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A Grounded Theory Study of Adolescent Mothers' Decision-Making During Labor and Birth

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A Grounded Theory Study of Adolescents' Decision-Making

During Labor and Birth

by

Carrie Holschuh Jacobson

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Nursing

in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
Dedication and Acknowledgements

This work is dedicated to my daughters, Ramona and Ada Lu, for their tireless enthusiasm, patience, and love. I am also deeply grateful to Stephan Orme for his consistent support and encouragement.

My sincere thanks go to all of the friends, family members, colleagues, faculty and mentors who helped me on this journey. I have been buoyed up by so many along the way. I would like to thank my sister, Ildiko Therneau, for being a kind listener, and my brother, Arno Holschuh, for making excellent dinners. In particular I owe a debt of gratitude to my father, Dr. Albrecht Holschuh, and my mother, Dr. Marilyn Holschuh Leisure, for raising me to believe this was within my reach.

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A Grounded Theory Study of Adolescent’s Decision-Making

During Labor and Birth

Abstract

Carrie H. Jacobson

Adult mothers with negative decision-making experiences during labor have increased risk for problems such as postpartum depression, yet little is known about adolescent mothers’ experiences of decision-making during labor. Despite their developmentally unique decision-making processes, in the United States adolescent mothers have the decision-making rights of adults during labor. The purpose of this study was to develop theory exploring adolescent mothers’ experiences of decision-making during labor and birth.

For this constructivist grounded theory study interviews were conducted with 18 adolescent mothers. Childbirth classes for adolescents in a West Coast urban area were also observed. Data collection and analysis were conducted concurrently using constant comparison, situational analysis, and dimensional analysis.

Adolescent mothers felt their decision-making during labor was setting the tone for early motherhood. Adolescents made decisions in the context of their belief that during labor they would go into mother mode and gain the strength to give birth and care for their child. Conditions affecting decision-making included the support available, expectations, communication and perceived locus of control. Key decision-making processes included ‘going natural’ versus ‘going epidural’; being strong for the baby; and interpreting the perceived cues of others. Consequences included increased feelings of confidence for adolescents who felt their
decisions reflected good mothering, and persistent feelings of regret and anxiety for adolescents who felt pressured into unwanted decisions.

Adolescent mothers reported feeling most supported when they had a supportive ally, yet often made decisions in the context of unpredictable availability and degree of support. Conditions influencing having a supportive ally included adolescents’ familiarity with the support provider, the expertise of the support provider and the consistency of support. During decision-making, key processes of the supportive ally included facilitating communication, making space for decisions and validating hard choices. Adolescents who had a supportive ally for decision-making during labor and birth reported feeling empowered, while mothers without a supportive ally could feel silenced in decision-making.

Further research is needed to investigate the relationship between adolescent mothers’ experiences of decision-making during labor and birth and long-term outcomes such as postpartum mood disorders, and should incorporate conceptual frameworks drawing from current theories of adolescent development and decision-making.
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Chapter One

Introduction

Carrie H. Jacobson
Introduction

Decision-making during labor and birth first interested me because of my clinical background as a nurse-midwife. It constitutes an arena of multiple and sometimes exaggerated choices for mothers, given the normalcy of birth and the paradoxical multitude of procedures and technologies now available for controlling it. Because risk in birth is low but always present, and undesired outcomes range from unnoticeable to catastrophic, it presents an excellent opportunity to learn more about how we approach risk in health decision-making. Decision-making during labor and birth holds the inherent tension of mother and baby and the balance of well-being between the two. It throws the interplay of emotional and physical experience into sharp relief, as evidenced by the emotional-hormonal feedback loop that governs progress in labor. New research has consistently strengthened the associations between interdependent experiential and physiological phenomena and health outcomes.

We need more research on adult mothers’ decision-making during labor and birth to refine and strengthen the existing evidence supporting associations between decision-making, emotional experience, and postpartum outcomes. For a period of time, I planned to focus my research on adult mothers’ experiences. However, in the course of my research on adult mothers, I discovered that there was even less literature on adolescent mothers’ experiences during labor and birth. Adolescent mothers represent a vulnerable and disadvantaged group in the United States, already at high risk for negative postpartum outcomes which might be affected by emotional experiences during labor. In addition, adolescents present the unique challenge of being developmentally distinct from adults. Of course, adolescents as a group and even as individuals will exhibit a range of maturity in their decision-making. Yet overall, the
combination of adolescents’ cognitive competence and increased sensitivity to emotional stimuli suggests that the effects of decision-making during a potentially emotional experience such as giving birth may be even more marked among adolescents than among adults.

Thus, I have chosen to focus on adolescent mothers’ experiences of decision-making during labor and birth. The data are so sparse that qualitative exploration seemed the best approach. In preparation for my dissertation study I chose to explore theories of adolescent decision-making which draw on recent neuroscience, and review literature on measurement of a key outcome potentially associated with experience of decision-making during labor, postpartum depression, in adolescents.

Better understanding of how adolescent mothers experience decision-making during labor and birth could aid in improving care, increase understanding of how experiences during labor can affect postpartum health for adolescents, and strengthen protection for adolescents’ patient rights. In addition, a more nuanced understanding of how adolescents navigate the cognitive challenges and emotional influences of decision-making during labor could, in turn, suggest ways in which we might better understand the experiences of adult mothers. While adults may have more reliable decision-making skills than adolescents in emotional situations, labor and birth can be a very emotionally charged time. By acknowledging the potentially significant role of emotion in adolescents’ decision-making during labor and birth, we allow for the possibility that emotional experience may also influence the decisions of laboring mothers, that decision-making may influence labor progress by generating emotions in the mother which have physiological effects, and that the interactions of decision-making, cognitive functioning, and emotional experience may have short- or long-term consequences for mother and baby.
Better understanding of these interactions may eventually contribute to more holistic, effective support of patients’ emotional well-being, safety, and autonomy during health care decisions.

**Theoretical Perspective: Symbolic Interactionism**

The combination of the symbolic interactionism conceptual framework and grounded theory research methodology has been termed a theory/methods package (Clarke, 2005). Both have the goal of developing theory rooted in the idea that meaning comes from interaction (Aldiabat & Le Navenec, 2011). The theory/methods package of symbolic interactionism and grounded theory is widely recognized as a cohesive and comprehensive integration of methodology and theory, and was therefore chosen for this study of individuals’ interpretation of and action on socially-influenced decisions (Charmaz, 2006). Symbolic interactionism emphasizes socially negotiable role expectations, and the social evolution of joint and individual action (Blumer, 1969). It holds that situations (e.g. prolonged second stage of labor) and objects (e.g. fetal heart rate monitors) have socially constructed and shared meaning (or demonstrate a breakdown in shared meaning which can lead to problems in establishing joint action), and is therefore appropriate to exploration of socially-mediated decision processes (Blumer, 1969; White & Klein, 2008).

The individual’s agency in interpretation (Blumer, 1969) will be key to this study of adolescent mothers’ experiences of decision-making during labor and birth, for example regarding the adolescent’s constructed understanding of a birth in terms of normality, risk, or both. In symbolic interactionism, one must evaluate human groups in action; it has been widely validated as a useful framework for studying groups of people producing meaning through
interaction (Kendall & Shelton, 2003; Figueroa, 2008), and is also well-suited to research focused on the dynamics between medical caregivers and their patients (Clarke, 2005).

The way a birth unfolds over time makes grounded theory’s emphasis on temporality and process an excellent fit for this topic (Morse, 1994; Strauss & Corbin, 1994). Grounded theory is well-suited to exploratory questions of social processes such as decision-making wherein individuals come to agreement to plan joint actions (Charmaz, 2006). A constructivist grounded theory/symbolic interactionism approach as described by Charmaz (2006), which foregrounds the subjectivity of individuals’ experiences and the co-production of meaning by the researcher and the participant, opens space for the data from adolescent, vulnerable mothers. It increases opportunities for reflexivity on the part of the researcher and supports the participants’ positions as the authorities on their own experiences. Constructivist grounded theory is also especially useful in exploring overt and covert hierarchies (Creswell, 2007) such as may be at work when adolescents are given adult rights over their health care decisions but still have the least social capital, and possibly least developmental maturity, of anyone in the birthing room. My priority was the authenticity, if such a word may be permitted, of the representations of participants’ “voices,” rather than universal meanings (Sparkes, 2001). Clarke’s (2005) situational analysis was particularly helpful in exploring all of the different potential influences on adolescent mothers’ decision-making processes as they navigated conflicting roles and social contexts.

**Sensitizing Concepts: Intersectionality and Feminist Research**

Grounded theory investigators approach the study having identified “sensitizing concepts,” or initial ideas that guide the study design and initial data collection (Wasserman, Clair, & Wilson, 2009). Feminist research and intersectionality informed the use of grounded
theory in this study, specifically to increase sensitivity to the influences of social conditions and power differentials given the potential marginalization of adolescent mothers (Hesse-Biber, 2006). According to Nancy Krieger (1999), physical health is co-constructed with social position in an ongoing process. Poststructural feminism, as defined by De Reus, Few & Blume (2005), states that women’s experiences and identities cannot be essentialized because they evolve from the interaction of experiences and discourses unique to that individual. Intersectionality describes this negotiation of social categories and the ways in which they “intersect” for each individual (De Reus, Few & Blume). Feminist research sensitizes the researcher to the social discourses around race, gender, and other categories which influence theoretical development and support advocacy for research participants (Ford-Gilboe, Wuest, & Merritt-Gray, 2005).

Definitions

Adolescents were identified as aged 13 to 20 for the purposes of this study; mothers were defined by having had a child or being pregnant and planning to have a child. I chose this age range in the hope of capturing a spectrum of adolescent developmental stages and situations (Steinberg, 2005) without extending too far into the range of adult responsibilities and conditions, for example end of schooling and transition to socially perceived adulthood, which may significantly affect participants’ experiences. The definition of decision-making was not limited to informed consent or shared decision-making for this study, rather, exploration of the adolescent mothers’ definitions for decision-making during labor and birth was integral to the process of theoretical development.

Purpose and Specific Aims
The purpose of this grounded theory study was to explore adolescent mother’s experiences of decision-making during labor and birth. The specific research aims were a) to explore pregnant adolescents’ expectations of decision-making during birth, b) to describe adolescent mothers’ experiences of decision-making during birth, and c) to develop a mid-range theory of adolescent mothers’ experiences of decision-making during birth.

**Overview of Chapters Two to Five**

The three following chapters consist of separate manuscripts related to the dissertation. Chapter Two, entitled “A Conceptual Framework for Adolescent Mothers’ Decision-Making During Labor and Birth,” integrates two new theories of adolescent risk-taking based in neuroscience and applies them in the context of birth (see Figure 2.1). Chapter Three presents the central theory developed from the data, and is titled “Into Mother Mode: Adolescent Mothers’ Decision-Making During Labor and Birth” (see Figure 3.1). In Chapter Four, the second data-based manuscript “Urban Adolescent Mothers’ Experiences of Support and Decision-Making During Labor” presents a theory-within-a-theory as it delves deeper into a particularly complex and theoretically rich dimension of the overarching theory (see Figure 4.1). Chapter Five synthesizes the findings presented in Chapters Three and Four, compares them critically with the new conceptual framework proposed in Chapter Two, and discusses potential clinical implications and directions for further research.
References


Chapter Two

A Conceptual Framework for Adolescent Mothers’ Decision-Making

During Labor and Birth¹

Carrie H. Jacobson

¹ Manuscript submitted to *Journal of Advanced Nursing*
Abstract


Background. Adolescent mothers often take on adult decision-making rights and responsibilities during labor, yet new science shows adolescent decision-making can reflect immaturity and unique vulnerability to social and emotional influences. Inspired by Keeler & Kaiser’s Integrative Model for Adolescent Health Risk Behavior, I integrated two recent theories addressing adolescents’ participation in medical decision-making, Steinberg’s dual systems model and Reyna’s fuzzy-trace theory, and applied them to the context of labor and birth.

Design. Discussion paper.

Data Sources. Sourced literature from 1995-2014 on the relationships between decision-making, risk-taking, adolescent development and childbirth from the fields of nursing, sociology, psychology and neuroscience, located through PubMed, CINAHL, PsychInfo, Medline and Web of Science.

Implications for Nursing. The paper proposes a new conceptual framework for understanding the cognitive and emotional processes influencing adolescents’ decision-making during labor and birth, integrating recent developments in neuroscience and decision-making theory. This conceptual framework can serve as the basis for developmentally appropriate interventions to support successful decision-making for adolescent mothers during labor and birth.

Conclusion. Adolescent mothers may significantly benefit from intrapartum care informed by an updated, integrated understanding of their special needs for decision-making. This conceptual
framework could be used to develop decision-making protocols and tools for use with adolescent mothers, as well as to support future research examining how decision-making during labor and birth could potentially affect adolescent mothers’ postpartum health and coping.

Keywords: Conceptual Models of Nursing, Nursing Theory, Pregnancy, Adolescent Health, Decision-making, Childbearing
A Conceptual Framework for Adolescent Mothers’ Decision-Making During Labor and Birth

Introduction

High adolescent birth rates persist in many countries, posing a global health problem strongly associated with social disadvantage (Molina Cartes & Gonzalez Araya 2012, Rowlands 2010). For example, births to adolescents occur at higher rates in the United States (US) than in other industrialized countries (Kearney & Levine 2012). Improving healthcare for adolescent mothers is an international priority for reducing infant morbidity and mortality (Hanf et al. 2013).

Adolescent mothers are more likely to have experienced preterm birth, low birth weight, infant mortality, low educational attainment, unemployment, and welfare dependency (Huang et al. 2014, Santelli & Melnikas 2010); poverty (Wodtke 2013); violence (Copping et al. 2013); substance abuse (Cavazos-Rehg et al. 2010); poor social support (Casares et al. 2010, Noll & Shenk 2013); birth-related psychological trauma (Anderson & Logan 2010); and postpartum depression (Hodgkinson et al. 2014, Venkatesh et al. 2014).

Given increased rates of previous trauma and depression among pregnant adolescents and issues unique to adolescent development (Siegel & Brandon 2014, Yozwiak 2010), adolescents may differ from adults in their needs and responses during birth. In particular, developing adolescents demonstrate greater susceptibility to social and emotional influences during decision-making (Reyna & Farley 2006, Wilhelms & Reyna 2013, Steinberg 2010). Little is known about adolescent mothers’ experiences of medical decision-making during birth. Among adult mothers, a woman’s involvement in decision-making regarding her own care has been found to be protective against trauma and depression symptoms postpartum (Elmir et al. 2010,
Nilsson et al. 2013), while lack of involvement or a feeling of powerlessness during intrapartum decision-making has been shown to increase women’s risk for birth-related psychological trauma (Beck et al. 2011, Garthus-Niegel et al. 2013) and postpartum depression (Czarnocka & Slade 2000, Lobel & DeLuca, 2007). Much of the literature on adolescent pregnancy to date reports on factors such as race or risk-taking (e.g. unprotected sex) without exploring the interaction of developmental and contextual influences on adolescents’ decision-making (Talashek et al. 2006, Waddell et al. 2010).

Attitudes toward adolescents’ rights and capabilities in medical decision-making are in flux. In the US, girls as young as the age of 14 are legally entitled to the decision-making rights of adult women during pregnancy and birth (Steinberg 2013). Recent advances in neuroscience have sparked a debate as to how to apply the “mature minor doctrine,” used in both legal and medical US contexts for over 20 years to describe the assumption that minors at age 15 and above can reason as well as adults (Steinberg 2008, Wilhelms & Reyna, 2013). Some propose that the law should be changed so the mature minor doctrine is used little or never in medical decision-making (Cherry 2013), given new evidence that adolescents are more vulnerable to social and emotional influences (Strang et al. 2013), overemphasize short-term benefits when compared to adults (Partridge 2013), and rely too heavily on strictly rational comparison of risks and benefits instead of the “gist-based” judgment, mediated by emotions and values, which leads adults to make less risky decisions (Wilhelms & Reyna 2013).

Others suggest that the mature minor doctrine can be appropriate in cases where adolescents are provided with accommodations that minimize social and emotional pressure, such as counseling and protection from coercion (Steinberg et al. 2009, Steinberg 2013). With an adolescent patient, the concept of autonomy itself is under review, as healthcare providers
consider alternative definitions that take into account the social context of decision-making and the emotional influences on both patients and providers, known as relational autonomy (Walter & Ross 2014). Conversely, how could an adolescent mother be treated as incapable of participating in medical decision-making during labor, and be sent home with a new baby and the adult responsibilities of motherhood?

