Fall 12-15-2017

Oh Baby! Evaluating the Impact of Blossom's Natural Childbirth Prep Course on Women's Childbirth Experience

Florence Oxenham

Follow this and additional works at: https://repository.usfca.edu/capstone

Part of the Maternal and Child Health Commons

Recommended Citation
https://repository.usfca.edu/capstone/664
Oh Baby! Evaluating the Impact of Blossom’s Natural Childbirth Prep Course on Women’s Childbirth Experience

Florence Oxenham

MPH Candidate 2017

University of San Francisco
Table of Contents

Literature Review .................................................................................................................. 4

Maternal Mortality and Morbidity ......................................................................................... 4
Cesarean Delivery Rates ........................................................................................................ 6
Pre-pregnancy and Maternal Overweight and Obesity ........................................................ 8
Maternal Mental Health ......................................................................................................... 9
Racial and Ethnic Maternal Health Disparities ..................................................................... 9
Maternal Health Objectives and Interventions ................................................................. 11

Scope of Work ....................................................................................................................... 19
The Agency: Blossom Birth Services .................................................................................... 19
The Project: Pilot Impact Evaluation ..................................................................................... 19
My Role: Lead Evaluator ....................................................................................................... 22

Public Health Impact ............................................................................................................. 24
Demographic Characteristics of Sample ............................................................................. 24
Quantitative Results ............................................................................................................. 25
Qualitative Results ............................................................................................................... 28
Research, Program, and Policy Implications .................................................................... 31

Conclusion ............................................................................................................................ 37
References .............................................................................................................................. 41

Tables and Graphs ............................................................................................................... 48

Appendices ............................................................................................................................. 54
Abstract

The United States has some of the highest rates of maternal morbidity and mortality among developed countries. Comprehensive childbirth education is an important component of improving maternal health outcomes. This project was a pilot evaluation of a childbirth education course offered by Blossom Birth Services, a community-based non-profit organization providing resources for new and expectant families in the San Francisco Bay Area. A 41-item survey questionnaire was developed and administered to explore the impact of Blossom’s Natural Childbirth Prep course on women’s knowledge, feelings, and sense of self-efficacy regarding childbirth. Likert scales were used and thematic analysis of qualitative data was conducted. All survey respondents (N=13) indicated that the course reduced their fear of childbirth to some degree and prepared their partner to support them during labor and delivery. Most respondents indicated that after taking the course they felt prepared to have a vaginal birth without medical interventions and medications. All respondents attempted and subsequently had a vaginal birth but roughly half (58%) had some form of medical intervention. Qualitative data suggests that emphasizing “natural” childbirth and birth “plans” can foster negative feelings in women who have complicated births. More research into how language impacts women’s perceptions and feelings towards childbirth needs to be conducted. Suggestions for course and program improvements include modifications to course content, delivery, and language; systematic channeling of childbirth course participants into existing postpartum support classes; establishing a program to share birth experiences; and establishing a team and budget dedicated to program evaluation.

Keywords: maternal health, childbirth, childbirth education, program evaluation
Oh Baby! Evaluating the Impact of Blossom’s Natural Childbirth Prep Course on Women’s Childbirth Experience

The United States has some of the highest rates of maternal morbidity and mortality among developed countries. Changes in the overall health of the birthing population and a high primary cesarean delivery rate among low-risk pregnant women contribute to the high rates of maternal morbidity and mortality. There are also significant disparities between demographic groups—non-Hispanic black women, in particular, are at higher risk for maternal morbidity and mortality and adverse birth outcomes than other racial/ethnic groups. The United States’ Healthy People 2020 initiative includes several objectives to improve maternal health outcomes. California is the only state that has shown a decline in maternal mortality in recent years. However, California’s low-risk cesarean delivery rate remains high with significant variations between hospitals. Much is being done state-wide to improve maternal health outcomes, but gaps still exist.

Literature Review

Maternal Mortality and Morbidity

Maternal health outcomes remain poor for many women, globally and in the United States. Approximately 830 women die each day globally from preventable causes related to pregnancy and childbirth (WHO, 2016). Maternal mortality is the second leading cause of death among women aged 15 to 49. The maternal mortality ratio in developing countries in 2015 was 239 deaths per 100,000 live births, versus 12 maternal deaths per 100,000 live births in developed countries (WHO, 2015). According to the World Health Organization (WHO) (2015), women in developing countries face a 1 in 180 lifetime risk of dying from pregnancy- and childbirth-related causes (including hypertension, hemorrhage, and sepsis) compared with a 1 in 4,900 lifetime risk for women in developed countries. Although the
global maternal mortality rate has declined by 44% since 1990, the global community failed to meet the target of a 75% reduction in the maternal mortality rate by 2015 set by the United Nations in its Millennium Development Goals (WHO, 2015).

The maternal mortality rate in the United States has increased in recent years and is one of the highest among developed countries. The U.S. is one of only 13 countries with maternal mortality rates that have increased since 1990 (Miles, 2015). According to data from the Centers for Disease Control’s (CDC) Pregnancy Mortality Surveillance System (PMSS), pregnancy-related deaths increased from 7 deaths per 100,000 live births in 1987 to almost 16 deaths per 100,000 live births in 2012 (Review to Action, n.d.). Between 2006 and 2013, the U.S. maternal mortality rate increased by 65%, from 13.3 to 22 maternal deaths per 100,000 live births. In that same time-span, maternal mortality in California declined by 57%, from 16 down to 7.3 maternal deaths per 100,000 live births, and is the only state to show a downward trend in maternal mortality (CPDH, 2015; CMQCC, n.d.a; MacDorman, Declercq, Cabral, & Morton, 2016).

Maternal morbidities constitute a greater fraction of burden than maternal mortality—for every woman who dies of pregnancy-related causes scores more will experience acute or chronic morbidity (Firoz et al., 2013). Severe maternal morbidity (SMM) is defined by the CDC (2017a) as “unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman’s health” (n.p). The overall rate of SMM (per 10,000 delivery hospitalizations) in the U.S. has increased almost 200% from 47.6 in 1993-1994 to 141.6 in 2013-2014, measured in part by the rate of blood transfusions performed (an indicator of SMM) which has risen from 26.0 in 1993-1994 to 120.4 in 2013-2014 (CDC, 2017a; Creanga et al., 2014). This rise in severe maternal morbidity has been attributed to changes in the health of the U.S. birthing population, including increases in maternal age, pre-pregnancy obesity, and pre-existing chronic medical conditions (such as cardiovascular
disease), and the growing number of cesarean deliveries (CDC, 2017a; Gadson, Akpovi, & Mehta, 2017).

**Cesarean Delivery Rates**

Cesarean deliveries have become increasingly common in both developed and developing countries. Medically-indicated cesarean deliveries are effective in saving maternal and infant lives. However, like all major surgical procedures, undergoing a cesarean section comes with significant risks including complications (such as infection, hemorrhage, hysterectomy, uterine rupture, and placental abnormalities in subsequent pregnancies) and maternal death, particularly in settings that lack the facilities, resources, or capacity to conduct safe surgical procedures or treat complications (Boyle et al., 2013; Guszkowska, 2014; WHO & HRP, 2015). Cesarean deliveries have also been associated with an increased risk of psychiatric disorders (such as PTSD), depression, disorders of maternal attachment, and difficulties establishing breastfeeding (Guszkowska, 2014; Möller et al., 2017).

The World Health Organization has proposed that the ideal population-based cesarean delivery rate is between 10% and 15% of all live births in a given time-period (WHO & HRP, 2015). Studies indicate that population-level cesarean delivery rates *up to* 10-15% are associated with reductions in maternal and neonatal mortality rates, but above this level an increase in the cesarean delivery rate is no longer associated with reduced mortality (WHO & HRP, 2015). Other data suggests cesarean delivery rates above 19% are associated with higher maternal and neonatal mortality (Stoll et al., 2017).

The United States has one of the highest cesarean delivery rates in the world. The overall U.S. cesarean delivery rate increased 60% between 1996 and 2009, from 20.7% to 32.9%, an upward trend that could be seen across all demographics (CHCF, 2017; Osterman & Martin, 2014). The rate has declined almost every year since its peak in 2009 but, at 31.9% in 2016, is still significantly higher than the WHO recommendation (Osterman & Martin,
Primary cesarean deliveries (cesarean deliveries to women who have not had a previous cesarean delivery) have also increased, from a rate of 14.5% in 1996 to 23.4% in 2007 (Boyle et al., 2013). Primary (or first-time) cesarean deliveries account for approximately 60% of all cesareans and have become a major driver of the overall cesarean delivery rate (Boyle et al., 2013; Osterman & Martin, 2014). Following a first cesarean delivery, the probability that a woman has another cesarean delivery for a subsequent pregnancy is about 90% (CHCF, 2017; Osterman & Martin, 2014). One study found that having a previous uterine scar (an outcome of a cesarean section) was the most common reason for having a subsequent cesarean delivery, accounting for approximately 30.9% of all cesarean deliveries (Boyle et al., 2013). Perhaps of greatest concern is the United States’ high rate (26.9% in 2013) of cesarean deliveries among low-risk women (also known as the Nulliparous, Term, Singleton, Vertex—“NTSV”—cesarean birth rate), although that rate has decreased nearly every year, declining 4%, since its peak in 2009 (Osterman & Martin, 2014; Smith, Peterson, Lagrew, & Main, 2016).

California’s low-risk cesarean delivery rate increased 40% between 1997 and 2009 (from 19% to 26.6%, respectively) and remained unchanged in 2013 (the most recent CDC state-level data set available) (Osterman & Martin, 2014). However, there are significant variations between California hospitals, with cesarean delivery rates from 15% to over 65%, and between regions—in 2013, women in the Los Angeles region were 50% more likely to deliver by cesarean than women in the North Bay Region (CHCF, 2017; OSHPD, 2017; Smith et al., 2016). Variations in the U.S. cesarean delivery rates can also be identified between demographic groups: women aged 40 and older are more than twice as likely to deliver by cesarean section than women under age 20; and non-Hispanic white women have the lowest overall and low-risk cesarean delivery rates (31.1% and 24.8%, respectively) while non-Hispanic black women have the highest overall and low-risk cesarean delivery rates.
(35.5% and 29.7%, respectively) (Martin, Hamilton, Osterman, Driscoll, & Matthews, 2017a; Martin, Hamilton, & Osterman, 2017b). Proposed reasons for the high U.S. cesarean delivery rates are many although not well-understood, including delayed childbearing; increasing maternal obesity; physicians’ fear of litigation; hospital culture and policies; maternal and/or partner preference (concerns about genital modifications after vaginal birth, for example); and maternal psychological indications (such as fear of childbirth) (Betrán et al., 2016; Boyle et al., 2013; Möller et al., 2017; Stoll et al., 2017).

Pre-pregnancy and Maternal Overweight and Obesity

Pre-pregnancy and maternal overweight and obesity (calculated using Body Mass Index or BMI) are risk factors for a number of adverse pregnancy and childbirth outcomes. According to data from the CDC’s Pregnancy Risk Assessment Monitoring System (PRAMS), the prevalence of pre-pregnancy obesity increased by 69% over a 10-year period, from 13% in 1993-1994 to 22% in 2002-2003, while the most recent PRAMS data currently available (2011) showed that the overall percentage of pre-pregnancy obesity was 20.7% (Leddy, Power, & Schulkin, 2008). According to Leddy et al. (2008), two in three women had pregnancy weight gain that was inconsistent with Institute of Medicine (IOM) guidelines, and another study, using birth certificate data from 47 states and the District of Columbia, indicated that approximately 50% of all women who delivered a live-birth infant in 2014 were either overweight (25.6%) or obese (24.8%) in pre-pregnancy (Branum, Kirmeyer, & Gregory, 2016).

Maternal obesity is associated with an increased risk of hypertensive disorders (including preeclampsia), cesarean delivery, and still birth. Leddy et al. (2008) found that obese pregnant women are three times more likely to develop preeclampsia than pregnant women of normal weight. They also found that the rate of successful vaginal deliveries decreases progressively as maternal BMI increases with a two- to three-fold increase in the
cesarean delivery rate among pregnant women classified as extremely obese compared with women who weighed 200 pounds or less (39.6% versus 18%, respectively). And an obese pregnant woman is twice as likely to have a stillbirth as a pregnant woman of normal weight (Leddy et al., 2008).

