DOULA CARE IN CALIFORNIA DURING COVID-19: THE IMPACTS OF SOCIAL DISTANCING ON A HIGH-TOUCH HELPING PROFESSION

by

Jodie Lisenbee

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Approved by:

_____
Dr. Jennifer B. Webb

_____
Dr. Virginia Gil-Rivas

_____
Dr. Margaret M. Quinlan

_____
Dr. Alicia A. Dahl

ABSTRACT

JODIE LISENBEE. Doula Care in California during COVID-19: The Impacts of Social Distancing on a High-Touch Helping Profession.
(Under the direction of DR. VIRGINIA GIL-RIVAS and DR. JENNIFER B. WEBB)

Birth doula care was uniquely impacted by hospital visitor restriction policies enacted in response to the COVID-19 pandemic. Doulas were classified as "non-essential" personnel and thus generally excluded from providing in-hospital childbirth support. Research demonstrates that birth doulas, who attend approximately 6% of births, have significant positive impacts on various maternal and infant health outcomes, including psychological well-being. The present study drew upon social action theory to highlight the role that doulas played in supporting their clients' self-change processes (e.g., problem-solving, outcome expectancies, self-efficacy, goal structures, cognitive schemas), which in turn influenced the extent to which pandemic-related disruptions to socio-environmental contexts threatened perinatal health outcomes. This research employed a methodologically rigorous, contextually bound, qualitative case study design to examine the impacts of visitor restriction policies and other contextual factors on doula services in the San Francisco Bay Area. This highlighted ways in which doulas adapted their services to continue delivering care and supported their clients in adapting to giving birth during the unusual circumstances of the 2020 Coronavirus disease outbreak. In-depth, semi-structured telephone interviews were conducted with 15 birth doulas, paired with a brief online survey. Findings contribute to our broad knowledge of the impacts of COVID-19 on maternal and child health care delivery and garner a more nuanced understanding of psychosocial interventions that may underlie the demonstrated positive effects of doula care on health outcomes. Theoretical and practical implications are discussed.

Keywords: doula, social action theory, birth, COVID-19

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INTRODUCTION

On March 13, 2020, the San Francisco Department of Public Health (SFPHD) issued an order placing restrictions on hospital visitations in response to the growing urgency surrounding the unprecedented Coronavirus outbreak, initially effective through April 30, 2020. It later extended (City and County of San Francisco Department of Public Health, 2020). National news outlets reported that the San Francisco Bay Area, and California more broadly, "set the tone" for the rest of the US on Coronavirus responses, including issuance of the first statewide stay-at-home order (Fuller & Arango, 2020). The novel coronavirus, or COVID-19, is a highly contagious respiratory illness, spread mainly from person-to-person contact and via "community spread" in some areas (CDC, 2020a). San Francisco's hospital visitation measure was one of many diverse, wide-ranging efforts to slow the disease's transmission across the globe, including restrictions on non-essential gatherings, travel, services, and movement of goods, mobilization of resources, redirection of public health infrastructure, and acceleration of research and innovation (World Health Organization, 2020). This particular order from San Francisco's health officer, which was quickly replicated by public health departments across the broader Bay Area, mainly excluded "Visitors and Non-Essential Personnel" from entering hospitals.

One such class of affected personnel that is sometimes deemed "non-essential" are *doulas*. Birth doulas provide physical, emotional, and informational support to mothers during childbirth and the immediate postpartum (DONA International, n.d.). Extensive research has demonstrated the positive impacts of doulas on maternal and child health outcomes, including psychological well-being (e.g., reduced anxiety; Gruber, Cupito, & Dobson, 2013). Systematic reviews report that continuous support from a birth doula reduces the likelihood of cesarean

delivery, the length of labor, and the use of epidural (Hodnett, Gates, Hofmeyr, & Sakala, 2013), among numerous other benefits for both mother and infant.

Doulas are most often independently contracted by pregnant women and their families; however, a variety of business models exist in addition to private hire, including agency models, doula co-ops, hospital-employed doulas, and non-profit organizations (DONA, 2015). Oregon and Minnesota passed legislation in 2012 and 2013, respectively, implementing third-party reimbursement for doula services through Medicaid, making them the only states in which some doula care is reimbursable by health insurers (Kozhimannil & Hardeman, 2016). As a result, the out-of-pocket cost of hiring a doula is prohibitive to many families, making it a selectively available resource of higher socioeconomic status (Kozhimannil, Hardeman, Attanasio, Blauer-Peterson, & O'Brien, 2013). Further, the doula profession is not often financially rewarding. One national sample of 471 certified doulas found that only 20.3% of doulas earned more than $5,000 gross income in 2002 (Lantz, Low, Varkey, & Watson, 2005). This contributes to a lack of demographic diversity among birth doulas, who are primarily white, well-educated married women with children living in two-income households (Lantz et al., 2005). Unsurprisingly, the demographic makeup of doulas' clients largely mirrors these trends. Surveyed doulas report that 84% of their clients are married and that racially/ethnically, their clients are 84% white, 6% African American, 7% Hispanic, and 3% other race/ethnicities (Lantz et al., 2005).

These access-related factors contribute to the limited utilization of doula services. In 2012, about 6% of births surveyed in a large national sample were attended by a doula (Declercq, Sakala, Corry, Applebaum, & Herrlich, 2013). California, which sees a somewhat higher prevalence of doula care as compared to national averages, reported that about 9% of births were attended by a doula in 2016 (Sakala, Declercq, Joynt, & Turon, 2018). The current nature of

doula care, in which doulas attend less than 10% of births and are privately hired in most instances, rendered these services uniquely vulnerable to hospital restrictions on outside visitors in response to the Coronavirus outbreak.

In an electronic toolkit of recommendations for doulas published on March 12, 2020, DONA International, the leading doula certification body, urged doulas to begin preparing to support clients in new ways (e.g., prenatal consultations via teleconference, use of personal protective equipment, infection control protocol, supporting women at home for as long as possible before transferring to the hospital; DONA International, 2020). Additionally, this publication reviewed the impacts of hospital policies during the 2003 SARS outbreak and encouraged doulas to begin discussing with clients accordingly.

Within theory, steps became realities, as hospitals began enforcing policies limiting laboring women to one support person. For example, on March 18, 2020, the University of California at San Francisco (UCSF) issued a letter to pregnant families planning to deliver at the UCSF Birth Center (Appendix A), providing information about the SFPHD's March 13th Order of the Health Officer on visitor restrictions and clarifying: "What this means is that each Birth Center patient can identify one person to be their designated support person during their stay. Examples of a support person are a family member, friend, or doula."

Meanwhile, on social networking sites, doulas across the San Francisco Bay Area shared information informally about hospital policy changes affecting their clients. For example, one doula in the present study's sample shared an update via Facebook: "CPMC Mission Bernal is closing its labor unit Saturday, March 21st to prepare to care for Covid-19 patients. ALL CPMC births will be diverted to Van Ness Campus." ("Kyle," Alameda County, CA, March 19, 2020).