The purpose of this paper will therefore be to discuss a conceptual framework which incorporates the potential positive impact of emotion and value-based judgment on adolescent decision-making while reflecting the unique constraints of decision-making in a medical context, in this case childbirth. I will focus on two current theories: Steinberg’s (2008) dual systems model of adolescent risk-taking, and the fuzzy-trace theory of adolescent risk-taking (Reyna & Farley, 2006; Rivers, Reyna, & Mills, 2008). I will then propose an integrated conceptual framework for understanding the ways in which adolescent mothers experience decision-making during labor and birth, and review potential applications for clinical care and research.

Background

Practice and policy decisions related to adolescent decision-making previously drew from grand theories published in the second half of the 20th century (Lerner & Steinberg 2009). Jean Piaget’s cognitive theory of development attributed to adolescence the stage of formal operations, or acquisition of the adult capacity for abstract reasoning and problem-solving (Inhelder & Piaget 1958, Rew 2005). Piaget’s work was instrumental to the effort to determine the age of consent for medical treatment for adolescents, as it specified the process (and largely the timing) with which adolescents’ ability to reason approximates that of adults (Kuther 2003, McCabe 1996). Meanwhile in 1968, the psychologist Erik Erikson published Identity: Youth in
Crisis, in which he called adolescence the “fidelity” life stage, representing a struggle between identity and role confusion, or “identity crisis” (Gross 1987). Erikson described adolescence as the time when the adolescent must reconcile her sense of self with the expectations of society, and included development of a peer group as an important part of this transition (Stevens 1983).

Urie Bronfenbrenner’s (1979, 1989) ecological systems theory was not specific to adolescents, but its introduction coincided with an increased interest in the empirical study of adolescent development under varying conditions (Steinberg & Morris 2001). It was a variation of ecological framework that represented a major turn from the emphasis on individual psychology to the interaction between environment and biogenetic characteristics in human development (White & Klein 2008). The use of bioecological models continues to grow, as researchers seek to address coping, resilience and risk within an adolescent’s often fluctuating social context (Cicchetti & Blender 2006, Henrich 2006, Smetana et al. 2006).

Despite their important contributions, none of these theories was completely explanatory of adolescent decision-making. It is possible that the majority of adults never reach the consistently high level of rational thought processing Piaget attributed to adolescents who had reached the stage of formal operations (Gordon 1996). The evidence suggests that peers and authority figures significantly influence adolescents’ reproductive choices (Beaulieu et al. 2011, Commendador 2010, Harper et al. 2010, Harper et al. 2004, Manlove et al. 2009); pure cognitive theory will omit the influences of these and other potentially important aspects of the social context in which the decision takes place.

The 1980’s focus on “raging hormones” as an explanation for adolescent behavior was joined in the 1990’s by a renewed emphasis on the long-lasting impacts of early childhood
development, an idea which had always been fundamental to Erikson’s theory (Cauffman 2004). Yet Erikson’s fidelity stage of adolescence, while taking into account a normative social context, does not address specific variations of individual, environment, or cognitive process which may significantly impact adolescent decision-making. Bioecological theories of development are well-suited to the complexity and synergy of biosocial influences on adolescents, and address the unique combination of plasticity and individual agency, which make adolescence an ideal period for solutions-oriented study of positive development (Lerner & Steinberg 2009). In conjunction with recent scientific advances in the biology of decision-making, bioecological theory has set the stage for the next generation of theories of adolescent decision-making and risk assessment.

More recently, Keeler and Kaiser (2010) have applied concepts from Steinberg’s (2008, 2010) dual systems model to adolescent health decisions in the Integrative Model of Adolescent Health Behavior (IMAHB). The IMAHB represents a synthesis of theoretical and empirical work intended for use in nursing research on adolescents, in particular the influences on their decisions to take or avoid risks. The Keeler and Kaiser model hinges on Steinberg’s concept of maturity of judgment, defined as a combination of logical reasoning and psychosocial maturity, which mediates between environmental influences on adolescents and their attraction or aversion to risk. In Keeler and Kaiser’s interpretation, psychosocial maturity consists of: perspective, or having a sense of where the decision fits in time and social context; responsibility, which includes the concept of self-efficacy; and temperance, meaning ability to control impulsivity and sensation-seeking. Drawing in part from Bronfenbrenner’s ecological systems theory, Keeler and Kaiser describe cultural, intrapersonal, and interpersonal influences that can be protective or escalatory for risky decision-making. They identify positive and negative health outcomes of risk-taking and risk avoidance as part of their model.
Steinberg’s dual systems model (2010) proves a viable theory from which to build a template for use in nursing research, and the IMAHB allows for bidirectional and overlapping influences. Because they acknowledge the normative and potentially adaptive nature of risk-taking in adolescence, Keeler and Kaiser include both risk-taking and risk aversion in the IMAHB. However, the model does not illustrate the unique effect of reward-seeking behaviors on adolescent risk-taking (Steinberg 2008, 2010). Nor does the model consider other recent theories with evidence of the potential positive effects of emotion on healthy decision-making (Reyna & Farley 2006), or the specific conditions of medical decision-making that often make the complete avoidance of risk an unrealistic goal.

Data Sources

PubMed, CINAHL, PsychInfo, Medline and Web of Science databases were searched between May 2012 and May 2014 using the following search terms: ‘adolescent’; ‘adolescent pregnancy’; ‘childbirth’; ‘decision-making’; ‘adolescent development’; ‘risk-taking’; ‘informed consent.’ Peer-reviewed articles in English published between 1995-2014 were included if they focused on adolescent decision-making and health-related issues. Additional research of seminal texts and current or emerging theories followed, aimed at exploring theoretical discourse uncovered in the initial literature search, and increasingly focused on the two theories discussed below in tandem with development of the new conceptual model.

Discussion

Steinberg’s Dual Systems Model of Adolescent Risk-Taking

Laurence Steinberg, notably in conjunction with Cauffman (2000, 2008, 2010) and Gardner
(2005), has put forward a conceptual framework of adolescent risky decision-making that incorporates the progressive cognitive maturation and unique socio-emotional changes specific to adolescence (Steinberg 2008, 2010). Recently, rapid progress in the field of neuroscience has significantly enhanced the empirical study of decision-making (Dahl 2004). Thus, it has become possible to isolate, and to some extent quantify, the roles of emotion and cognitive control in adolescent decision-making, which have long been suspected to act differently in adolescents compared to adults (Gardner & Steinberg 2005, Steinberg 2010).

Steinberg (2004) cautions that the concept of decision-making may be too limiting to describe adolescents’ choices, which may be influenced by emotion as much as by rational deliberation. Yet theories of risky decision-making have much to offer in application to high-stakes situations such as labor and birth, which may pose different risks but similar decision-making challenges. For example, it has been suggested that peer influence could increase or decrease risk-taking depending on peer group context (Gardner & Steinberg 2005) and that peer influence may have positive as well as negative effects on decision-making (Strang et al. 2013); therefore in an experience such as labor, an adolescent might mirror others’ approaches to considering risks and benefits. While adolescents generally take risks at higher rates than adults (Rivers et al. 2008), research has shown that this difference cannot be attributed to adolescents’ reasoning capacity, ability to understand information regarding risk, or perception of risk and personal vulnerability; in all of these areas, a 15-year-old’s performance is comparable to an adult’s (Steinberg 2013). Although adolescents can reason as well as adults, they are more sensitive to the emotional rewards of peer approval and sensation-seeking, meaning the pursuit of new or thrilling experiences (Cauffman et al. 2010, Steinberg et al. 2009).
Steinberg’s (2008, 2010) framework incorporates two developmental processes that correlate with current neuroscientific evidence (Johnson et al. 2009, Yurgelun-Tod 2007). The framework posits that the onset of puberty triggers a change in socio-emotional processing, which results in a large increase in sensation- and reward-seeking that peaks in early adolescence, and is particularly strong in the presence of peers (Steinberg et al. 2008). Thus, the interaction of psychosocial development and the social context must be taken into account when considering adolescents’ risky decision-making (Morrell et al. 2010, Steinberg 2005; Steinberg & Morris 2001). Secondly, cognitive control, or self-regulation, increases linearly through adolescence into adulthood, perhaps only reaching full capacity in the mid-20’s (Cauffman & Steinberg 2000), a trajectory consistent with longitudinal brain scan studies (Lebel & Beaulieu 2011, Van Leijenhorst et al. 2010). Self-regulation may be defined as stopping when one is engaged in a potentially risky behavior, thinking before acting, and choosing the less risky option when presented with a choice (Steinberg 2004). The combination of cognitive control elements and these factors of self-reliance may be globally termed “maturity of judgment” (Cauffman & Steinberg 2000, Keeler & Kaiser 2010).

The Socio-emotional System and Peer Influence

Recent neuroscience suggests that changes in the dopaminergic system coincident with the onset of puberty are partially responsible for an increase in sensation-seeking correlated more with pubertal stage than chronological age, and primed for rewards related to peer approval (Steinberg 2008, 2010). The increased role of oxytocin, the human bonding hormone, during puberty may support the increased rewards associated with positive peer interaction and help explain why adolescents’ risky decision-making increases in response to peers’ perceived preferences
(Gardner & Steinberg 2005; Steinberg 2004, 2008). While reward-sensitivity, sensation-seeking, and risk preference all seem to peak during early-to-mid adolescence (ages 12-17), other psychosocial phenomena such as impulse control and future orientation gradually increase, suggesting that reward-related socio-emotional changes are in some ways distinct from general psychosocial development (Gardner & Steinberg 2005, Steinberg et al. 2008). Thus, mid-adolescence (ages 14-17) may be an especially vulnerable time for risky decision-making as reward-seeking impulses outpace cognitive control (Steinberg 2005).

**Cognitive Control**

Fortunately, the increase in reward- and sensation-seeking is balanced by a gradual increase in cognition control, most likely as the result of a gradual maturation in formal, abstract thinking processes associated with structural changes in the brain, especially in the prefrontal cortex and limbic system (Steinberg 2010). Changes in the brain, such as increased myelination, persist through early adulthood and may be associated with continued increases in future orientation (Steinberg et al. 2009) as well as planning and coordination of affect and cognition (Steinberg 2005). By 15 years of age, synaptic pruning in the prefrontal cortex may be associated with increased efficiency and the ability to perform at an adult level on decision-making tasks of moderate difficulty, such as those used in controlled experiments. However, more complex decision-making tasks require coordination between more diverse areas of the brain, and continue to improve into early adulthood (Steinberg et al. 2009). Thus, while adolescents appear to possess adult rational capacity by their mid-teens, most of them will not attain full maturity of judgment until later, and even then at an individual pace not easily predicted by age alone (Steinberg 2008). Cognitive control changes are most likely are not directly related to the
hormonal changes of puberty (Dahl 2004, Paus 2005), and may afford the possibility of a window for significant, positive alterations to dysfunctional cognitive-behavioral patterns created during early childhood development (Steinberg 2005).

In the dual systems framework, increased influence of emotion has the potential to result in riskier decisions (Steinberg 2008). Adolescents are more reactive to emotional stimuli than adults, and more prone to misperception of emotional cues such as facial expression (Pfeifer et al. 2011). However, rather than representing a simple increase in sensitivity to emotional stimuli, Steinberg (2008, 2010) suggests that adolescents’ decision-making reflects an immature or less differentiated coordination of emotion processing in the brain when compared with adults. Adolescents focus on the present rather than the future (Steinberg 2004, 2005) and, despite their increased sensitivity to in-the-moment emotional stimuli, experience less emotional responses than adults when considering a potentially bad future outcome (Steinberg et al. 2009, Cauffman et al. 2010).

The dual systems model describes decision-making in terms of changes over the course of adolescence, often by comparing adolescents with adults. It does not concentrate on the employment of judgment in particular situations or contexts. Nor does it fully describe how the emotional and rational aspects of previous experiences may impact subsequent risky decision-making. To further explore the role of emotional affect and its vehicles (for example, emotionally-charged memories) in adolescent decision-making, the discussion now turns to another recent approach to adolescent decision-making, fuzzy-trace theory.

Reyna’s Fuzzy-trace Theory of Decision-making in Adolescence
Valerie Reyna’s fuzzy-trace theory proposes that there are two types of judgment: *gist*, or a kind of “gut-sense” heuristic strategy that uses recalled emotional feeling, and *verbatim processing*, which involves the use of “surface form,” or factual details such as the comprehensive information needed to follow a logical decision path (Reyna 2008). Fuzzy-trace theory proposes that gist-based decision-making is a form of advanced reasoning, which, unlike logico-deductive or verbatim reasoning, can take context and values as well as logical principles into account (Reyna *et al.* 2003). However, in contrast to Steinberg’s dual systems model, the key to fuzzy-trace theory is its assertion that the emotionally-tinged meaning, or “gist,” of previously absorbed factual and concrete information and experiences plays an essential role in shaping current and future decisions. Gist is based on an emotionally coded shorthand that can help guide the decision-maker in the next situation, particularly when emotions are high and verbatim processing is difficult (Reyna & Farley 2006). Reyna and Farley (2006) suggest that when an individual’s reasoning lacks apparent coherence, it may be the result of simultaneous verbatim and gist decision-making processes rather than simple disorganization.

**Fuzzy-trace Theory, Judgment, and Adolescence**

Fuzzy-trace theory suggests that gist-based judgment occurs simultaneously with verbatim processing, but may be more instrumental to reducing risky decisions (Reyna & Farley 2006, Reyna 2008). In a study assessing risk perception in 596 adolescents, Mills, Reyna and Estrada (2008) found that prompting adolescents to use more values-based, emotionally-linked thinking actually reduced their intentions to engage in risky activity. When compared with adolescents, it appears that adults make less risky decisions because they are more likely to retrieve gist-based responses that encourage categorically avoiding risk, and less likely to enter into a detailed cost-
benefit analysis of quantified risk prior to reaching a decision (Reyna & Farley 2006).

According to fuzzy-trace theory, while gist-based decisions may lack logical coherence, they have greater correspondence to the desired outcome (Reyna & Farley 2006); Wilhelms and Reyna (2013) go so far as to suggest that in most cases, adolescents’ lack of gist-based judgment may prevent them from mature participation in medical decision-making.

With increasing age, individuals are more likely to make decisions based on global experience rather than situation-specific information (Reyna & Farley 2006). The more experience an individual has with a task, the more likely he or she is to use gist-based judgment (Rivers Reyna & Mills 2008). The developmental assumptions of fuzzy-trace theory are therefore the opposite of traditional deliberative theories, in that fuzzy-trace theory assumes that beneficial decision-making will show a progressive shift from early analytic competence toward more gist-based and less analytic decision-making with increasing age, rather than a steady increase in rational decision-making (Wilhelms & Reyna 2013). This constitutes an increasingly skilled and useful employment of emotion in the decision-making process during adolescence. While the verbatim path is slow and deliberative, gist-based judgment is fast and intuitive; thus, adolescents are slower decision-makers (Reyna & Farley 2006).

The Impact of Emotion and Memory on Gist-based Judgment

Rivers, Reyna and Mills (2008) divide the influence of emotion in gist-based judgment into three components: valence, feeling states, and arousal. Valence refers to the nonspecific positive or negative emotion attached to a stimulus, for example the negative reaction triggered by “smokers” rather than any concrete negative detail associated with “smokers.” Reyna and Farley (2006) distinguish between the anticipation of an emotional consequence of a decision (e.g.
satisfaction or regret) and the anticipatory, visceral emotion (e.g. fear, anxiety) that overlays the decision. Feeling states refer to a mood such as happiness or anger, which may be incidental to or related to the situation requiring a decision; a positive feeling state predisposes one to gist-based judgment, while a negative feeling state increases the likelihood of using verbatim processing (Rivers Reyna & Mills 2008). Arousal describes the level of emotional activation, from calm to excited. According to Rivers, Reyna and Mills, increased arousal increases the likelihood of forming a gist-based memory, and decreases the likelihood of forming a memory rich in verbatim detail. Thus, for example, an adolescent mother may form a memory of her birth rich in emotional meaning and implication for future decisions even if she cannot recall much “surface” detail from the event. Rivers, Reyna and Mills point out that the valence around decisions (positive or negative) and the feeling state at the time of the decision will affect the subsequent encoding of the involved risk stimuli for future gist-based decisions.

Reyna’s fuzzy-trace theory complements Steinberg’s socio-emotional neuroscience framework of adolescent decision-making by elaborating on the positive role of emotion in forming judgment and guiding decisions, as well as the interaction between affect, memory, and the formation of future judgments. Reyna and Farley (2006) point out that gist-based decisions can only be as good as the values and experiences from which they are based. In addition, Reyna (2008) notes that gist can result in erroneous judgment when encountering a new situation, which is a frequent experience for an adolescent. Such erroneous judgment could lead to potentially devastating neglect of crucial information in the situation at hand, particularly regarding medical care decisions, by both adolescents and care providers.