**Maternal Mental Health**

Perinatal psychiatric disorders are another leading cause of maternal morbidity and mortality. An enquiry into maternal deaths conducted between 1997 and 1999 in the United Kingdom found that psychiatric disorder, and suicide in particular, was the leading indirect cause and accounted for 28% of maternal deaths in that period (Oates, 2003). Data from the National Survey of Drug Use and Health (NSDUH) show that about one in every ten women in the United States (8% of pregnant and 11% of non-pregnant women of reproductive age, 18-44 years) had at least one major depressive episode in the year before the survey interview (Creanga et al., 2014). Between 6.5% and 12.9% of pregnant women suffer from depression and almost 20% of women have a depressive episode within the first three months postpartum (Raymond et al., 2014). Another study found that there was a high prevalence of demoralization (feelings of distress, hopelessness, and helplessness) among primiparous women (first-time mothers) in the early postnatal period (Bobevski, Rowe, Clarke, McKenzie & Fisher, 2015). Among women who have suffered from a previous perinatal psychiatric disorder, the risk of recurring postnatal depressive illness following subsequent childbirths is estimated to be one in three (Oats, 2003).

**Racial and Ethnic Maternal Health Disparities**

Substantial racial/ethnic disparities in maternal health outcomes exist. In the United States, black women are at higher risk for maternal morbidity and mortality and adverse birth outcomes than other racial/ethnic groups. During 2011-2013, there were 43.5 deaths per
100,000 live births for black women compared with 12.7 deaths for white women and 14.4 deaths for women of other races (CDC, 2017b). Among women who delivered in California hospitals from 1996 to 1998, prevalence rates of aggregate obstetric complications (i.e. maternal morbidities) were highest for blacks (24.2%) compared with white and Asian women (21.3% and 21.1%, respectively) and Latina women (19.6%). (Guendelman, Thornton, Gould, & Hosang, 2006). In 2004, the fetal death rate for black women was more than twice that for non-Hispanic white women (11.3 deaths per 1,000 live births versus 5.0/1,000, respectively). Rates for other racial/ethnic groups, including Hispanic, Asian/Pacific Islander, and American Indian/Alaskan Native women, did not differ significantly from that of white women (Bryant, Worjoloh, Caughey, & Washington, 2010). Preterm birth/low-weight birth is the most common cause of infant death for black women, attributable for 80% of the black-white disparity in infant mortality. In 2006, the rate of preterm birth for black women was 18.4%, compared with 11.7% for white women (Bryant et al., 2010).

While there may be a biological basis for some racial/ethnic maternal health disparities, many more are associated with maternal health behaviors and the social and physical environments. Prenatal care (PNC) utilization (initiation timing, frequency, and duration of use) is a commonly used indicator of maternal health outcomes, while social determinants, such as insurance status and transportation, likely impact PNC utilization. One study conducted in California found that twice as many Latinas (4.7%) and blacks (4.4%) delayed PNC initiation until the third trimester of pregnancy or went without care compared to white (2.3%) and Asian (2.2%) women (Gadson et al., 2017; Guendelman et al., 2006).

Black women are less likely to have access to affordable or adequate prenatal care compared to non-black counterparts. For example, in Georgia, black women constitute the largest group of women using Medicaid for pregnancy services (Adams, Gavin, & Benedict,
2005). Qualitative interview participants living in identified areas of Georgia with PNC provider shortages reported difficulties in finding providers who accepted Medicaid. In the same study, participants indicated that the need to travel for care led to interruptions in PNC with some citing up to a 1-month delay in presentation (Gadson et al., 2017).

Perceived racism, discrimination, and attendant stress likely play a role in maternal health outcomes. Gadson et al. (2017) note that, compared to white women, black women are 24% more likely to report emotional stressors, 35% more likely to report financial stressors, 163% more likely to report partner-related stressors, and 83% more likely to report traumatic stressors. Black or Hispanic race/ethnicity is associated with almost three times higher odds of discrimination based on race, language, or culture, while uninsured women have nearly twice the odds of experiencing discrimination (Gadson et al., 2017).

**Maternal Health Objectives and Interventions**

Global, national, and state-wide focus remains on improving maternal health outcomes. The current global Sustainable Development Goal (SDG) 3.1 aims to reduce the global maternal mortality rate to less than 70 deaths per 100,000 live births by 2030 (WHO, 2015). The United States’ Healthy People 2020 Maternal, Infant, and Child Health objective 5 (MICH-5) is to reduce the rate of maternal mortality from 12.7 (2007 baseline) to 11.4 by 2020 (a 10% reduction). The U.S. has also set an objective (MICH-7.1) of reducing the cesarean delivery rate among low-risk women with no prior cesarean births from 26.5% (2007 baseline) to 23.9% by 2020 (a 10% reduction) (Office of Disease Prevention and Health Promotion, 2017). In 2006, the California Pregnancy-Associated Mortality Review (CA-PAMR) was established to examine maternal deaths between 2002 and 2007 (the years with the sharpest rise in maternal deaths). The goal of the review was to strengthen California’s surveillance of maternal mortality and determine causes in order to identify
appropriate clinical and public health interventions (California Department of Public Health, 2016).

**California’s CPSP program.** Much is being done to improve health outcomes for new and expectant mothers, but gaps still exist. Improving quality and utilization of prenatal care remains a priority for California’s Department of Public Health (CDPH). The CDPH’s voluntary Comprehensive Perinatal Services Program (CPSP) provides low-income pregnant women on California Medicaid (Medi-Cal) with a variety of medical and support services from conception through 60 days postpartum. These include obstetric (prenatal, intrapartum, and postpartum) services; enhanced services (including client orientation, health education, and psychosocial assessments and interventions); prenatal vitamin and mineral supplementation; and required referrals to other state and local support services and programs, such as Women, Infants, and Children (WIC) and well-child care. (Kinsler, n.d.; CDPH, 2017).

**California’s CMQCC initiative.** The California Maternal Quality Care Collaborative (CMQCC) is another state-wide maternal health improvement initiative. The CMQCC, a partnership forged in 2006 between the Stanford School of Medicine and the State of California, has played an integral role in reducing the prevalence and incidence of mortality, morbidity, and racial disparities in California maternity care (CMQCC, n.d.b). The Collaborative has three key components—a Maternal Data Center, quality improvement initiatives, and research. More than 200 hospitals are participating in the data center, covering approximately 90% of all births in California, and have access to near real-time benchmarking data on perinatal performance metrics and improvement insights. The CMQCC (n.d.c) also provides hospitals and health care providers with evidence-based toolkits for the leading causes of preventable maternal deaths and complications, namely hemorrhage and preeclampsia. Recent research indicates that cardiovascular disease may be
driving the increasing rates of pregnancy-related mortality and severe maternal morbidity and the CMQCC (n.d.c) is currently working on a Cardiovascular Disease Toolkit (Creanga et al., 2014; Gadson et al., 2017; Main, McCain, Morton, Holtby, & Lawton, 2015). The aforementioned CA-PAMR is jointly published by the CMQCC and California’s Public Health Department and informs the direction and content of the CMQCC’s quality improvement initiatives. A follow-up to the 2011 review is currently being prepared and focuses on maternal mental health (CMQCC, n.d.c).

The decline in California’s maternal mortality rate has coincided with the establishment of the CMQCC and, between 2014-2016, maternal morbidity was reduced by 20.8% in the 126 hospitals participating in CMQCC projects that address maternal hemorrhage and preeclampsia (CMQCC, n.d.b). In 2014, a 6-month pilot of CMQCC’s project to support vaginal delivery and reduce primary cesarean deliveries decreased the primary cesarean delivery rate by more than 20% between the three participating hospitals. The project is now being implemented in at least 100 hospitals state-wide (CMQCC, n.d.c).

**Psychosocial screening.** Another intervention to improve maternal health involves screening for psychosocial determinants of maternal health. Gadson et al. (2017) used screening interviews to assess pregnant women’s risk of depression, access to telephones, housing and food security, social support, and transportation access. This approach provides real-time engagement with social determinants of health and may be most effective if applied systematically throughout pregnancy. California’s CPSP includes four initial assessments to determine the client’s risks, needs, and strengths in obstetrics, education, nutrition, and psychosocial behavior. Follow-up assessments are given in each trimester, and in the postpartum period to address any issues that might arise such as breastfeeding difficulties, postpartum depression, bonding challenges, and family planning (CDPH, n.d). Assessing the social determinants of maternal health offers opportunities for policy makers and health
systems to shift focus to, and invest in, community infrastructure and organizations that can more appropriately respond to the unmet needs of pregnant women.

**Group prenatal care.** Group prenatal care, such as CenteringPregnancy®, has been implemented and studied across the United States and abroad since 1995. Group prenatal care involves bringing together six to ten women based on their estimated delivery month and integrates assessment, education and life skills training, and support. The group meets 10 times over the course of pregnancy and postpartum for 1.5 to 2 hours each time for a total of approximately 20 hours of prenatal care (by comparison, individual prenatal care across the pregnancy involves a total of 2 hours of care). Group meetings are facilitated by a trained physician (a midwife or obstetrician, for example) and all prenatal care is conducted within the group except for an initial assessment, any health concerns that need to be addressed privately, and cervical examinations. The primary aim of group care is to actively engage women in their health care by, for instance, having participants take and record their own weight and blood pressure during visits. The group also involves peer interaction around topics appropriate for gestational age, and other relevant topics of interest introduced by participants (Barger, Faucher, & Murphy, 2015).

Evidence suggests that the group care approach leads to improved maternal health outcomes. A randomized controlled trial conducted at two university-affiliated hospitals (in Connecticut and Georgia) found that pregnant women assigned to group prenatal care were significantly less likely to have preterm births, with a risk reduction of 33% (Ickovics et al., 2007). Eighty percent of study participants were non-Hispanic black women and, when this population was examined alone, the impact of group care on reduced risk of preterm birth was strengthened. Group care participants were also less likely to receive inadequate care (26.6% compared with 33% for individual care) and rates of breastfeeding were significantly improved (66.5% compared with 54.6% for individual care) (Ickovics et al., 2007).
Group prenatal care has other clinical and psychological benefits for women. In the study by Ickovics et al. (2007), group care participants had significantly better psychosocial outcomes, more prenatal care knowledge, felt more prepared for labor and delivery, and had significantly higher satisfaction with prenatal care compared with those in individual care. Another study found that women in group care gained less weight during pregnancy and retained less weight 12 months postpartum than women in individual care. These differences in weight gain trajectories persisted when data was stratified by obesity status (either non-obese or obese) and, in addition, women who were categorized as obese based on pre-pregnancy BMI gained less weight during pregnancy and lost more weight postpartum than women who were not obese (Magriples et al., 2015). Group care has also been associated with increased self-esteem and decreased stress, as well as decreased social conflict and depression 12 months postpartum among high-risk women (Ickovics et al., 2011).

Another randomized controlled trial, looking at the effects of group prenatal care on perinatal and reproductive health outcomes among adolescents, found that, in the intention-to-treat analysis, adolescents in group prenatal care were less likely to deliver a baby small for gestational age, were slightly less likely to have babies born preterm, and were less likely to have babies admitted to the Neonatal Intensive Care Unit (NICU), compared with adolescents in individual care (Ickovics et al., 2016). In as-treated (or dose-response) analyses, Ickovics et al. (2016) found that the greater the number of group prenatal care visits the adolescents attended, the lower their odds of delivering a baby small for gestational age, preterm, or low birth weight. While there was no difference in admission to the NICU, attending more group care sessions was associated with babies spending fewer days in the NICU. The study also showed that attending more group sessions was associated with a lower likelihood of rapid repeat pregnancy, more condom use, and fewer acts of unprotected
sexual intercourse (all concerns that are especially pertinent to maternal health among adolescents) (Ickovics et al., 2016).