Across the internet more broadly, national news sources published articles with attention-catching headlines to highlight the impact of hospital visitation policies on childbearing experiences, such as, “Pregnant patients at New York-Presbyterian hospitals will reportedly give birth alone amid coronavirus concerns” (Cranley & Tubman, 2020) and “‘It felt wrong’: Mom shares story of childbirth without support person” (Holohan, 2020). Online petitions soliciting signatures of support also circulated, such as one on Change.org titled, “*Dear Governor Newsom and SFPHD: Doulas are Essential Personnel. Protect hospital access*” (Rubio-Mills, Maliya, n.d.). This was accompanied by a campaign reaching across social media sites such as Instagram, Twitter, and Facebook, with the hashtag #doulasareessential.

Despite a strong public response, hospital visitor restriction policies continued to be enforced in labor and delivery units across the Bay Area, with some exceptions, until a new order was issued on May 26, 2020, beginning to ease restrictions (e.g., permitting visitations on a “case-by-case basis”). These exceptions continued to be scarce until early 2021, after the Coronavirus vaccine rollout began. At that time, a number of the prominent Bay Area hospitals began resuming their birth doula policies. For example, the UCSF Birth Center began allowing two labor support persons (one primary caregiver, one doula) effective February 2, 2021 (UCSF Birth Center, 2021). This timeline reflects close to a year during which doulas were largely excluded from attending hospital births in person.

We are only in the early days of understanding the downstream effects of these policies for women and their families, infants born during the COVID-19 pandemic, and birth workers. During a time when the Centers for Disease Control and Prevention (CDC) recommends taking additional actions to manage stress and anxiety in response to community mental health concerns (CDC, 2020b), we must examine the impact of institutional policies that limit services known to

enact positive influences on psychological well-being. Somewhat ironically, the unique experience of giving birth during a pandemic may be a time during which the support of a birth doula could be *most* beneficial.

Thus, the present study sought to understand ways in which Bay Area doula services were impacted by visitor restriction policies, how doulas adapted their services to continue supporting clients, and the nature of doula-client relationships during the 2020 Coronavirus disease outbreak. These questions were approached qualitatively via in-depth, semi-structured telephone interviews with 15 Bay Area birth doulas, paired with a brief online survey. The following sections will review the study's guiding theoretical framework, discuss methodological tactics and rationale, describe sample characteristics and contextual factors, provide a thorough overview and interpretation of findings, and offer arguments for the study's significance.

Social Action Theory

The present study drew upon social action theory (Ewart, 1991), which offers a means through which concepts from health psychology are applied to public health promotion. Social action theory highlights "modifiable social and personal mechanisms" (Ewart, 1991, p. 932) under the individual's control while explicitly attending to broader environmental system factors. The COVID-19 pandemic demanded widespread social action at the global population level; governments and health leaders called upon individuals to reduce health-endangering behaviors to reduce the virus' transmission throughout communities and to dampen the burden on hospital systems. This call for self-protective and socially-conscious action demanded modifications to a wide variety of behavioral and psychological mechanisms, including self-regulatory behaviors (i.e., personal actions are taken in the pursuit of long-term goals, for example, health habits),

cognitive schemas (i.e., patterns of thought that organize information, for example, beliefs about oneself, one's body, or the world), social interaction processes (i.e., the ways individuals and groups interact, such as cooperation), goal setting (i.e., development of action plans towards goals), and other ways of being.

For pregnant mothers, the required shifts may have been even further pronounced. Pregnancy and the postpartum period by nature demand a high degree of behavior change and lifestyle modification strongly influenced by contextual factors in order to maintain maternal and infant health. Women who gave birth during the unique circumstances of the COVID-19 pandemic experienced two parallel and interrelated targets of public health promotion efforts. In other words, these women were required to make decisions and take actions that both 1) fostered a healthy pregnancy, childbirth, and postpartum period via recommended behaviors such as nutrition, physical activity, and sleep, and 2) protected themselves and their families from contracting COVID-19 and contributing to community spread. Both of these critical health-protective goals were vulnerable to interindividual and environmental factors such as employment status, neighborhood safety, access to healthy foods, attitudinal beliefs, family structure, transportation, social capital, and other perceived benefits and barriers.

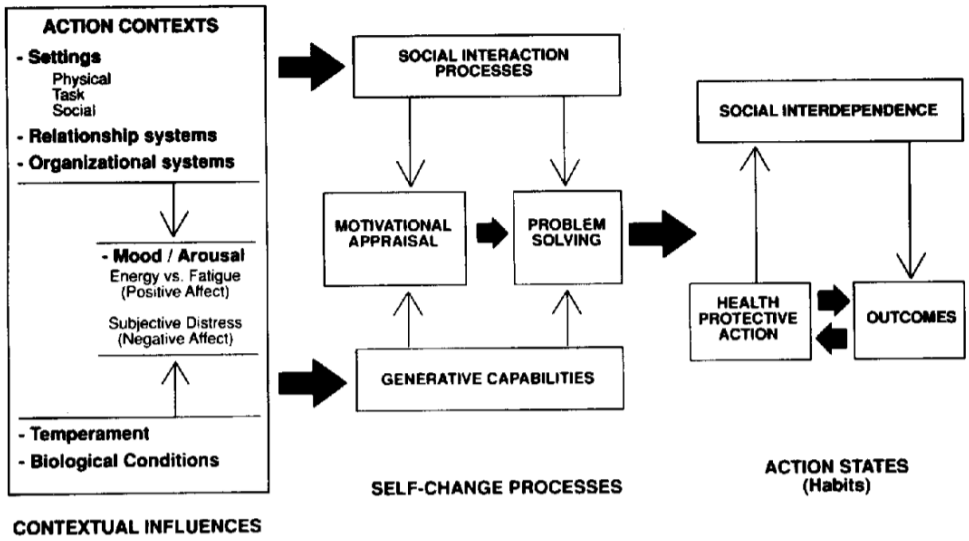
Rather than viewing women as individuals independently responsible for their health behaviors, social action theory highlights the importance of *social interdependence* or *interaction*; that is, each individual in a social relationship may facilitate or impede the ability of the other to attain desired health outcomes. Individuals in the social relationship share *interlinked scripts,* and each both give and accept benefits from the relationship (Clark & Reis, 1988). Social action theory describes that the translation of motivational appraisal processes into strategies is a

function of both knowledge/capabilities and the interpersonal skills possessed by both dyad members (Ewart, 1991).

The doula's role has previously been described as one that fosters *relational autonomy* (Meadow, 2015), meaning that doulas support clients in exercising their autonomy via values clarification, engagement, identification of options, communication skills, decision-making support, emotional support, and health education. Beyond offering hands-on labor and delivery support, doulas serve as a source of knowledge, act as advocates, and help clients adapt to changing circumstances during the childbirth process (Amram, Klein, Mok, Simkin, Lindstrom, & Grant, 2014). These aspects of doula care suggest that birth doulas may hold the potential to offer support for other adaptive processes. The present study investigated ways in which doulas attempted to support their pregnant clients in adapting to the childbirth experience during a pandemic, despite limitations to their services in light of hospital visitor restrictions. This aim explored doulas' philosophical understanding of their role, the intended impact they strived to enact on their clients and their perceptions of the extent to which their clients benefited from any adapted services or support provided.