While fuzzy-trace theory describes the advantages of gist in emotionally-charged
situations and the tendency for decisions to vary based on context, this theory does not focus on how affective influences in the present moment can influence judgment, particularly when peer pressure is involved. The combination of strong emotional influences, reward-seeking and lack of experience may lead adolescents to make poorer decisions than adults when they rely on gist, rather than using verbatim/rational processes (Wilhelms & Reyna 2013). Moreover, as Steinberg (2004) points out, when faced with risky decisions, any predictable decision-making process in adolescents may be overwhelmed by rewards such as perceived peer approval. Neither verbatim- nor gist-based decision-making fully describes what takes place when reward- and sensation-seeking guide an adolescent toward actions they would not have reached through either kind of decision-making. In order to understand the complex interaction of emotion and decision-making for adolescents, aspects of both Steinberg’s dual systems model and Reyna’s fuzzy-trace theory must be integrated into a single conceptual framework.

A Conceptual Framework for Adolescent Decision-Making During Labor and Birth

For this new conceptual framework, aspects of Keeler and Kaiser’s (2010) IMAHB have been adapted to reflect an integration of the dual systems model with the concept of gist from Reyna’s fuzzy trace theory. In Figure 2.1, the adapted framework is applied to adolescent decision-making during labor and birth. Because risk is normally low but always present in decisions during labor and birth (Lawrence et al. 2012, Lyndon et al. 2012), the concept of “risk-taking” has been replaced with “decision-making (in the context of risk).” Thus, what were protective and escalatory factors in Keeler and Kaiser’s model become contributing factors in this model. Cultural and environmental factors affecting adolescents’ decision-making around childbearing are highlighted in this model; these can be interchanged with other factors depending on the
Socioeconomic status and cultural capital are included in response to the disadvantage faced by many adolescent mothers (Breheny & Stephens 2008, Smithbattle & Leonard 2012), as well as the influence of social media and stigmatization (Gregson 2009). A box has been included for emotional/temporal factors drawn from fuzzy-trace theory; this box is also intended to highlight the role of situational or transitory emotional stimuli (e.g. emotional arousal in the presence of peers) as described by the dual systems model. Cognitive and socio-emotional skills have also been moved from judgment to intrapersonal factors; while these are integral components, they do not constitute the whole of the judgment process, and are linked to individual development.

This framework indicate that risks and benefits are present with the great majority of decisions during labor and birth, thus decision-making moves along multiple axes rather than simply one of more or less risk. This is in contrast to the Keeler and Kaiser model and other models that frame health decisions as risk-taking, with the background assumption that risk can be avoided. At the far right of the model, positive and negative outcomes have been replaced with clinical and emotional outcomes to avoid conflation of the positive or negative quality of the clinical outcome (for example, an undesired cesarean birth) and the emotional valence around the decision. This arrangement was prompted by evidence showing that even in clinically undesirable situations, positive feelings around involvement in decision-making can increase the chances of a positive birth experience for adult mothers (Behruzi et al. 2010). Finally, the middle box on the far right demonstrates how, according to fuzzy trace theory, emotions as well as knowledge can evolve from one decision to influence the next.
Implications for Nursing

The conception of gist may prove helpful in addressing two questions with important implications for adolescent mothers and their experiences of decision-making during labor and birth: 1) how could one conceptually incorporate the temporal influences of memory and cultural context (beyond situational peer pressure)?; and 2) is there a positive role for emotion in healthy decision-making? For example, imagine a teen is told she has a 10% chance of uterine rupture during labor. Verbatim processing would allow her to understand that she has a 90% chance of avoiding uterine rupture and to calculate how much higher her risk is than the average. Using gist, she will hopefully retain a bottom-line, emotionally charged judgment that her risk of uterine rupture is dangerously high, and that the consequences of uterine rupture pose an intolerable risk. Both types of judgment are in process concurrently, so that she might simultaneously know that she has a 10% chance of rupture and that her chances are dangerously high. However, after some time has passed or at a time of increased stress such as unexpected onset of labor, the gist-based judgment may come more easily to her and have more meaning, in this case resulting in a swifter and safer decision (“I am at high risk, I need help”).

The experience of decision-making during labor and birth may significantly influence the postpartum well-being of adolescent mothers, for example by affecting their chances of postpartum mood and anxiety disorders. If adult mothers experience increased rates of postpartum depression (Lobel & DeLuca 2007) and PTSD (Beck et al. 2011) after negative experiences of decision-making during birth, then adolescent mothers, already at increased risk for these negative postpartum outcomes (Anderson & Logan 2010, Logsdon & Myers 2010), may encounter similar or more severe effects. Yet adolescents experience decision-making
differently than adults, for example with increased susceptibility to social and emotional influences in the context of fewer prior experiences of similar situations (Steinberg 2010, Reyna & Farley 2006). While the influence, if any, of decision-making during labor and birth on adolescent mothers is unknown at this time, the impact of emotional experience (positive/negative, empowering/disempowering) of decision-making during birth on adult mothers’ postpartum rates of mood disorders suggests that similarly emotionally-mediated mechanisms may be involved for adolescents. However, the unique ways in which adolescents process socio-emotional factors during decision-making, for example with increased sensitivity to rewards such as perceived peer approval (Steinberg 2008), suggest that any long-term effects of their emotional experience with decision-making during birth may differ in character or intensity from those of adult women.

The new conceptual framework presented here describes how emotional experience during decision-making creates an emotionally-laden contextualized memory which can potentially influence future decision-making or health outcomes for adolescent mothers. The framework articulates the role of emotion as described by the dual systems model and the concept of gist-based decision-making from fuzzy-trace theory, and is tailored to research on adolescent mothers’ decision-making during labor and birth. In order to reflect the relationship of risk to health care decision-making, as opposed to health risk-taking, the model’s context has been shifted from positive and negative health outcomes to risks and benefits in accordance with the accepted language of informed consent, as well as emotional and clinical outcomes. Finally, incorporating the potential impact of emotional memory on future decision-making (and perhaps health outcomes) in the specific context of adolescent development is key for using this conceptual model in research focused on preventive as well as treatment approaches to improve
the health of adolescent mothers.

**Conclusion**

We urgently need a better understanding of the effects of adolescent mothers’ decision-making during labor and birth in order to ensure their rights and protect their well-being. This new conceptual framework guides and informs research to support adolescents’ appropriate participation in shared decision-making. It also helps identify additional risks and potential protective factors for emotionally-mediated postpartum outcomes such as postpartum mood disorders in adolescents related to decision-making during labor and birth. Research and clinical practice improvements grounded in alternative models of shared decision-making could include approaches such as relational autonomy, in which providers engage with patients emotionally as well as rationally to improve decision-making outcome (Walter & Friedman Ross 2014). These improvements require integrated conceptual frameworks such as the one proposed here. As new research continues to demonstrate the enduring mental health effects of even brief exposure to emotionally-mediated hormones such as oxytocin during labor (Bell *et al.* 2014), it is essential that theory guides practice by including both the role of emotion in shaping medical decision-making and its relationship to long-term outcomes.
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Chapter Three

“Into Mother Mode”: Adolescent Mothers’ Decision-Making During Labor and Birth

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Abstract

Background: Adolescent mothers have developmentally unique decision-making processes, yet often assume adult decision-making responsibilities during labor and birth. Little is understood about adolescent mothers’ experiences despite known links between decision-making in labor and adverse health outcomes in adults. This study explores experiences of decision-making during labor in a group of US urban adolescent mothers.

Methods: Constructivist grounded theory study using interviews with 18 adolescent mothers and observations of childbirth classes for adolescents.

Results: Adolescent mothers felt their decision-making during labor indicated their inherent mothering abilities. Decisions were made in the context of their belief that the strength to give birth and care for a child emerged naturally during labor. Conditions affecting decisions included the mother’s expectations, available support, and others’ control over decisions and communication. Key processes included “going natural” versus “going epidural”; being strong for the baby; and interpreting the perceived cues of others. After birth, mothers who felt empowered by their decisions during labor felt more confident, while mothers who felt pressured into unwanted decisions felt regretful and anxious.

Conclusions: Adolescents mothers’ experiences of decision-making during labor may have lasting effects. Empowering decision-making experiences during labor for adolescent mothers may support optimal transition to motherhood and postpartum health in this vulnerable population.

Key words: adolescent, decision-making, childbirth, grounded theory, qualitative research
“Into Mother Mode”: Adolescent Mothers’ Decision-Making during Labor and Birth

Background

Births to United States (US) adolescents aged 15 to 19 have decreased 18% since 2007, yet birth rates for non-Hispanic Black and Hispanic adolescent mothers remain more than twice as high as for non-Hispanic white adolescents (1). Adolescent birth rates in the US are significantly higher than in other industrialized countries (2). Improving health for adolescent mothers is recognized as key to reducing global infant morbidity and mortality (3,4). Compared to adults, US adolescent mothers experience worse outcomes, including increased risk for postpartum depression (PPD) and birth-related post-traumatic stress disorder (PTSD) (5,6).

One third of US adolescents describe their birth as traumatic and half are symptomatic for birth-related PTSD, compared to 9% of adult mothers (7,8). Traumatic birth experience has been correlated with risk of PPD in adults (9) and postpartum psychological birth trauma in adolescents (10). Information, involvement in decision-making, and a feeling of control contribute to a positive birth experience for adults (11). While approximately 14.5% of all US mothers are diagnosed with postpartum depression (PPD), up to half of adolescent mothers report some depressive symptoms postpartum (12,13). Adolescents experience higher rates of perinatal depression than adult women, yet inconsistent screening likely leads to under-diagnosis of PPD in the adolescent population (14). In addition, while US girls as young as 14 are legally entitled to the decision-making rights of adult women during pregnancy and birth (15), the wisdom of treating adolescents as adults during medical decision-making is currently debated (15,16).
Birth experiences could impact adolescents’ well-being more strongly than adults’ due to their increased social vulnerability and sensitivity to emotional and novel stimuli (17,18). Their developmentally unique decision-making processes may have significant influence on their experience during labor (19). Most research on adolescents’ reproductive choices has focused primarily on discrete factors such as race or risk-taking behaviors (20,21). However, contextual, social experiences are also important to adolescent mothers’ trajectories (22,23). Compared to adults, adolescents assign different meanings to certain aspects of the birth experience, for example pain (24). With increased knowledge we could better support health-promoting decision-making during labor for adolescent mothers (25). We therefore conducted this qualitative exploration of adolescent mothers’ experiences with decision-making during labor.

Methods

Setting

The first author recruited pregnant and parenting adolescents at San Francisco Bay Area non-profit and university-affiliated clinics, a public high school for pregnant and parenting adolescents, and a non-profit organization, using a study protocol approved by the University of California, San Francisco Committee on Human Research. The prenatal settings were chosen to optimize diversity of participants’ socioeconomic, ethnic, and racial backgrounds. At the university-affiliated clinic, nurses, nurse-midwives, physicians, and social workers care for a diverse range of adolescents and adult women. At the non-profit clinic, nurse practitioners and social workers staff a reproductive health clinic for adolescents. The non-profit service organization offers a childbirth preparation class and doula matching program in coordination with the high school, which was led by a doula and attended by the high school nurse and a
service coordinator. Births occurred in public and private hospital settings including large urban medical centers and smaller community hospitals. Providers attending births at these hospitals varied by location and included nurse-midwives, family physicians, and obstetrician-gynecologists. Two birth settings had volunteer doulas available for intrapartum support.

Sample and Data Collection

The first author conducted semi-structured interviews and participant observation. Recruitment was initially purposive; theoretical sampling was later used to develop theoretical dimensions during data analysis (26,27). Inclusion criteria were English-speaking adolescents aged 13 to 20 who were pregnant and planning to give birth or had given birth within the past year. Exclusion criteria were cognitive or emotional difficulties which would prevent informed consent or put the adolescent at risk by being interviewed. Waiver of parental consent for participants under 18 years of age was granted. Multiple strategies were used to minimize the risk of undue pressure to participate in this adolescent population.

Interviews were conducted between May 2013 and April 2014 using a brief interview guide (Table 3.1) that included follow-up questions responsive to the interview data and emerging theoretical conceptualizations (28). Sensitive topics such as previous abuse were discussed only if introduced by the participant. Initial interview questions were developed from a pilot study undertaken by the first author. Interviews lasted approximately 60 minutes, took place in locations of the participant’s choosing, and were digitally recorded and transcribed verbatim. Seven participants were interviewed twice; five participants engaged in one prenatal and one postpartum interview, and two key informants participated in two postpartum interviews each. Participants completed a brief demographic questionnaire (Table 3.2) including mode of
birth and pain medications (Table 3.3), and received a $25 gift card for each interview. The first author observed five adolescent childbirth preparation classes lasting two hours each. Field notes were taken by hand during observations and transcribed as soon as possible after the observation period.

Data Analysis

A constructivist grounded theory approach was used, in which data collection is concurrent with data analysis and continues until data saturation is reached. (30,31). Grounded theory draws on interviews, observations, field notes, researchers’ analytic memos, and other data sources to develop theory “grounded in” the data collected (27). The analytic approach is outlined in Table 3.4. The process begins with the line-by-line analysis of data to identify “codes” or units of meaning in the data, progresses to increasingly theoretical codes, concepts, categories or dimensions, and finally a theory of social process, in this case adolescent mothers’ decision-making during labor and birth (28,31). Constructivist grounded theory allows for “indeterminacy” inherent in complex social processes (and analyses) and accounts for the influence of hierarchical relationships on theory development (29). Dimensional analysis aided in the organization of theoretical dimensions into a theory of social process (34), while situational analysis was used to probe areas needing further analytic development and test for theoretical saturation (32) (see Table 3.4).

The first author conducted initial coding; theoretical development incorporated repeated analysis and feedback from colleagues and research team members (29). Analysis involved frequent, iterative checks between data, coding and interpretation (28). Rigor was maintained through reflexive journaling, verification of findings with participants, and an analytic audit trail
Throughout analysis the researchers were mindful of their clinical “insider” perspectives as nurses (41). Triangulation of data through use of interviews, observations, and other data sources further strengthened rigor (29, 42).

**Results**

We conducted 25 interviews with 18 adolescent mothers, five prenatal and 20 postpartum. Eleven adolescents identified as ethnically Hispanic or Latina, eight as white, five as African American, four as Asian/Asian American/Hawaiian/Pacific Islander, and one as American Indian/Alaska Native. Most were students (n=15), receiving assistance from community resources (n=16), had infants less than six months old (n=14), lived with their parents (n=14), had a boyfriend or girlfriend (n=15), were formula feeding (n=11), and had a vaginal birth (n=17). Twelve had epidural anesthesia during labor and three had no pain medication; the remaining three mothers had intravenous or injected pain medications only. Ten participants were attended by at least one doula at some point during labor. Four participants were exclusively breastfeeding, and three combined breast and formula feeding.

**Central Perspective: Decision-Making During Labor Sets the Tone for Early Motherhood**

Adolescents perceived decision-making during birth as an important indicator of their competence and inherent mothering ability (Figure 3.1). Giving birth represented a way of accessing motherhood, which for many was their first milestone of adult responsibility. This perspective took root in pregnancy, when many mothers felt increased responsibility led them to curb risky behavior and focus on long-term goals:

> [You] could be like a really rebellious person and then once you have a baby, you can either stay that way or you can realize that you need to change for the better because kids are like a map of their parents... when I graduate from here, I’m allowed to carry
my son across the stage … I want him to see just because I had a kid young, it doesn’t mean that I stopped everything, like that means I just continued because I had a reason to continue.

Adolescents believed that motherhood bestowed the strength to give birth and selflessly care for an infant regardless of circumstance. This belief could support mothers in coping with challenging situations during labor:

I was proud I did that because I always wanted to cry, but I just had to stay strong and try to push through it, and it shows that I could probably be a strong mother too. During life, there’re going to be a lot of struggles and physical and emotional pain and after you go through so it shows I can handle it.

Context: Adolescent Mothers’ Belief in a Universal “Mother Mode”

Adolescents characterized the transition to motherhood as a natural process culminating in labor and entrance into “mother mode,” which they perceived gave mothers the strength to sustain the pain of labor and successfully raise their infant:

But when I look at her and she looks at me, she smiles at me, I know I can do it. I know I can get through it. If I could deliver a baby, I can get through the worst things in life…. You can do it, and that’s all there is to it. You’ve just got to push yourself, and if you can’t push yourself, think about your daughter or think about your son, because they’re the ones that are really going to push you the farthest, more than anybody else will.

Thus for most mothers, the pain of labor and the challenges of mothering were intertwined. Mothers described a “natural” eclipse of their former teenage identity by the priorities of the mother mode, and made decisions in that context:

Because right now obviously, I’m not in mother mode. All I can do is think about is the pain and what I’m gonna go through; but once it starts, it’s like all you can think about is your baby and how she’s gonna be … you’re gonna be more attentive towards the baby than yourself.

