

A Journey of Love: The Influence of Prenatal and Perinatal Psychology on Parent-Child Bonding

Christie Barrack, PhD

ABSTRACT: The purpose of this qualitative, phenomenological study was to better understand parents' experiences of bonding with their babies in utero and after birth, and to discover the relevance of a prenatal and perinatal psychology (PPN) based bonding class in this process. Five couples were recruited from prenatal parenting classes in Santa Barbara, CA, and interviewed in person 2-6 months after giving birth. Benefits of the class for the parents included developing awareness of the consciousness of unborn babies, learning methods for bonding prenatally, and finding ways to communicate with a newborn. Suggestions for the future included offering tips for healing after a traumatic birth, normalizing the postpartum period, and easing the pressure prospective and new parents feel. This underscores the necessity of PPN educators using sensitivity and creativity in imparting this new perspective.

KEY WORDS: bonding, attachment, prenatal education, parent, child, prenatal and perinatal psychology (PPN), qualitative research.

Parent-child attachment theory has been widely accepted since the 1970s as an integral foundation to the health and well-being of infants, children, and adults (Karen, 1994). A strong parent-child bond lays the foundation for a child's sense of security, trust, and independence (Bowlby, 1988). Recent research in the emerging field of prenatal and perinatal psychology (PPN) and health suggests this parent-infant bond can and should begin in pregnancy, as early as conception (Chamberlain, 2003).

As I contemplated these ideas midway through a doctoral program

Ann Christine Barrack, PhD, is a prenatal and perinatal educator, author, and consultant. This article is based upon the author's doctoral research project presented January 31, 2005, in partial requirement for her doctoral degree from Santa Barbara Graduate Institute. Her doctoral committee consisted of chairperson, Carolyn Kenny, PhD, with Marti Glenn, PhD, and Bobbi Jo Lyman, PhD as members. Currently she serves as a member of the SBGI online faculty, counsels parents at a crisis pregnancy center, and teaches prenatal parenting classes. She is now embarking on a new art/research project about parenting, miracles, and passion. She may be reached at 24988 Blue Ravine Rd., Suite 108-182, Folsom, CA 95630. Email: christiebarrack@yahoo.com.

in Prenatal and Perinatal Psychology, I wondered if the concepts I was being taught—the awareness of babies prenatally and the importance of parents interacting with their unborn children—would be helpful to young parents expecting their first child.

PERSONAL INTEREST

It was my curiosity and intrinsic need to understand this important bond between parent and child that drew me into this graduate program and particular research study. My history was tied intergenerationally to my grandmother, who died giving birth to my mother. The perceptions, feelings, fears, and beliefs my mother carried as a result of losing her own mother at birth were unconsciously passed down to me, interfering with our bonding experience and coloring the way I viewed life and relationships. My journey of healing in this area has fueled my passion to assist people in their transition to parenthood in healthy, conscious ways.

PURPOSE OF THE STUDY

The focus of my research was twofold. First, I wanted to gain a personal and comprehensive understanding of the phenomenon of parent-child bonding, both prenatally and after birth, as experienced by a small group of first-time parents. Second, I wanted to discover whether parents' experiences of bonding with their babies were enhanced by their participation in a prenatal class that discussed the parent-infant relationship from the perspective of PPN. I wanted to hear from the parents themselves if the theories exciting me translated into meaningful and functional concepts that were useful in the everyday experiences of new parents in relating to their babies.

A BRIEF REVIEW OF LITERATURE

Bonding and Attachment

The process of parent-child bonding and attachment has been extensively studied in the last five decades. It is now commonly accepted that a healthy bond between a parent and child is essential to the wholesome development of the child into a secure and independent adult (Bowlby, 1988). John Bowlby, considered the pioneer of attachment theory, asserts that the parental formation of a secure base from which a child can grow and explore contributes to the

healthy attachment of parent and child. “A young child’s experience of an encouraging, supportive and cooperative mother, and a little later father, gives him a sense of worth, a belief in the helpfulness of others, and a favorable model on which to build future relationships” (Bowlby, 1982, p. 378).

Mary Ainsworth’s (1978) extensive studies with an experiment known as the Strange Situation indicate that a strong parent-child bond based on trust lays the foundation for a secure attachment and a sense of safety and independence in the child. In the early 1970s, pediatricians Marshall Klaus and John Kennell (1976) became well known for their research on bonding. They began studying mother-infant dyads and hypothesized there might be a *sensitive period* after birth in which the conditions in both mother and baby were optimal for bonding to occur. If this period were interrupted for some reason such as prematurity or surgical intervention, the bond between mother and baby might be jeopardized (Kennell & Klaus, 1984).