Social action theory (Ewart, 1991) offers a framework for conceptualizing these processes (Figure 1). Disruptions to *action contexts* (i.e., components of social, environmental systems) impact a variety of *change mechanisms* (e.g., goals, expectations, strategies, capabilities), which in turn threatens *action states* (e.g., health habits, desired ends). In other words, the social-environmental context impacts self-change processes, which in turn determines health outcomes. Additionally, this theory emphasizes that social interaction processes play an integral role in the transition from old health-relevant action states to new ones, as the individual's *action capabilities* are primarily a function of close relationships.

Figure 1. *Ewart's (1991) social action theory, representing "self-regulation as a subcomponent of larger social and environmental systems"*



Note. The model specifies contextual influences that, by altering microsocial relationships and personal generative capabilities (self-change processes), empower or constrain the development of self-protective habits (action states).

The application of this theoretical framework to doula care suggests that the unprecedented landscape of the Coronavirus pandemic may have threatened pregnant women's action states (e.g., healthy habits formed during pregnancy), impacted their access to close social relationships (e.g., due to hospital visitor policies and stay-at-home orders), and threatened desired action outcomes (e.g., having a doula attend her birth, delivery preferences). Although many women who planned to work with doulas prior to the emergence of COVID-19 did not realize the birth experience they planned, doula-client relationships continued to exist, as each member of the dyad adapted to the changing healthcare context.

Social action theory suggests that doulas may have even offered a form of "social empowerment" to their clients, facilitating the transition from old pre-COVID-19 action states to new ones, by enacting influence on mechanisms for change such as problem-solving, outcome expectancies, self-efficacy, goal structures, cognitive schemas, and social interaction processes. Particularly during a time when pregnant and postpartum women may have experienced a

perceived loss of control or reduced decisional autonomy due to the introduction of healthcare restrictions in response to COVID-19, an examination of possible contributors to individual and collective empowerment was needed. Doulas may have empowered their clients by offering to scaffold towards health-protective actions, which in this context may have included both behaviors to bolster maternal and child perinatal health outcomes as well as infection avoidance measures to be utilized during their hospital stay.

Further, the idea of social interdependence described by this theoretical model suggests that *clients* likely also facilitated or impeded *doulas'* self-change processes by encouraging, informing, and enabling doulas' adaptation and expansion of their services. As doulas assessed their clients' needs and obtained feedback (explicit or implied), the same change mechanisms were likely activated, as they problem-solved ways to continue generating income, set new goals for their businesses, met remotely with clients, cognitively reframed their roles and expectations, and so on. Thus, the present study also investigated birth doulas' perceptions of their clients' influence on *them* as they adapted their services to the unprecedented pandemic landscape.

Although the two objectives described above are mainly reciprocal (i.e., the influence of doulas on clients and the influence of clients on doulas), the answers to these questions are based exclusively on *birth doulas'* perceptions. In other words, the present study aimed to assess doulas' experiences, philosophies, intentions, and perceived impacts. Dyadic data collection will be considered for future study.

Objectives

The present study pursued answers to the following questions:

1. How did doulas attempt to serve the unique psychological needs of their clients via change mechanisms (i.e., generative capabilities, motivational processes, problem-

solving, and social interaction processes) to support them in adapting to the unusual circumstances of giving birth during the Coronavirus pandemic?

2. How did doulas adapt or expand their services to continue delivering care to their clients during the novel Coronavirus pandemic? How did their clients serve to inform, facilitate, or motivate these changes?
3. What contextual influences (i.e., barriers or facilitators) did doulas encounter while delivering care during the Coronavirus pandemic?
4. Philosophically, how did doulas view their role within the context of the 2020 Coronavirus pandemic?

Researcher Statement

The research team was comprised of 1) a doctoral student in health psychology (the primary researcher), 2) a health psychologist with a research background in psychological adjustment to stressful events, 3) a clinical health psychologist with previous experience conducting qualitative research with postpartum samples, 4) a maternal health content expert with a public health background, and 5) a health communications scholar with a specialization in women's reproductive health and qualitative research methods.

The primary researcher is currently a 28-year-old white, female doctoral student in health psychology, with over three years of prior experience volunteering as a birth doula (certified with DONA International) for low-income and homeless populations in a hospital setting. Related to the doula training curriculum and experiential contact with families in the role of doula, the primary researcher admittedly feels an emotional connection to the subject matter. It acknowledges the inevitability of associated biases and subjectivity, as is natural in qualitative work (Maxwell, 2013). First and foremost, this experience as a birth worker ought to be regarded

as a strength related to a nuanced understanding of the content under investigation. Second, the primary researcher made a strong commitment to ongoing self-reflection to maintain a lens of open-minded curiosity related to the research questions. She invited the other research team members to challenge her on potentially biased perspectives throughout the research process. One additional factor influencing the researcher's positionality is her status as a graduate-level trainee in clinical health psychology. This undoubtedly colored her approach to qualitative interviewing and increased the likelihood that concepts from the psychological literature would be drawn upon in coding, analysis, and subsequent write-up.

METHODS

Study Design

A qualitative case study methodology, situated in a social constructivist paradigm, was utilized to examine the phenomenon of doula care within the bounded context of the COVID-19 outbreak in the Bay Area of California. The case study is *descriptive*. It documented a phenomenon in the real-life context in which it occurred (i.e., during the ongoing COVID-19 pandemic, rather than retrospectively; Baxter & Jack, 2008). It reflects a *social constructivist* approach in that truth was dependent on a socially constructed reality, in this case, reflective of birth doulas' perspectives and without supporting data from their clients (Hyett, Kenny, & Dickson-Swift, 2014). Further, we may consider the proposed methodology an *intrinsic* case study. We had an inherent interest in learning about this particular case and capturing its complexity, as opposed to understanding something this case represents or may be generalized to (Stake, 1995). Characteristic of intrinsic case study, the case presented a unique or unusual situation—accordingly, the subsequent write-up provides both a case description and case themes (Creswell, 2013).

A cornerstone of case study methodology is a clear definition of the "case," as the appropriate binding of a case ensures that the inquiry remains focused and reasonable in scope (Baxter & Jack, 2008). *Contextually bound* case study (i.e., specifying time and place) is one method of doing so. Accordingly, the present study was limited to the nine counties of the Bay Area in California (i.e., Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties), which was the first US state to issue a shelter-in-place order. Additionally, time was bounded to reflect the approximately 10-week time period during which the SFPHD's hospital visitor restriction mandate was most strict. Further, by limiting the

research questions' focus to independently contracted birth doula care in hospital settings, we excluded several dimensions from the bounds of the present study's scope, such as other birth professionals (e.g., midwives, exclusively postpartum doulas, nurses), different settings (e.g., birth centers, home births), and other contractual arrangements (e.g., volunteer-based or hospital-provided doulas).