Conditions: Support, Expectations, Communication and Perceived Locus of Control
Adolescents’ decision-making was influenced by conditions including the support available to them during labor. For example, this participant chose to have an epidural to enable her to better seek support by phone from the father of her baby, who was incarcerated:

_They were surprised that I wanted the epidural, actually. One of the decisions that I made – that made me choose the epidural, because I wanted to talk to my daughter’s father and I couldn’t while going through contractions._

Adolescents found consistent, respectful support to be helpful to participating in decision-making. Adolescent mothers who felt unsupported described withdrawing from decision-making, and making choices that they later regretted:

_Because I was feeling – I was feeling horrible so I think that my decisions are not best for my baby. That’s why I was silent. I was like – I wasn’t saying anything. That’s why._

Expectations further shaped adolescents’ decision-making; some adolescent mothers anticipated active participation in decision-making, while others with less prenatal preparation tended not to expect to participate in decisions during labor. Adolescent mothers benefitted when they got information from a trusted person in a direct and respectful manner. However, mothers felt the information they needed to participate in decisions was often withheld. Adolescents viewed the locus of decision-making control as variable and ranged from trusting others to trusting their own instincts. While adolescents relied on others for support and guidance, many reported being bypassed in decision-making by supporters and care providers:

_I kept asking them some questions, but they were whispering... I couldn’t really understand what they were saying. They just kept saying something about the baby. And then she said, “Well, you only have a certain time before you have to get a C-section.” And I was like, “I don’t want one.” She’s like, “Well, you’re gonna have to get one if you don’t push that baby out.”_

**Processes: ‘Going Natural,’ Being Strong for the Baby and Interpreting the Cues of Others**
For many of these adolescents, ‘going natural,’ or avoiding an epidural, was perceived as a testament to a “natural” ability to mother:

“You won’t really be a real mother if you won’t – if you haven’t felt what it’s like to have your baby. Like you’re not feeling the motherhood... there were so many times when I wanted epidural because the pain was too much. And now every time I think about it, it showed me that I am strong enough.

Adolescents who ‘went natural’ (participants used this to include any pain medication except epidural) felt the experience increased their confidence and resilience as new mothers. Nearly every adolescent mother hoped that she could ‘go natural’ and those who then ‘went epidural’ often expressed regret and a sense of loss:

Like, it’s an amazing experience - the most painful, amazing experience you will ever have, and it’s just - you get robbed of it. If you had a C-section and you get the epidural, you get robbed of it.

Mothers who planned to ‘go epidural’ wished they could ‘go natural’ but expressed doubt in their abilities:

Like you’re supposed to go through the pain and you’re supposed to go through freaking out, like I think that’s, like, the natural way that you’re supposed to do it but, I don’t know. I think an epidural would just do me more justice because of how frightened I am.

Adolescents who had unplanned epidurals often characterized these decisions as personal disappointments with negative impact, despite describing reasons such as prolonged labor, discomfort with monitors or restricted movement, fear for the baby, and lack of adequate support that they believed led them to ‘go epidural’. Adolescents were very attentive to the opinions of others during decision-making, often interpreting the cues of others in the attempt to understand how their decisions reflected on their mothering competence. Yet they also felt their own voices were often silenced, as was the case for the only participant to have a cesarean birth:
And everybody was only talking, going about their own business, getting everything ready so calmly. And I was yelling and I was like, “God I want an epidural right now.” I was like, “Help me.”

Decisions about issues such as labor induction, pain medication, or cesarean birth differed based on individual preference, but were guided by the desire to achieve recognition as a capable mother, most importantly by making decisions that participants perceived represented being strong for the baby. In participants’ views, the range of decisions that could reflect being strong for the baby extended along a continuum from outspoken engagement or even disagreement with care providers to passive stoicism. For example, while some adolescents believed that being strong meant being assertive, others felt that quietly enduring difficulty and striving to avoid conflict showed they were being strong for their babies:

I mean I would like to act like a mom. You’re already acting like a mom giving birth, but like I said, I’m going to try to be as calm as I can with people around me, not, you know, try to let it get to me, but if anything is – if I say anything in the wrong tone of voice, it’s because I’m in pain.

Adolescents’ perceptions of what kind of mother they appeared to be to others affected their engagement in medical decisions. Adolescents admonished to “settle down” and be less disruptive felt disrespected as mothers and dehumanized, further alienating them from participation in decisions and causing them to withdraw from people whom they perceived viewed them as bad mothers:

I felt like I was going crazy. [Laughter] I was like, “You - you’re making me sound like I’m an animal,” you know: … when you’re telling me to calm down, I’m like, it kind of bothers me, but, like, whatever.”

**Consequences: Decision-Making During Labor Impacted Postpartum Mood**

Adolescents who encountered significant challenges, including unsupportive or disrespectful treatment during decision-making, frequently ‘moved on’ by reframing painful moments:
Participants showed resilience in their attempts to ‘move on,’ but expressed continued anxiety and regret related to negative decision-making experiences during labor. Adolescents who ‘went natural’ often had the support of trusted, encouraging adults during labor, and described their resulting confidence as innate and self-sustaining. In contrast, adolescent mothers who had unplanned epidurals often did so at the urging of supporters and care providers, and the way in which they were counseled made them feel as if those around them were disappointed or lacked confidence in them. Adolescents who were pressured into decisions that did not reflect their maternal role or preferences reported painful memories:

*When the people tell me that I should get the epidural, I was thinking like they might think that I’m weak and I can’t handle the – the pain, but I can. And – and I didn’t feel nothing… and then I was sad… I was thinking I want to feel the pain, so I can remember my baby…It’s like I want to feel it, too, when I have my baby like, you know, to be like I’m strong, I’m a woman, and I can handle it.*

Adolescents felt that their confidence could be undermined when the course of labor did not allow them to birth as they desired. In these cases, participants experienced their participation in decision-making as resulting in unnecessary failure rather than motherly sacrifice or resilience.

**Discussion**

Adolescent mothers felt that participation in decision-making during birth sets the tone for early motherhood and helps determine a mother’s confidence in her ability to successfully parent. Adolescents’ decision-making reflected their belief that the strength to give birth and be a good mother emerged naturally during labor. Adolescents were attentive to the opinions of those around them when making decisions, including peers, family, and care providers. They made decisions in ways that would demonstrate their ability to mother, for example by avoiding
conflict during labor in order to provide a peaceful, accepting environment for their new infant. Conditions affecting adolescents’ decision-making included expectations for birth, available support, how decision-making power was distributed in the labor room, and communication.

The choice between ‘going epidural’ versus ‘going natural’ was a key decision process with implications for postpartum mood and mothering confidence. Additional processes affecting decision-making included being strong for the baby and interpreting the cues of others. Adolescents felt empowered by positive experiences of decision-making during labor, and were anxious and regretful when they felt pressured into decisions during labor. Supporting positive decision-making experiences for adolescent mothers may be crucial to their successful transition to the responsibilities and challenges of motherhood. This could entail supporting them in their goals for birth, or helping them to reframe unanticipated decisions, such as ‘going epidural,’ as reflective of strength and good mothering in challenging circumstances.

To our knowledge, no previous study has examined decision-making during labor and birth among US adolescent mothers. Our findings suggest that for some adolescents, the experience of decision-making during birth may affect postpartum outcomes. In particular, the feelings of increased anxiety and decreased self-confidence that resulted from negative decision-making experiences during labor in our study could contribute to the high rates of postpartum mood and anxiety disorders in this population (8,43). Providing care that supports the adolescent’s ability to view her participation in decision-making during labor as empowering could increase her confidence and self-efficacy as a new mother, and decrease her risk of postpartum mood and anxiety disorders.
This study was limited in several ways. Many of the adolescents interviewed had been exposed to the idea of a doula, if not paired with a doula while in labor. This strengthened the ability to compare the experiences of mothers who felt entitled to consistent, knowledgeable support during labor with mothers for whom that kind of support was not known or available. However, the support services received by some of the participants may limit the transferability of the findings to other groups of US adolescent mothers. Because recruitment placed the burden of contact on participants, recruitment efforts may have missed adolescents who had difficulty responding to the flyer. Interviewing some adolescents twice allowed for comparison of expectations and experience of decision-making during labor. However, prenatal interviews may also have affected participants’ expectations and resulting experiences. The developmental and social characteristics specific to very young mothers (age 14 and under) were not addressed here and should be targeted in future research. Additional research in this area should also include non-English speaking adolescents and those living in rural contexts. In addition, research including repeated measures of postpartum mood and anxiety disorders in the prenatal and postpartum periods could help to further explore the relationship between experiences of decision-making during labor and adolescent mothers’ mental health and coping after birth.

Conclusion

Our findings have additional significance in light of recent proposals to curb or remove the healthcare decision-making rights of minors (44,45). For our study participants, intrapartum decision-making was more than a process of informed consent; it was an integral part of the developmental process of becoming a mother. This process was extended to positive life changes and investment in long-term goals tied to attaining the mother role.
While further research is required, preliminary evidence suggests adolescent mothers may resemble adults, for whom consistent support during labor has been found to improve birth outcomes (46). Adequate pain control and caregiver support have been cited as important to increasing adolescent mothers’ chances of having a positive birth experience (47,48). Perhaps unlike adult mothers, the importance of ‘going natural’ to the adolescents in our study may have been related to their association of their body’s adult capacity to reproduce with their ability to take on the adult responsibilities of giving birth and parenting. Respecting adolescents’ ability and decision to birth without an epidural if they desire to do so may also have meaningful health benefits. Helping adolescents participate in even the most difficult intrapartum decisions in a way that adequately supports their strengths as mothers may significantly contribute to health promotion for young mothers and families (25).
References


Chapter Four

Urban Adolescent Mothers’ Experiences of Support and
Decision-Making During Labor

Carrie H. Jacobson

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ABSTRACT

Introduction: US adolescent mothers have unique developmental needs as adolescents as well as adult decision-making rights during labor and birth. Little is known about adolescent mothers’ experiences of decision-making during labor, despite the fact that adult mothers with negative experiences of decision-making during labor and birth experience increased risk of problems such as postpartum mood disorders. The purpose of this study was to develop a theory of supported decision-making in adolescent labor and birth.

Methods: For this constructivist grounded theory study, interviews were conducted with 18 adolescent mothers 16-20 years of age. Adolescent childbirth classes in a West Coast urban area were also observed.

Results: Adolescent mothers reported feeling most supported in decision-making during labor and birth when someone in attendance was being a supportive ally. Their perception of helpful support with decision-making went beyond patient advocacy to include dimensions such as making space for unpressured decisions, validating difficult decisions, and facilitating communication around decision-making.

Discussion: The findings from this study suggest that tailoring support to the adolescent’s needs can enhance positive experiences with decision-making during labor and birth. Clinicians can use these findings to support birth experiences for adolescent mothers, with potential long-term benefits for young families.

Keywords: pregnancy in adolescence, adolescent development, decision-making, obstetric labor, grounded theory
Urban Adolescent Mothers’ Experiences of Support and Decision-Making During Labor

INTRODUCTION

In 2010, 34.3 per 1,000 United States (US) adolescents aged 15-19 gave birth; a total of 367,752 infants were born to adolescent mothers that year (1). While the 2010 birth rate reflected an 18% decrease from 2007, non-Hispanic Black and Hispanic adolescent mothers gave birth at rates more than two times higher than non-Hispanic white adolescents (2). Reducing adolescent pregnancy is a US national health priority, yet US adolescent pregnancy rates remain the highest of all industrialized countries and are strongly associated with social disadvantage (3-6). Factors such as poverty, violence, substance abuse, sexual abuse and poor social support put adolescents at increased risk for unplanned pregnancy (7-10). Adolescent mothers and their children are at higher risk for complications such as preterm birth, low birth weight, infant mortality, postpartum depression (PPD), low educational attainment, unemployment, and lifelong poverty (11-12). While 9% of adult mothers report symptoms of birth-related post-traumatic stress disorder (PTSD), one third of adolescents describe their birth as traumatic and half display PTSD symptoms (13,14). Good caregiver support during labor may help reduce the chance of psychological birth trauma for adolescent mothers and promote positive birth experiences for them (15-17).

Adult Mothers, Support, and Decision-Making Experiences During Labor

Among adult mothers, good caregiver support appears to improve decision-making experiences (18,19). Continuous support reduces adult mothers’ dissatisfaction with the birth experience and use of labor interventions (20). Providers can influence mothers’ sense of control and experience of being involved in decisions (21,22). Perceived criticism from healthcare providers may
impact successful maternal role attainment, and mothers lacking sufficient information may relinquish control over decisions to providers (23, 24).

Unfortunately, many US women are dissatisfied with the support and information they receive during birth; in a recent national survey, 44% of women felt overwhelmed, 37% felt frightened, and 30% felt powerless during labor and birth (23). There is a need for increased understanding of how to implement shared decision-making during labor (24, 25). Sense of control and participation in decision-making reduce fear during birth and lower risk of postpartum mood and anxiety disorders in adult mothers, while feeling pressured into decisions can increase the risk of birth-related PTSD (26-28). Involvement in decision-making during labor increases a woman’s sense of responsibility for herself and her baby and her positive feelings toward her infant (29).

**Adolescent Development, Support, and Decision-Making**

In most US states, girls as young as 14 have the decision-making rights of adult women during pregnancy and birth (30). In general adolescent girls rely heavily on the support and advice of others in parenting and reproductive health decisions (31,32). Adolescent mothers interpret and act on certain labor experiences, for example pain, differently than adult mothers (33). Furthermore, adolescent mothers may face biases from care providers, which can impact their decision-making (34). Characteristics such as increased sensitivity to social and emotional influences and heightened reaction to novel situations are unique to adolescent decision-making (30,35). It is possible that the emotional experience of decision-making can impact future decisions, including adolescent mothers’ future experiences of coping with choices as new mothers (36). The quality of support for decision-making during labor may have even greater impact on risk for factors such as postpartum mood and anxiety disorders in the already high-risk
adolescent population. With this study we therefore aimed to develop a theory of supported
decision-making for adolescent mothers during labor and birth.

METHODS

This theory was developed in conjunction with an original study that identified support as a key
dimension of a general theory of adolescent decision-making during labor and birth; for the
findings of the original study and a more detailed account of the research methods used see
Chapter 3. We used a constructivist grounded theory approach with concurrent data collection
and analysis, wherein interaction between the data, interpretation, and data collection strategies
is known as the constant comparative method (37). Grounded theory draws on sources including
interviews, observations, researchers’ analytic memos, and field notes to develop theory
“grounded in” the data collected. Data collection and analysis occur concurrently until saturation
is reached. Grounded theory is based in the theory of symbolic interactionism, which holds that
meaning is socially constructed (37-39). Constructivism accounts for hierarchical relationships
and the researcher’s role in shaping the theoretical findings (38). Aspects of dimensional
analysis and situational analysis were incorporated in order to account for the influence of both
systematic and intuitive processes and social discourse on the theory generated (40,41).

Participants and Setting

Settings were chosen to optimize socioeconomic, ethnic, and racial diversity and included non-
profit and university-affiliated clinics, a non-profit organization, and a public high school for
pregnant and parenting adolescents. Nurses, nurse-midwives, physicians, and social workers
care for a diverse group of adolescents and adult women at the university-affiliated clinic. Nurse
practitioners and social workers provided reproductive health care to adolescents at the non-
profit clinic. An adolescent childbirth preparation class and doula matching program was offered by the non-profit service organization in coordination with the high school. Participants gave birth in a range of public and private hospital settings, including large urban medical centers and smaller community hospitals, and were attended by nurse-midwives, family physicians and/or obstetrician-gynecologists. Volunteer doulas were available for intrapartum support in two birth settings.

**Sampling and Data Collection**

Sampling for semi-structured interviews and participant observation was at first purposive and later theoretical to develop relationships between concepts during data analysis (42). Inclusion criteria were adolescents aged 13-20 who were pregnant and planning to give birth or had an infant less than one year old. Recent evidence suggests that adolescent brain development persists until age 25; adolescent was defined as age 13-20 to capture the experiences of adolescents who had not yet fully achieved functional independence (35). Exclusion criteria were cognitive or emotional problems that could prevent informed consent or safe participation in the interview.

