, abrupt, and intense, characteristics which are related to the cesarean born's different sense of time and space learned during delivery. She describes them as having an "all or nothing," arrow-like quality rather than a wave-like quality of contraction and expansion that would be learned in vaginal birth. Like Feher (1981), she addresses the little sense of process in the cesarean born, which is manifested in relationships in a tendency to expect that a relationship either exists and doesn't need to be nourished, or doesn't exist and is impossible. Leverant (2000) mentions several negative cesarean born aspects. Among them are a tendency toward being detached, obsessive, co-dependent, controlling, and avoiding contact. These may have a direct negative impact on cesarean born relationships.

Jane English (1985) points out some positive aspects of being born cesarean:

I think there is also a sense of pioneering and leadership among cesareans ... A certain strength comes from living outside the mainstream ... Cesarean birth is an ideal structure for allowing something new to come through into the world. It sets aside some deep patterns that have been common to all human culture. We begin to realize that we don't have to do some things the way people have been doing them for thousands of years (p. 130).

English (1994) believes the cesarean born have easy access to transpersonal awareness. Feher (1981) too, appreciates the positive qualities of cesarean personality stating that a cesarean born can be enthusiastic, spontaneous, and artistic. Leverant (2000) notes that a deep longing for connection is one of the positive aspects of a cesarean born archetype, which is often met by choosing to work in the helping professions, farming, gardening, etc. He adds the following positive aspects as well: "the labor cesarean born is usually very principled, practical, skilled in critical thinking, intuitive, aware of shadow material in others, helpful, and caring" (p. 314).

Evidence from Studies

Qualitative Studies

Milliken (2007) conducted a phenomenological study in which four recruited volunteer cesarean born college students (two labor-cesarean

born and two non-labor cesareans born in uncomplicated surgeries) participated. Milliken devised a 40-item survey based on Emerson's (1997) questionnaire, "The Evolution of Obstetrical Trauma," and included 40 first-person statements regarding attitudes, behaviors, and other cesarean born characteristics identified in the literature and by Emerson. For example: "I find it difficult to complete tasks on my own," or "When I get started I find that I need help to get through" (p. 146). The participants were asked to mark the survey statements that applied to them with no restriction and after returning them, each was contacted by phone for an interview in which they were asked to tell the interviewer about their birth and what they thought about cesarean birth as well as choose five or six survey questions that were most meaningful to them.

The labor-cesarean born participants chose 15 survey items or more (15 or 18) while the non-labor born participants chose less than 10 (six or eight). The surveys and the interviews were then reviewed in order to identify common themes and potentially consequential connections between the participants' life patterns and birth experiences. The three main themes that emerged were: interruption, motivation to achieve, and offering help even when it is not requested. The first theme emerged in all four participants and the other two in three out of the four participants. Interestingly, the two non-cesarean born participants both selected the statement: "I can trust higher forces to direct me and/or assist me in my life." Although this is a small sample study and clearly its findings cannot be generalized, it is apparently, to date, the only qualitative study to explore the implications of a cesarean birth on later adult behavior patterns, and could be the basis for further qualitative studies on larger participant samples.

Quantitative Studies

A large Chinese population-based retrospective cohort study examined whether birth by cesarean delivery on maternal request had an effect on childhood psychopathology compared with birth by assisted or spontaneous vaginal delivery (Li et al., 2011). A total of 4,190 preschool children of mothers registered in a perinatal care surveillance program (which recorded general information and information regarding prenatal care and labor and delivery for each mother) were assessed using the Child Behavior Checklist (CBCL) to determine child emotional and behavioral problems. This 0-2 score checklist includes 118 items regarding emotional and behavioral problems based on nine syndromes: withdrawn, somatic complaints, anxious/depressed, social difficulties, thought difficulties, attention difficulties, sex difficulties, delinquent behavior, and

aggressive behavior. Of the 4,190 children aged 4-6 years assessed, 100 were born via cesarean delivery on maternal request and the rest via vaginal delivery (either spontaneous or assisted). The CBCL was completed for each child by the parents (in over 90% of the cases) or the grandparents, and statistical analysis was conducted and adjustments were made for confounding factors. This study found that the likelihood of child psychopathological problems was lowest in the children that were delivered by cesarean on maternal request.