Research suggests that the multi-faceted nature of group care, as well as the augmentation of care (more visits, more intensive interaction with health care providers, more information-sharing using didactic learning approaches), and the emphasis on self-care, may partially account for the more favorable outcomes among women in prenatal group care (Ickovics et al., 2007; Magriples et al., 2015). The various studies show, however, that favorable outcomes of group care are not uniform, and there are some non-significant differences between group and individual care. Additionally, Ickovics et al. (2016) observed substantial challenges in group prenatal care adherence among adolescents, with one in five adolescents randomized to group care not attending any group sessions while the average number of group sessions attended was five out of ten, suggesting the need for patient support to attend group care and support at the health systems level. Notwithstanding these challenges, the demonstrated efficacy of group care, the low cost of implementation, and an absence of adverse effects, all suggest that group care may be a worthwhile strategy for improving maternal health outcomes.

**Social support and education.** Community-based organizations and programs that provide support and education for new and expectant families—such as *The Parent Connection* at Boston’s Beth Israel Deaconess Medical Center, Bini Birth in Los Angeles, and Blossom Birth in Palo Alto—could also improve maternal health outcomes. Studies have shown that maternal social support is associated with better physical and mental health outcomes. One study found that pregnant women who received more social support, and who were more satisfied with the support received, had fewer difficulties in labor, had babies with greater birth weights and Apgar scores, and were less at risk for pre- and postnatal depression (Collins, Dunkel-Schetter, Lobel & Scrimshaw, 1993). Social support can help reduce a new
mother’s stress, low-mood, and anxiety, and increase self-efficacy. A qualitative study by McLeish and Redshaw (2017) found that mothers who received consistent positive feedback from other mothers had more self-confidence in their own parenting abilities. At the University of California, San Francisco, researchers found that mindfulness practice during pregnancy led to greater childbirth self-efficacy and a reduction in depressive symptoms postpartum (Duncan et al., 2017). The study, conducted by Bobevski et al. (2015), suggests that interventions aimed at parental skill-building and psychoeducation could increase parental self-efficacy and reduce demoralization.

Addressing pregnant women’s educational needs can improve maternal health outcomes. The Listening to Mothers III survey—a national survey of U.S. mothers conducted in 2013—found that only about half of first-time mothers (59% of the survey sample) participated in established, in-person childbirth education classes. Most women now rely on electronic and digital media sources (such as the Internet, reality television, and social media platforms like Facebook) for childbirth information with 99% of first-time mothers surveyed indicating using the Internet as a source of prenatal information (Declercq, Sakala, Corry, Applebaum, & Herrlich, 2013). This raises concerns regarding the accuracy and adequacy of the information pregnant women receive, and the childbirth messages they are exposed to. As Smith et al. (2016) point out, the prevailing media representations of childbirth emphasize fear, pain, and risks associated with childbirth, as well as medical technology and interventions for childbirth. The authors go on to note that “the fear of childbirth that is deeply embedded in American culture has a significant impact on the perceived value of vaginal birth and is a critical determinant of women’s birth choices and experiences” (Smith et al., 2016, p. 26).

In the United States, between 4% and 11% of cesarean deliveries are conducted upon request without medical indication, and fear of childbirth (which encompasses, among other
things, a fear of pain) is one of the main reasons for cesarean requests (Guszkowska, 2014). Adequate childbirth preparation, including comprehensive childbirth education, can alter perceptions of pain and may therefore be an important preventive factor. Childbirth education classes help prepare women and their partners for labor not only by providing information and reducing anxiety but also by developing practicable pain-coping skills (Guszkowska, 2014). An examination of Chinese women’s satisfaction with a childbirth class, and the perceived effect of the class on their labor experience, found that the class was a means for providing accurate information and helped to correct misconceptions about childbirth (Lee & Holroyd, 2009). Study participants expressed that the childbirth class facilitated their experience of a smooth labor process and that, overall, the class helped relieve their anxiety regarding childbirth (Lee & Holroyd, 2009).
Scope of Work

The Agency: Blossom Birth Services

Blossom Birth Services (hereafter Blossom) is a 501(c)(3) community-based non-profit organization established in 1999. Its mission is to provide new and expectant families with “resources and services for a healthy, informed and confident pregnancy and parenting journey” (Blossom Birth Services, 2017) (see also Appendix A). Blossom has established various pathways to fulfilling its mission, including providing core programs and services for new and expectant families (such as prenatal yoga, childbirth education, and breastfeeding education and support), forming partnerships with like-minded local organizations and service providers, and organizing community-based events (see Appendix B).

Blossom is located in Palo Alto, California, and serves approximately 2,000 families annually in the San Francisco Bay Area, Peninsula, and Silicon Valley. Its core team is relatively small, consisting of two full-time staff (the Executive Director and Program Manager), and six part-time permanent staff (an accountant, two outreach coordinators, a retail manager, and three front-desk associates). Blossom also has a Board of Directors (consisting of nine members) and works with at least forty instructors and consultants on a contractual basis.

In its most recent annual report, Blossom reported an income of US$421,823 for the 2014-2015 financial year. Seventy percent of Blossom’s income comes from its programs, 15% from grants and donations, 8% from community events, and 7% from retail sales. Blossom’s expenses for that same year totaled US$350,118 (see Appendix C).

The Project: Pilot Impact Evaluation

The goal of the pilot impact evaluation was to assess whether Blossom is meeting its objectives and fulfilling its mission, that is, if Blossom’s programs and services are producing
the desired effect on its target population. Through the impact evaluation, Blossom aimed to gather information and data that could provide evidence of Blossom’s efficacy to potential funders; be used to improve current, and inform future, programs and services; and boost staff morale.

Due to the breadth and variety of Blossom’s programs and services, the pilot impact evaluation was conducted on just one of Blossom’s offerings—the Natural Childbirth Prep (NCP) course. If the pilot evaluation design proved useful, it could then be adapted and used to evaluate Blossom’s other programs and services.

The NCP course has been taught at Blossom since 2007 and is a central component of Blossom’s childbirth education program. The course provides comprehensive childbirth education and covers topics such as partner/coach preparedness; proper exercise and nutrition in pregnancy; anatomy and physiology of the stages of labor; evidence-based medical care and interventions; complications and cesarean sections; compiling birth preferences (or ‘birth plans’); relaxation and breathing techniques for labor and birth; and postpartum preparedness. Participants in the NCP course meet once a week for eight weeks and the course is taught by a certified childbirth instructor. The course requires preregistration and costs US$475 for a couple.

There were four main objectives of the impact evaluation for the NCP course:

1. Compare participants’ knowledge of childbirth before and after taking the course.
2. Explore the impact of the course on participants’ feelings regarding childbirth and their sense of childbirth self-efficacy.
3. Explore the impact of the course on participants’ experiences of childbirth.
4. Determine participants’ satisfaction with course structure and outcomes.

In short, we wanted to know if the NCP course was effective in preparing women for a vaginal birth with no medical interventions or with minimal medical interventions only as
necessary; if the NCP course was meeting the educational needs of pregnant women; if the
course was providing women with a realistic perspective of birth; and if the course was
effective in preparing women psychologically for childbirth including, for example, relieving
their anxiety regarding childbirth.

We used Likert scales, Likert-type scales (with variations to the traditional Likert
style, for example a usefulness scale with only the end categories labeled), and open-ended
questions in a 41-item online self-administered survey questionnaire that we developed using
Google Forms (see Appendix D). We included a cover letter with information on the purpose
of the survey, instructions on how to complete and submit the survey questionnaire,
confidentiality, anticipated risks, and contact information. The survey was entirely voluntary
and consent was given with submission of survey responses. Respondents were given a $10
Blossom Beanstalk voucher and free admission for two to the 2017 San Francisco Birth and
Baby Fair for their participation.

We used a purposive (or selective) sampling method. Participants in the survey were
women who had completed the NCP course between January and September 2017.
Participants were identified through Blossom’s YogaReg database and the questionnaire was
sent to them by email. A follow-up email and text message were sent and a reminder phone
call was made before the survey closed. The survey was “live” for ten days. Out of the 37
women invited to participate in the survey, 13 responded (N=13, 35% response rate).

The evaluation was conducted by a lead evaluator (myself) in collaboration with the
Executive Director (also my preceptor) with input from Blossom staff. One of the objectives
of the impact evaluation was to create buy-in from Blossom constituents. This was achieved
by designing an evaluation that was constituent-facing through involving key stakeholders,
including Blossom community members, in the data collection process. Blossom can be more
responsive to what its community needs by hearing directly from its community members about their experiences with Blossom classes.

The impact evaluation was primarily concerned with determining how Blossom’s NCP course impacts the attitudes, behaviors, and values of the individuals that complete the course. In that sense, the project operated on the individual level of the ecological model. The impact evaluation also operated on the interpersonal level of the ecological model as it aimed to determine how Blossom’s NCP course influences the degree of support (practical and emotional) participants feel they have or receive during their pregnancy, childbirth, and postpartum journey.

**My Role: Lead Evaluator**

As Lead Evaluator, my role was to coordinate the pilot impact evaluation and see it through from conception to completion. I was ultimately responsible for all evaluation activities, including planning, developing evaluation objectives, addressing data collection needs, reporting findings, and working with stakeholders and consultants.

I began by conducting a review of literature on the state of maternal health globally, in the United States, and in California. The information gathered from the review, including maternal morbidity and mortality data and cesarean delivery rates, was necessary to contextualize the work that Blossom does and the community it serves (namely, new and expectant mothers) and the public health issue that the NCP course addresses (California’s high rate of cesarean deliveries among low-risk women). I used PubMed and Google Scholar to source relevant and contemporary peer-reviewed research articles and a general web search to source websites from government public health departments as well as non-governmental organizations.

I also explored different evaluation approaches and methods, consulted with evaluation experts, and reviewed various evaluation field-guides available online. A large
part of the work that I did included designing the pilot NCP course evaluation questionnaire, administering the questionnaire, analyzing and reporting on data, and providing recommendations to Blossom’s staff and Board of Directors.

Other day-to-day activities included administrative work, such as organizing and facilitating meetings with my preceptor and Board members, and recording and distributing meeting minutes. My project deliverables included an evaluation design (the NCP Course Pilot Outcome Evaluation Questionnaire); data analysis (including numerical and thematic analysis); a written report of the analysis; and recommendations to the Blossom Board based on findings from the pilot evaluation.
Public Health Impact

This fieldwork placement resulted in a self-administered 41-item survey questionnaire (N=13 participants, 35% response rate) assessing the impact of Blossom’s Natural Childbirth Prep course on pregnant women’s knowledge, feelings, and experiences related to childbirth.

Demographic Characteristics of Sample

Pregnant women who took Blossom’s Natural Childbirth Prep Course were more likely to be older, white, wealthy, and highly educated (see Table 1). Nine respondents (69%) were in the 30-34 age range at the time of course enrollment, the youngest age group recorded, and twelve respondents described their race or ethnicity as “White/Caucasian”. The most frequently recorded combined family income was $150,000-$200,000 (n=3, 27%). The lowest combined family income was $75,000-100,000 (n=1, 9%) and the highest was $300,000+ (n=1, 9%). A Bachelor’s degree was the lowest formal educational qualification recorded (n=4, 33%). Approximately half of the respondents (n=7, 58%) had a Master’s degree and one respondent (8%) had a Doctorate or Professional (MD, JD, DDS) degree. For most respondents (n=12, 92%) this was their first time taking a natural childbirth course.

Pregnant women were more likely to take the NCP course as first-time expectant mothers (primigravidae) (n=11, 85%) but have at least some knowledge of childbirth before taking the course (n=7, 54%). Roughly a quarter of respondents (n=3, 23%) had “a lot of knowledge” of childbirth before taking the course and another quarter of respondents (n=3, 23%) had “no knowledge”.

All respondents (n=13, 100%) indicated that they attended the NCP course with their intimate partner. The majority of respondents (n=9, 69%) attended all of the eight course sessions, three (23%) attended 6-8 course sessions, and one respondent attended 4-6 sessions.

Most respondents (n=11, 85%) delivered in a hospital, one respondent delivered in a birthing center, and one respondent had a home-birth (see Table 2). All survey respondents
attempted and subsequently had a vaginal birth but roughly half had some form of medical intervention. The most frequently reported medical intervention was an epidural (n=5, 39%) followed by an episiotomy (n=4, 31%) (see Table 2).