The first author conducted interviews with brief interview guides (see Table 3.1) and incorporating questions to address data as it is collected and emerging theoretical conceptualizations (38). Participants chose the locations for interviews, which lasted approximately 60 minutes and were digitally recorded and transcribed verbatim. Participants completed a demographic questionnaire (see Table 3.2) and received a $25 gift card for each interview. Five teen childbirth preparation classes, each lasting two hours, were observed. Field notes taken during observations were transcribed as soon as possible thereafter.
Data Analysis

Constructivist grounded theory analysis begins with line-by-line analysis of data; iterative checks between data and coding continue as line-by-line codes are gradually organized under more theoretical codes (38,40). Increasingly theoretical codes are in turn organized into concepts, and the relationships between the theoretical concepts resulting from continued comparison of coding and data are eventually developed into a coherent theory of social process which reflects the perspectives of both the researchers and the participants (38,40). The first author performed initial coding; frequent analysis and feedback from colleagues and research team members were incorporated into theoretical development (42). Rigor was maintained through reflexive journaling, repeated verification of findings at every stage of analysis with participants, and an analytic audit trail (38,43). The researchers were conscious of their “insider” perspectives as nurses and socioeconomic differentials in interviews and birth settings (44). The use of interviews, observations, and other data sources further strengthened rigor through triangulation of data (43).

Ethical Considerations

The study protocol was approved by the University of California, San Francisco Committee on Human Research, which granted waiver of parental consent for participants under 18 years of age. We collected written informed consent before interviews and participants reviewed an information sheet and provided verbal consent before observations. Strategies to minimize undue pressure for research participation in this adolescent population included extra time for review of consent materials, prompts to confirm comprehension, and flyer-based recruitment requiring interested adolescents to voluntarily contact researchers.
RESULTS

Sample Characteristics

Interviews were conducted with 18 mothers; participants were between 26 and 40 weeks gestation for 5 interviews, and between 6 weeks and 11 months postpartum for 20 interviews. Seven of the adolescents had a second interview; 5 were interviewed once prenatally and once postpartum, and 2 key informants were interviewed twice postpartum. Please see Table 3.2 for descriptive information about the participants. The majority of adolescents were students living with their parents and using community resources such as the Women, Infants, and Children Food and Nutrition Service (WIC). Seventeen had spontaneous vaginal births, one had a cesarean birth, 12 had epidural anesthesia during labor, 3 had no pain medication, and 3 had intravenous or intramuscular pain medications only. Eleven participants were formula feeding, 4 were exclusively breastfeeding, and 3 combined breast and formula feeding. Ten participants had a doula for at least part of their labor.

Having a Supportive Ally

‘Having a supportive ally’ was the central dimension under which the other categories, or dimensions of the theory were organized (Figure 4.1). ‘Having a supportive ally’ influenced decision-making in different ways based on theoretical dimensions of: context (the situation in which the social process(es) are embedded); conditions (things that facilitate, shape, or block central actions); process (actions set in motion by conditions); and consequences of the identified processes (45). Each of these major dimensions is discussed below.

To adolescents, allies in decision-making could provide information or facilitate communication with care providers and others; they could also simply serve as supportive
witnesses to the mother’s decision-making. Adolescent mothers who experienced this kind of support found it profoundly influenced their labor experience: “…[without her] I would’ve not known what to do…She – she was very supportive of everything, helped me so much.”

Adolescents appreciated being supported by someone whom they perceived to have expertise in birth, but the fundamental characteristics of a supportive ally were sharing and validating their perspective during decision-making, or being someone who “really knew what I was going through”:

So I wasn’t really tripping if my mom was there or not because my doula was someone who was like really there with me…because she already knows how hard it is like the pain and stuff because she herself has a daughter.

The sample included participants who were cared for by a variety of providers; some participants also had access to volunteer doula services. Not all of the participants with access to doula services used them; however, adolescents knowledgeable about doulas’ support of mothers’ decision-making felt entitled to dedicated support for their own decision-making during labor. In the absence of a doula, adolescent mothers often described other support people whom they believed would or did act in a doula-like role during their labors. In contrast, adolescents who were not offered access to doula services often did not anticipate participating in decision-making during labor: “I mean it’s pretty smooth. I mean you don’t really do that much about decision-making except for, listening to the doctor.” While they sought support from knowledgeable or trusted people during labor, adolescents unprepared to participate actively in decision-making viewed support people as authoritarian or even “controlling” in making decisions for them:

Because I can’t say no to my mom. I can’t say, “No, I’m not getting an epidural” like with her I can’t say, “No, I don’t want to” to what she said because my mom, I’m like,
no, I’m not going to say anything. “Yes.”

These adolescents prioritized complying with others’ decisions in order to maintain good relations with support people during labor. Some adolescent mothers without a supportive ally nonetheless described feeling “judged” by others during labor. “[T]hey can't be mean to you or say anything because that’s their job... I just didn’t wanna bother them because I felt like I was being annoying.”

Context: Unpredictable Availability and Degree of Support During Labor

Adolescents described making decisions in a context of frequently unreliable or interrupted support. This was often due to situational factors such as transportation issues, competing demands and obligations, and hospital shift and staffing changes. For example, adolescents who hoped that people they relied on for support before birth would support them as allies during labor could become disappointed, particularly when support people withdrew, took control over decisions, or were forced to leave to attend to other responsibilities during labor. Conversely, individuals not necessarily anticipated to be supportive in decision-making could become allies at key moments, such as care providers who were perceived as trustworthy and respectful of their decisions:

So when she talked to me like that like in a better way than the other doctor who said “You have to do it right now. You have to. You have to.” She told me in a better way that kind of calmed me down and helped me accept the fact that I have to get a C-section.

Sometimes longer-term social needs, such as a relationship with a partner or mother who was expected to provide significant support after the birth, could supersede the shorter-term social need of support for decision-making during labor. For example, this doula guided an adolescent
mother to choose the father of the baby to accompany her to the operating room for a cesarean birth:

She was like, “Who do you want to go with you into the room?” I was like, “I kinda want you ‘cause – I mean you know the stuff and you could talk for me. Like you already know what I want or you already know – you already know me. You’d be able to explain things to me and he won’t.” She was like, “Yes.” She’s like, “But I think he should go ‘cause that’s the dad.” I was like, “Okay. Yes. Have him go.”

Conditions: Mothers’ Experiences Varied with Consistency, Familiarity and Expertise of Support Provider(s)

Mothers valued consistency of support from a trusted source, while inconsistent access to support could hinder or prevent positive decision-making experiences. One variable of consistency was a mother’s familiarity with a support person. “And then I think like that bond that we connect – that we built before my labor that helped me feel me a lot more comfortable with her.” While some adolescents described finding unexpected support from people they met during labor, adolescent mothers were more inclined to describe supportive allies as people with whom they had established a supportive relationship prior to labor. Participants emphasized the importance of mutual experience for building trust; also, adolescents valued the connection with their lives outside of labor:

I just want my mom, my sister and my boyfriend…that’s the only people that have been there for me…mostly my mom; she’s been there with me through everything since I was little, you know?...and my boyfriend, you know, he’s the dad, so I want him to see his baby come out.

Some adolescents described having the fathers of their babies, mothers, and other significant people in their lives present just to witness the labor, even if they did not expect them to be supportive in other ways. In the absence of controlling behavior, witnessing could represent a kind of passive support of decision-making, as adolescents felt that this would or did lead others
to appreciate their decisions during labor and be more supportive of them and their decisions after the birth.

When adolescents anticipated help from a supportive ally but found it to be unavailable, they described feeling vulnerable and betrayed, and subsequently taking a more passive role in decision-making. For example, an adolescent assigned to a doula she did not feel connected with, or had not met before labor, could feel uncomfortable or pressured into decisions. Yet according to these participants, contradicting the doula would disrupt their ostensibly “supportive” relationship, and mothers preferred to silence their concerns:

*I didn’t want her in there either, but I didn’t want to like tell her to leave because she came all the way over there to help me and she wasn’t doing anything that she wasn’t supposed to be doing.*

Adolescents also described similar frustrations when support people were unable to successfully navigate communication with care providers. This could happen due to language barriers, lack of comfort with the hospital setting, or feeling disrespected by hospital staff. The resulting misunderstandings could prevent adolescents from participating effectively in decisions.

*Key Processes: Helpful Support Included Facilitating Communication, Making Space for Decisions, and Validating Hard Choices*

Adolescents felt that allies in decision-making provided them with sufficient information in clear, nonjudgmental language, and empowered them to use the information to come to their own decision. “Cause like she was telling me … she wasn’t against my decision. She was supporting my decision and telling me what’s better for my baby and what’s better for me.” Conversely, mothers who did not feel they had a supportive ally described decision-making as way to preserve emotional closeness with support people. “All I cared about was my mom and [the
baby’s] dad. So my mom, I let her decide who [could stay].” Mothers who had a supportive ally were more inclined to listen to their ally at the moment of decision-making than the person with the most expertise or authority, for example the care provider. “Well, I wouldn’t really normally ask the doctors. I mean if I have questions, I will ask my doula.”

Mothers perceived allies to act as intermediaries, listening to care providers and then repeating information to mothers in a way they felt was easier to understand. Mothers who had a supportive ally were likely to depend on that person to relay their wishes to other support people and care providers as a kind of buffer between participants and potentially stressful exchanges. ”[My doula] was all like, ‘I'm gonna be there so if you don't feel comfortable telling someone to leave, you could tell me and I could tell them.’ So she was basically my voice if I didn't feel like I had a voice, you know.”

As part of facilitating communication with others, adolescents reported that supportive allies created space for them to make unpressured decisions. This entailed asking care providers for any additional time and information needed to comfortably reach a decision, and encouraging the mother to take the space she needed.

And then there’s like a bunch of things that she would like, “Okay, can we talk first?” And they’re like, “Oh yeah, okay.” So [the physicians] would leave and then she would explain it to me and I would make my decision. So I guess that made me feel like a lot safer.

Creating space could also involve incorporating and guiding others attending the birth so that they could best support the mother in her decision-making. Adolescents felt best supported when they had the counsel of a trusted person who validated their choices, especially difficult ones:
Adolescent mothers described meaningful validation, like that identified by the adolescent in the quote above, as tied to the trajectory of their labor experience and how they felt their decision-making during labor reflected their ability to mother; it represented a shared understanding of social and situational context as well as clinical risks and benefits.

Consequences for Adolescent Mothers Ranged from Empowerment to Silencing in Decision-Making

While participants who had supportive allies in decision-making reported feeling empowered and validated, adolescents who perceived less support or opportunity for participating actively in decision-making felt less supported overall during labor and more regretful when recalling decisions:

*When I think back, like I’m like with my next baby, I don’t want to get the epidural. I want to try harder like I should have tried harder to have gone natural, like maybe...choosing a hospital with a bath...maybe I’ll have more support that time. The next time around, I’ll have more support.*

It could be especially difficult for adolescents to assert their preferences when they felt alienated from or intimidated by the people who were trying to support them. Adolescents who forfeited control of decisions during labor in order to maintain harmony with their support people were unable to express discomfort or disagreement. Being unable to express their feelings made it difficult for support providers to effectively recognize or address the adolescent’s needs, for example when one participant wanted to avoid an epidural but did not speak up when her family requested one for her because her sister told her, “You know, I don’t want to see you in this much pain.” Finally, adolescents also described feeling confused and discouraged in situations
where they were uncertain about who had control of decision-making. This adolescent was originally given the choice to go home or stay at the hospital and have her labor induced:

The midwife didn’t really mind I guess you know because once again the decision was mine. It wasn’t my mom’s or anybody else’s. So then I told them I want to go home... [T]he midwife... she looked at my mom and she just said, “How do you feel about that?” ...The midwife took the chart... so then they just told me that I should stay...

Adolescents who were unsure if they had been given complete information or prevented from desired participation in decision-making described a lack of confidence in subsequent decisions and the information that was conveyed to them.

DISCUSSION

Adolescent mothers with access to a supportive, nonjudgmental ally felt empowered to participate in decision-making, and experienced even unanticipated or undesired decisions more positively. In this study, familiarity with the concept of dedicated labor support encouraged adolescents’ decision-making during labor, while adolescents unfamiliar with the idea of being supported in making their own decisions during labor participated in decision-making to a lesser degree. Key social processes adolescents associated with supportive allies included facilitating communication with care providers and other support people, making space for decisions, and validating difficult decisions. Adolescents made decisions in the context of unreliable or inconsistent support, and decision-making was influenced by variation in the consistency of support, the familiarity of support people, and their expertise with birth. Consequences for adolescents ranged from feeling empowered by successful participation in decision-making to being prevented from participating in decision-making. Feeling unsupported in decision-making during labor led to feelings of regret.
Adolescent mothers’ experiences of being supported in decision-making echo those of adult mothers, for whom continuous labor support and positive experiences of decision-making during labor have measurable benefits (18-22). However, adolescents’ experiences of support in intrapartum decision-making also reflect their increased sensitivity to social and emotional stimuli in unfamiliar situations (30,35). In particular, the adolescent mothers in this study attached importance to the role of support person as trusted peer as well as birth expert, with the potential to provide social as well as rational validation for the choices they made during labor. In addition, adolescents described supportive allies as respected peers in the context of labor, and found their support to be invaluable for appropriate participation in decision-making. Paradoxically, participants described being alienated and silenced by hierarchical or controlling support even when it came from caring and familiar adults. Adolescents’ experiences of being supported in decision-making may have had longer-term effects on their confidence regarding their decision-making ability, possibly influencing postpartum mood, coping, and risk for problems such as postpartum mood and anxiety disorders (36,45).

Limitations

The applicability of our study to other US adolescent mothers may have been limited because some study participants had received prenatal education about labor support and decision-making. In addition, our sample included only English-speaking, urban, West Coast mothers aged 16 and over; younger mothers, mothers from rural contexts or other areas of the country, and non-English-speaking mothers may have different experiences (2). The flyer-based recruitment placed the burden of contact on participants, which may have excluded some adolescents if they had difficulty responding to the flyer. Repeating interviews with some participants before and after birth, while allowing for the comparison of expectations and
experience of decision-making during labor, may have affected participants’ expectations and resulting experiences. This study focused solely on adolescent mothers’ experiences; further research should involve support people to adolescent mothers and those involved in shared decision-making during labor. Studies incorporating direct observation of decision-making during labor and birth would also expand knowledge in this area.

**Implications**

Care providers may use this theory of supported decision-making for adolescents during labor as a context for optimal care for this vulnerable population, through provision of appropriate support for decision-making from someone in the supportive ally role, or employment of the supportive ally processes described here. The theory may be used to inform future research for development of protocols and tools which take account of the unique ways in which adolescents need to be supported during labor and adequately ensure adolescents’ decision-making rights and well-being. Recent theories of adolescent risk-taking suggest that experience can play an important role in helping individuals to make safer decisions guided by emotional “gut” feelings, especially when overwhelming or urgent situations make it difficult to process statistical details of risk and benefit information (36). Because doulas and other adults identified as supportive allies would typically have previous experience with birth and mature decision-making processes, their support may actually help guide adolescent mothers to make safer decisions during labor. In addition, the stronger the emotions experienced during decision-making, the greater the likelihood that the memory of decision-making will impact future decisions (36). Thus, the intense emotions often experienced during labor, and to which adolescents are particularly vulnerable, may amplify the long-term effects of adolescents’ decision-making during labor, providing a unique opportunity to positively influence their experience of future
decisions as new mothers. Future research should explore not only the long-term effects of
decision-making during labor for adolescent mothers, but interrelated factors such as the function
of oxytocin and other labor hormones known to interact with mood and decision-making, and
continuity of support from prenatal to postpartum care (46,47). Effective support of decision-
making during labor and birth may be an integral part of postpartum health promotion for
adolescent mothers (48).
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Chapter 5

Synthesis

Carrie H. Jacobson
The purpose of this dissertation was to develop mid-range theory for understanding adolescent mothers’ expectations for and experiences of decision-making during labor and birth and to propose a conceptual framework for adolescent mothers’ decision-making during labor and birth drawing from current theories of adolescent development and decision-making.

Summary of Conceptual Framework for Adolescent Mothers’ Decision-Making During Labor and Birth

The first paper, presented in Chapter 2, proposes a new conceptual framework for understanding the cognitive and emotional processes influencing adolescents’ decision-making during labor and birth, integrating recent developments in adolescent development and decision-making theory based in neuroscientific findings. The conceptual framework adapted Keeler & Kaiser’s (2010) Integrative Model for Adolescent Health Risk Behavior by elaborating on the elements of Steinberg’s dual systems model of adolescent decision-making and incorporating aspects of Reyna’s fuzzy-trace theory of risk-taking in adolescence (Reyna & Farley, 2006). The conceptual framework was then modified to be specific to the context of labor and birth for the adolescent mother.