Anthropologically speaking, the feelings of love parents have for their baby, and the baby’s instinctual behaviors, serve to keep parents and baby in close proximity, insuring survival (Hrdy, 1999). The parent-child bond is the first relationship to which we are exposed, giving us our initial sense of whether the world is a safe or dangerous place (Panksepp, 2001). This bond, an intimate connection ideally based on safety, trust, love, and consistency, forms the foundation of the developing parent-child relationship (Ainsworth, Blehar, Waters, & Wall, 1978). It is a vastly complex process with myriad factors influencing its development, such as the parents’ own prenatal, birth and bonding history (Sears & Sears, 2001), the type of birth one experiences (Kitzinger, 2003), social support (Sroufe, Cooper, DeHart, & Marshall, 1996), employment status (Sears & Sears), and personalities of both parents and child (Tsujino, Higa, Eng, & Inuihara, 2002). The bonding relationship in turn influences a number of factors in the child such as brain development (Schore, 2002; Siegel, 1999), nervous system regulation (Siegel & Hartzell, 2003), self-esteem (Watson & Ecken, 2003), intelligence (Karmiloff & Karmiloff-Smith, 1999), ability to manage stress (Nathanielsz, 1999), sense of security (Bowlby, 1982), and social behavior (Watson & Ecken).

Prenatal and Perinatal Psychology

Further investigation into this important dynamic has led people in various fields of human research to study the probability that the bonding process begins even earlier than birth. Research in the

emerging field of PPN maintains that babies are conscious and aware of their environment from the moment of conception (Verny & Weintraub, 2002). Physiological, emotional, and environmental influences during this formative time of growth and development create a foundation, or blueprint, from which children will construct perspectives and belief systems they will carry throughout the rest of their lives (McCarty, 2002). It seems crucial, then, that prospective and pregnant parents become aware of the consciousness and abilities of their unborn babies and learn how to sensitively interact with them during these formative periods.

Prenatal Education

Although still common in many traditional cultures (Trevathan, 1987), in our current Western culture young people are not commonly exposed to birth and early parenting in the home, so prospective parents must seek information from other sources. Prenatal education classes have provided an accessible and appropriate environment for acquiring this valuable information (Nolan, 1997).

In recent decades, childbirth education classes have helped to prepare expectant parents for the physical and emotional aspects of childbirth (Willford, 1998). However, few childbirth education classes have incorporated into their curriculum the perspective of PPN, which asserts that building an emotional connection between parent and child at this early stage is important in the lifelong bonding and attachment process (Verny & Weintraub, 2002).

METHOD

Research Design

The research design centered on the following two questions: What are parents' experiences of bonding with their babies? Would information provided in a prenatal education class drawn from PPN principles make a difference in the way parents experienced the bonding process? Because of the delicate and intimate nature of this research, I sought a design that lent itself to subjective description, experiential interpretation, and recognition of the participants as experts. I chose a qualitative, phenomenological design (Moustakas, 1994) highlighted by aspects of portraiture (Lawrence-Lightfoot & Davis, 1997) to allow for the most illustrative portrayal of the bonding

experience. I wanted to learn about the process of parent-infant bonding from parents who were living it. I wanted to hear their words, see their expressions, and watch their interactions with their children. In writing about their experiences, I wanted their words to take precedence.

As qualitative research seeks to describe observable behavior in a subjective manner, qualitative researchers are interested in learning the meanings people ascribe to the details of their lives (Taylor & Bogdan, 1998). They gather information in an inductive manner, viewing people in their normal settings while considering the whole continuum of their lives, thoughts, and relationships. Qualitative researchers recognize the influence of their own perceptions and values on the process of discovery with the final emergent themes or findings forming a collaboration of construction by researchers and participants.

Within the framework of qualitative design, phenomenological research seeks to understand more thoroughly a particular concept of lived experience (van Manen, 2002). The phenomenological researcher attempts to suspend his or her own beliefs and biases, a quality phenomenology pioneer Edmund Husserl termed *epoche*, from the Greek meaning “to abstain” (Moustakas, 1994). The objective of the phenomenological research process is to determine “what an experience means for the persons who have had the experience and are able to provide a comprehensive description of it” (Moustakas, p. 13). This is affected by the continual presence of the researcher and the participant, both of whom hold perceptions and life views that intermingle during the course of research.

I decided to use aspects of portraiture to highlight the parents’ stories because portraiture has a narrative quality, which is useful in communicating such a personal, complex, and intimate topic where the story is more important than categories and themes.

Prenatal Bonding Class

A four-week prenatal bonding class, “Bonding With Your Baby Before, During, and After Birth,” was offered during Winter and Spring 2003 through the Adult Education Department of Santa Barbara City College. My classmate, Carrie Contey, designed the class, and I assisted her in teaching it. Five of the participating families ultimately supplied the data for this research.