Quantitative Results

Knowledge before taking the course. There was a bimodal distribution of responses to statements regarding participants’ knowledge of childbirth before taking the natural childbirth course (see Graph 1). Roughly half of respondents (n=6, 46%) felt knowledgeable about various comfort measures for labor, but an equal number of respondents (n=6, 46%) indicated they lacked knowledge about various comfort measures for labor (mdn=3, IQR=3). Respondents were also polarized with regards to how knowledgeable they felt they were about the risks and benefits of labor and delivery medications and interventions before taking the course (mdn=3, IQR=3). More than half of respondents (n=8, 62%) felt they lacked knowledge about their options for labor and delivery medications and interventions before taking the course (mdn=2, IQR=3). Overall, respondents felt knowledgeable about childbirth in general but lacked knowledge about the options, risks, and benefits of labor and delivery medications and interventions.

Feelings/attitudes and self-efficacy before taking the course. We conducted a quantitative (Likert scale) analysis of how participants felt about childbirth and their sense of childbirth self-efficacy before taking the natural childbirth prep course (see Graphs 2 and 3). We found that most respondents felt somewhat fearful of childbirth (mdn=4, IQR=2). Most respondents felt strongly fearful of labor pain (mdn=4, IQR=1.5) while more than half of respondents (n=8, 61.5%) indicated they lacked confidence in their ability to cope with labor pain (mdn=2, IQR=1.5). Before taking the course, most respondents felt somewhat anxious about delivery (m=4, IQR=0.5) and just over half of respondents (n=7, 54%) lacked confidence in their ability to have a vaginal birth without medical intervention, although
roughly equal number (n=6, 46%) had some confidence in their ability to have a vaginal birth without medical intervention (mdn=2, IQR=2.5). Most respondents felt somewhat anxious about having adequate support from their partner/coach during labor (mdn=4, IQR=2). Just over half of respondents (n=7, 54%) indicated feeling anxious about taking care of a newborn (mdn=4, IQR=2) but, when asked about their sense of self-efficacy, more than half (n=8, 62%) felt confident in their ability to take care of their newborn (mdn=4, IQR=1.5).

**Usefulness of course topics.** We used a Likert-type scale to assess the usefulness of course topics and found that, overall, respondents found the course topics highly useful, with the exception of the topic “proper nutrition and exercise”. The most useful topics were “stages of labor” (mdn=5, IQR=0.5), “evidence-based care (interventions and medications)” (mdn=5, IQR=1), “coach/partner preparedness” (mdn=5, IQR=1), “complications and cesarean sections” (mdn=5, IQR=1), and “postpartum preparation (infant care, supplies, and breastfeeding)” (mdn=5, IQR=1). This reflects survey data indicating majority of respondents felt anxious about delivery and having adequate support from their partner and coach during labor, felt somewhat anxious about taking care of a newborn, and lacked knowledge about the options, risks, and benefits of labor and delivery medications and medical interventions. The least useful topic was “proper nutrition and exercise” (mdn=3, IQR=2), perhaps because most respondents were already well into their pregnancy when they took the course—39% of respondents (n=5) were in their second trimester and 54% (n=7) were in their third trimester at the time of course enrollment. This is supported by qualitative data with one respondent noting, “I do think that the nutrition and exercise part was the least helpful part of the course, as most of us probably knew how to eat and exercise properly already” and another stating “the nutrition part wasn’t as helpful in the third trimester so it didn’t need to be covered or should be covered in [the] first trimester”. The topic “compiling birth preferences” (mdn=4,
IQR=2) had more varied results with roughly a third of respondents (n=4, 31%) indicating the topic was only somewhat useful (a score of 3 out of 5 on the usefulness scale).

**Satisfaction with course outcomes.** We wanted to determine whether the course was producing its intended outcomes and we found that, overall, this was the case (see Graph 4). The majority of respondents (n=12, 92%) somewhat or strongly agreed that the course provided the information they needed (mdn=5, IQR=0.5). All respondents (n=13, 100%) indicated that the course reduced their fear of childbirth to some degree (mdn=5, IQR=1) and that the course prepared their partner to support them during labor and delivery (mdn=5, IQR=1). Most respondents (n=10, 77%) indicated that after taking the course they felt prepared to have a vaginal birth without medical interventions and medications (mdn=4, IQR=1.5). However, as noted earlier, although all respondents attempted and subsequently had vaginal births, roughly half of all respondents had some form of medical intervention. The course was most effective in giving participants the confidence to voice their birth preferences to medical personnel (mdn=5, IQR=1) and was least effective in giving participants confidence in their ability to take care of their newborn’s needs (mdn=4, IQR=2).

**Satisfaction with course structure.** Overall, respondents expressed high levels of satisfaction with the course structure. The majority of respondents were “highly satisfied” with the duration of each individual session (mdn=5, IQR=1), the location of the course (mdn=5, IQR=1), the physical environment of the classroom (mdn=5, IQR=1.5), and the number of participants in the sessions (mdn=5, IQR=1). A roughly equal number of respondents were either “somewhat satisfied” (n=5, 39%) or “highly satisfied” (n=6, 46%) with the duration of the entire course (mdn=4, IQR=1). Respondents were most satisfied with the level of opportunity given to students to participate in the sessions (mdn=5, IQR=0) and the performance of the instructor (mdn=5, IQR=0.5), and were least satisfied with the time of each individual session, but only somewhat so (mdn=4, IQR=1.5).
Net Promoter Score. We asked course participants to rate on a scale of 0 to 10 their likelihood of recommending the Natural Childbirth Prep course to others. Using the Net Promoter Score (NPS) system (a measure of client satisfaction), responses are classified into three categories: “Detractors” (0-6), “Passives” (7-8), and “Promoters” (9-10). We had zero detractors, two passives, and eleven promoters and an overall NPS of 85 (out of 100), meaning that 85% of course participants are likely to recommend the course to others.

Qualitative Results

Motivations for taking the course. We used qualitative analysis (open-ended questions) to explore what motivated pregnant women to take Blossom’s NCP course. Wanting or preparing for a natural birth were the most significant motivating factors for taking the course. For women who had had a previous birth (multigravidae), a negatively perceived previous childbirth experience was a motivating factor. For example, one mother (a multigravida) was motivated to take the course after a “bad experience with epidural, forceps and episiotomy with son”. Other reasons included wanting “the most in-depth course available” and wanting to “feel more confident and be able to advocate for [one]self”.

Only one respondent mentioned partner involvement as a motivating factor although several respondents indicated that partner support during labor and delivery was important or had a positive impact on their childbirth experience. One respondent stated, “I had my partner supporting me and being a great teammate, and that is in very large part due to everything we learned in the class, we were prepared for the unexpected setbacks and calmly tackled them as they came”. Another noted, “I had a natural birth and had great support from my partner”. One respondent, a medical professional “familiar with many aspects of birth”, found the course particularly helpful for her partner.

Knowledge acquisition and empowerment. Knowledge acquisition was both a primary motivating factor for taking the course and a valued outcome of the course.
Knowledge of the labor and delivery process and of hospital procedures, medical interventions, and medications were most commonly mentioned by respondents as having an impact on their childbirth experience. Knowledge was also a means of empowerment, enabling the women to actively participate in decision-making and, in certain ways, make determinations about their labor. For example, one respondent noted:

I labored at home almost 2 days prior to even being checked and felt confident doing this based on [the instructor’s] thorough coverage of stages of labor. By the time I was finally checked (at my OBs office) I was 5cms [dilated] and 100% effaced which gave me the confidence that I could progress un-medicating and in the hospital when the time came.

Another said, “I was able to meet my goal of an un-medicating vaginal birth in which I felt empowered to make my own choices and approach [it] with as little fear as possible”.

Familiarity with childbirth terminology was another means of empowerment. As one respondent commented:

It was great to be so well-versed in everything, so we felt like we were making very educated choices (even though many of them were choices that were advocated against in the class). It also helped that we “spoke the language” of our nurses, so they were more candid with us about their experiences and opinions, because it was clear we knew what we were talking about and could handle getting more details.

**What the term “natural childbirth” means to course participants.** We also wanted to explore what the term “natural childbirth” meant to course participants. The majority of responses to the question ‘what does the term “natural childbirth” mean to you?’ indicate that what is understood by that term is a vaginal birth that has no or limited medical interventions. For example, some of the responses include “vaginal birth with no pain medication”, “without medical intervention”, “no drugs”, “no medical interventions”, and
“childbirth without interventions”. Several respondents specifically mentioned Pitocin, episiotomy, and forceps as medical interventions. Understanding of what the term means can change with knowledge and experience. One mother indicated that before taking the course she thought the term meant “no C-section and no epidural”. After taking the course, her understanding of the term shifted to childbirth with “minimal medical interventions (only as necessary)”. After experiencing childbirth, she understood the term to mean childbirth “with maximum involvement of both parents in the physical and decision-making process to achieve a safe, happy experience and outcome”, a broader definition that encompasses a wider variety of childbirth experiences.

**Impact of language.** An emphasis on “natural” childbirth can have an unintended negative impact on women’s perceptions of their childbirth experience. For example, one respondent noted:

Because the focus in the class was natural birth, I felt that giving birth any other way was the wrong way. I did go through a process where I thought I failed somehow, and kept thinking back on my birth experience and wondering what if, what if I had done this or that different would the outcome have been different and would I have had less interventions.

Childbirth is an inherently unpredictable process and focusing on birth “plans” can also have an unintended negative impact on women’s perceptions of their childbirth experience. Analysis of the qualitative data suggests that women who had birth experiences that deviated from their birth plan had more negative feelings about their birth experience. For example, one respondent said:

Everything I had on my birth plan, that I did not want to have happen, happened.

Manual breaking of my water, an epidural, vacuum extraction and an episiotomy […]

30
With more time passing, I realize that there is no right way or right birth, you can have a plan, but in the end, you have to do what feels right for you and the baby. This may be why the topic “compiling birth preferences” scored lower on the usefulness scale than most other course topics. Respondents who had positive birth experiences tended to affirm their birth plan while those who had negative birth experiences tended to express dissatisfaction with the concept of a birth plan. For example, one respondent said she felt “great” about her childbirth experience and that it “went as planned”. Another respondent, who used a birth plan suggested by the instructor, felt “a tinge of disappointment” that her childbirth experience “took [her] so far from [the instructor’s] suggested birth plan” and suggested that “the highest goal of this course should be to prepare parents to have the best birth experience possible, regardless of the exact details of how it happens”.

Research, Program, and Policy Implications

This is the most in-depth and comprehensive program evaluation that Blossom has conducted to date and much of the data collected has been illuminating. However, this was merely a pilot evaluation and much more needs to be done as a result of this work, both in terms of improving Blossom’s approach to evaluation and in terms of how to utilize this data to inform future programs.

Limitations. There were several limitations of the present evaluation. Survey findings represent the perceptions of a distinct group of women and may not be indicative of the program’s effectiveness overall due to convenience (or selective) sampling. Additionally, our small sample has small statistical power.

Survey improvements. The current evaluation survey questionnaire could be improved. Information missing includes class size (class size can range from four to eight couples and can influence the learning environment and experience); why sessions were missed (for example, perhaps the course participant gave birth earlier than expected—if so,
this could have a significant impact on a participant’s experience of both the course and of childbirth; data on satisfaction with course affordability (which was intentionally omitted from the current survey questionnaire due to recent changes in the pricing structure); and data on infant postnatal age (or chronological age). In addition, we did not survey the intimate partners who attended the childbirth course. Partner preparation is a key component of the course and understanding the ways in which intimate partners view the course and experience childbirth is therefore important. This could be the focus of a future evaluation.

We made certain demographic questions optional and, while a majority of respondents submitted responses to these questions, others disregarded them. These questions should have been required as they provide information that, as other research has shown, can have an impact on birth outcome, such as race/ethnicity, household income level, and educational attainment. There were also questions that could have been phrased differently to capture additional information, or variables that could have been measured in a different way. We used, for example, an ordinal scale to measure whether the course reduced participants’ fear of childbirth (the dependent variable) and, while the categories on the scale can be ranked (from “strongly disagree” to “strongly agree”), values between the categories cannot be assigned. So, while all respondents indicated that the course reduced their fear of childbirth, we could not ascertain from the scale the degree to which the course reduced their fear of childbirth.