The limited case described above – one geographical region, one limited time, and one type of healthcare service – may be considered a *single case* design (Yin, 1989). However, the present study examined more than one unit of analysis within the case, making it also an *embedded* design (Yin, 1989). Individual birth doulas were the units of analysis, serving as our primary informants. Examining embedded units situated within the broader case serves to better illuminate the case (Baxter & Jack, 2008, p. 550).

The use of a single contextually bound case study design with embedded sub-units of analysis was also appropriately reflective of a health psychological approach. It elucidated multiple levels of the case to better understand the bioecological system (Bronfenbrenner, 1979). That is, this case study considered factors at the levels of the individual (e.g., mental health, demographics), microsystem (e.g., social support, doula care), mesosystem (e.g., the interaction between doula and partner), exosystem (e.g., financial strain, distal social support), macrosystem (e.g., societal norms around social distancing), and chronosystem (i.e., the unique historical context of the COVID-19 global pandemic). Additionally, the chosen guiding theoretical framework of social action demanded careful consideration of contextual influences or action contexts (e.g., settings, relationship systems, organizational systems); this theoretically aligned with both a health psychological approach and contextually bound case study.

Another essential characteristic of case study methodology that fueled the decision to employ this approach is that the research and analysis may be *guided by* theory or conceptual categories (Meyer, 2001); this diverges from grounded theory or ethnography, which each more exclusively aim to uncover theoretical perspectives firsthand as an *output* of the data collected (Charmaz, 2006; Marshall & Rossman, 2010). This key difference pointed to a qualitative case study as an appropriate method, as the current investigation applied social action theory as a guiding framework from the outset.

Further, case study methodology allows more flexible use of mixed methods to gather detailed information about the case from multiple angles (Denzin & Lincoln, 2000). We collected limited quantitative data (e.g., demographics, close-ended details on services provided, credentials) to complement the more open-ended qualitative data, so a mixed-methods case study may also accurately describe the approach.

Sampling, Recruitment, & Setting

While quantitative sampling aims to achieve representativeness, qualitative sampling aims for information richness (Meyer, 2001). A purposeful snowball or chain sampling approach to recruitment was taken in order to locate "information-rich key informants" (Patton, 1990, p. 176). This process began by recruiting two well-situated Bay Area doulas (i.e., those who held leadership positions within their certifying organizations, trained new doulas, and had extensive experience of 23 and 28 years) from the primary researcher's professional network, then asking them, "Who else is a prominent doula in your community who might be well-versed on this topic as well?" This outreach yielded many of the sample's participants. The primary researcher also purposefully solicited participation from several doulas found via internet searches to maximize participant diversity on dimensions such as geographical region, race/ethnicity, and years of

experience (e.g., via the Black Women Birthing Justice's doula locator, the Roots of Labor Birth Collective), in line with the goal of information richness.

In total, approximately 80 doulas were contacted in order to recruit a final sample of 15 doulas. A qualitative study's appropriate sample size is not often defined a priori; rather, it is determined when the research questions have been adequately answered (Marshall, 1996). Thus, upon completion of 10 interviews, three members of the research team met to discuss whether various dimensions of diversity were satisfactorily represented, to consider whether saturation had been reached in relation to the research questions (Charmaz, 2006), and to identify possible knowledge gaps. The group agreed that recruiting five additional participants would increase the study's methodological rigor. Specifically, a goal was set to locate informants in an earlier stage of their doula careers, as all participants had reported 7 or more years of experience. It was hypothesized that newer doulas' perspectives could diverge somewhat from their more seasoned colleagues. The final five doulas recruited included four doulas with 3-4 years of experience who commented on the relevance of their more recent entry to the field.

The primary researcher approached doulas via email, as contact information was available online (active doulas typically maintain professional websites to advertise their services or they are listed as a member of a doula collective or other organization). Initial outreach included an explanation of the study's purpose and nature, as well as an invitation to participate. This email also informed participants that they would receive a $25 Amazon gift card for completing the study to incentivize potential participants. For those who were referred via a previous participant, the referrer's name was shared after obtaining consent to do so. Doulas who agreed to participate were then emailed a link to a Qualtrics survey requesting their informed consent to participate (provided via electronic signature), assessing their eligibility, and if

deemed eligible, followed by a brief survey battery (details below). In addition to standard content, the informed consent portion stated that the interview would be audio-recorded and encouraged participants to find a quiet place free of distractions to improve the quality of this recording. Respondents who were deemed eligible were scheduled for an approximately one-hour interview via telephone.

Human Subjects Considerations

To protect human subjects, ethical approval from the University of North Carolina at Charlotte's Institutional Review Board (IRB) was obtained before initiating participant outreach and recruitment. Although doulas are not considered a vulnerable population by the IRB, their pregnant clients are protected. Thus, one unique ethical consideration for the present study concerned maintaining the confidentiality of the participants' clients. Additionally, in light of potential consequences for specific medical providers involved in stories and examples shared by participants, anonymity was ensured for this group as well. Finally, special care was given to maintaining the participants' anonymity and emphasizing their freedom of refusal to answer any questions. These protections were explicitly acknowledged in both written informed consent and verbal review of important points. All other ethical and legal protections were implemented in line with standard IRB-approved human subjects research guidelines.

Participants

Those eligible for the study were birth doulas living in the nine counties of the San Francisco Bay Area who were contracted to work with two or more clients as the primary birth doula with estimated due dates after March 13, 2020, prior to the enactment of hospital visitor restrictions (i.e., in order to gain information about clients who doulas had already formed professional relationships with pre-COVID). Eligibility criteria also demanded that participants

had been working as a birth doula for at least one year, completed all study requirements in English, and were over 18. Although the study was open to participants of all gender identities and efforts were made to represent diversity (i.e., direct outreach to the only male birth doula in the Bay Area that could be identified via a Google search), all participants identified as female, which is reflective of the vastly female-dominated profession.

The final sample of 15 birth doulas represented various identity characteristics (see Table 1). The majority of the sample (M_{age} = 42.33) identified as white, earned an annual household income of $50,000 or more, had attended at least some college, had no physical disability, spoke more than one language, were married, had one or more children, and were politically Democrat. Despite targeted efforts to recruit doulas across the Bay Area, all respondents resided in four of the nine Bay Area counties. However, all doulas reported servicing clients in multiple counties, thus increasing geographical coverage for the clients they served and hospitals in which they worked.