Steinberg’s dual systems model proposes that cognitive and socio-emotional maturation are distinct processes which follow different trajectories during adolescence (Steinberg, 2008, 2010). Thus, while most adolescents can perform logico-deductive tasks as well as adults by the age of 15, mid-adolescence is also a time of increased impulsivity and reward-seeking which can quickly derail logical decision-making in real-life situations (Steinberg, 2008, 2010). Steinberg concludes that adolescents can make decisions as well as adults when removed from pressured or
emotionally overwhelming situations. While Steinberg and other proponents of dual systems theory do not claim that the effect of emotion on decision-making is always negative (Strang, Chein & Steinberg, 2013), dual systems theory is often interpreted as such, for example by Keeler & Kaiser (2010) in their model. They frame the absolute lack of risk-taking, through management and control of emotional impulses on the adolescent’s part, as the goal of “good” adolescent judgment.

However, others suggest that emotion can have a positive effect on decision-making, notably Reyna in her fuzzy-trace theory (Reyna & Farley, 2006). According to Reyna, gist-based decision-making is a higher-order decision-making which relies on the emotional valence of past decisions and emotionally-linked values to result in less risky decisions than when one relies purely on logico-deductive, or verbatim, thinking (Rivers, Reyna & Mills, 2008). Reyna suggests that maturation of judgment is a reflection of increased use and refinement of gist-based decision-making, such that adults are less likely than adolescents to make purely “rational” decisions based on the statistics of absolute risk, and more likely to make safer decisions couched in a context of past experience (Reyna & Farley, 2006). Reyna further concludes that the stronger the emotional experience associated with a decision, the more likely it is that the emotional memory of that decision will influence future decisions (Reyna & Farley, 2006).

The most significant contribution of the new conceptual framework is the incorporation of emotion as a potentially positive influence on current and future decisions for adolescent mothers, in a context where the absolute avoidance of risk is not a realistic goal. The new framework has been reoriented so that every decision is made within a context of comparison of risks and benefits, and outcomes include clinical outcomes as well as emotional experience and the impact on future decisions, based on Reyna’s gist-based theory. The framework includes as
contributing factors the emotional influence of past decisions as well as social, personal and environmental factors, and represents both logico-deductive as well as gist-based processes of judgment. Thus it accounts for the inevitable influence of emotion and potential risk on decision-making during labor and birth, with a framework tailored to the developmental needs of the adolescent mother.

**Summary of “Into Mother Mode”: Adolescent Mothers’ Decision-Making During Labor and Birth**

Chapter 3 reported on a constructivist grounded theory study of adolescent mothers’ experiences of decision-making during labor and birth. Findings were organized under the central theoretical perspective that adolescent mothers felt their decision-making during labor indicated their inherent mothering abilities and set the tone for early motherhood. Adolescent mothers felt confident about their ability to mother successfully when they felt empowered by their decisions during labor, while mothers who felt pressured into unwanted decisions during labor felt regretful about how their decisions reflected on themselves as mothers.

Adolescents’ belief in a ‘mother mode’ which emerged during labor to give strength for childbirth and early motherhood formed a powerful context for decision-making. A key process was the choice to ‘go natural’ or ‘go epidural.’ Most, but not all, mothers desired to go natural yet most mothers birthed with epidurals, making this a choice usually made during pregnancy and then revisited frequently during labor. Another significant process was being strong for the baby, which could entail being assertive or avoiding pain medication, but was just as likely to manifest as efforts to maintain harmony during the labor and avoid losing self-control. Finally,
mothers strove to interpret the cues of others when forming their ideas of how their decisions during labor reflected on their mothering ability.

These processes were affected by conditions such as the adolescents’ expectations, available support, communication, and the perceived locus of control over decisions. In the presence of consistent support and direct communication, even mothers whose births deviated widely from their expectations could feel empowered when their decision-making was framed as reflective of strong mothering. Mothers who regretted their decisions during labor did so even when they could identify the factors that led them to those decisions. Mothers mentioned factors including inconsistent support and poor communication, in addition to unfulfilled expectations and being confused or disappointed about who really had control over decisions.

Summary of Urban Adolescent Mothers’ Experiences of Support and Decision-Making During Labor

The third paper, presented in Chapter 4, expands on the particularly significant aspects of support from the more broad theory of adolescent mothers’ experiences of decision-making during labor with a theory-within-a-theory focused specifically on supported decision-making in adolescent labor and birth. Adolescents reported feeling most supported in decision-making when they had a supportive ally. Adolescents characterized a supportive ally as someone who truly identified with their experiences in labor and engaged in specific processes during decision-making. Adolescents who had been educated about doulas’ support for decision-making expected to have support for their decision-making during labor. Adolescents who were not familiar with the doula’s role in supporting decision-making described making getting along with support people and care providers their priority in decision-making. Adolescent mothers who felt
they had a supportive ally in decision-making reported feeling empowered by their decisions, while mothers who did not have a supportive ally felt less supported overall during labor, were more regretful of decisions, and often described feeling silenced during decision-making.

Adolescents described making decisions during labor in a context of unpredictable availability and degree of support. Adolescent mothers’ experiences of being supported during labor varied with the consistency of support and the familiarity and expertise of the support provider. Inconsistent support was perceived as less helpful in decision-making than consistent support; on the whole adolescents were more likely to establish a supportive ally relationship with someone who they had known before labor, and who they perceived to be knowledgeable about birth. Adolescents described supportive allies as facilitating their communication with other support people and care providers and buffering them from stressful interactions. Another key process of the supportive ally during decision-making was making space for decisions by supporting the adolescent in asking for time and privacy, when possible, for consideration and discussion before making a decision. Finally, supportive allies validated adolescent mother’s decisions by helping to frame them as reflective of strength and good judgment in the context of their individual labor.

**Synthesis: Comparing the Findings with the Conceptual Framework**

In many ways, the conceptual framework proposed in Chapter 2 appears at least partially predictive of the findings presented in Chapters 3 and 4. For example, contributing factors from the conceptual model such as “social support,” “communication with providers,” and “autonomy” (locus of decision-making control in the data-based theory) were all represented as dimensions in the data-based theories. Furthermore, the factor termed “perceived peer approval”
could potentially be extended to at least two aspects of the findings: the supportive ally in labor, whom adolescent mothers perceived to communicate in a knowledgeable but accessible and nonjudgmental way, and whose validation was an extremely important component of the support processes; and the process of ‘going natural,’ which held a special meaning for participants that they described as reinforced by peer approval.

In describing their experiences with decision-making during labor, adolescent mothers felt that it was very helpful when their supportive ally would aid in communication by repeating information from a care provider in a way they found easier to understand. It seems possible that in these cases the supportive ally may have been assisting the adolescent in using more gist-based decision making by taking the factual details of risks and benefits provided by the care provider and reframing them in more value-based terms, for example by framing a discussion of the risks and benefits of epidural in terms of a stated goal of generally avoiding medication and interventions when necessary. The model also identifies emotional experience as a potentially significant outcome related to decision-making during labor, and the adolescents in the study reported on here certainly felt that the emotional experience of decision-making during labor had just as much, if not more, lasting significance as the clinical course their labor took. Adolescents described how decision-making during labor impacted their postpartum mood in ways which could support the inclusion of mood under emotional/temporal factors in the conceptual model.

However, it is less clear if and how the emotionally-tinged memories created by decisions during labor may have influenced future decisions for the adolescent mothers in this study, as proposed in the conceptual framework. The consequences of confidence in mothering ability or regret related to decision-making during labor would seem to suggest that these experiences do have the potential to create lasting emotional memories that shape future decisions. A mother
who had an empowering experience of decision-making during labor and felt that gave her increased confidence in her mothering might have a more positive association with making her own choices as a new mother and therefore make more or more assertive decisions, for example. Yet this study was limited in most cases to one postpartum interview per participant, most commonly in the first six months postpartum, and it is not possible to determine from this evidence exactly how the emotional memories of decision-making during labor may impact outcomes throughout the postpartum period. In addition, contributing factors such as the intrapersonal characteristics of history of trauma and abuse, cognitive skill, and socioemotional skill were not measured and could not be evaluated with this study, nor were measures of socioeconomic status sufficient to make any conclusions.

The unique situation of adolescent decision-making during labor and birth highlights the complex interplay of cognitive and emotional functioning at a time of physiological and social role transition. It cannot be extricated from the dynamic social context of the labor room, and while a completely normal process it can sometimes entail risk and uncertainty. In contemplating the needs of mothers who have not yet reached full maturity themselves, it is easy to grasp how emotion could significantly impact their decision-making and influence their transition to motherhood. We can anticipate that the vulnerable population of adolescent mothers would require special consideration. With effective support, it seems possible that adolescent mothers could participate safely in decision-making during their own labors, thereby preserving their human rights as patients and parents, and possibly improving their postpartum well-being. However, in order to provide sufficient support for adolescent mothers’ decision-making during labor it would be necessary to allow for the explicit role of emotion in shaping shared decision-making as well as the lasting impact of important life events such as birth. It would entail
dropping the Cartesian perspective whereby rational decision-making is theoretically divorced from physical experience and social context, and embracing a more encompassing definition of shared medical decision-making. It would require a more complex and relational model of decision-making not just for mothers, but for support people and clinicians as well.

In recognizing the potential harm of treating adolescent mothers as dispassionate, autonomous decision-makers during labor, we need not assume their decision-making responsibilities and negate their rights. In fact, we might consider the impact of emotion and social context on any woman, regardless of age, making decisions during labor and birth. Perhaps in treating birth as a normal process, we should be sure to recognize the social and emotional transitions that accompany it and the burden on those present to support the mother in all aspects of her experience. Decision-making during labor and birth must be a holistic partnership. Rather than invalidating her autonomy, perhaps the inevitable emotional involvement of a mother in labor could be viewed as a golden opportunity for supporting a successful transition to parenthood. Just as we do not leave a student alone in a room to learn, nor should we expect new mothers to successfully transition to their new role without the guidance, and respect, of those attending them.

Implications

The conceptual framework as well as the data-based theories suggest that it may be particularly helpful to provide adolescent mothers with consistent support, direct and appropriate communication, and careful attention to preserving their participation as the primary locus of control in decision-making in order to foster the best possible labor experience for adolescent mothers and increase the chance of setting a positive tone for the initial postpartum period.
Helping adolescent mothers to frame or reframe even difficult or unexpected decisions as reflective of positive mothering, ideally while the decisions are taking place during labor, may be particularly important to improving the experience and memory of decision-making.

Supporting adolescent mothers in their preferences and abilities to succeed in physiologic birth, where possible, may also have benefits for their experiences of decision-making and resulting feelings of confidence. In addition, support for adolescents’ decision-making during labor may be significantly enhanced by the presence of a dedicated support person trained to employ the strategies described under supportive ally processes here, and education about support for decision-making during prenatal care. More attention to adolescents’ experiences of decision-making during labor may not only reinforce their rights to participate in decision-making and be protected from undue harm or coercion, but could potentially ease the transition to motherhood by setting a more positive tone and increasing confidence.

**Future Research**

The incorporation of emotional influences and gist-based decision-making into a framework for adolescent decision-making during labor and birth may enhance future research in this area. For example, future research exploring the dynamics of relational autonomy (Walter & Friedman Ross 2014) could benefit from use of conceptual frameworks such as the one presented here. New research continues to illustrate the interrelated effects of emotions, hormones, mood, and physiology for decision-making, and it will be important to incorporate these aspects into the theoretical frameworks for future research (Bell, Erickson & Carter, 2014). To my mind, this topic generally lends itself well to mixed-methods approaches which integrate data regarding the experiential and physiological aspects of labor. Mixed-methods approaches and repeated
measures used prenatally and postpartum could work well for addressing some of the unanswered questions discussed above, for example measuring how decision-making during labor affects adolescent mothers’ risk for symptoms of postpartum mood or anxiety disorders. Additional studies are needed to determine the impact of prenatal care and continuity of care from pregnancy to the postpartum period on adolescent mothers’ decision-making. It will also be important to compare experiences of decision-making with measures of pre-existing risk factors of intrapersonal trauma and cultural/environmental factors such as poverty which predispose adolescents to becoming mothers (Anderson & McCarley, 2013).

To enhance the transferability of findings, future research might focus on adolescents from rural US backgrounds, on non-English-speaking adolescent mothers in the US, or on adolescents in different global contexts to determine the way in which neuroscientifically mapped developmental issues of decision-making interact with social and environmental context. Additional studies could focus primarily on the experiences of support people for adolescent mothers in labor, mothers who were not exposed to the concept of support for decision-making during labor, and on very young adolescent mothers.

**Conclusion**

Improved understanding of the effects of adolescent mothers’ decision-making during labor and birth is urgently needed to ensure their rights and protect their postpartum well-being, especially in light of recent proposals to revise or remove adolescents’ medical decision-making rights (Steinberg, 2013). Decision-making during labor should be viewed as an integral part of the developmental transition to motherhood for adolescents, with potentially significant impact for early motherhood and identity formation regarding engagement with and empowerment in
decision-making.
References


doi:10.1016/j.dr.2007.11.002


Appendix
Study Status: Active
Principal Investigator: Lyndon, Audrey L, PhD, RN
Study Number: 10-01210
Study Title: Adolescent Mothers' Experiences of Decision-Making During Labor and Birth
Expiration Date: 06/07/2015
Study Title: Adolescent Mothers' Experiences of Decision-Making During Labor and Birth
Status: Active
Study Alias: AME1ID

Coordinating Study Number: Blinding Method:
Research Type: VA Number:
Therapeutic Area: Current Enrollments: 0
Accrual Target: Phase Category:
FDA Regulated: No

Study Department(s)
Name: UCSF - 317604 - N_FHCN-Administration
Is Primary: Yes

Study Personnel
Principal Investigator: Dr. Audrey L. Lyndon, PhD, RN
Contact: Carrie H Jacobson
Co-Principal Investigator: Carrie H Jacobson
Faculty Advisor: Dr. Audrey L Lyndon, PhD, RN

Study Number: 10-01210
IRB of Record: Yes
Committee of Record: Laurel Heights Panel
IRB Initial Approval: 06/25/2010
IRB Expiration: 06/07/2015
Last Continuing Review Approved: 06/08/2012
Continuing Review Due: Study Closure:
Temporary Closed: No

https://uip.ucsf.edu/Deminfo-iris.ucsf.edu/IRSS+SystemHelpViewer.jsp?title=IRSS%20Study%20Profile%20Print%20Friendly&page=Study_Profile...
Appendix A: AME/ID Letter to Providers at SFGH Clinic and UCSF Young Women's Program

February 24, 2013

[Provider Name and Office Address]

Dear [Provider],

Thank you again for taking the time to speak with me regarding my research plans. I very much appreciate your enthusiasm and support. As you already know, I am a PhD candidate in the Family Health Care Nursing Department at UCSF interested in conducting a qualitative study to explore the ways in which pregnant adolescents experience decision-making during labor and birth. I am very grateful that you have invited me to recruit potential participants during your [clinic name].

I hope to speak individually with as many as 40 adolescent mothers once during the prenatal period and/or once during the postpartum period for no more than 60-90 minutes. I plan to ask them about the ways in which decision-making regarding their care impacted their birth experience. I will pay the participants $25 at the end of each interview, for a total of no more than $50 for those who are interviewed twice. Participation in the study is completely voluntary and the participants can stop participation at any time. I will consider including any pregnant adolescent ages 13-20 with fluency in English. The exception would be an adolescent with cognitive or psychological problems which could impair her ability to understand or participate in the study or make participation not in her best interest.

Thank you very much for agreeing to distribute study information to eligible teens in your care so that they may contact me directly if interested in the study, or give you their contact information to pass on to me if they prefer. In addition, thank you for allowing me to stay in the clinic waiting room or office space during your clinic hours so that I may be available to talk to potential participants, should they express interest in the study. I will not approach potential participants directly. I am including copies of the study information sheet and flyer with this letter and will be glad to provide more as needed.

I will screen all prospective participants prior to enrollment in the interview portion of the study so that I may advise them of the risks and benefits of the study and ensure that they
will not be put at undue risk of distress by participating. Once again, thank you so much for your kind support. Please do not hesitate to contact me at jacobsonc@obgyn.ucsf.edu or (415) 215-9338 for any reason.

Sincerely,

Carrie Jacobson, CNM, MS
PhD Candidate, Department of Family Health Care Nursing, UCSF
February 24, 2013

Dear Ms. Melbourne,

I very much appreciate your enthusiasm and support regarding my research plans. As you already know, I am a PhD candidate in the Family Health Care Nursing Department at UCSF interested in conducting a qualitative study to explore the ways in which pregnant adolescents experience decision-making during labor and birth. I am very grateful that you have invited me to observe the childbirth preparation class and post flyers at the office.

In addition to my observations of childbirth preparation class, for my research I hope to speak individually with as many as 40 adolescent mothers once during the prenatal period and/or once during the postpartum period for no more than 60-90 minutes. I plan to ask them about the ways in which decision-making regarding their care impacts their birth experience. I will pay the participants $25 at the end of each interview, for a total of no more than $50. Participation in the study is completely voluntary and the participants can stop participation at any time. I will consider including any adolescent ages 13-20 who is planning to give birth or gave birth within the last year, is fluent in English, and has no cognitive, psychological or emotional difficulty which could make it difficult for them to understand or participate in the study.