We found that survey respondents were more likely to be from an earlier course cohort potentially skewing survey data. Four respondents (30.8%) were from the January–April 2017 cohort compared to just one respondent (7.7%) from the more recent August–September 2017 cohort. This is unsurprising—the demands on a new mother’s time and energy are perhaps greatest in the immediate postpartum and may diminish over time as she grows in experience and as the infant matures. Extending the data collection period from 10
days to, say, 6 weeks could increase the response rate across the board (although this was not possible for our present evaluation due to time constraints). However, the passage of time could also influence recall of, and feelings towards, the NCP course and the childbirth experience itself. Surveying only one course cohort soon after the immediate postpartum period may minimize recall bias and other potential confounders.

**Evaluation design improvements.** Improvements to the evaluation design itself could be made, including considering alternative approaches to data collection such as a pretest-posttest design, a prospective cohort study, or in-depth one-on-one interviews. Because our evaluation design was cross-sectional and participants were surveyed after their childbirth experience, we were not able to collect baseline data before participants were exposed to the course (the intervention) or before they developed any of the outcomes of interest. The information we gathered was retrospective in nature and so it has significant limitations. For example, we wanted to determine participants’ level of childbirth knowledge, feelings towards childbirth, and childbirth self-efficacy at three points: before they took the course, after the course but before childbirth, and then after childbirth. In order to do so we had to ask course participants to think back in time. Retrospective studies may be quicker, easier, and more cost-effective to execute but they are also prone to recall bias or misclassification bias, subject to confounding, and amplify the attribution problem (that is, the difficulty in determining whether outcomes can be attributed to the exposure or to another factor).

Follow-up one-on-one interviews could be used to enhance data from our present evaluation. For example, only one respondent indicated that the course did not provide the information she needed. A one-on-one interview with this respondent could be used to explore why she felt that way or what information she felt was missing from the course. Likewise, one respondent strongly disagreed with the statement “the course reduced my fear
of labor pain”. A one-on-one interview could explore this response—perhaps it was a false-response, or perhaps we might identify fear-reduction mechanisms that the course does not presently cover.

**Research implications.** Evaluation results also point to future research opportunities. Researchers might explore, for example, the ways in which the language of childbirth influences how women feel about or interpret their childbirth experience. The term “natural childbirth” implies that the inverse—unnatural childbirth—exists. The terms “birth plan” and “stages of labor” belie the complexity and inherent unpredictability of the childbirth process. Women who “plan” a “natural” birth (that is, a vaginal birth with no medical interventions or minimal medical interventions used only as necessary) and ultimately experience a birth aided by numerous medical interventions (whether considered medically necessary or otherwise) may develop feelings of failure, disappointment, and guilt. As one survey respondent expressed:

> Sometimes interventions happen, and to not bring in a sense of "it's too bad that I had to do X, because it was against what [the instructor's] ideal plan recommended, and I really wanted this to be more ideal..." [...] I wouldn't change any of it, because the outcome is so wonderful, even if the process was so incredibly far from what we were taught was the ideal. I don't feel shame in any of it now, but at the time I did have the voice of [the instructor] in the back of my head saying how "unfortunate" it was that we had to do what we had to do.

**Program implications.** A number of program recommendations can be made based on the survey data. Course content, language, and delivery can be modified to avoid stigmatizing medical or hospital-based options. We could talk about birth “options” and “preferences”, rather than “plans”, and we could introduce the course as a “comprehensive” childbirth course rather than a “natural” childbirth course. Evidence-based information about
the childbirth process, medications, and medical procedures can be delivered in a factual, dispassionate, and non-judgmental way. And we can provide information and deepen understanding of childbirth while also highlighting the inherent uncertainties and variability of childbirth. Blossom could also establish a parallel program that specifically addresses the emotional needs of postpartum women—providing a safe space where women can share their childbirth story and unpack the emotions surrounding their childbirth experience, as well as celebrate their birth experience.

Feedback on the structure of the course suggests that there is room for improvement. The nutrition and exercise component of the course could be condensed or removed entirely (Blossom’s new “Pregnancy 101” workshop may be a more appropriate forum for these topics as it targets pregnant women of a younger gestational age). The postpartum preparation component of the course could be expanded or, alternatively, more systematic action could be taken to channel participants into Blossom’s existing Baby Care workshop. Survey respondents indicated that the topic was useful but was also the least effective with one survey respondent noting that more information needed to be given regarding newborn care. Other logistical aspects of the course where participants expressed some dissatisfaction—the time of each individual session and the duration of the entire course—could also be addressed.

Blossom might also consider addressing demographic gaps to reach pregnant women from different age, racial/ethnic, and socio-economic groups. This may require significant changes in course content, structure, pricing, and marketing. Or it may require developing, in partnership with these groups, an entirely new childbirth education program that meets the needs of the target population. Blossom has already identified expanding service and program access to underserved populations as an objective for 2015-2020 (see Appendix A). As an initial step, a grant proposal for funding to achieve this objective could be developed.
The fieldwork project has wider organizational implications. The challenges encountered throughout the project indicate that Blossom should build systematic evaluation into its programs from the outset, including establishing a team and budget dedicated to program evaluation. This would also entail developing program logic models to assist evaluators by providing a picture of how programs are intended to work and determine measurable outcomes.

**Policy implications.** Findings from our evaluation are consistent with other research findings indicating that childbirth education has important benefits for pregnant women. Childbirth education can help women prepare psychologically for birth by reducing fear and anxiety; develop women’s knowledge and understanding of their childbirth options; develop women’s knowledge and understanding of the risks and benefits of labor and delivery medications and interventions; and give women the confidence to voice their birth preferences to medical personnel. Research suggests that these childbirth education outcomes can lead to a more satisfying labor experience, improve labor outcomes, and reduce the incidence of postnatal depression (Lee & Holroyd, 2009). Providing affordable, accessible, and culturally-appropriate comprehensive childbirth classes for all pregnant women should therefore be a priority for policy makers. However, as our data also suggests, childbirth education can have unintended negative effects, including failing to prepare women for a complicated birth. As a result, women can develop feelings of disappointment, shame, or guilt following their “less-than-ideal” birth. Therefore, childbirth educators need to be mindful of the childbirth messages they convey and be respectful of the variety of ways in which women give birth.
Conclusion

This project was an evaluation of a childbirth education course offered by Blossom Birth, a non-profit organization that provides programs and services for new and expectant families in the San Francisco Bay Area. The aim of the project was to evaluate the impact of Blossom’s natural childbirth course on women’s knowledge, feelings, and self-efficacy regarding childbirth.

It is clear from the literature that maternal health remains a concern both globally and in the United States. Approximately 830 women die each day globally from preventable causes related to pregnancy and childbirth and many others experience acute or chronic morbidity (Firoz et al., 2013; WHO, 2016). The United States’ maternal mortality and morbidity rates are some of the highest among developed countries (CDC, 2017a; Creanga et al., 2014; Miles, 2015). Increases in maternal age, cesarean section deliveries, pre-pregnancy obesity, psychiatric disorders, and preexisting chronic medical conditions (such as cardiovascular disease) have all been attributed to the rise in maternal mortality and morbidity in the United States (Gadson et al., 2017).

Substantial disparities in maternal health outcomes exist between demographic groups. In the United States, black women are at higher risk than other racial/ethnic groups for maternal morbidities, maternal mortality, and adverse birth outcomes (including fetal death) (Bryant et al., 2010; Guendelman et al., 2006).Latinas and black women are more likely to delay prenatal care initiation than their white and Asian counterparts, and black women are less likely to have access to affordable or adequate prenatal care than non-black women (Adams et al., 2005; Gadson et al., 2017; Guendelman et al., 2006).

California has made significant gains in improving maternal health outcomes and is the only state that has shown a decline in maternal mortality in the past decade (MacDorman et al., 2016). Several state-wide initiatives, including the California Maternal Quality Care
Collaborative and the Comprehensive Perinatal Services Program, have demonstrated efficacy in improving maternal health outcomes. Other promising initiatives include the group prenatal care model, such as CenteringPregnancy®, and community-based organizations and programs that provide educational and social support for new and expectant families (Bobevski et al., 2015; Collins et al., 1993; Ickovics et al., 2007; McLeish & Redshaw, 2017). However, California’s low-risk cesarean delivery rate remains high with significant variations between hospitals and regions (CHCF, 2017; OSHPD, 2017; Osterman & Martin, 2014). Comprehensive childbirth education could be an effective approach to reducing the number of unnecessary cesarean deliveries by adequately preparing women psychologically for birth and providing useful pain-coping skills for labor (Guszkowska, 2014; Lee & Holroyd, 2009).

For this project I developed, in collaboration with my site preceptor, a 41-item survey questionnaire to evaluate Blossom’s Natural Childbirth Prep (NCP) course. There was no team or budget for this project, the first systematic program evaluation effort undertaken by Blossom since its inception in 1999. Feedback from Blossom Board and staff members was requested during survey development and external evaluation experts were consulted. The questionnaire was developed using Google Forms and distributed to thirty-seven selected survey candidates by email with follow-up reminders made through phone calls, text messages, and emails. We offered a $10 Blossom Beanstalk voucher and complimentary tickets to the 2017 San Francisco Bay Area Birth and Baby Fair as incentives. Thirteen women who had completed Blossom’s Natural Childbirth Prep course between January and September 2017 participated in the survey (a 35% response rate).

Results from our survey indicated that women who take the NCP course are more likely to be white, wealthy, well-educated, and of advanced maternal age. Participants were more likely to take the course as primigravidae with some prior knowledge of childbirth and
attend the course with their intimate partner. Quantitative survey data showed that, overall, Blossom’s NCP course is meeting its outcome objectives and participants are satisfied with the course. The course provided respondents with the childbirth information they needed, reduced their fear of childbirth to some degree, prepared their partner to support them during labor and delivery, and gave them the confidence to voice their birth preferences to medical personnel. Most respondents indicated that the course prepared them to have a vaginal birth without medical interventions and medications, although this outcome indicator did not score as highly as other indicators. All respondents attempted and subsequently had a vaginal birth although roughly half had some form of medical intervention, the most frequent of which was an epidural. Survey respondents indicated that “proper nutrition and exercise” was the least useful course topic and that the course was least effective in giving participants confidence in their ability to take care of their newborn. Qualitative survey data suggested that the course’s emphasis on “natural” childbirth may have had a negative impact on women who ended up having some form of medical intervention or medication. Likewise, an emphasis on birth “plans” may have undermined women’s satisfaction with their birth if it did not go according to their plans.

Modifications to the NCP course content, language, and delivery can be made to improve the course, including replacing the terms “natural childbirth” and “birth plan” with language that emphasizes the inherent uncertainties and variability of childbirth; removing the topic “proper nutrition and exercise”; and expanding the postpartum preparation content or channeling participants into Blossom’s existing Baby Care workshop. Further research into how language impacts women’s perceptions of and feelings towards childbirth needs to be conducted. Other recommendations for Blossom include establishing a program that provides an opportunity for women to share their childbirth experiences, for example in a facilitated group setting; expanding efforts to reach minority groups; and establishing a team
and a budget dedicated to program evaluation. Providing affordable, accessible, sensitively delivered, and culturally-appropriate comprehensive childbirth classes for all pregnant women must be an ongoing priority for policy makers concerned with improving maternal health outcomes.
References


EVALUATING BLOSSOM’S NATURAL CHILDBIRTH COURSE


California Maternal Quality Care Collaborative (CMQCC). (n.d.b). Who we are. Retrieved from https://www.cmqcc.org/who-we-are


https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmortality.html


EVALUATING BLOSSOM’S NATURAL CHILDBIRTH COURSE


Health Policy. Retrieved from

from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2621047/


maternal mortality rate increasing? Disentangling trends from measurement issues.

related mortality in California: causes, characteristics, and improvement
opportunities. Obstetrics and Gynecology, 125(4), 938-947.
doi:10.1097/AOG.0000000000000746

& Ickovics, J. R. (2015). The impact of group prenatal care on pregnancy and
postpartum weight trajectories. American Journal of Obstetrics and Gynecology,
213(5), 688.e1-688.e9. doi:10.1016/j.ajog.2015.06.066

Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Matthews, T. J.