Table 1

Sample Characteristics

	N (%) / M ± SD
1. Age	42.33 ± 8.95
2. Race/ethnicity	
American Indian or Alaska Native	1 (6.7%)
Asian	1 (6.7%)
Black or African American	2 (13.3%)
Hispanic or Latina	3 (20%)
Native Hawaiian or other Pacific Islander	0 (0%)
White	12 (80%)

Some other race	0 (0%)
3. Annual household income	
Less than $20,000	0 (0%)
$20,000 to $34,999	2 (13.3%)
$35,000 to $49,999	1 (6.7%)
$50,000 to $74,999	3 (20%)
$75,000 to $99,999	0 (0%)
$100,000 to $149,999	6 (40%)
$150,000 to $199,999	0 (0%)
$200,000 or more	3 (20%)
4. Educational attainment	
High school or less	2 (13.3%)
Some college / Associate's degree	5 (33.3%)
College or postsecondary degree	8 (53.3%)
5. Geographical region	
Alameda County	6 (40%)
Contra Costa County	0 (0%)
Marin County	0 (0%)
Napa County	0 (0%)
San Francisco County	0 (0%)
San Mateo County	4 (26.7%)
Santa Clara County	4 (26.7%)
Solano County	0 (0%)

Sonoma County	1 (6.7%)
6. Physical disability	
Yes	1 (6.7%)
No	14 (93.3%)
7. Speaks another language(s) in addition English	
Yes*	9 (60%)
No	6 (40%)
8. Relationship status	
Single	2 (13.3%)
Partnered but not married	1 (6.7%)
Married	10 (66.7%)
Divorced	2 (13.3%)
9. Number of children	
0	4 (26.7%)
1	1 (6.7%)
2	7 (46.7%)
3	3 (20%)
4+	0 (0%)
10. Political affiliation	
Republican	0 (0%)
Democrat	11 (73.3%)
Independent	2 (13.3%)
Another political affiliation	2 (13.3%)

Note. $N = 15$. No missing cases.

*Other languages spoken consist of: French (x4); Italian; Portuguese; Ga and Twi (Ghanaian dialects); Portuguese, Spanish, and Swahili; and Spanish.

Participants reported professional diversity as well (see Table 2), including the number of years working as a birth doula ranging from 3-28 and approximate number of births attended as the primary doula during the previous year ranging from 4-60. Additionally, multiple certifying organizations were represented, with most participants having received their training from DONA International or Cornerstone. A variety of certifications, services offered, and types of practices were also represented by this sample, which are listed below (Table 2).

Table 2

Participant Professional Characteristics

	N (%) / M ± SD
1. Doula status	
Birth doula only	7 (46.7%)
Both a birth doula and a postpartum doula	8 (53.3%)
2. Years working as a birth doula	10.40 ± 6.81
3. Clients with whom a language other than English is primarily spoken	
Less than 25%	7 (46.7)
25-50%	1 (6.7%)
51-75%	0 (0%)
Greater than 75%	1 (6.7%)
4. Approximate number of birth clients in 2019	30.47 ± 17.50
5. Births attended in a hospital in 2019	
Less than 25%	0 (0%)

25-50%	1 (6.7%)
51-75%	2 (13.3%)
Greater than 75%	12 (80%)
6. Number of clients contracted with when hospital restrictions were enacted	9.07 ± 5.67
7. Type of practice	
Solo practice	8 (53.3%)
Group practice with two to four doulas	3 (20%)
Another type of practice*	4 (26.7%)
8. Average number of birth clients per month	3.17 ± 1.63
9. Number of pro bono clients in 2019	1.93 ± 3.89
10. Number of sliding scale fee clients in 2019	7.13 ± 11.22
11. Average number of prenatal meetings per client	
Once	0 (0%)
Twice	5 (33.3%)
Three or more times	10 (66.6%)
12. Average number of postpartum meetings per client	
Once	8 (53.3%)
Twice	5 (33.3%)
Three or more times	2 (13.3%)
13. Certifications held	
Birth/labor doula certification	12 (80%)
Postpartum doula certification	7 (46.7%)
Midwife’s assistant or monotrice	1 (6.7%)
Lactation consultant (IBCLC)	0 (0%)
Certified childbirth educator	5 (33.3%)

Other certifications**	7 (46.7%)
14. Other related services offered	
Birth preparation classes	6 (40%)
Prenatal consultations	9 (60%)
Placenta encapsulation	7 (46.7%)
Sleep consultation/coaching	1 (6.7%)
Prenatal yoga	0 (0%)
Bereavement doula services	2 (13.3%)
Night nurse, baby nurse, nanny, babysitting, or mother's helper	5 (33.3%)
Hypnobirthing education	0 (0%)
Other services not listed***	5 (33.3%)
15. Number of pro bono clients in 2019	1.93 ± 3.89

Note. $N = 15$. No missing cases.

* Other types of practice consist of: Solo practice paired with a referral service/agency; solo practice paired with community practice in a collective; solo practice with a dedicated backup team.

**Other certifications consist of: Placenta Specialist/Encapsulator; Holistic Health and Nutrition Coach; Reiki, Birth Hypnotherapy; Certified Lactation Educator; Birth Doula Trainer.

***Other services consist of: Lactation education; postpartum doula, nutrition counseling; educator, podcast host, birth photographer, and branding strategist; abortion doula services; Spinning Babies education.

Data Collection Procedure

The primary researcher conducted all semi-structured interviews one-on-one with participants via telephone. She began each interview by verbally reviewing important elements of informed consent with participants, including the use of audio recording and providing an opportunity to ask questions. The Google Voice mobile application, as well as one handheld audio recording device, were used to record in anticipation that the second device may have been required as a backup in case of technological obstacles. Participant names were not used during

the interviews nor attached to any data collected or notes taken; instead, participants were asked to select a pseudonym at the interview's commencement which was used throughout the research process. Two participants requested the use of their true first names rather than adopting a pseudonym, and this wish was honored. Table 3 presents the participants' selected pseudonyms alongside a few of their demographic characteristics such that readers may better discern participant individualities when quoted in forthcoming results reporting.

Table 3

Select Participant Characteristics

Pseudonym	Age	Race/ethnicity	Geographical region	# of years' experience	Date of interview
Kyle	55	Hispanic, American Indian or Alaska Native	Alameda County	23	08/19/2020
Veronica	51	Hispanic	Alameda County	12	08/25/2020
Chrissie	55	White	Sonoma County	28	09/01/2020
Monica	45	White	Santa Clara County	13	09/07/2020
Lucy	35	White	Alameda County	7	09/12/2020
Jody	52	White	San Mateo County	8	09/15/2020
Kareema	40	Black or African American	Alameda County	12	09/30/2020
Rose	46	Black or African American	Santa Clara County	8	10/05/2020
Nina	52	White	San Mateo County	10	10/19/2020

Suzi	34	Hispanic	Alameda County	11	10/29/2020
Stella	29	Asian, White	Alameda County	10	11/02/2020
Adair	30	White	Santa Clara County	3	11/02/2020
Noemie	43	White	Santa Clara County	3	11/17/2020
Kathy	34	White	San Mateo County	4	11/18/2020
Lenore	34	White	San Mateo County	4	11/19/2020

Interview Guide

A semi-structured interview guide was developed to reflect the study's research questions (Appendix B). One initial interview with a birth doula from Charlotte, NC, was conducted in July of 2020 to pilot-test the interview guide, assess whether it functioned as intended, and ensure that any potential technological or logistical issues were discovered and addressed prior to initiating formal data collection. This interview resulted in meaningful data that closely related to the study's objectives and hypotheses, and logistically, the interview went very smoothly. No revisions were made to the interview guide following this trial run.