I am hoping that I may come to visit the childbirth preparation class briefly to introduce myself and distribute information sheets regarding my study. I would very much appreciate it if you or the class teacher could discuss this possibility with the class. I am including copies of the information sheet with this letter and will be glad to provide more if needed. In addition, as we have discussed, I am hopeful that at a subsequent class you or the class teacher will be able to use the information sheet to obtain verbal consent for me to sit in if the
Finally, I hope you or the class teacher will please let me know if any teens are interested in the interview portion of the study and would like for me to contact them. I will screen all participants prior to enrollment in the interview portion of the study so that I may advise them of the risks and benefits of the study and ensure that they will not be put at undue risk of distress by participating. Once again, thank you so much for your kind support. Please do not hesitate to contact me at jacobsone@obgyn.ucsf.edu or (415) 215-9338 for any reason.

Sincerely,

Carrie Jacobson, CNM, MS
PhD Student, Department of Family Health Care Nursing, UCSF
Appendix C: AME/ID Letter to Recruitment Sites- Flyer Only

February 24, 2013

[Administrator Name and Address]

Dear [Administrator],

Thank you very much for taking the time to discuss my research plans with me. I very much appreciate your enthusiasm and support. As you already know, I am a PhD candidate in the Family Health Care Nursing Department at UCSF interested in conducting a qualitative study to explore the ways in which adolescent mothers experience decision-making during labor and birth. I am very grateful that you have invited me to post flyers for my study at your offices.

For my research, I hope to speak individually with as many as 40 adolescent mothers once during the prenatal period and/or once during the postpartum period for no more than 60-90 minutes. I plan to ask them about the ways in which decision-making regarding their care impacts their birth experience. I will pay the participants $25 at the end of each interview, for a total of no more than $50. Participation in the study is completely voluntary and the participants can stop participation at any time. I will consider including any adolescent ages 13-20 who is planning to give birth or gave birth within the last year, is fluent in English, and has no cognitive, psychological or emotional difficulty which could make it difficult for them to understand or participate in the study. As we have discussed, flyers are one of my primary means of recruiting participants, and allow interested teens to contact me without my ever approaching an adolescent directly about the study. I am very grateful that you have agreed to allow me to post flyers for the teens you serve.

I will screen all participants prior to enrollment in the interview portion of the study so that I may advise them of the risks and benefits of the study and ensure that they will not be put at undue risk of distress by participating. Once again, thank you so much for your kind support.

Please do not hesitate to contact me at jacobsonc@obgyn.ucsf.edu or (415) 215-9338 for any reason.

Sincerely,

Carrie Jacobson, CNM, MS
PhD Student, Department of Family Health Care Nursing, UCSF
UNIVERSITY OF CALIFORNIA SAN FRANCISCO (UCSF)

Study: Adolescent Mothers’ Experiences of Decision-Making During Labor and Birth Information Sheet

For Use With Verbal Consent for Observation in Childbirth Preparation Class

What is this study about?

Carrie Jacobson, CNM, MS, and Audrey Lyndon, PhD, from the UCSF Department of Family Health Care Nursing, are doing a research study. The study is to find out how young mothers feel about the decisions that are made during labor. The researchers will sit in the childbirth preparation classes. They may also talk to teen mothers from the class about their expectations and their births.

The researchers hope that what they learn will help improve things for young mothers in the future, though they can’t be sure it will.

Because you are part of the childbirth preparation class, the researchers are asking if you want to be in this study.

How many people will take part in this study?

About 40 adolescents (13 to 20 years old) who are pregnant, or had a baby in the last year.

What will happen if you decide you might want to be in this research study?

For now, you will be asked if you would mind if one of the researchers, Carrie Jacobson, sits in on your childbirth preparation class as an observer. She is a nurse-midwife but she will be there just to listen to everyone and learn about how the class works.
If you and everyone else in your childbirth preparation class agrees that Carrie Jacobson can come to classes as an observer, then your teacher will let her know that she can start coming.

During the observation part of the study:

1. Even if you said that it was fine to have someone sitting in on your childbirth preparation class, you can change your mind at any time.

2. You can tell the researcher or your teacher if you don’t feel like having someone sitting in on your class. You can tell your teacher in private before or after the class if you don’t want others to hear.

3. The researcher will not listen to private conversations between you and your teacher. She will not write down any names or look at any information about you.

4. The researcher will come to every class, unless someone asks not to have her there.

5. No one outside of the childbirth preparation class will know that you, personally, have agreed to let the researcher sit in on the class.
6. You may also be in the study by talking with one of the researchers about what you think your birth may be like. You can let Carrie Jacobson or your teacher know if you would like to learn more about that.

When the class observation part of the study ends:

7. After you have your baby, you may also be in the study by talking to one of the researchers about your birth after it has happened. You can let Carrie Jacobson or your teacher know if you would like to learn more about that.

Will any parts of this study hurt or have other risks?

It might make you feel strange to have someone sitting in on your childbirth preparation class. You can always tell the teacher you don’t want the observer to be there, and she will ask her to leave right away.

Will you get better if you are in this study?

We don’t think this part of this study will make you feel better. It probably won’t make much difference in how you feel.

What if you have questions?

You can ask Carrie Jacobson or Dr. Lyndon or your teacher any questions you have about the study. You can ask your questions now or later, any time you like.

What are your choices?

You can be in this study if you want to. But you don’t have to be in it if you don’t want to. Nobody will get mad at you if you don’t want to do this.
If you don’t want to be in the study, nothing will change with your childbirth preparation class. If you decide to be in the study, nothing will change in terms of the way the class works for you. Your decision to be part of the study, or not to be part of the study, won’t change anything for you.

If you decide to be in the study now and you change your mind later, that’s okay, too.

You just have to tell the researcher or your teacher as soon as you change your mind, and the researcher will stop coming to your childbirth preparation classes.

********************************************************************************************************************************************************************************************************

For more information, you can call, text, or email:

Carrie Jacobson, CNM, MS  (415) 215-9338 Cell  jacobsonc@obgyn.ucsf.edu

For information about participating in studies and your rights,
you can call: UCSF Committee on Human Research  (415) 476-1814
Appendix E: AME/ID Flyer
University of California, San Francisco

Research Study:

Young Mothers and Labor Want to help researchers learn more about young mothers’ birth experiences?

Here’s a chance to share your story.

Carrie Jacobson, RN, CNM, MS, a PhD student in the UCSF Department of Family Health Care Nursing, and Audrey Lyndon, PhD, are doing a study to learn more about teenage mothers and how they feel about decisions during labor.

You may be able to participate if you:

- Are 13-20 years old
- Are going to have a baby, or
- Had your baby less than 12 months ago

Volunteers will be asked to talk with Ms. Jacobson for 1 to 1 1/2 hours. Ms. Jacobson will come meet you at a time and place that works for you.

Volunteers will be paid $25 for talking with Ms. Jacobson. Some volunteers may be asked if they would like to talk for a second time for no more than 1 hour, for a total of $50 for both interviews.

The study is completely voluntary and you can stop at any time.
<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teenage Mothers Study</td>
<td>(415) 215-9338</td>
<td><a href="mailto:jacobsonc@obgyn.ucsf.edu">jacobsonc@obgyn.ucsf.edu</a></td>
</tr>
</tbody>
</table>

Carrie Jacobson
Appendix F: AME/ID Interview Eligibility Screening

Questions To be completed in person or by phone

1. Teen age 13-20 who is pregnant or has a baby less than 12 months old? YES____ NO____
2. Able to read and write English? YES____ NO____

To be eligible: Responses to 1 and 2 must be answered YES

☐ If ineligible, state:
☐ “I’m sorry but you’re not eligible to participate in the interview part of the study.”
   “Thank you so much for your interest. Goodbye.”

☐ If eligible, go over study information including risks and benefits as listed in written consent form and make a plan to schedule an appointment and decide on meeting place and time during the postpartum period.
Appendix G: AME/ID Investigator-Generated Prenatal Interview Guide

Hello, thanks so much for taking the time to talk with me today. I’m very interested to hear what you have to say. I’m going to be asking you some questions about being pregnant and what it might be like when you give birth. This interview is about your experiences, so all the answers are right. Except for the special situations we talked about in the consent, nothing you say will ever get back to your chart, the midwives/doctors, the hospital, the school, or anyone else. Do you have any questions before we start?

1. Have you thought about what giving birth will be like for you? Tell me about that.

   - What will you be doing?
   - Who will be there? What will they be doing?
   - What do you want to happen?
   - Are there things you don’t want to happen?
   - How do you feel when you think about giving birth?

2. What will you do if things aren’t going the way you want while you’re in labor?

   - Who, if anyone, would you tell? If you would talk to someone, what would you say?
   - What do you think they might say to you? How do you think you might feel?
   - Who could help you? How?

3. What do you look forward to about birthing your baby? What do you think you’ll remember?

   - How will that make you feel?
   - What, if anything, will you tell people about? How will you decide who to tell?
   - What, if anything, will you not tell people about?

4. Since you found out you were pregnant, when you’ve had to make choices about how to take care of yourself, how did you come up with what to do?

   - Who did you talk to about how to make the choice? Was there anyone you decided not to listen to?
   - How did you feel about making the choice? How do you feel about it now?
- What did you like about how you did it? What would you change about how you decided?
- Tell me about the choices you will make when you are giving birth.

5. Have you heard other peoples’ stories about giving birth?

- If so, what stuck with you about what you heard? Why?
- What else have you heard about having a baby? Where did you hear it?
- How did it make you feel?
- What did it make you think about?
Hello, thanks so much for taking the time to talk with me today. I’m very interested to hear what you have to say. I’m going to be asking you some questions about what it was like when you were having your baby, and about your life now. I also just want to make sure you know that you can talk about anything you want to, but this interview is for research only. Except for the special situations we talked about in the consent, nothing you say will ever get back to your chart, the midwives/doctors, the hospital, the school, your parents or anyone else. Do you have any questions before we start?

1. Please tell me a little bit about what your life is like right now.
   - Who do you live with?
   - What is a normal day like for you right now?

2. Please tell me the story of when you gave birth to your baby.
   - If you took a picture right then, what would it look like? What did the room look like, who was there, what else was in the room? What were you looking at when people were talking to you?
   - How did you feel about who was there?
   - Was there anyone you wished could have been there? Why?
   - What was it like at the hospital?

3. Could you tell me about one thing that happened that really stands out for you?
   - What was different about that moment? How do you feel when you think about that now?
   - What, if anything, surprised you about how things went? How did that make you feel? Who, if anyone, did you talk to about it? What did you say? What did they say?

4. Please tell me about the things other people were doing while you were having your baby.
   - What were people doing? What, if anything, were you glad that they did? What, if anything, were they not doing that you wanted them to do?
-Did anything not go the way you thought it would? What happened?
-How do you feel about the way they took care of you?
-Is there anything you wish you could go back and change?

5. What were people talking about? Who talked to you about how things were going? What did they say?

-Please tell me a little bit more about how that went for you.
-What did the midwives/doctors talk to you about? What did they ask you? What, if anything, did you ask them? What did the nurses talk to you about?
-Did you feel like you understood what was going on?

6. What has it been like for you since you had your baby?

-Are you happy with how things went? What were the good parts? What were the bad parts?
-What, if anything, would you like to tell the people in the hospital who took care of you?
-What would you tell a friend who was about to give birth? What are the things you still think about, and how do they make you feel?
Appendix I: AME/ID Demographic Sheet

This form will be stored separately from any other information in this study and will not be linked to what you tell us in any way. Please do not write your name on this form. The information you give us will make it easier for us to describe the general group of people participating in the study. For each question, please check only one box or fill in the blank.

**Age**
How old are you? __________

**Race/ethnicity**
How do you describe yourself? (please check all options that describe you)
- American Indian or Alaska Native
- Asian or Asian American
- Black or African American
- Hawaiian or Other Pacific Islander
- White
- Two or more races (Mixed)
- Hispanic or Latino

**Education completed**
What is the highest grade or year of school you completed?
- Never attended
- Grades 1 through 8 (Elementary)
- Grades 9 through 11 (Some high school)
- Grade 12 or GED (High school graduate)
- College 1 year to 3 years (Some college or technical school)

**Employment status**
Are you currently:
- A student
- Employed by someone who pays your wages
- Self-employed
- Unemployed/Looking for work
- A stay at home mother
Community Resources
Are you currently receiving services through a community agency (i.e. Black Infant Health or WIC)?
☐ Yes, Please state the agency _________________________
☐ No

Type of Birth
☐ Vaginal
☐ Caesarian Section (C-Section)
☐ Vaginal with Vacuum or Forceps

Pain Medication During Labor (please check all that apply)
☐ None
☐ Oral (by mouth)
☐ Injection (a shot)
☐ IV
Age of Newborn
How old is your infant? _________

Infant Feeding Method
Are you currently:
- Breastfeeding
- Formula feeding
- Combination of both breastfeeding and formula feeding

Partner Status
- Single Boy/Girlfriend
- Married

Living Arrangement
Who do you live with? Check all that apply.
- Live alone
- Boy/Girlfriend
- Husband/Wife
- Parent(s)
- Grandparent(s) Friends
- Roommate(s) Aunt(s)/Uncle(s)/Cousin(s)
- Other: _________________________
UNIVERSITY OF CALIFORNIA SAN FRANCISCO (UCSF)

Study: Adolescent Mothers’ Experiences of Decision-Making During Labor and Birth Written Consent for Individual Interview

What is this study about?

Carrie Jacobson, CNM, MS, and Audrey Lyndon, PhD, from the UCSF Department of Family Health Care Nursing, are doing a research study. The study is to find out how young mothers feel about the decisions that were made during their labor. The researchers will sit in on childbirth preparation classes and also talk to teen mothers about their births.

The researchers hope that what they learn will help improve things for young mothers in the future, though they can’t be sure it will.

Because you are a young mother who is pregnant or has just had a baby, the researchers are asking if you want to be in this study.

How many people will take part in this study?

About 40 adolescents (13 to 20 years old), who are pregnant or had a baby within the past year.

What will happen if you decide you might want to be in this research study?

First, you will be asked to answer a couple questions over going over this form to make sure that you understand all of the information about the study. Then, you will be asked to sign this consent form to say that you agree to be in the study.
Appendix J: AME/ID Written Consent

You can always say no. You can always change your mind at any time.

**Before you begin the interview:**

1. You will be asked to fill out a short form with questions about your background and situation. This form is confidential and will never have your name on it.

2. You will be asked if you have any other questions. You may ask a question at any time before, during or after the interview.

**During the interview:**

3. The interview will be recorded. This sound recording will be kept safe and confidential. It will be turned into a written version (transcribed) with all personal information such as names and dates taken out. The sound recording will be destroyed when it is no longer needed. The researcher may also pay attention to what you and other people (for example, your baby) are doing during the interview (for example, nursing/drinking a bottle) that may help her understand you and your experience better.

4. You may be asked about what you expect for your labor and how you think decisions will be made during the birth of your baby. If you have already had your baby, you will be
asked about your feelings, thoughts and memories from the birth and how you felt about the decisions that were made for you and with you during labor.

5. The interview should take 1 to 1½ hours. You may stop at any time.

6. All the information you provide is confidential. If you choose to talk about physically hurting yourself or others (suicidal or homicidal thoughts) or your current experience with abuse or neglect, the researcher is required to report the information to the police and/or Child Protective Services. The researcher is also required to report if she suspects child abuse or neglect of your child(ren). Otherwise, all information you provide is confidential and will not be shared with your parent(s)/guardian(s), partner, boyfriend/girlfriend, husband/wife, nurse-midwife, teacher, counselor, doctor, social worker, or anyone else.

**How long will I be in this study?**

The interview will take 1 to ½ hours. At the end you will be asked if you would mind being called for a second interview later on. If you agree, you may have the chance to participate in a second interview lasting up to 1 hour. The total amount of time you could spend in the interview part of the study is 1 to 2½ hours.

**Will I get paid?**

You will be paid $25 for the interview. If you agree to talk again at a different time, you may be paid another $25 for that interview. The most you could be paid would be $50 total for two interviews.

**Will any parts of this study hurt or have other risks?**

You may feel sad or upset when talking about your pregnancy or the birth of your baby. If you feel you are getting too upset, you can ask to stop at any time.
Appendix J: AME/ID Written Consent

Will you get better if you are in this study?

We don’t think this study will make you feel better. Sometimes talking about your pregnancy or birth can make you feel good, but it’s important to remember that the goal of this study is to learn about how things went for you, not to help you or to make you feel better. It probably won’t make much difference in how you feel.