2016. NCHS Data Brief, 287. Retrieved from


https://doi.org/10.1186/1471-2393-14-336


## Tables and Graphs

### Table 1: Demographic Characteristics of the Study Sample

<table>
<thead>
<tr>
<th>Demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at time of course enrollment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤19</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>20-24</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>25-29</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>30-34</td>
<td>9</td>
<td>69.2</td>
</tr>
<tr>
<td>35-39</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>40-44</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>45+</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>Hispanic, Latino or Spanish origin</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>Black/African American</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Asian</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Middle Eastern or North African</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Education at time of course enrollment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school diploma or equivalency (GED)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Associate degree (junior college) or vocational degree/license</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>4</td>
<td>33.3</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>7</td>
<td>58.3</td>
</tr>
<tr>
<td>Doctorate, Professional (MD, JD, DDS)</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Household income at time of course enrollment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$25,000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>$25,000-$50,000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>$50,000-$75,000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>$75,000-$100,000</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>$100,000-$150,000</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>$150,000-$200,000</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>$200,000-$250,000</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>$250,000-$300,000</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>$300,000+</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>Don’t know/Not sure</td>
<td>2</td>
<td>18.2</td>
</tr>
</tbody>
</table>

*Indicates question was optional
### Table 2: Birth Place, Birth Type, and Medical Interventions (n=13)

<table>
<thead>
<tr>
<th>Birth place</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>11</td>
<td>84.6</td>
</tr>
<tr>
<td>Birth center</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Home</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Birth type</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesarean section</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Vaginal</td>
<td>13</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medical interventions</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No medical interventions</td>
<td>6</td>
<td>42.2</td>
</tr>
<tr>
<td>Medical induction</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Epidural</td>
<td>5</td>
<td>38.5</td>
</tr>
<tr>
<td>Other pain-relieving medication</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Intravenous (IV) drip</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>4</td>
<td>30.8</td>
</tr>
<tr>
<td>Vacuum extraction</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Forceps</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not applicable</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other: saline lock</td>
<td>1</td>
<td>7.7</td>
</tr>
</tbody>
</table>
I felt knowledgeable about childbirth
I felt knowledgeable about various comfort measures for labor
I felt knowledgeable about my options for labor and delivery medications and interventions
I felt knowledgeable about the risks and benefits of labor and delivery medications and interventions
I felt fearful of childbirth
I felt fearful of labor pain
I felt anxious about delivery
I felt anxious about having adequate support from my partner/coach during labor
I felt anxious about taking care of a newborn

Graph 2: Feelings regarding childbirth before taking the Natural Childbirth Prep course

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
I felt confident in my ability to cope with labor pain
I felt confident in my ability to voice my birth preferences to medical personnel
I felt confident in my ability to have a vaginal birth without interventions
I felt confident in my ability to take care of my newborn

Graph 3: Childbirth self-efficacy before taking the Natural Childbirth Prep course

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree
The course provided the information that I needed.

The course prepared my partner/coach to support me in labor and delivery.

The course reduced my fear of childbirth.

The course reduced my fear of labor pain.

The course reduced my anxiety about delivery.

The course gave me courage for labor.

The course gave me courage for delivery.

After taking the course I felt prepared for a vaginal birth without medical interventions or medications.

After taking the course I felt knowledgeable about the benefits and risks of labor and delivery medical interventions and medications.

The course gave me confidence in my ability to voice my birth preferences to medical personnel.

The course gave me confidence to meet my newborn’s needs.

---

**Graph 4: Natural Childbirth Prep course outcomes**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The course provided the information that I needed</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The course prepared my partner/coach to support me in labor and delivery</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The course reduced my fear of childbirth</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>The course reduced my fear of labor pain</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>The course reduced my anxiety about delivery</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>The course gave me courage for labor</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>The course gave me courage for delivery</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>After taking the course I felt prepared for a vaginal birth without medical interventions or medications</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>After taking the course I felt knowledgeable about the benefits and risks of labor and delivery medical interventions and medications</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>The course gave me confidence in my ability to voice my birth preferences to medical personnel</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>The course gave me confidence in my ability to meet my newborn’s needs</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendices

Appendix A. Blossom Mission Statement and Organizational Goals and Objectives 2015-2020.

Mission Statement
Blossom provides resources and services for a healthy, informed and confident pregnancy and parenting journey.

Organizational Goals & Objectives for 2015-2020

Goal 1: Thrive as a trusted non-profit organization that offers new and expectant families evidence-informed resources and services for a healthy, informed and confident pregnancy and parenting journey.

Objective 1: Grow our (in person and online) welcoming, non-judgmental, trusted community that respects all clients’ values, cultures, choices and preferences for birth and parenting.

Objective 2: Increase the self-efficacy of clients by supporting their knowledge, choices and decisions regarding their own maternity care and parenting journey.

Objective 3: Expand access to our services and programs to underserved populations.

Goal 2: Strengthen the birthing and parenting professional community serving the Bay Area.

Objective 1: Expand professional development opportunities and increase peer-to-peer support for birthing and parenting professionals (for example: birth and postpartum doulas, prenatal and postpartum yoga instructors and lactation counselors).

Objective 2: Increase the field’s knowledge base by conducting and disseminating high quality, innovative research and pilot studies to inform current practices in effective maternity and postpartum care and parenting needs.

Objective 3: Convene the birthing and parenting community to focus on improving the birth and postpartum experience for mothers and babies through collaboration and for mutual benefit.

Goal 3: Advocate for improved maternity care by amplifying the voice, demands, and needs of expectant and new mothers and their partners.

Objective 1: Collect and disseminate information on maternity and postpartum experiences of women in the Bay Area to:
   a) improve policies, programs and services;
   b) educate women and health professionals; and
   c) identify research priorities.

Objective 2: Develop a clearinghouse of information about maternal care providers to help women and their partners navigate the maternity care system and to understand available birth and postpartum options.

Objective 3: Increase and guide financial support for the improvement of maternity care.
Appendix B. Blossom Marketing Brochure.

Blossom is a non-profit, community-based organization providing resources and support for your healthy, informed, and confident pregnancy and parenting journey. Since 1999, Bay Area families have chosen Blossom as their trusted resource as they navigate the new world of pregnancy, birth, and early parenting.

From the moment women find out they are pregnant to learning about their choices for childbirth and how to care for a newborn... in the quiet space of our yoga studio, to the boisterous fun of our carnivals and community, Blossom is with women and their families, every step of the way.

If you are considering or have begun your pregnancy and parenting journey, we invite you to our center. Our team of knowledgeable and friendly staff, instructors, and volunteers will be happy to answer questions, provide access to resources and, when needed, a comfortable couch on which to rest.

"I enthusiastically recommend Blossom to all of my pregnant patients. In my opinion, it is the best center in the Bay Area for support, classes and information related to pregnancy and becoming a mother. Blossom offers a wide range of wonderful courses that are small, intimate and are led by very dedicated instructors. The atmosphere there is very nurturing and allows women to connect with many others who are going through the same transition into parenthood. Many of my patients have made important long lasting friendships with others they have met there."

-Dr. Jan Rydor, Assistant Clinical Professor at Stanford University Medical Center, Center of Inte5e & Andes, 55 Pregnancy Companion"

Blossom offers a comprehensive range of resources and services for all your preconception, pregnancy, birth and parenting needs. As a community non-profit, we are built around the needs of our families. If there are resources that you are looking for, check with us - chances are we can help you!

- Yoga
  We are known for our daily prenatal yoga classes taught by highly-trained instructors. We also offer Mom & Baby Yoga, Mom & Toddler Yoga, Vinyasa Flow, special workshops and teacher training. You will find the perfect class for beginners and long-time yoga practitioners alike. Childcare available for select classes.

- Childbirth Preparation Classes
  Blossom offers the largest variety of childbirth preparation classes on the Peninsula, including specialized classes like VBAC (Vaginal Birth After Cesarean) Prep, Dad's Prep, and more. We also offer Baby Care, Breastfeeding, and more to help you prepare for baby.

- Parenting Classes and Parent Baby Groups
  Our popular parent baby groups offer a facilitated space for new parents to gather and share their experiences, triumphs and challenges, with specific groups to support breastfeeding and postpartum mood and challenges. Our Infant Massage and Baby Sign Language classes help increase the parent-baby bond.

- Blossom Beansstalk Resale and Retail Boutique
  Our Beansstalk Boutique offers a variety of gently used, high-quality maternity and baby clothing, toys, books, and gear at fantastic prices. We also carry new retail items: yoga accessories, herbal products and more.

- List of Local Birth & Parenting Professionals
- Lactation, Sleep, and Babywearing Consultations
- Lending Library
- Professional Development Courses
- Community Events, Talks and Film Showings
- Community Outreach and Scholarships
- Volunteer Opportunities
- Birth Tub Rentals
- Room Rentals

Optional Lifetime Membership
Join the Blossom Membership Program and start saving on classes and resources! In addition, you can access many members-only perks, which include making a contribution to our scholarship fund for moms in need. Our introductory Lifetime Membership at $99 is a tax-deductible donation.

As a non-profit resource center (EIN 553-692-6943) we invite you to support us through tax-deductible financial contributions and in-kind donations. Classes cover only a portion of our expenses and we depend on grants and generous individual financial gifts to keep serving the needs of our community. If you are interested in making a donation, we would love to discuss our ongoing needs and future.

We look forward to welcoming you to Blossom during our Office Hours:
Monday - Friday, 10:00am - 2:00pm
and by appointment
or visit us online:
www.blossombirth.org
Since 1999, Blossom has been a trusted nonprofit organization that provides resources and services for a healthy, informed, and confident pregnancy and parenting journey!
Dear Friends,

Welcome to Blossom’s first ever Annual Report!

Blossom continues to be the trusted gathering space for new and expectant families in Silicon Valley for building community, finding resources and growing into their role as parents!

For those like us, who like to see the evidence behind these statements, below are a few numbers relating to Blossom’s operations:

- Families from over 25 cities across the Bay Area visit Blossom;
- The number of families utilizing Blossom’s services has grown by 62% in the last four years;
- 2000 families preregistered for our prenatal and postpartum classes last year;
- Blossom is the only location that offers eight types of childbirth preparation classes to meet specific needs of families;
- There have been over 8000 check-ins for our yoga and parent baby group offerings in the last year;
- Blossom is the only location in the Bay Area offering daily prenatal yoga taught by highly trained instructors;
- Since last year, Blossom has doubled its lifetime membership to over 500 families;
- In the last year, Blossom has offered 100+ in-home consultations expanded to offer lactation, sleep and babywearing support in the comfort of our clients’ homes;
- Blossom’s operating budget has increased by over 76% in the last four years; and
- There are over 100 local providers who have chosen to be listed in our database of community resources for new and expectant families.

In particular, 2015 has been a year of significant growth for Blossom - we launched Blossom 2.0 and Mom-Baby Spanish Yoga. We hope you will enjoy reviewing our annual report to learn about the happenings at Blossom in 2014-2015.

We are very thankful to our community for supporting Blossom’s mission to provide resources and services for a healthy, informed and confident pregnancy and parenting journey.

It has been an honor to serve the Bay Area community for over 16 years and we look forward to continuing to welcome new families through our doors. As they say, it takes a village to raise a child, and Blossom is that village for many families in the Silicon Valley!

Sincerely!

Gauri Manglik, on behalf of Blossom’s Board of Directors
2015: Year in Review

Events: Building Community, creating connections

Birth and Family Fair on April 19 with a sold-out keynote address by Dr. Harvey Karp, internationally acclaimed author of *The Happiest Baby on The Block*.

Over 900 families attended our Halloween Carnival, by far the largest local Halloween event for families with young children. We were honored to host the mayor of Palo Alto and join with local businesses for this annual event.

New Website! Our new website is mobile friendly, more easily searchable and includes an online password-protected forum for members to connect and communicate. Check it out!

Highlighting Successes

We honored Bay Area Maternity (BAM) with our Mother’s Day Achievement Award for the excellent midwifery care they provide to Bay Area families.
Community Service

Blossom offered a pilot Spanish Mindfulness-based Mom Baby Yoga in partnership with the Fair Oaks Community Health center in Redwood City, CA.

New Initiative! Blossom 2.0 is an innovative, women-led community initiative that supports parents seeking new ways of working while raising a family. We provide a spectrum of tools and resources, including a collaborative community, co-working resources, career services and support, networking and mentoring opportunities and on-site child care.