A total of 10 questions and corresponding sample prompts were included in the final iteration. Although this guide could have evolved as needed throughout the process as is characteristic of a social constructivist approach (Creswell, 2013), no changes were made during the data collection phase. The first question could be considered a "typical grand tour" question, which is a type of descriptive question that serves to familiarize the interviewee with the format and encourage them to elaborate (i.e., "To start, please describe what your birth doula services typically looked like pre-COVID-19"; Spradley, 1977). Other questions in the interview guide

consisted of additional descriptive questions (e.g., Please describe what aspects of your services may have continued uninterrupted, newly emerged, or that you have adapted), experience questions (e.g., To what extent have you and your clients supported one another in coping with the unique circumstances of the Coronavirus pandemic?), and one example question (i.e., Finally, please tell me about a specific client who has delivered her baby during the Coronavirus pandemic). The complete interview guide, which includes these and other questions, is provided in Appendix B.

This guide was crafted stemming from components of social action theory. Thus, these open-ended questions were designed to uncover information related to 1) action contexts, 2) change mechanisms, and 3) action states, as displayed in Figure 2 below. To probe for the first component of the model, we first asked participants to identify contextual influences that may have facilitated or impeded the delivery of their doula services. The second component of the model was investigated with a series of questions explicitly targeting doula support for client 1) expectations and goals, 2) problem-solving and strategizing, and 3) motivation and capabilities; likewise, doulas were asked how their clients supported their self-change processes. Social interaction processes were probed for via a question about bidirectional social support between doulas and their clients. Finally, client experiences were examined indirectly using an example question (Spradley, 1979), which asked respondents to recall details of one of their clients' resulting birth experience and the role that the doula played; doula outcomes were conceptualized as the adaptations made to their services.

Figure 2. *The framework underlying the interview guide's development, based on Ewart's (1991) social action theory*

This type of ethnographic interviewing involves the parallel processes of "developing rapport" and "eliciting information" (Spradley, 1979, p. 78). Regarding the first, the interviewer began each interview by dedicating time to sharing brief, relevant personal information about herself and previewing what to expect in the interview. Additionally, she explicitly welcomed the opportunity to address any questions or concerns interviewees may have held (Spradley, 1979). In line with these goals, the interviewer delivered the following opening statement:

> Hello! My name is Jodie Lisenbee, and I'm a doctoral student in Health Psychology at UNC Charlotte. Before arriving at graduate school, I also volunteered as a birth doula in San Francisco. First, thank you so much for agreeing to participate in this study, especially during this unprecedented pandemic. I'm going to ask you a series of about 10 or so questions to which there are no right or wrong answers. I'm hoping to gain your unique perspective and encourage you to reflect openly and honestly on your experiences as a birth doula. I also would like to remind you to avoid using any identifying information about your clients or their providers in order to protect their privacy. What initial questions or concerns might you have for me before we begin?

Following any discussion prompted by the interviewee's questions, which commonly centered around 1) what aspects of their work to focus their answers on (e.g., labor and delivery versus postpartum work), 2) what information they ought to avoid disclosing (e.g., names of hospitals or healthcare systems), or 3) the interviewer's past experiences with birth, the semi-structured interview was conducted. At its completion, the following closing statement was delivered:

> Thank you very much for taking the time to speak with me today and for advancing my understanding of these topics. This project will serve as my thesis project and, hopefully be published in an academic journal in the future. Is there any further information I could provide for you before our interview comes to a close?

These interviews were then transcribed verbatim by either the primary researcher or a research assistant enrolled in a master's degree program within one week of interview completion. The primary researcher listened to the recording of each interview transcribed by the research assistant to audit the transcription quality and made any needed corrections. Handwritten notes were recorded in a reflexive journal during and immediately after the interviews and during transcription auditing to increase transparency and clarify thinking around emerging findings.

Screening and Survey Instrument

Towards the goal of providing a thick description of the "case," as well as to gather details about contextual factors, an online survey (Appendix C) complemented the previously described qualitative interviews. This survey consisted of questions related to 1) eligibility, 2) details about the doula services provided by the respondent (e.g., prenatal/postpartum services, certifications, and training), 3) impacts of COVID-19 (e.g., hospital visitor restrictions, financial

implications, doula mental health), and 4) demographics. This survey included both closed- and open-ended questions. Importantly, eligibility questions were located at the beginning of the survey. Respondents were routed to the end of the survey following any answers that deemed them ineligible (i.e., due to their age, geographical location, services, or number of contracted clients). Only one individual who completed the survey was determined to be ineligible, based on geographical location.

The COVID-19 Exposure and Family Impact Survey (CEFIS; Kazak et al., 2021) was included to thoroughly assess the impact of contextual factors related to the pandemic, including potentially traumatizing events. This instrument was developed by researchers at the Children's Hospital of Philadelphia's Center for Pediatric Traumatic Stress (CPTS) and was used with permission. CEFIS data for the current study's participants are presented in Table 4. The Exposure Score is a count that measures participants' "exposure to COVID-19 and related events"; scores range from 0-25 with higher scores indicating more exposures. Some of this sample's reported exposures included having a "stay at home" order ($N = 15$), family income decreasing ($N = 14$), missing an important family event ($N = 14$), and someone in the family having symptoms or being diagnosed with COVID-19 ($N = 3$). The Impact Score is a mean of 10 items that use a four-point Likert scale to measure the impact of COVID-19 on self and family from 1 (a lot better) to 4 (a lot worse), such that higher scores indicate more negative impact. Some examples include the impact on emotional well-being (e.g., anxiety), physical well-being, ability to care for family members, and family relations. The Distress Score measures how much distress the participant experienced related to COVID-19 using one item on a 10-point scale, with higher scores reflecting greater distress. Finally, the CEFIS invites respondents to share open-ended elaboration on their responses.

No normative data nor clinical cutoffs were available at the time of administration, as the measure was developed using a rapid iterative process in response to an urgent need for such an instrument; however, initial psychometrics were published during the present study's data analysis process. Data collected between May and December 2020 from 1805 participants yielded excellent internal consistency for Exposure (α = .80) and Impact (α = .92; Kazak et al., 2021).

Table 4

COVID-19 Exposure and Family Impact Survey (CEFIS) Scores

Pseudonym	Exposure Score	Impact Score	Distress Score
Kyle	9	2.50	7
Veronica	11	2.67	8
Chrissie	10	2.75	4
Monica	6	3.00	7
Lucy	9	3.13	4
Jody	6	1.13	3
Kareema	11	3.11	7
Rose	11	2.00	4
Nina	8	3.25	7
Suzi	8	2.86	4
Stella	15	3.50	7

Adair	11	3.00	7
Noemie	6	3.14	8
Kathy	7	2.50	6
Lenore	7	3.00	6

Sample averages: Exposure Score (M = 9); Impact Score (M = 2.76); Distress Score (M = 5.93).

Importantly, the survey was distributed and analyzed with no goal of enumeration, except for the CEFIS scores described above. It is characteristic of qualitative approaches; instead, it generated more in-depth knowledge of the sample's characteristics experiences. Further, this survey instrument served to shorten the length of the qualitative interview, reducing the demands placed on participants. Participants completed this survey in approximately 32 minutes, on average.