Another study which assessed the emotional and behavioral characteristics of preschool children born in a cesarean delivery on maternal request compared with vaginally born children found quite the opposite results (Kelmanson, 2013). The study sample included 40 five-year-old cesarean born children who were matched with 40 controls who were born vaginally. Mothers were asked to fill in the CBCL for ages 1.5-5 years (a modified version of the original CBCL comprised of 99 items), participants' birth records were analyzed, and statistical analysis was conducted with adjustments for confounding factors. Children born via a cesarean delivery on maternal request had significantly higher score values on the anxiety/depression scale, the withdrawal scale, and sleep problem scale in comparison to the control group. In addition, they had statistically significantly higher values of internalizing problems which are based on the emotional reactivity, anxiety/depression, somatic complaints, and withdrawal scales.

A prospective study by Al Khalaf and her colleagues (2015) done on a large Irish-based population sought out to investigate whether mode of delivery affected childhood behavior and motor development. The researchers used data collected from an ongoing national Irish longitudinal trial named the Growing Up in Ireland study, in which parents were interviewed about their children nine months postpartum and when children were three-years-old. The study cohort consisted of 11,096 children born in four modes of delivery which were determined by maternal testimony during the nine months postpartum interview: spontaneous vaginal delivery (58.4%), instrumental vaginal delivery (14.8%), emergency cesarean delivery (13.8%), and elective cesarean delivery (12.9%). At nine months postpartum, parents completed the Ages and Stages Questionnaire (ASQ) to assess behavioral, cognitive, and motor developmental status. This questionnaire included questions on five child development domains: communication skills, problem solving, personal social, gross motor, and fine motor. Parents completed a modified version of the Strengths and Difficulties Questionnaire (SDQ) when the child was three-years-old in order to identify emotional/behavioral problems. It is comprised of 25 rated statements in five subscales:

emotional problems, conduct problems, hyperactivity/inattention, peer relationship, and prosocial behaviors. Potential confounders were assessed during the statistical analysis and data were weighted so that all statistics reflected a national representative sample of 73,662 children. The study findings show evidence of an association between elective cesarean deliveries and developmental delay in personal social and gross motor domains and emergency cesarean deliveries to be associated with a delay in gross motor functions at age nine months.

A Lithuanian prospective study (Sirvinskiene, Zemaitiene, Jusiene, & Markuniene, 2016) aimed to examine emotional and behavioral problems in 18-month-olds and identify early psychosocial and biomedical factors that may predict these problems. The researchers used data from an ongoing birth-cohort study in which mothers and their children were followed up. The study sample was comprised of 172 infants and data was collected in three stages. During the first stage, at two to three days postpartum while still at the hospital, mothers filled out a psychosocial data questionnaire and a biomedical data questionnaire about perinatal conditions including mode of delivery. During the second stage, at three months postpartum, mothers were required to fill out several questionnaires (sent by mail and e-mail) to verify psychosocial data including infant difficult behaviors using the Mother's Perception of Infant Difficult Behaviors Scale. At stage three, 18 months postpartum, psychosocial data was collected via questionnaires (sent by mail and e-mail) including an assessment of infant emotional and behavioral problems measured by the CBCL for ages 1.5-5 years. Following data collection, statistical analysis was performed. Among other findings, this study revealed that emotional and total problems at age 18 months were more prevalent in cesarean born children in comparison to vaginally born children.

A study done in Israel (Netz, 2014) assessed the relationship between mode of delivery and sensory processing patterns and anxiety levels in children. The study included 164 children between the ages of three and ten. The interest was to discern whether there was a difference between children born in a vaginal delivery with no medical intervention (86 children) and children born in either an elective cesarean delivery or an emergency cesarean delivery (35 and 43 children, respectively). Child anxiety level was determined by the Screen for Child Anxiety Related Emotional Disorders (SCARED) questionnaire which was filled out by the children's mothers. This instrument consists of 41 items and five factors that parallel the DSM-IV classification of anxiety disorders: generalized anxiety, separation anxiety, somatic/panic anxiety, social anxiety, and phobia of school. The study findings showed that children born by

cesarean delivery (regardless of type of cesarean) had more extreme sensory processing patterns and higher levels of anxiety compared with children born vaginally. More specifically, children born via emergency cesarean delivery scored higher on the somatic anxiety factor and children born via elective cesarean delivery scored higher on the social anxiety factor.