Leader in Professional Development

Blossom provides professional development for birth and parenting professionals by offering doula workshops and continuing education. We also hosted talks by international birth experts Dr. Michel Odent and Dr. Kerstin Uvnas-Moberg.
Financials

* For Year Ending Dec. 31, 2014

Financials

Income $421,823
Expenses $350,118

Classes at a Glance

<table>
<thead>
<tr>
<th>Class</th>
<th>1st trimester</th>
<th>2nd trimester</th>
<th>3rd trimester</th>
<th>0-1 months</th>
<th>1-3 months</th>
<th>3-6 months</th>
<th>6-12 months</th>
<th>12-18 months</th>
<th>18+ months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal Yoga/ Fitness</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Childbirth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypnobirthing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childbirth Prep Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childbirth Prep Intensive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VBAC Prep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childbirth Prep Refresher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort Measures for Labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dad's Labor Prep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breastfeeding Basics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happiest Baby on the Block</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent-Baby Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant Massage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mom &amp; Baby Yoga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postpartum Pilates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby Sign Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music Together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mom &amp; Toddler Yoga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“I enthusiastically recommend Blossom to all of my pregnant and postpartum patients. In my opinion, it is the best center in the Bay Area for support, classes and information related to pregnancy and becoming a mother. Blossom offers a whole range of wonderful courses that are small, intimate and are lead by very dedicated instructors. The atmosphere there is very nurturing and allows women to connect with many others who are going through the same transition into parenthood. Many of my patients have made important long lasting friendships with others they have met here.”

- Dr. Jan Rydfors, Founder of the Freyja Clinic, Adjunct Clinical Professor at Stanford University Medical Center & Creator of the “Pregnancy Companion” App for iPhone and Android.

“Blossom 2.0 is tackling the childcare puzzle with an empathy and compassion that will hopefully become the default for all of our employers. Through their pilot program, I have relished working alongside other like-minded parents while our kids are taken care of by a team of professionals right next door. The environment is quiet, clean, and supportive, and the fact that my 8-month-old is nearby eliminates the need for pick ups, drop offs, and pumping, which is an absolute win.”

- Natasha Yeoman
  Blossom Mom
Appendix D. NCP Course Outcome Evaluation Questionnaire.

Natural Childbirth Prep Course Outcome Evaluation Questionnaire

You are invited to participate in a self-administered online survey regarding the Natural Childbirth Prep course at Blossom. The purpose of this survey is to gather information about your experience of the course and to help Blossom evaluate the effectiveness of the course. Additionally, data collected may be used by the instructor to modify and improve the course.

Please take the time to read each question carefully and respond as openly and honestly as possible. The questionnaire will take between 10 and 20 minutes to complete and must be completed in one sitting. If you close your browser, you will lose any responses you previously entered. Please note that you can select "back" to amend your responses at any time before you submit your answers.

Participating in this survey is voluntary. By submitting your questionnaire responses you consent to participating. The information gathered will remain confidential to the degree permitted by the technology used. Individuals will not be identified and only group or aggregate data will be reported. In the event of any publication or presentation resulting from the survey, no personally identifiable information will be shared. Submitted comments will not be attributed to any individual demographic characteristics. These comments will be analyzed using content analysis. Anonymous quotes from submitted comments will be used throughout the report to give "voice" to the quantitative data.

There are no anticipated risks in participating in this survey beyond those experienced in everyday life. Some of the questions are personal and might cause discomfort. In the event that any questions asked are disturbing, you may stop responding to the survey at any time.

You can ask questions about this survey in confidence. Questions and comments concerning this project should be directed to Florence Oxenham: florence.oxenham@gmail.com / Ph: 415-518-0403.

This questionnaire is accessible in alternative formats. If you need any accommodations in order to fully participate in the survey, please contact Florence Oxenham (contact details above).

Both the instructor of the course and Blossom as a whole value the information you provide.

For your participation, you will receive a $10 Blossom Beanstalk voucher and free admittance for two to the upcoming San Francisco Birth & Baby Fair. We are collecting respondents’ email addresses to confirm participation only. Thank you for your time and participation!

* Required

1. Email address *

About You

2. Which Natural Childbirth Prep course did you enroll in? *

   Mark only one oval.

   - 8 January - 5 April 2017
   - 26 March - 15 May 2017
   - 3 May - 21 June 2017
   - 11 June - 6 August 2017
   - 2 August - 20 September 2017
3. How many of the sessions did you attend? *  
   *Mark only one oval.*  
   ○ All 8 sessions  
   ○ 6-8 sessions  
   ○ 4-6 sessions  
   ○ fewer than 4 sessions

4. Was this your first time taking a natural childbirth course? *  
   *Mark only one oval.*  
   ○ Yes  
   ○ No

5. Did you take this course as a first-time expectant mother? *  
   *Mark only one oval.*  
   ○ Yes  
   ○ No

6. Who attended the Natural Childbirth Prep course with you? *  
   *Mark only one oval.*  
   ○ Intimate Partner  
   ○ Other family member  
   ○ Friend  
   ○ Doula  
   ○ Alone  
   ○ Other: _____________________________

7. What trimester of pregnancy were you in at the time of course enrollment? *  
   *Mark only one oval.*  
   ○ 1st trimester (1-12 weeks)  
   ○ 2nd trimester (13-27 weeks)  
   ○ 3rd trimester (28 weeks – 40+ weeks)

8. What was your age at the time of course enrollment? *  
   *Mark only one oval.*  
   ○ ≤19 years of age  
   ○ 20-24 years of age  
   ○ 25-29 years of age  
   ○ 30-34 years of age  
   ○ 35-39 years of age  
   ○ 40-44 years of age  
   ○ 45+ years of age
9. **Where did you give birth to your most recent baby? *\**
Mark only one oval.

- [ ] Home
- [ ] Birth Center
- [ ] Hospital
- [ ] Other: __________________________________________

10. **Did you attempt a vaginal birth for your most recent baby? *\**
Mark only one oval.

- [ ] Yes
- [ ] No

11. **What type of birth did you subsequently have? *\**
Mark only one oval.

- [ ] Cesarean Section
- [ ] Vaginal Birth

12. **If you had a vaginal birth, what medical interventions (if any) did you have? Check all that apply *\**
Check all that apply.

- [ ] No medical interventions
- [ ] Medical induction
- [ ] Epidural
- [ ] Other pain-relieving medication
- [ ] Intravenous (IV) drip
- [ ] Episiotomy
- [ ] Vacuum extraction
- [ ] Forceps
- [ ] Not applicable
- [ ] Other: __________________________________________
13. What was your total combined family income for your household in the past 12 months? (Optional) Mark only one oval.

- <$25,000
- $25,000-$50,000
- $50,000-$75,000
- $75,000-$100,000
- $100,000-$150,000
- $150,000-$200,000
- $200,000-$250,000
- $250,000-$300,000
- $300,000
- Don’t know/Not sure
- Other:

14. What is your highest formal educational qualification? (Optional) Mark only one oval.

- High school diploma or equivalency (GED)
- Associate degree (junior college) or vocational degree/license
- Bachelor’s degree
- Master’s degree
- Doctorate, Professional (MD, JD, DDS)
- Other:

15. Which of the following categories describes your race or ethnicity? Check all that apply (Optional) Check all that apply.

- White/Caucasian
- Hispanic, Latino, or Spanish origin
- Black or African American
- American Indian or Alaska Native
- Asian
- Middle Eastern or North African
- Native Hawaiian or Other Pacific Islander
- Other:

Knowledge, attitudes, and opinions about natural childbirth BEFORE taking the Natural Childbirth Prep Course
16. What motivated you to take the Natural Childbirth Prep course? *


17. What does the term “natural childbirth” mean to you? *


18. How much knowledge of childbirth did you have BEFORE you took the Natural Childbirth Prep course? *

Mark only one oval.

☐ A lot of knowledge
☐ Some knowledge
☐ No knowledge

19. The following statements relate to your knowledge of childbirth BEFORE taking the Natural Childbirth Prep course. For each of the statements, indicate whether you "Strongly agree", "Somewhat agree", "Neither agree nor disagree", "Somewhat disagree" or "Strongly disagree". *

Mark only one oval per row.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt knowledgeable about childbirth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt knowledgeable about various comfort measures for labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt knowledgeable about my options for labor and delivery medications and interventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt knowledgeable about the risks and benefits of labor and delivery medications and interventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
20. **The following statements relate to your feelings about childbirth BEFORE taking the Natural Childbirth Prep course. For each of the statements, indicate whether you "Strongly agree", "Somewhat agree", "Neither agree nor disagree", "Somewhat disagree" or "Strongly disagree". * Mark only one oval per row.**

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt fearful of childbirth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt fearful of labor pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt anxious about delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt anxious about having adequate support from my partner/coach during labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt anxious about taking care of a newborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. **The following statements relate to your sense of childbirth self-efficacy BEFORE taking the Natural Childbirth Prep course. For each of the statements, indicate whether you "Strongly agree", "Somewhat agree", "Neither agree nor disagree", "Somewhat disagree" or "Strongly disagree". * Mark only one oval per row.**

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt confident in my ability to cope with labor pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt confident in my ability to voice my birth preferences to medical personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt confident in my ability to have a vaginal birth without interventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt confident in my ability to take care of my newborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Satisfaction with Course Structure**

Thinking about how satisfied you were with the course structure, please answer the following questions on a scale of 1 to 5 where 1 indicates "Not at all satisfied" and 5 indicates "Highly satisfied".

22. **How satisfied were you with the duration of the entire course? * Mark only one oval.**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Highly satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. How satisfied were you with the duration of each individual session? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

24. How satisfied were you with the time of the individual sessions? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. How satisfied were you with the location of the course? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. How satisfied were you with the physical environment of the classroom? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. How satisfied were you with the number of participants in the sessions? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

28. How satisfied were you with the performance of the instructor? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. How satisfied were you with the level of opportunity given to students to participate in the sessions? *
Mark only one oval.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all satisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Usefulness of Course Topics**

Thinking about how useful you found the course topics, please answer the following questions on a scale of 1 to 5 where 1 indicates "Not at all useful" and 5 indicates "Highly useful".

30. **How useful was the topic: coach/partner preparedness?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. **How useful was the topic: proper nutrition and exercise?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

32. **How useful was the topic: stages of labor?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

33. **How useful was the topic: evidence-based care (interventions and medications)?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

34. **How useful was the topic: complications and cesarean sections?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

35. **How useful was the topic: compiling birth preferences (also known as a birth plan)?** *

*Mark only one oval.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
36. How useful was the topic: postpartum preparation (infant care, supplies, and breastfeeding)? *

Mark only one oval.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all useful</td>
<td></td>
<td></td>
<td></td>
<td>Highly useful</td>
</tr>
</tbody>
</table>

Satisfaction with Course Outcomes

37. The following statements relate to course outcomes. For each statement, indicate whether you "Strongly agree", "Somewhat agree", "Neither agree nor disagree", "Somewhat disagree" or "Strongly disagree". *

Mark only one oval per row.

<table>
<thead>
<tr>
<th>The course provided the information that I needed</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The course prepared my coach/partner to support me in labor and delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course reduced my fear of childbirth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course reduced my fear of labor pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course reduced my anxiety about delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course gave me courage for labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course gave me courage for delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After taking the course I felt prepared for a vaginal birth without medical interventions or medications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After taking the course I felt knowledgeable about the risks and benefits of labor and delivery medical interventions and medications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course gave me confidence to voice my birth preferences to medical personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course gave me confidence in my ability to meet my newborn’s needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General Comments
38. How do you feel about your most recent birth experience? (Optional)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

39. Was there anything specific that you learned in the course that helped you during your labor and delivery? (Optional)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

40. Was there anything that was NOT covered in the course that may have helped you during your labor and delivery? (Optional)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

41. Based on your experience, how likely are you to recommend Natural Childbirth Prep course at Blossom to others? *
Mark only one oval.

0 1 2 3 4 5 6 7 8 9 10
Not at all likely Extremely likely

42. What else would you like to share about your experience with the Natural Childbirth Prep course at Blossom? (Optional)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
# Appendix E. Program Competencies Matrix.