This series of classes, open to the general public, departed from traditional prenatal education classes in that the curriculum was

focused on principles from PPN and their relationship to parent-child bonding. The teacher imparted information about the development of babies in utero, the consciousness of babies and their awareness of their environment, and the importance of communicating with babies during this formative time. Experiential exercises and open discussion helped demonstrate the following skills (McCarty, 1996, 2000, 2002; Paris & Paris, 1992):

- *Communication*—discussion of ways parents can communicate with their baby prenatally such as talking directly to them, reading them stories, singing to them, and massaging the mom's belly. Postnatally, helping parents to understand that their babies are communicating with them from the very first minutes of life through their eyes, facial expressions, movements, breath and heart rates, crying talking, and placement of attention. By listening, parents learn what their babies need.
- *Narration*—a form of communication that involves telling babies what is happening during the day, and preparing them for experiences that may be surprising or alarming.
- *Reflection*—reading babies' emotional state and responding in a like manner, showing babies that parents understand what they are feeling. Parents also reflect what their babies are doing, letting the babies know they see and acknowledge their actions.
- *Differentiation*—acknowledging the parent's feelings as separate from the baby's and reassuring the baby that he or she is not responsible.
- *Repair*—apologizing when making a mistake, and reconnecting by restoring communication, touch, and love.
- *Regulation*—learning to manage one's own sense of well-being physically and emotionally, so the parent is able to respond in a healthy way to the child's needs, which in turn, teaches the child to regulate his or her emotional and physical needs.

The class also included education about the importance of the partner relationship, generational influences in parenting, optimal birthing alternatives, and the importance of support during the pregnancy, birth, and newborn periods. The teacher offered examples of some practical equipment to aid the parents in bonding, such as the sling for carrying their baby and the bouncy ball for calming a fussy baby. A primary focus of the class was that most people possess the

innate knowledge and instinct to be the kind of parents they desire to be. However, many have learned to trust external wisdom more than internal knowing, so they rely on the various “experts” to guide them. And then they are confused by conflicting information. The class encouraged parents to educate themselves about the various aspects of the journey into parenthood, and then to listen within and balance what they read with their own inner guidance. A goal of the class was to empower people to take control of their process and begin to parent from a place of confident inner knowing.

Data Collection and Analysis

Data were collected through semi-structured interviews conducted 2–6 months after the parents had their babies. I conducted all of the interviews, using video as well as audiotape, to provide a fuller understanding of the parent-baby relationship. I asked open-ended questions about the parents’ experiences of bonding with their babies and broad-based questions about the relevance of the class material to their bonding experience. After each interview I made field notes describing my time with the family. Professional transcribers and I transcribed all the audiotapes.

The data were analyzed using a combination of techniques. The primary model was based on Clark Moustakas’s *Phenomenological Research Methods* (1994), in which he modified the analysis methods of van Kaam, Stevick, Colaizzi, and Keen. This was a fairly rigorous and complex method involving the discovery of emergent themes and the composition of textural and structural descriptions for each interview, culminating in a combined synthesis of *what* happened and *how* it happened. The final analysis revealed the essence or meaning of the experiences of the parents.

In addition to using Moustakas’s (1994) method, I drew on Sara Lawrence-Lightfoot and Jessica Hoffmann Davis’s (1997) portraiture analysis. It seemed to me the experience of parents falling in love with their children could not be reduced effectively to analyzed data, as it is a living, organic process more suitably told in a fluid and colorful way. Lawrence-Lightfoot and Davis use a blend of aesthetics and empiricism to bring together a graceful and vibrant portrait of the scientific study.

RESULTS

The Families

Christine, 28, and Mark, 30, were a young married couple living in Ventura, California. They had just moved into their new condominium 3 weeks before their son, Flynn, was born via a natural vaginal birth in a birth center.

Cody and Laura, a young couple in their mid-20s, married for 3 years and living in the married student-housing complex at the University of California, Santa Barbara, had planned a home birth, but had to be transported to the hospital. Ocean was ultimately born by vacuum extraction.

Nicole, 33, and Steffan, 37, a married couple, lived in a comfortable home on a hillside in Santa Barbara, California. They had a home birth with a midwife. As they had chosen to forego any ultrasounds, they were surprised at the birth by twin boys, Aaron and Evan.

Bren and Misha, a young unmarried couple, rented a home in a wooded area overlooking Santa Barbara. This was Bren's first child, but Misha had been pregnant 5 years earlier, when she had tried to have a home birth but had to be transferred to the hospital where the baby died. This time she decided to take every precaution to have a safe birth. She chose a high-risk doctor, and Kelly was delivered in the hospital by a scheduled Cesarean section.

Samantha, 30, and Terry, 52, were a married couple living in the foothills of Santa Barbara, California. This was Samantha's first marriage and pregnancy; however, Terry was married previously and had a 19-year-old daughter. Twins Alden and Eli were conceived by in vitro fertilization, and were born 6 weeks prematurely by emergency Cesarean section. They spent 10 days in the Neonatal Intensive Care Unit (NICU) of the hospital.