Analysis

Miles and Huberman (1994) advocated for creating an initial "start list" of codes prior to data collection, stemming from the study's theoretical framework, research questions, or target variables (Basit, 2003). In line with this philosophical approach, *hypothesis coding*, which utilizes theory- or hypothesis-driven codes (Saldaña, 2013), was used as a lens through which to analyze the data. This method offers efficiency and focus to the coding process, and it further defines the parameters of the case study. The researchers develop codes *before* data has been collected or analyzed (see the preliminary coding system outlined in Appendix D) based upon previous literature and corresponding hypotheses. The coding process refined the coding system somewhat; thus, revisions to the codes and categories were made as the analysis unfolded.

Simultaneously, targeted *values coding* (reflective of values, attitudes, and beliefs) was conducted, to capture doulas' philosophical positioning on the role of doulas during the Coronavirus pandemic (the fourth research objective), as well as implications for their role outside of this context. Key phrases such as "It's important that" or "A doula should" served as cues during coding (Saldaña, 2013).

Following transcription, the primary researcher conducted a round of "pre-coding" (Saldaña, 2013), during which she circled critical words and phrases (i.e., those that reflected or contradicted the preliminary coding system), highlighted potentially important quotes, and applied codes preliminarily. This process was used to refine the coding scheme, adding codes within the social action theory framework (e.g., the addition of "OTHER DOULAS" within the category of relationships systems, as this was not included in the preliminary coding system yet discussed extensively by participants), deleting codes or categories that were not represented in the interviews (e.g., the deletion of "SUBSTANCE USE" which was included as a possible self-protective action or habit in the preliminary coding system yet not mentioned by any participants), and noting data that served to refute hypotheses. As mentioned previously, a reflexive journal was kept, in which brief analytic memos were written for each addition, removal, or other development in the researcher's understanding of a code or category. Additionally, brief definitions were added for each code in the final coding system and exemplars are drawn from the interview transcripts.

Transcripts were then uploaded to QSR International's NVivo 12 software for coding and analysis. Formal coding was conducted by the primary researcher, who was supported and supervised by her co-investigators. Monthly check-in/debrief meetings were held with the goals

of 1) holding the primary researcher accountable to the utmost integrity, 2) discussing emergent findings, and 3) considering methodological next steps (Lincoln & Guba, 1985).

Rigor

Several additional strategies were incorporated to bolster the study's methodological integrity. To further establish credibility, quotes reflective of the full spectrum of responses were included in the interpretation of results and subsequent write-up, intentionally highlighting all respondent voices and increasing objectivity to the extent feasible (Davies & Dodd, 2002). To enhance the trustworthiness of interpretations, the primary researcher conducted a process of member checking with interviewees within two weeks after each interview (Lincoln & Guba, 1985); the investigator provided a concise bullet-form summary of interview findings via email and invited participants to confirm or clarify key takeaways, as well as contribute additional perspectives via email, if desired. A follow-up email was sent to participants who did not respond within one week, clarifying that a subsequent non-response would be considered their implied acceptance of the provided summary. Thirteen of the fifteen participants responded and these member checks produced a handful of clarifications and corrections which were integrated into the analysis process.

A second research assistant served to increase the integrity of interpretations as well. This individual offered feedback and suggestions on the codebook prior to formal coding (e.g., possible mischaracterizations of the participants' words for exemplars, relevant code omissions, organization of the coding system). Next, she served as a second formal coder for five of the fifteen interviews (33%) and met regularly with the primary researcher for peer debriefing (Lincoln & Guba, 1985). The two coders engaged in discussion around code assignments, any needed revisions to the codebook, and subsequent conclusions throughout the process to reach

consensus. Intercoder reliability was calculated using the original code assignments made by each coder prior to peer debriefing. The overall Cohen's kappa coefficient ($\kappa = 0.69$) indicated *substantial* agreement per Cohen's interpretation guidelines (Cohen, 1960). Similar levels of substantial agreement were maintained 1) when examined at the level of the individual interview (kappa coefficients for the 5 interviews included in the statistic = 0.62, 0.65, 0.66, 0.75, and 0.77)[1], 2) when examined for each component of the social action theory model (action contexts $\kappa = 0.69$, self-change processes $\kappa = 0.62$, and action states $\kappa = 0.74$), and 3) whether examined using aggregated parent nodes or individual codes (e.g., overall kappa using motivational processes, generative capabilities, problem-solving, and social interaction processes $\kappa = 0.71$, while overall kappa using their sub-themes $\kappa = 0.69$). Together, this suggests that the macro-level kappa coefficient does not mask potentially concerning patterns at the micro-levels (e.g., significant coding bias in response to a single interview). When kappa coefficients were examined at the individual code level, approximately 16 codes were deleted or merged with other codes, based on very low kappa coefficients, substantial overlap, or lack of clarity during peer debriefing.

In keeping with the current literature, the authors recognize that Cohen's original cutoffs classifying these agreement values as *substantial* have been criticized by some scholars; thus, we offer the following defense. A kappa coefficient of 0.69 indicates intercoder agreement was 69% better than might have occurred by chance. Intercoder reliability is expected to be lower when 1) the coding system includes a large number of codes, 2) the codes index conceptually

[1] Upon considering reasons underlying the discrepancy between kappa coefficients for individual interviews, we noted that Kareema's relatively lower intercoder reliability ($\kappa = 0.62$) was unsurprising based on extensive discussion during peer debriefing to tease apart interrelated psychological mechanisms, whereas Lucy's relatively higher intercoder reliability ($\kappa = 0.77$) reflected a lesser emphasis on psychological change mechanisms largely because of her work with medical professionals who were well-versed in navigating hospital births and the virus.

sophisticated constructs with deeper "latent" meanings (in contrast to codes reflecting binary concepts, for which the statistic performs best), and 3) coding procedures allow for the application of multiple codes to a single unit of text (O'Connor & Joffe, 2020; Hruschka et al., 2004). Each of these three conditions was met in the present study (i.e., the final codebook consisted of 48 codes spanning the three components of social action theory, nuanced psychological mechanisms were the study's focal point, and nearly every data segment necessitated more than one code assignment). Thus, we argue that intercoder reliability of 0.69, after correcting for agreement occurring by chance, reflects rigorous coding practices. The use of this statistical tool promoted reflexivity and dialogue amongst research team members, improved the transparency and systematicity of what findings were included in the subsequent write-up serve to demonstrate trustworthiness to readers, particularly in relation to the extent to which coding may have been biased (O'Connor & Joffe, 2020).

To further bolster methodological rigor, data on the doula-related services respondents provide and contexts in which they work (i.e., prenatal and postpartum services, geographical region, identity characteristics and educational/professional background, and so on) were collected such that other scholars might better discern the transferability of findings to future samples and other contexts/situations (Lincoln & Guba, 1985). Related to this goal, concepts have been thoroughly described, defined, and bounded to the extent possible (Warren-Findlow, 2013). Finally, to ensure that a dependability and confirmability audit may be conducted in the future, all products of the study have been retained, including interview recordings, transcripts, raw data, process notes, diagrams, codebook and final code assignments (Lincoln & Guba, 1985).