<table>
<thead>
<tr>
<th>Competency</th>
<th>Method of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Select quantitative and qualitative data collection methods appropriate for a given public health context</td>
<td>I created a questionnaire to collect both qualitative and quantitative data—using Likert scales, Likert-type scales, and open-ended questions.</td>
</tr>
<tr>
<td>6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels</td>
<td>In the introduction section of my capstone paper I discuss the various ways in which certain groups of women (minority women, non-Hispanic black women, the uninsured, the poor, those with lower levels of education) are at increased risk for maternal mortality and morbidity and adverse birth outcomes compared to their non-black, wealthy, insured, and/or highly educated counterparts.</td>
</tr>
<tr>
<td>11. Select methods to evaluate public health programs</td>
<td>This project aimed to evaluate the outcomes of a childbirth education program. One of my tasks was to determine which evaluation method would be most appropriate. We used a non-experimental cross-sectional survey sample design.</td>
</tr>
<tr>
<td>16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making</td>
<td>As Lead Evaluator, I was tasked with overseeing the evaluation design and implementation process. One of my first tasks was to establish clarity of what Blossom wanted to achieve through the pilot evaluation. I collaborated closely with my preceptor and elicited input from Blossom Board members and outside evaluation experts.</td>
</tr>
<tr>
<td>22. Apply systems thinking tools to a public health issue</td>
<td>This project demonstrates how problems in public health tend to be complex with many actors, institutions, and risk factors involved. There are many interacting and adaptive parts and actors that influence maternal morbidity, mortality, and birth outcomes. By including key stakeholders in a structured participatory process, taking a mixed-method approach to evaluation, and looking at interactions between actors, as well as outcomes, we aimed to capture the complexities inherent in real-world public health problems.</td>
</tr>
</tbody>
</table>
### Appendix F. Fieldwork Goals, Objectives, and Activities.

#### Goal 1: General familiarization with the key dimensions of maternal health (in U.S. and California)

<table>
<thead>
<tr>
<th>Objective(s)</th>
<th>Activities</th>
<th>Start/End Date</th>
<th>Who is Responsible</th>
<th>Tracking Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Become familiar with Blossom Birth’s core mission, vision, values, and target population</td>
<td>July – August 2017</td>
<td>Flo (MPH Student) and Dominique (Preceptor/Blossom Executive Director)</td>
<td>Dominique will give Flo access to Blossom’s materials (strategic plan, for example) and introduce Flo to Blossom’s staff as well as orient her to Blossom’s day-to-day operations</td>
</tr>
<tr>
<td></td>
<td>• Review Blossom website, founding documents, and all promotional and program materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Meet with Executive Director, Board members, and staff for orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>Learn about the different aspects of maternal health and how they relate to Blossom Birth’s mission and vision</td>
<td>August – October 2017</td>
<td>Flo (MPH Student)</td>
<td>Flo will produce a background paper on the public health issue (maternal health outcomes) that Blossom addresses through its mission, vision and values</td>
</tr>
<tr>
<td></td>
<td>• Conduct a literature review of maternal health issues in the United States and in California (the need/problem that Blossom addresses) using online research databases, journals and websites</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Write a background/intro section on maternal health outcomes in U.S. and California</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Goal 2: Understand the key components of impact evaluation

<table>
<thead>
<tr>
<th>Objective(s)</th>
<th>Activities</th>
<th>Start/End Date</th>
<th>Who is Responsible</th>
<th>Tracking Measures</th>
</tr>
</thead>
</table>
| 1) Learn about different impact evaluation tools and how they can be utilized to evaluate Blossom Birth programs. | • Reach out to Dr. Kelly L’Engle who teaches MPH 636 (Program planning, evaluation and management)  
• Review MPH 636 course materials  
• Consult other experts and professionals in data collection/evaluation as well as web and text sources  
• Consider case-studies and best practices | August – September 2017 | Flo (MPH Student) and Dr. Kelly L’Engle (USF Professor) | Flo will provide Dominique with materials to review on impact assessment tools                             |
<p>| 2) Become familiar with questionnaire development                          | • Consider using questionnaire as a mixed-method tool (utilizing Likert and Likert-type scales and open-ended questions)                                                                                   | October                 | Flo (MPH Student)                                                                 | Flo will share with Dominique ideas on how to collect data, including the mixed-method questionnaire     |</p>
<table>
<thead>
<tr>
<th>Objective(s)</th>
<th>Activities</th>
<th>Start/End Date</th>
<th>Who is Responsible</th>
<th>Tracking Measures</th>
</tr>
</thead>
</table>
| 1) Design Evaluation Questionnaire | • Identify course outcomes to measure/evaluate  
   • Identify survey participants/criteria for participation  
   • Develop questions, Likert scales, and Likert-type scales  
   • Determine incentives  
   • Write cover page outlining purpose/use of questionnaire survey, confidentiality and consent, possible risks, and contact info  
   • Create questionnaire using Google Forms | October 1-October 15 | Flo (MPH Student) and Dominique (Preceptor/Blossom Executive Director) | Flo will produce a questionnaire ready to send to survey participants by October 15 |
| 2) Implement questionnaire | • Send questionnaire survey via email  
   • Send link to survey via text message  
   • Follow up with phone call  
   • Send reminder email  
   • Mail thank you/incentives to survey participants | October 15 – October 25 | Flo (MPH Student) | |
3) **Analyze and synthesize collected data**

- Calculate median and inter-quartile range for quantitative data from Likert scales
- Calculate Net Promoter Score (NPS)
- Conduct textual/thematic analysis of qualitative data
- Create tables and graphs from quantitative data

| October 16 – November 15 |

<p>| Flo will produce a paper and presentation on capstone project with results from impact evaluation as well as background/intro and scope of work |</p>
<table>
<thead>
<tr>
<th>Objective(s)</th>
<th>Activities</th>
<th>Start/End Date</th>
<th>Who is Responsible</th>
<th>Tracking Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Demonstrate leadership abilities as a collaborator and coordinator of an evidence-based public health program</td>
<td>• Spearhead/lead the impact evaluation in collaboration with Preceptor</td>
<td>July 2017 - ongoing</td>
<td>Flo (MPH Student)</td>
<td>Flo will provide recommendations for Blossom’s current and future childbirth education program to be presented to Blossom’s Board of Directors and staff Flo will meet with Dominique (Execute Director) to discuss next steps with implementing recommendations Flo will communicate in a clear and timely manner with her Preceptor and other stakeholders Flo will act in a manner that is respectful, polite, professional and dignified and abide by USF student and Blossom codes of conduct.</td>
</tr>
<tr>
<td></td>
<td>• Convene and facilitate meetings with Preceptor and other relevant stakeholders to discuss progress and plan next steps – also take and distribute minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Work on improvement of the NCP course and implementation of recommendations (for example grant writing and working on expanding services to underserved populations—starting with a needs assessment in the target population).</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Appendix G. Fieldwork Time Log

## Master of Public Health Program

**FIELDWORK TIME LOG**

<table>
<thead>
<tr>
<th>Student Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student’s Name: Florence Oxenham</td>
</tr>
<tr>
<td>Student’s Phone: (415) 518-0403</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preceptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preceptor’s Name: Dominique Vincent</td>
</tr>
<tr>
<td>Preceptor’s Phone: (312) 852-4330</td>
</tr>
<tr>
<td>Organization: Blossom Birth Services</td>
</tr>
<tr>
<td>Student’s Start Date: 3 July 2017</td>
</tr>
</tbody>
</table>

## Time Log for (Check One):

___ Spring 2017  
___ Summer 2017  
**X** Fall 2017  
___ Spring 2018

<table>
<thead>
<tr>
<th>Week</th>
<th>Total # of Hours for Week</th>
<th>Preceptor Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Sept. 4-6)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>2 (Sept. 11-13)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>3 (Sept. 18-20)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>4 (Sept. 25-27)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>5 (Oct. 2-4)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>6 (Oct. 9-11)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>7 (Oct. 16-18)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>8 (Oct. 23-25)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>9 (Oct. 30 – Nov. 1)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>10 (Nov. 6-8)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>11 (Nov. 13-14)</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>12 (Nov. 20-21)</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H. Student Evaluation of Field Experience.

Master of Public Health Program
Student Evaluation of Field Experience

<table>
<thead>
<tr>
<th>Student Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student's Name: Florence Oxenham</td>
</tr>
<tr>
<td>Student's Phone: (415) 518-0403</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preceptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preceptor's Name: Dominique Vincent</td>
</tr>
<tr>
<td>Preceptor’s Phone: (312) 852-4330</td>
</tr>
<tr>
<td>Organization: Blossom Birth Services</td>
</tr>
<tr>
<td>Student's Start Date: 4 September 2017</td>
</tr>
</tbody>
</table>

Please use the following key to respond to the statements listed below.

<table>
<thead>
<tr>
<th>My Field Experience...</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributed to the development of my specific career interests</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Provided me with the opportunity to carry out my field learning objective activities</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Provided the opportunity to use skills obtained in MPH classes</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Required skills I did not have</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Please list: Using statistical software (such as Stata or SPSS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required skills I have but did not gain in the MPH program</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Please list: Textual analysis of qualitative data (my sociology training came in useful here)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Added new information and/or skills to my graduate education</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Please list: Questionnaire development and implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenged me to work at my highest level</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>Served as a valuable learning experience in public health practice</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td>N/A</td>
</tr>
<tr>
<td>I would recommend this agency to others for future field experiences.</td>
<td>Yes</td>
<td>NO</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>My preceptor...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was valuable in enabling me to achieve my field learning objectives</td>
</tr>
<tr>
<td>Was accessible to me</td>
</tr>
<tr>
<td>Initiated communication relevant to my special assignment that he/she considered of interest to me</td>
</tr>
<tr>
<td>Initiated communication with me relevant to general functions of the agency</td>
</tr>
</tbody>
</table>
2. Would you recommend this preceptor for future field experiences? Please explain.

   _____Yes   _____No   _____Unsure

This preceptor is knowledgable and competent in her area of expertise (marketing and non-profit management) and was enthusiastic and accessible most of the time. However, she lacks public health work experience and knowledge which made my fieldwork challenging at times.

3. Please provide additional comments explaining any of your responses.

   I think Blossom Birth is a great site for fieldwork provided the preceptor has a specific project in mind that meets the requirements of the MPH program. The most challenging part of my fieldwork experience was a lack of clarity regarding what Blossom wanted to achieve with the impact assessment (which I conducted) and a lack of mentorship/guidance.

4. **Summary Report**: All students are required to prepare a written summary of the field work to be submitted with this evaluation form.

   [See next page]
Summary Report:

I conducted my MPH fieldwork project at Blossom Birth Services, a Bay Area community-based non-profit organization that provides resources, services, and support to new and expectant families for a healthy, informed, and confident pregnancy and parenting journey.

My task was to design an impact evaluation of Blossom’s Natural Childbirth (NCP) Prep course. The objective of the evaluation was to explore the impact of the NCP course on participants’ feelings regarding childbirth, their childbirth experience, and their sense of childbirth self-efficacy. In short, Blossom wanted to know whether the course was effective in preparing women to have a vaginal birth with no medical interventions (or limited medical interventions only as necessary). In California, 26.6% of cesarean sections are performed on women who are at low risk for a cesarean delivery (meaning they are good candidates for a vaginal birth).

With assistance from my Preceptor, I devised a 41-item survey questionnaire which included Likert scales, Likert-type scales, and open-ended questions. The questionnaire was sent via email to women who had completed the NCP course between January and September 2017 (37 women). The survey was self-administered online. The design of our evaluation was cross-sectional and the nature of the information we gathered was retrospective.

We had 13 respondents (N=13; 35% response rate—a small sample so we had small statistical power). Respondents were predominantly white, wealthy, highly-educated, and older. We found that the NCP course is effective in preparing women for a vaginal birth with no or minimal medical interventions. However, the emphasis on “natural childbirth” and “birth plans” can have unintended negative impacts on women’s perceptions of their childbirth experience (respondents reported feelings of shame and guilt). More research needs to be done regarding the ways in which language impacts women’s childbirth experiences.

My recommendations to Blossom include delivering course content in a dispassionate and non-judgmental manner; establishing a parallel program to address women’s emotional needs following childbirth; and expanding their childbirth education program to underserved populations (considering unique needs of target population, for example Spanish language).

I learned invaluable lessons from my fieldwork experience at Blossom including the challenges of program evaluation and the need for program logic models, a team, and a budget dedicated to program evaluation.