Phases of the Journey

The process of becoming a parent and bonding to a child was described by Christine in this way: "It was a journey really. It was a journey of figuring, you know, learning and growing and reading and feeling and just kind of navigating to find the right place for us" (Barrack, 2005, p. 146). I will discuss the results of my research in the context of four different stages of the journey into parenthood: pregnancy, birth, the newborn period, and settling in as a family. In each stage, parents described attributes that facilitated their experience of bonding with their babies and those that interfered with

the process. Finally, the parents discussed aspects of the bonding class that helped them in their relationship with their child and offered suggestions for improvement.

Pregnancy—The Journey Begins

In many ways the transition to parenthood is like embarking on a journey to a foreign country. Depending on how one feels about the trip, the beginning phase (pregnancy) is characterized by feelings of excitement, nervousness, or even dread. Nevertheless, there is planning and great anticipation. Mothers and fathers experience this and all phases of the journey in differing ways, as the lens through which each individual views life is tinted by that person's travels thus far.

These parents all said that at some point they felt a bond to their unborn baby, though their individual experiences differed. They indicated their awareness of the baby's consciousness, their ability to communicate with their child, and the support of their partner facilitated bonding during the pregnancy. Conversely, feeling unprepared for pregnancy, not knowing the sex of their child, and feeling anxious detracted from their ability to bond.

Mothers and fathers experienced the bond with their babies during this time in very different ways. For mothers, their changing bodies initially made them more cognizant of another presence inside. They were physiologically connected in a way that fathers could not experience. Samantha described her feelings during the pregnancy:

[The bond with the babies] was really strong and once I could actually start feeling them move, I could really start bonding with them more. I could feel these were beings more. I think from the moment I got pregnant, there was a certain amount of bonding going on because I definitely felt like I wasn't alone any more. I knew there were these two little souls inside of me, and so I felt that was there from the beginning, but it grew as I grew, definitely. (Barrack, 2005, p. 188)

Misha expressed her experience this way:

I felt bonded to her because in a weird way like sometimes when I was pregnant and I would be like, she hasn't moved enough today. And I would start tripping out and

she would kick and be like I'm okay, I'm a strong girl...So it was really kind of neat, anytime I would have a thought of worry, she would, like, back it up. Just like with either a thought through my own brain, or she would kick or she would move or she would just let me know, hey, I'm cool. Don't worry. Everything's good. (Barrack, 2005, p. 162)

Fathers also desired to have a connection to their baby, but reported that it felt somewhat vague during this time. Steffan said, "I felt like the whole pregnancy process was unclear partly because I'm sure I wasn't carrying a baby. The feelings were more, a little bit murky" (Barrack, 2005, p. 176). Bren also described his feelings during the pregnancy saying, "But a lot of times, there's so much fear when you're pregnant. And a lot of the bonding thing, I think it inhibits the bonding, you know, the fear" (Barrack, 2005, p. 169).

But for all the unknowns, the worries, and the blur around bonding, optimism seemed to triumph. Somehow, parents believed that everything would be okay once the baby arrived.

Birth—The Arrival

The arrival phase comes with the birth of the child. Heightened and often unexpected emotions accompany this arrival. There is relief and joy that the much-anticipated passage is complete, and the parents have arrived at their destination, a new bundle of life in tow, but there is also fear and uncertainty. This is new territory that looks somewhat different from the pictures. For some, the trip has not been what they had expected, as there were detours, delays, and unanticipated problems.

These particular babies arrived in myriad ways, which had a decided impact on the very early bonding period for this group of parents. For those who carefully planned the birth, especially those desiring a natural one, the reality often contrasted sharply to their expectations. When complications arose and the birth did not proceed as intended, parents often felt like failures. Mothers in particular were disheartened, frustrated, and consumed with feelings of guilt and sadness. These feelings, along with the physical complications of a surgical or difficult birth, interfered with the mother's ability to bond with her baby. Misha, who had a scheduled Cesarean section, described her experience:

And you know our doctor had promised that if everything

goes well, Kelly should be able to be with you in recovery, but I was so kind of tweaked from the anesthesia that I couldn't. I was really nauseous and wanting to throw up and then, with the incision and stuff, so they kind of had her in the nursery, you know, clearing her lungs and doing the typical c-section stuff. (Barrack, 2004)

In contrast, when there was no intervention, the moments and hours following birth were a time of getting acquainted in a very calm, quiet, slow-paced atmosphere. Parents felt as if they were in a protected bubble, a surrealistic suspension in time. Mark and Christine, who had a natural birth in a birthing center, talked about their feelings right after Flynn's arrival. Mark said:

It was very quiet...We were just in this little bubble, where time felt like it was at a standstill...It was weird. I mean it was cool. He was there all of a sudden. And he was on her chest and just nursing and then he fell asleep...I think we just kind of stared at him. We didn't do a lot. (Barrack, 2004)

The Newborn Period—Adjusting to a New Life

Following the excitement and newness of the arrival, there is a period of adjustment to the new environment, in this case the addition of a baby or two. For many parents who spent months planning a trip to the tropics, they feel like they have inadvertently been dropped off in the arctic. This is not at all what they had expected. They are unprepared, disillusioned, exhausted from the journey, and hopelessly lost. They wish someone had prepared them for what it would be like. At the same time, they seem to have fallen in love with the new arrival(s) along the way and become determined to make this work. By some unfamiliar force, they feel *driven* to adapt to this new way of life.