Discussion

Cesarean rates are skyrocketing in the United States as well as around the world. There has been much concern about the medical complications related to the cesarean procedure both in the mother and the newborn. The emotional impact of undergoing a cesarean section on the woman and the impact on maternal-infant bonding have been studied and addressed as well (Affonso, 1981). Evidence from the pre- and perinatal literature suggests that we are conscious sentient beings prior to physical life (McCarty, 2004), that unborn children remember the experience of gestation and birth, and these memories become the foundation for feelings and behaviors throughout life (Verny & Weintraub, 2002). In an era when one in three babies is born by cesarean delivery, it is crucial that society consider the emotional implications of being born in a cesarean delivery and strive to create changes in hospitals' cesarean birth protocols to humanize the experience for the child, the mother, and the father.

In the beginning of the millennium, the late obstetrician Robert Oliver (2000), in his article "The Ideal Cesarean Birth," claimed that the modern models of childbirth experience optimization have eluded cesarean delivery, where little respect is given to the baby and the baby's wellbeing. Oliver stated it was crucial that the obstetric team understand the metaphysical and transformative aspects of labor and welcome the baby through prayer and meditation. Oliver also suggested numerous ways in which cesarean delivery could be humanized even in an emergency circumstance when the obstetric team has less than ten minutes to deliver the baby.

In the case of an elective cesarean, when the mother and baby are healthy, Oliver (2000) suggested that labor be allowed to start before performing the surgery, which could ensure fewer complications for both. By using regional anesthesia, the mother could be conscious throughout the delivery and breastfeed and bond with her baby after he is born. Oliver recommended a transverse incision so that the mother has the opportunity of a vaginal birth in the future and that the amniotic sac not be ruptured until after the baby's presenting part is elevated gently. The

nose and throat could be gently aspirated if needed and the rest of the body is then delivered but not by the pulling of the head. The baby could be gently compressed by the hands of the obstetrician to simulate vaginal passage, and can be covered with more warm, wet hands or towel while waiting for fetal circulation to stop. The cord should be clamped only after it stops pulsating and the baby should then be given to the mother and the father while the pediatrician judges the condition of the baby and decides whether gentle stimulation of breathing is needed. The obstetrician completes the delivery of the placenta, awaiting its delivery instead of jerking it out, and closes the uterus and abdomen (Oliver, 2000).

Oliver (2000) believed that this ideal was possible but necessitated tremendous awakening of the medical community to its need; however, it was only about two years after he published his vision that humanized cesarean delivery actually became a reality. Professor Nick Fisk, an obstetrician at Queen Charlotte's and Chelsea Hospital in west London together with midwife Jenny Smith, began practicing what they called "a 'natural' cesarean section" for elective cesarean deliveries (Moorhead, 2005)—performed quite similarly to Dr. Oliver's recommendations. The procedure technique, which is suitable for elective cesareans in healthy women with a term non-compromised single fetus excluding breech presentations, was later delineated in a journal article. The authors claim that a "natural" cesarean allows parents to be active participants in the birth of their child, enables a slow delivery with physiological auto-resuscitation, and promotes skin-to-skin contact as the baby is transferred directly onto the mother's chest following delivery (Smith, Plaat, & Fisk, 2008). Jenny Smith attests to the benefits of the procedure: "the parents feel more involved, which gives them a better start to family life, breastfeeding is easier to establish, and one can see how much calmer the baby is" (Moorhead, 2005, para 10).