What if you have questions?

You can ask Carrie Jacobson or Dr. Lyndon any questions you have about the study. You can ask your questions now or later, any time you like.

What are your choices?

You can be in this study if you want to. But you don’t have to be in it if you don’t want to. Nobody will get mad at you if you don’t want to do this.

If you don’t want to be in the study, nothing will change with the healthcare you have for you and your baby. If you decide to be in the study, nothing will change about the way you’re being taken care of and the services you can use.
If you decide to be in the study now and you change your mind later, that’s okay, too. You just have to say so when you change your mind, and the interview can stop.

****************************************************************************************************************************

If you don’t want to be in this study, just say so, and don’t sign this form.

If you want to be in this study, please sign your name below.

If you sign here, it means you agree to participate in this study. The research team will give you a copy of this form to keep.

__________________________  ____________  ____________
Signature                  Date                  Age

__________________________
Name (print)

__________________________
Person Obtaining Consent
University of California, San Francisco

Study: Adolescent Mothers’ Experiences of Decision-Making During Labor and Birth Participant Support Resources

Here are some services you can contact if you feel upset or need help after the study interview:

Teenage Pregnancy and Parenting Project (TAPP)
Family Service Agency of San Francisco
2730 Bryant Street, 2nd Floor
San Francisco, California 94110

Phone: (415) 695-8300

Young Family Resource Center (YFRC)

The Young Family Resource Center is one of California’s first peer-directed, peer-focused Family Resource Centers for teen parents, their children, and their families. Integrating a youth development model, peer-to-peer service delivery, and wraparound resources, the YFRC acts as the hub of a network of support, education, and child-development information for adolescent and young adult parents throughout San Francisco. Building on our Teenage Pregnancy and Parenting Project (TAPP) case-management program for teenage parents, it offers comprehensive resources for young parents and their children, including financial education, nutritional education, grief & trauma support, mental health services, and vocational training.

No fees are charged to participants.

2730 Bryant Street, 2nd Floor, San Francisco, CA
94110 Phone: (415) 695-8300 x 516
Community Mental Health Access Referral Line

8 AM – 5 PM, Monday – Friday. Referrals to mental health therapists in San Francisco. Client can have Medi-Cal or be uninsured, but no private insurance. San Francisco residents only. Call and leave a message with basic questions and they will return your call. Provides services in English, Spanish, and Chinese.

Phone: (415) 255-3737

Postpartum Health Alliance of Northern California - Postpartum Depression Stressline

9 AM – 9 PM seven days a week. Free and confidential telephone support and referral to medical providers and support groups for women experiencing postpartum blues, depression, and anxiety. Call and leave a message and they will return your call within 24 hours.

Phone: 1-888-678-2669
National Perinatal Hotline - Postpartum Moms’ Line

24 hours a day, seven days a week. Provides counseling and referrals for women experiencing postpartum depression. Provides services in English and Spanish.

Phone: 1-800-773-6667

Suicide Prevention

24 hours a day, seven days a week. Trained volunteer counselors provide crisis telephone counseling, information, and referral.

Phone: (415) 781-0500 / 1-800-SUICIDE

TALK Line Family Support Center/ SAFESTART

1757 Waller Street (between Stanyan and Shrader) TALK Line phone hours: 24 hours a day, seven days a week. Parent drop in hours: 9 AM – 2 PM Monday – Thursday; 5 PM – 7 PM Monday evenings. Parental stress, child abuse prevention, emergency respite care, single parent network, parents’ group, crisis counseling, substance abuse services and ongoing therapy. Childcare is available starting at 10 AM.

Phone: (415) 441-KIDS or (415) 441-5437
### Table 3.1. Interview Guide Sample Questions and Prompts

<table>
<thead>
<tr>
<th><strong>Prenatal Interview Guide Excerpts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you thought about what giving birth will be like for you? Tell me about that.</td>
</tr>
<tr>
<td>- What will you be doing?</td>
</tr>
<tr>
<td>- Who will be there? What will they be doing?</td>
</tr>
<tr>
<td>- What do you want to happen?</td>
</tr>
<tr>
<td>- Are there things you don’t want to happen?</td>
</tr>
<tr>
<td>- How do you feel when you think about giving birth?</td>
</tr>
<tr>
<td>What will you do if things aren’t going the way you want while you’re in labor?</td>
</tr>
<tr>
<td>- Who, if anyone, would you tell? If you would talk to someone, what would you say? What do you think they might say to you? How do you think you might feel?</td>
</tr>
<tr>
<td>- Who could help you? How?</td>
</tr>
<tr>
<td>Since you found out you were pregnant, when you’ve had to make choices about how to take care of yourself, how did you come up with what to do?</td>
</tr>
<tr>
<td>- Who did you talk to about how to make the choice? Was there anyone you decided not to listen to?</td>
</tr>
<tr>
<td>- How did you feel about making the choice? How do you feel about it now?</td>
</tr>
<tr>
<td>- What did you like about how you did it? What would you change about how you decided?</td>
</tr>
<tr>
<td>- Tell me about the choices you will make when you are giving birth.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Postpartum Interview Guide Excerpts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tell me the story of when you gave birth to your baby.</td>
</tr>
<tr>
<td>- If you took a picture right then, what would it look like? What did the room look like, who was there, what else was in the room? What were you looking at when people were talking to you?</td>
</tr>
<tr>
<td>- How did you feel about who was there?</td>
</tr>
<tr>
<td>- Was there anyone you wished could have been there? Why?</td>
</tr>
<tr>
<td>- What was it like at the hospital?</td>
</tr>
<tr>
<td>Please tell me about the things other people were doing while you were having your baby.</td>
</tr>
<tr>
<td>- What were people doing? What, if anything, were you glad that they did? What, if anything, were they not doing that you wanted them to do?</td>
</tr>
<tr>
<td>- Did anything not go the way you thought it would? What happened?</td>
</tr>
<tr>
<td>- How do you feel about the way they took care of you?</td>
</tr>
<tr>
<td>- Is there anything you wish you could go back and change?</td>
</tr>
<tr>
<td>What were people talking about? Who talked to you about how things were going? What did they say?</td>
</tr>
<tr>
<td>- Please tell me a little bit more about how that went for you.</td>
</tr>
<tr>
<td>- What did the midwives/doctors talk to you about? What did they ask you? What, if anything, did you ask them? What did the nurses talk to you about?</td>
</tr>
<tr>
<td>- Did you feel like you understood what was going on?</td>
</tr>
</tbody>
</table>
Table 3.2. Demographic Characteristics of Interview Participants, May 2013 to April 2014

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (year) (n=18)</strong></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>3 (17)</td>
</tr>
<tr>
<td>17</td>
<td>6 (33)</td>
</tr>
<tr>
<td>18</td>
<td>5 (28)</td>
</tr>
<tr>
<td>19</td>
<td>2 (11)</td>
</tr>
<tr>
<td>20</td>
<td>2 (11)</td>
</tr>
<tr>
<td><em><em>Race/Ethnicity</em> (n=18)</em>*</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1 (6)</td>
</tr>
<tr>
<td>Asian American</td>
<td>2 (11)</td>
</tr>
<tr>
<td>African American</td>
<td>5 (28)</td>
</tr>
<tr>
<td>Hawaiian/Pacific Islander</td>
<td>2 (11)</td>
</tr>
<tr>
<td>White</td>
<td>8 (44)</td>
</tr>
<tr>
<td>Hispanic or Latino Ethnicity</td>
<td>11 (61)</td>
</tr>
<tr>
<td><strong>Highest Level of Education Completed (n=18)</strong></td>
<td></td>
</tr>
<tr>
<td>Grades 1 through 8 (Elementary)</td>
<td>1 (6)</td>
</tr>
<tr>
<td>Grades 9 through 11 (Some high school)</td>
<td>10 (56)</td>
</tr>
<tr>
<td>Grade 12 or GED (High school graduate)</td>
<td>6 (33)</td>
</tr>
<tr>
<td>College 1 year to 3 years (Some college)</td>
<td>1 (6)</td>
</tr>
<tr>
<td><em><em>Employment Status</em> (n=18)</em>*</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>15 (83)</td>
</tr>
<tr>
<td>Employed by someone who pays your wages</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Unemployed/Looking for work</td>
<td>6 (33)</td>
</tr>
<tr>
<td><strong>Receiving community resources (e.g. WIC) (n=18)</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16 (89)</td>
</tr>
<tr>
<td>No</td>
<td>2 (11)</td>
</tr>
<tr>
<td><strong>Age of Infant (months) (n=18)</strong></td>
<td></td>
</tr>
<tr>
<td>&lt; 3</td>
<td>5 (28)</td>
</tr>
<tr>
<td>3-6</td>
<td>9 (50)</td>
</tr>
<tr>
<td>6-12</td>
<td>4 (22)</td>
</tr>
<tr>
<td>Infant Feeding Method (n=18)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>4 (22)</td>
</tr>
<tr>
<td>Formula feeding</td>
<td>11 (61)</td>
</tr>
<tr>
<td>Combination of breastfeeding and formula feeding</td>
<td>3 (17)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partner Status (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Boyfriend/Girlfriend</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Living Arrangement* (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
</tr>
<tr>
<td>Boyfriend/Girlfriend</td>
</tr>
<tr>
<td>Grandparents</td>
</tr>
</tbody>
</table>

*Participants could choose more than one option
### Table 3.3. Mode of Delivery and Pain Medication Use of Interview Participants, May 2013 to April 2014

<table>
<thead>
<tr>
<th>Mode of Birth (n=18)</th>
<th>Number (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal</td>
<td>17 (94)</td>
</tr>
<tr>
<td>Cesarean</td>
<td>1 (6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pain Medication Used During Labor*(n=18)</th>
<th>Number (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>3 (18)</td>
</tr>
<tr>
<td>Oral</td>
<td>1 (6)</td>
</tr>
<tr>
<td>Injection</td>
<td>5 (28)</td>
</tr>
<tr>
<td>IV</td>
<td>10 (56)</td>
</tr>
<tr>
<td>Epidural anesthesia</td>
<td>12 (67)</td>
</tr>
</tbody>
</table>

*Participants could choose more than one option
Table 3.4. Conceptual Framework, Strategies and Sensitizing Concepts

<table>
<thead>
<tr>
<th>Conceptual Framework: Constructivist Grounded Theory.Symbolic Interactionism Theory/Methods Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The combination of the symbolic interactionism conceptual framework and grounded theory research methodology has been termed a theory/methods package (32)</td>
</tr>
<tr>
<td>• Symbolic Interactionism emphasizes socially negotiable role expectations and the social evolution of joint and individual action (35), making it well-suited to use with constructivist grounded theory’s emphasis on the co-creation of theory by researchers and participant, as well as the potential for multiple and even competing (co)constructed meanings (29)</td>
</tr>
<tr>
<td>• The grounded theory/symbolic interactionism theory/methods package holds that situations and objects have socially constructed and shared meanings which can change over time, and is therefore effective for exploration of socially-mediated, temporal processes such as decision-making in labor (32)</td>
</tr>
<tr>
<td>• Grounded theory research based in symbolic interactionism is a dynamic process wherein data and theoretical findings are constantly compared to produce theory “grounded in” the data, and the socially shared and contextually specific construction of meaning can result in findings which encompass a range of varying and sometimes even conflicting theoretical dimensions (29). For example, in the study presented here, the process of being strong for the baby encompasses the seemingly conflicting actions of speaking out and being silent, both of which reflect points on a continuum unified by the socially-constructed significance of being strong for the baby described by the majority of participants.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy: Dimensional Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• As coding of data progresses from line-by-line analysis to more theoretical codes, concepts and categories, constant comparison of data and theoretical findings leads to the identification of the theoretical dimensions with the most explanatory power for the process being explored, in this case decision-making during labor and birth</td>
</tr>
<tr>
<td>• Theoretical dimensions are provisionally categorized as processes (intentional or unintentional actions set in motion by conditions); conditions (things that facilitate, shape, or block central actions, interactions or processes); elements of context (the situation in which the phenomenon is embedded); and consequences of the identified processes (33-34)</td>
</tr>
<tr>
<td>• A central theoretical dimension with the strongest explanatory power is identified and then used as a guiding perspective under which the relationships between the other theoretical findings are organized, in what is called an explanatory matrix (34)</td>
</tr>
<tr>
<td>• The explanatory matrix takes the following form: other key dimensions are organized under the central perspective in groups of processes, conditions, elements of context, and consequences and the relationships between these types of dimensions are illustrated and explored. For example, participants’ expectations for how decision-making would unfold during birth was a condition encompassing a range of possible expectations and affected processes such as efforts to be strong for the baby with consequences varying from feelings of confidence to persistent regret.</td>
</tr>
</tbody>
</table>
**Strategy: Situational Analysis**

- Uses situational mapping to examine the impact of social worlds, arenas and discourses on the process at hand
- Reminds us that processes and meanings are tied to particular situations and the people in them, and illustrates previously undescribed “sites of silence,” or themes which go unexamined or unnoticed in a particular social context or group (32)
- Used to identify the need for further theoretical development or additional data, and to evaluate theoretical saturation

**Sensitizing Concepts: Intersectionality and Feminist Research**

- Feminist research and intersectionality increase sensitivity to the influences of social conditions and power differentials given the potential marginalization of adolescent mothers (36)
- Intersectionality describes the negotiation of social categories and the ways in which they “intersect” for each individual (37)
- Feminist research sensitizes the researcher to the social discourses around race, gender, and other categories which influence social interaction, health, and theoretical development (38)
Table 4.1. Demographic Characteristics of Adolescent Mothers Who Participated in Interviews (N=18)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, y, n (%)</strong></td>
<td></td>
</tr>
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</tr>
<tr>
<td>20</td>
<td>2 (11)</td>
</tr>
<tr>
<td><em><em>Race/Ethnicity</em>, n (%)</em>*</td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>1 (6)</td>
</tr>
<tr>
<td>Asian/Asian American/ Hawaiian/Pacific Islander</td>
<td>4 (22)</td>
</tr>
<tr>
<td>African American</td>
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<td>Student</td>
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<tr>
<td>No</td>
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</tr>
<tr>
<td>Age of Infant (months), n (%)</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--</td>
</tr>
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<tr>
<td>6-12</td>
<td>4 (22)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partner Status , n (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>3 (17)</td>
</tr>
<tr>
<td>Boyfriend/Girlfriend</td>
<td>15 (83)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Living Arrangement*, n (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>14 (78)</td>
</tr>
<tr>
<td>Boyfriend/Girlfriend</td>
<td>5 (28)</td>
</tr>
<tr>
<td>Grandparents</td>
<td>2 (11)</td>
</tr>
</tbody>
</table>

*Participants could choose more than one option
Figure 2.1 Conceptual Framework for Adolescent Decision-Making During Labor and Birth

**Contributing Factors**

**Cultural/Environmental**
- SES/Social Capital
- Media/Stigma
- Autonomy for Decisions

**Interpersonal**
- Communication with Providers
- Social Support
- Perceived Peer Approval

**Intrapersonal**
- Hx of Trauma/Abuse
- Cognitive Skill
- Socioemotional Skill

**Emotional/Temporal**
- Mood(s)
- Positive or Negative Valence from Prior Experiences
- Level of Emotional Arousal

**Decision Process**

**Judgment**
- Logico-Verbatim Processes
- Emotional-Gist Processes

**Risks / Benefits**

**Clinical Outcome**

**Memory**
- Factual and Emotional memory used to influence future decisions

**Emotional Experience**
Figure 3.1 Decision-Making During Labor Sets the Tone for Early Motherhood

Pregnancy → Context

Belief that a universal “mother mode” will grant needed strength during labor and parenting

Labor → Conditions

- Inconsistent
- Withheld
- Unfulfilled
- In Others

Support Available → Consistent
Communication → Direct
Expectations → Fulfilled
Perceived Locus of Control → In Self

Decision-Making → Processes

- ‘Going Epidural’ / ‘Going Natural’
- Perceived Failure
- Being strong for the baby
- Seeing through others’ eyes
- Perceived Success

Post-Partum → Consequences

- Persistent anxiety and regret; disappointment in how decision-making reflected on mothering
- Increased confidence and sense of achievement; decision-making perceived as evidence of good mothering
- Moving On – Temporarily reframes decision-making but does not increase mothering confidence
Figure 4.1 Having a Supportive Ally for Decision-Making During Labor

Conditions
- Familiarity with Support Provider
- Consistency of Support
- Expertise of Support Provider

Decisions
Supportive Ally Processes
- Facilitating Communication
- Making Space for Decisions
- Validating Hard Choices

Consequences
- Silencing
- Empowerment

Context: Unpredictable availability and degree of support for decision-making
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[Signature]