These parents said the first few weeks and months after their baby was born were filled with extremes of emotion, conflicting feelings, reorganizations, exhaustion, and intense love. They were astonished at the depth of their feelings for their newborns. In these early weeks, parents recounted that holding, cuddling, talking, carrying, bathing, feeding, and sleeping with their infants fostered feelings of being bonded. Mothers all mentioned that breast-feeding was the single most influential experience promoting bonding. Nicole said:

That first week was so amazing just to watch them, just

brand new life and I'm sure it's as wondrous for them as it is for us. So new, so big. After they were born, Steffan and I would just look at them and get tears in our eyes because we couldn't believe how much love there was there. In fact, we still do sometimes. They're just so amazing. (Barrack, 2005, p. 177)

When Terry and Samantha brought Alden and Eli home from the NICU, Eli was unable to nurse so Terry bottle-fed him. Terry described his experience this way:

It was just wonderful. I just had a great bonding with him, because just like mom gets to have this experience all the time, I got to hold this little guy in my arms and feed him. It was wonderful, even though the fatigue was unbelievable, it was just really a joy to connect with him and be so much a part of it. I actually experienced some loss when he was able to start breast-feeding because then it meant I got him only on a hit or miss basis....So the first week to 10 days was a very special time with Eli. (Barrack, 2005, p. 191)

Bren and Misha spoke with astonishment about the newborn period with their daughter Kelly:

Bren: The first few weeks I didn't do anything but just look at her, you know? I could just spend hours looking at her. It was amazing.

Misha: For so long, Bren and I would just look at her, like can you believe it? Can you believe it? Remember, all we said was just, "Can you believe it?" Even still, when she goes to bed at nighttime, we're just like, "Are this many parents so stoked on their kids?"(Barrack, 2005, p. 163)

However, at the other end of the spectrum, the emotional lows were abysmal, particularly for mothers. They cried unexpectedly and often. Their bodies ached and felt like they were no longer their own. Fathers felt overwhelmed at the prospect of providing financially for a family. Both parents were sleep-deprived and fearful they were not parenting well. Laura, who had to be transferred from home to the hospital, expressed her feelings this way:

[I was] trying not to feel guilty that I needed some time to adjust to the whole event that had just happened as well as the outcome of that event...I was really disappointed so I was emotional on top of regular emotional...Why, why, why was the [question]...Was it was my fault, what did I do, what didn't I do, what could I have done?...I guess even though I had read a lot and talked to other moms, and done what I thought was a lot of preparation, I didn't know how it was going to be with a newborn. (Barrack, 2005, p. 157)

Christine, who had a natural birth, also described this period:

The first three months, they're just not fun. And it doesn't mean that they're negative. It's beautiful, it's challenging, it's intense, it's beyond anything you can imagine, but it's not fun. (Barrack, 2005, p. 136)

Samantha, who had an emergency Cesarean section, said:

I don't think [bonding is] innate. I used to think it was. But then when the babies came out, probably for several weeks, I didn't feel much for them. I felt so guilty and ashamed. And I don't even think I talked to [Terry] about it much, because aren't you just automatically supposed to feel a bond with your babies? I almost felt more bonded with them when they were inside of me, in a way. That might have been more innate, but it definitely was like a process that happened. It wasn't just an instant thing that happened after they were here in a physical form in the outside world anyway. (Barrack, 2005, p. 192)

The bond grew with time, but it was marked with intermittent spikes and valleys. Even the most prepared, positive-minded parents who experienced relatively easy and natural births felt overwhelmed by the sheer constancy and demands of this new job. The parents struggled to recreate themselves and their lives because of the love they felt for their child. The course of this reconstruction was shaped by their individual personalities, their early life relationships and experiences, and their resulting coping strategies.

Settling in as a Family

As time passed, the journey became less effortful. The terrain began to feel more familiar: they learned their way around; they found solutions to their problems; they learned the language. The bonding relationship became more of a rhythmic dance that slowly tightened the connecting chord between parent and child. Fueled by unrelenting love for their children, they began to emerge as a family, and they noticed changes taking place. The parents grieved the loss of their former life but began to embrace the joy of their new one. As their babies learned to make sounds, crawl to them, hug and kiss them, the bond was cemented into their being. The feelings of being overwhelmed dissolved into flexibility. They began to recognize their instincts and trust their intuition.