In the preparatory stage of the "natural" cesarean, the prospective parents are shown video clips of the procedure and the operating room and meet with midwife and obstetrician, if possible. The woman is encouraged to wear her own clothes for the procedure and bring her own music. The staff frees the woman's hands and chest wall from medical devices and wires (which are placed in alternative areas) so that she is able to hold her baby after birth. During the procedure, after the uterine incision, the drape separating between the mother and surgeon is lowered, blood is cleaned from the abdominal incision area once the baby's head approaches, the mother's head is raised so that she can watch the birth and her partner joins her. At this point the surgeon keeps his hands off and lets the baby breath air independently while still connected to the placental circulation. This pause also enables uterine pressure to expel

fluids from the newborn's lungs. After the baby's first cry, his shoulders are freed and arms often expand independently. An extra pause at this point lets the mother observe the baby and then, while the obstetric team, who continuously assess the baby's general condition, assists his effort to wiggle himself out as uterine contractions continue. After the baby is born the cord is clamped and the baby is put on his mother's bare chest by the midwife and is dried and warmed with a towel. Cutting of the cord, labelling, and vitamin K administration are all done while the baby is on his mother and nursing is initiated. The baby is weighed only after surgery is done (Smith et al., 2008).

Obstetricians have begun implementing Fisk's "natural" cesarean section technique in their practice in the United States (Camann & Barbieri, 2013; Magee, Battle, Morton, & Nothnagle, 2014; Schorn, Moore, Spetalnick, & Morad, 2015), England (Simmonds, 2016), Germany (Armbrust, Hinkson, von Weizsacker, & Henrich, 2016), The Netherlands (Posthuma et al., 2016), and Australia (Dowling, 2007), and report positive and satisfactory results. The technique has been filmed and narrated (Smith, 2012) and can be accessed online freely on YouTube (reelflow, 2011) and there have been women who have undergone the procedure and uploaded their personal movies online, as well. There has even been a report of twin babies born via a family-centered cesarean (Tumblin, 2013). Although this procedure is becoming more familiar, and delivery room equipment such as clear surgical drapes have been implemented to prevent contamination and enhance visibility (Camann & Trainor, 2012), the fact that its creators have chosen the word "natural" in conjunction with a cesarean delivery has generated some discussion (Douché, 2009; Maffi, 2013) and criticism (Newman & Hancock, 2009). The "natural" cesarean is far from becoming a standard procedure.

Dr. Chris Gunnell, an Australian obstetrician who began performing "assisted cesarean" deliveries, a procedure similar to the "natural" cesarean, in 2007 stated that it was unlikely to become mainstream procedure as many women are actually turned off by the idea and therefore do not want to be active participants during the delivery, and because the risk of infection and other factors need to be addressed before the procedure becomes standard, if at all (Dowling, 2007). According to Washington-based midwife Terah Lara (2013), it is not only women who are not open to the idea of the "natural" cesarean, but also midwives who have been told about it who show no interest in implementing it in their work. During the process of writing this article the American College of Obstetrics and Gynecology (ACOG) and the World Health Organization (WHO) were approached to ascertain whether they had an opinion or a policy regarding the "natural" cesarean. While the ACOG currently has

no guidelines on “maternal assisted (natural) cesarean sections” (ACOG resource center, personal communication, January 10, 2017), the WHO claim that “although their latest statement on cesarean section does not address the procedure, a lot of the principles of the “natural” cesarean are covered in other WHO guidelines on pregnancy, childbirth, postpartum, and newborn care” (G. Lazdane, personal communication, January 9, 2017).

For years, pre- and perinatal clinicians have witnessed the implications of cesarean birth in their clinical work with cesarean born individuals, developed therapeutic techniques for treating them, and reported their experience and findings in the literature. The medical community has finally awakened to the possibility that being born in a cesarean delivery can affect one’s emotional state and behavior and is beginning to acknowledge the importance of humanizing cesarean delivery for the baby and his parents. Only recently have researchers begun to scientifically study the possible association between mode of delivery and child psychopathology, and evidence from observational studies is beginning to emerge. Further studies are needed to scientifically validate the suggested correlations between behavior and personality patterns and birth experience. Although the “natural” cesarean is becoming more accepted, it is still far from being mainstream and policy makers have not endorsed it yet. It is imperative that birth practitioners worldwide become aware of the technique, implement it in their work, and practice it safely, and that future parents facing an elective cesarean delivery are educated about it.

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