In discussing the bond with her babies during this phase of the journey, Samantha said:

[The bonding] continues. It continues to get deeper and change. It still is about nurturing and caring for them, but now I am starting to get so much more interaction back from them, that I feel a whole new level of bonding, where they're recognizing us and we can have more of a relationship with them and their personalities are starting to emerge. (Barrack, 2005, p. 201)

Cody described his relationship with Olivia during this time:

I haven't had to work or go to school this whole summer, so I've been able to be here, and what a precious time, because she changes every day. She knows her dad. That's kind of rare too, to really have that time. Just for me, it just gets deeper and deeper every day. She started to follow and look at us and smile and react and stuff, you know, every day is just cinching tighter and tighter and tighter. (Barrack, 2005, p. 150)

Misha had this to say about her relationship with her daughter, Kelly:

As she develops more, we develop more relationship and interact and respond and laugh and we can laugh together. So I think every day it just grows more and

more...I think what I've enjoyed the most is watching her unfold, you know, coming from this little being that doesn't do much, to now when she found her hand and when she started holding her head up and being on her belly and being fine and just watching her unfold and watching myself unfold and watching Bren unfold into parents and feeling that love. (Barrack, 2005, p. 164)

The journey does not end here, as the parent-child bond has only begun. Just as it grew and changed in the months following birth, it will continue to transform itself throughout the lives of these families. According to Marshall Klaus and John Kennel (1976):

Close attachment can persist during long separations of time and distance, even though there may at times be no visible sign of its existence. Nonetheless, a call for help after even forty years may bring a mother to her child and evoke attachment behaviors equal in strength to those in the first year. (p. 2)

The Bonding Class—Using a Guide

Books, videos, pictures, and discussion with experienced travelers can be helpful in planning a journey, but they can never fully prepare anyone for the sensory and somatic fullness of the lived experience. This appears to be true for prenatal education as well. The prenatal bonding class, using principles originating in PPN, offered insight, education, and challenges for these parents, but still left them unprepared in many ways for what lay ahead.

However, the new concept of an unborn child possessing consciousness and awareness helped orient them to the reality that they were indeed already parents and their babies were already learning. They were excited to realize they could interact with their unborn baby. At the same time, the focus on optimal, natural birth, and the babies' awareness of their environment added further pressure to worries about being good parents. The realization of the responsibility being a parent holds and the possibility that their own early childhood experiences could affect their parenting style was both eye opening and burdensome.

After the babies were born, parents went into survival mode. They initially responded to their new situation using methods they were accustomed to employing when faced with stressful and novel

situations. But morsels of information from the class clung to their memories. Parents remembered to communicate with their baby, differentiate their emotions, and keep themselves regulated. Some remembered to allow their babies to self-attach to the breast (a natural process immediately following birth whereby a baby placed skin-to-skin on the mother's abdomen will scoot upward, using the scent of the breast, latch onto the breast and begin sucking) long after the birth. In these ways, the bonding class was useful to this group of new parents.

Nicole talked about a class experience that was helpful to her:

I really appreciated the video that you showed of the [babies] crawling up to the breast and self-attaching. And I actually wasn't able to do that right after the birth...In that overwhelm of the whole situation I kind of forgot that that was my intention and about a week later I realized that we hadn't done that and so I started doing that with them and I would just put them on my belly and they would...crawl up and self-attach with some support at the head and the feet. And I continued to do that with them I think through six or seven weeks. They continued to want to and sometimes when Aaron, he would be crying and not wanting to eat; I would put him on my belly so he could self-attach. Then he would eat. It's almost like he wanted to do that or needed that process to help him feel secure. (Barrack, 2005, p. 181)

Mark described his experience:

Well, I think from my perspective just hearing and understanding that your baby is conscious in the womb, because you don't think about it. Nobody would really tell you that...And your narrating thing. I didn't do it as much, but Christine really talked to Flynn, you know, "I'm getting in the car now; we're going to do this and that." And I think it really helped. You start to realize that like whenever we got upset with each other; we tried not to talk loud or to do anything in front of Flynn even though he was in the womb because we still just think about it consciously. (Barrack, 2004)

Terry stated, "The class was very empowering for that level of bonding and trusting that they could get it on some level, our

communication, and we trusted that” (Barrack, 2005, p. 197).

However, all parents indicated they were still unprepared for the reality of life with a newborn. While this was not the primary focus of the class, the confusion and unexpected events they experienced during the first few weeks interfered with their ability to bond with their babies. When the births did not meet their expectations, they felt responsible and grieved the loss of their dream. They wanted to know how to repair any trauma their babies had suffered and learn ways to restore the breach in the bond. They felt that being better prepared for the actuality of new parenthood would have enhanced the bonding process. Their suggestions indicate the importance of finding a balance and sensitivity in presenting this material—a way to provide education without instilling more pressure. Cody had this suggestion, “Let them know that whatever happens is okay, you know. Make your plans this way but if it doesn’t turn out that way, you’re not a bad parent” (Barrack, 2004).

Samantha offered this:

Tell them to try to not have expectations. You can visualize what you want, but get informed as much as possible about all the possible outcomes, all the steps to pregnancy and birth. And be open and make the best of whatever happens. (Barrack, 2004)

Parents also realized they were unable to assimilate much of the parenting information imparted in the class because they had no prior frame of reference as to the usefulness of the material. Their suggestion of bringing a new parent and child to class to share their experience might prove helpful in this regard. Ultimately, however, it appears that education is a poor substitute for experience.

DISCUSSION

Why do parents and children bond? From an anthropological perspective, such a bond insures survival. The outpouring of love parents feel for their child guarantees they will provide for the child’s needs. Biologically speaking, humans were designed for bonding. A human baby is born completely helpless, necessitating care by a parent. A mother’s body is elegantly equipped to nurture, feed, and respond to a newborn. Chemicals and innate instincts surface spontaneously during pregnancy, birth, and the newborn period that assist in the bonding process. Bonding has been occurring for

centuries; it is the glue, if you will, that holds families, societies, and civilizations together at their most foundational level. Yet bonding in our current society faces challenges unknown to historical or even other contemporary cultures, such as the impact of advanced technology, mothers working outside the home, separation and isolation of extended families, and people becoming parents at an older age.

While there are commonalities in experience among couples and their children, each couple's relationship with their child is unique. In fact, each person's experience of bonding with a child is distinctive, with one parent often developing this connection in a very different manner from the other. The intricacy and magnitude of this phenomenon make it unwieldy to research, awkward to describe, and problematic to measure, rendering decisive conclusions challenging. Bonding is a relationship, a living, breathing, moving, changing dynamic with characteristics as varied as the people involved.

Although I believe it impossible to categorize or quantify this interaction as an exact science, we can watch, study, ask questions, and learn from parents and their children in an attempt to better understand the workings and consequences of this beautiful process. This study confirmed certain existing research findings and added original insights, specifically from the field of PPN, into the growing comprehension of this rich phenomenon.

Contributions to the Field of Prenatal and Perinatal Psychology

I believe this study has given a voice to the wide range of personal experiences today's parents encounter. This small, local, fairly homogeneous group of participants experienced a wide range of birth outcomes and bonding relationships. Today's parents enter the transition to parenthood in vastly diverse ways, so it is important as professionals in the field of PPN that we listen to their stories and find creative and compassionate ways to support them and their babies through the process in a way that helps them feel safe, supported, healthy, and confident.

The results of this study showed that information from the field of PPN can indeed be useful in helping parents bond with their babies before, during, and after birth. Parents said their perception of their babies as well as their awareness of their role as parents shifted as they learned about the consciousness of their unborn children. They were excited about learning to relate to the child before birth but a bit awed at the responsibility that entailed. Many of them prepared their

babies for the approaching birth by talking to them about what was going to happen and how they might feel. The tools of communication, reflection, and differentiation helped pregnant parents relax and practice relating to their unborn children. After birth, these same tools served to promote the bonding relationship.

Many of the theories I ascribed to were challenged as I conversed with my participants, and I discovered the importance of tempering the concepts with sensitivity and creativity. For instance, it is commonly believed in PPN that birth interventions have a negative effect on mothers and their babies and thus should be avoided unless absolutely necessary. While this may be ideal for both mother and baby, it is sometimes unavoidable or undesirable for a variety of reasons. For example, I learned from Misha and Bren that a planned Cesarean section could actually reduce anxiety, offer calm communication to the baby about what was going to take place, and help parents to feel safe and confident with their choice.

When intervention does occur, it is important these parents not feel they have done something wrong, and that we give them tools to resolve any trauma that may have been experienced and offer hope that their babies will recover. Parents who have undergone surgical or traumatic births need encouragement and support to communicate to their babies their regrets and hopes for the future, and to allow their babies freedom of expression about what happened to them.

Future Education

PPN bonding classes. The key purpose in presenting this class for pregnant parents was to offer the information from PPN in the hope it would assist parents in bonding with their babies. However, four 2-hour classes are but a very brief introduction to this material. Parents' personal experiences of being loved or being deprived of love will likely contribute more to their experience of bonding than any material a parenting class will introduce. Still, we can help people become aware of the multiple factors that influence bonding and encourage them to search their hearts and their past experiences for issues that may interfere with their journey. And we can empower them to find and trust their own innate wisdom to guide them through their transition to parenthood.

I discovered that we must contemplate the impact this PPN information might have on prospective parents. As we began to teach, it became clear the information being presented sometimes caused more stress and concern for expectant parents than it relieved. For

example, Bren and Misha came to us at the conclusion of one of the early classes to let us know about her previous experience of losing a child. They said that while they supported the concept of natural, unmedicated birth for bonding and other purposes, they had selected a high-risk doctor and scheduled a Cesarean section to avoid any risk with this baby. It was difficult for them to hear some of the material because of their situation. In presenting this material, PPN educators must take into consideration the many routes by which modern people become parents and assist them in finding options that best support their babies to thrive.

While I think it is essential to educate parents about optimal conditions for birth and bonding to maximize the potential health of their child, it is equally important to emphasize that error and the unexpected are part of the human condition, and that being real and honest, repairing the damage, and reconnecting with the child will go farther to ensure the child's mental health than the apprehension caused by attempting perfection. In line with the parents' suggestions, I would stress the importance of becoming educated and making a plan, but encourage them to hold it lightly, without rigid expectations, as this seems to predispose them to disappointment.

In addition, more time devoted to discussing the reparation of misattunement and dysregulation is desirable to promote healing and reconnection. Discussion of current therapeutic interventions from the perspective of PPN would give parents resources should they desire support. PPN therapy has the potential to repattern prenatal and birth trauma while a child is very young, preventing the layering effect that typically occurs over time (Emerson, 1996). Therapy can assist both parents and their babies or children in making sense of the past trauma and bringing healing and health to their relationship.

The broader scope of education. According to Luminare-Rosen (2003) and others, bonding begins before conception. The physical, emotional, and psychological environment in which parents themselves were raised creates a framework for how they will approach bonding with their own children (Siegel & Hartzell, 2003). Thus it seems essential that educators reach prospective parents earlier rather than later with new material from PPN. The ideal time to discuss this information is before couples become pregnant, while they have the opportunity to research their own history and implement therapy if needed. However, this presents a dilemma because most young people are not aware of the generational influences that affect their ability to parent, and many are not motivated to learn about parenting until they become pregnant—or

more commonly until they encounter a problem with a child.

What then is the best way to reach young people? The most practical and obvious channels through which to access young people would likely be in their current educational institutions. I would like to see PPN information taught in high school health education programs and college and university psychology classes. Exposure to the impact of prenatal and birth experiences on the belief systems and life choices they have already adopted might spark an interest in the minds and hearts of these young people in time for them to make changes in their lives that will affect their children. I would also like to see prenatal bonding classes instituted for newly married or pregnant parents in the same way that premarital counseling, pre-adoption counseling, and pre-divorce counseling programs have become mandatory. What better gift could there be to future generations than to educate all prospective parents in ways they can better relate to their children and provide for their health?

I propose an even broader scope of education in an attempt to provide optimal care for babies and children. As it is likely mothers will continue to work in our country, the question becomes not *if* day care is healthy for children, but *how* to create a beneficial system for both parents and their babies. Because of the recent research on brain development and the necessity of right-brain-to-right-brain consistent interaction between caregivers and babies to ensure optimal neuronal development (Schore, 2000), day care personnel would benefit from education in these areas. Adequate one-on-one interaction, communication, and play that stimulate positive affect are essential in these environments, and not impossible to achieve if caregivers are educated as to the needs of babies.

Implications for Society

Marilyn Watson and Laura Ecken (2003) proposed “an evolutionary predisposition to be collaborative and prosocial” (p. 10) emerges from the secure attachment. A society built on trust, cooperation, empathy, and support will prosper. By implication, the opposite would also be true, with the increasing incidence of insecurely attached children giving rise to a society based on mistrust, fear, and manipulation. It follows that a healthy parent-child bond and resulting secure attachment are essential to the integrity of our society.

Bonding and attachment problems have been linked to aggression in school-age children (Lyons-Ruth, Easterbrooks, & Cibelli, 1997), “rage filled adolescents” (Karr-Morse & Wiley (1997, p. 9), inadequate

neuronal development resulting in the lack of a conscience (Magid & McKelvey, 1987), illness in adulthood (Ciechanowski, Walker, Katon, & Russo, 2002), criminal tendencies and suicide (Main, 1991). The ultimate health of the family, the educational system, and the very fabric of our society as a whole has its roots in the quality of the delicate yet compelling bonding process that originates between parents and their children. Thus we must find ways to educate new parents to better prepare them for the process of forming a secure bond with their children. It is incumbent on PPN educators to also teach medical professionals, health care workers, educational systems, and legislators the roots of social and psychological dysfunction and the appropriate ways in which they can prevent as well as manage behavioral complexities.

Recommendations for the future include educational intervention programs in high-risk populations, prenatal and perinatal or attachment-oriented therapy for babies who have experienced a traumatic birth and for behaviorally problematic children, and longitudinal studies addressing the various complex determinants of bonding and attachment, the effects of technologically assisted pregnancies and birth interventions, and the growing involvement and relationship of fathers and their babies.

SUMMARY

The importance to our society of the healthy parent-child bond and attachment cannot be underestimated. The success or failure of a society to adequately provide for its members and function with integrity is rooted in this early relationship. Educators must find ways to reach prospective parents as well as the institutions that interact with them, providing them with information about healthy bonding and attachment both pre- and postnatally. It is desirable for educators to combine understanding, empathy, and creativity with their knowledge of the parent-child relationship to offer parents encouragement and support as they find the optimal road to their transition into parenthood. It was apparent from the experiences of the parents in this study that PPN concepts can be eye-opening, consciousness-raising, and ultimately practical for new parents and their babies. When theory is blended with compassion and ingenuity, babies and parents can be the fortunate beneficiaries of this new paradigm shift.

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