RESULTS

Action Contexts

Settings

We examined contextual influences based on Ewart's (1991) conceptualization of settings, including the physical features of doulas' and their clients' environments, tasks routinely performed there, the interpersonal interactions characterizing their social environments, as well as the interlinked financial contexts in which each exists.

Physical. Most notably, all participants described features of health care settings and home environments (e.g., drawing comparisons between hospitals, birth centers, and home environments for labor and delivery).

Health Care Settings. Doulas continued to support hospital births, both virtually and in person. Twelve doulas reported opportunities to serve as the primary support person on some occasions, for example, if a couple preferred that the doula attend the birth so that the partner could care for other children at home. Doulas offering virtual support educated their clients prenatally about how to navigate a hospital setting and what to expect. Monica offered the analogy:

> … if you go to an airport and someone hasn't told you the realities of what you have to do to get through with security, you're going to have a really unpleasant time. It doesn't mean that you dislike airport security; it means you're talking about how to get through it so that you know the language, you know what to do, how to wear flip flops instead of lace-up boots.

Participants described that features of hospital settings looked different during the pandemic to reduce virus spread. For example, Kareema explained that "They don't have yoga

balls for, for patients anymore so if you want one, you need to bring one with you. The cafeteria is closed, so you need to bring food or have foods dropped off in this particular way.'" Nina added that, "some of the hospitals that had tubs, they weren't allowing people to use tubs at the time," and further, that for doulas, "once you were in the room, you could not leave anymore, no matter what. You have to use the restroom? You have to use the same restroom as the mom." Similar limitations were described by participants related to access to ice machines, refrigerators, and microwaves as well. Kathy confessed that during one mid-March birth, she was not permitted to leave the labor and delivery room and resorted to "just like sleeping on a chair, like covering myself with a blanket just to get some space, with my headphones in, just for a little bit."

Home Environments. Fourteen participants observed an upward trend in out-of-hospital births related to many clients' sense of unease about the risk of contamination associated with entering a hospital setting. Stella described:

> I feel like some of my clients jumped into wanting a homebirth right away, like, 'We don't want to go to the hospital during a pandemic; that seems like the least safe place for a healthy mom and a healthy pregnancy.' And so, a lot of my births in the spring switched to home births…

In general, doulas reported following their clients' lead in terms of settings for meetings. Noemie shared, "I like to meet my clients where they're at, and if they want to do all virtual, we do all virtual. If they want me to come to the home and we set up in a backyard setting with the proper precautions, I'm comfortable with that." Eleven doulas met with clients in their home environments, for prenatal appointments, and sometimes during early labor. Stella shared that for her:

> The most ideal situation is a client goes spontaneously into labor, we labor at home until they're in transition, or in those final stages of labor, and then they get to the [hospital] door and they have their baby within 2 hours or 3 hours or so after arriving there.

Others equipped their own homes with all the necessary features to enable successful virtual support. For example, Kyle described that during virtual appointments, she had a "Mary Poppins basket next to me with my demonstration uterus and pelvis and baby and every, you know, monitoring strips, and everything I could possibly need in a visit…" Some doulas' home environments were more conducive to virtual work than others. For example, Lenore described: "…my brother-in-law is a massage therapist. So, I have a table. He also does videography. So, I have a table to perform, and his girlfriend is my model … I have him as a cameraman, and I can use his massage equipment or his massage table to guide my- my families through position work or massage and touch. So, it's easy for me to do."

Tasks: Roles and Responsibilities. Ten of the fifteen doulas described ways in which their other roles and responsibilities contributed to the contexts from which they delivered doula services during the pandemic. For example, Lucy also worked as an abortion counselor, and she noted that some potential clients, particularly those inquiring about doula support for homebirths, "felt that like my level of risk since I was physically in a hospital two days a week was more than they really were willing to take on." This combined with other factors led Lucy to support two clients who, beyond their roles as birthing women, also held roles as medical professionals: "one was a doctor and one was a nurse, and so they were already like more fluent than I was in navigating hospitals..."

Five participants noted the relevance of their roles within their families, particularly as mothers. Lenore gave birth herself during the summer of 2019 and disclosed that she became

"emotional" during the interview reflecting on differences between her own perinatal experiences and that of her clients:

> I empathize a lot because I've been through it. I had such a different experience, and it was a joyful one … I didn't have to think about a pandemic … all the same pregnancy things are going on and people still have the same aches and pains that pregnant people have, but then they have this added um. Yeah… I feel grief for them even if they don't tell me that they're grieving; I feel grief for what they- for what their pregnancy could have been.

Kathy was pregnant at the time of our interview and noted that she began maternity leave earlier than planned, about 20 weeks into her pregnancy, because of bidirectional effects between her personal experience of being pregnant during the pandemic and her role as a birth doula:

> I found myself like connect- just bringing things from these births into my own experience and into my own kind of fears and anxieties and things … it's surprising actually … I really had to kind of step back and be a little more gentle with myself because, this work is very, very, intense… So yeah, it's been a very strange and interesting time to be a doula and to be pregnant right now, for sure.

Nine doulas described other roles and responsibilities that helped them sustain their businesses, such as training new doulas, providing virtual childbirth education classes or support groups, offering consultation to newer doulas on creating multiple income streams, and expanding their postpartum offerings. Adair described that "there's been a lot of weird pivots that people have been doing where they're kind of turning their business into another entity, to kind of deal with the revenue loss."

Four doulas also discussed ways in which the need to complete activities of daily living contributed to interactions with clients. Nina noted that it was "kind of an honor system," in which doulas and clients negotiated what level of risk each was comfortable with, and Chrissie described transparent conversations with her clients in which she detailed possible risk, e.g., "even though I've been staying so very um much in place … I did go to the supermarket twice this month." The necessity of these disclosures seemed particularly salient because as members of a vulnerable group, many pregnant women took extra precautions to protect their pregnancy health, such as "getting their groceries delivered and completely isolating," according to Stella.

Social Environment. Fourteen of the fifteen doulas in this sample described that their clients experienced more limited social support due to the pandemic circumstances, from family and friends, other pregnant women, healthcare providers who conducted more appointments virtually, and so on. Kyle described that doulas filled some of these social support gaps:

> I think um, having a doula has helped women to feel, A) in some way normal in her pregnancy and not so alone because we're so alone now, we don't get to see our friends, we don't get to go to the yoga class, we don't get to see the mama in line at the coffee shop that is pregnant too -- 'When are you due?' 'Who's your doctor?' We don't get that anymore.

Additionally, three participants shared that they missed the social environment of working with clients' care teams in hospital settings as well. For example, Jody lamented that her clients missed out on "the playfulness and the synchronicity and the team that built with the doula in the [labor and delivery] room." Adair elaborated that virtual support has sometimes led to tension with care providers during birth:

> …being removed from hands-on support has affected my relationship with the birth partner, with the nurses, with the midwives that attend them or the, or the OBs. It's just everything has a layer of separation to it, which adds to, kind of a miscommunication if you're not really careful and you don't know how to read the room or make yourself kind of vulnerable, so you let them know that you also don't know what you're doing. And you're very eager to go with the flow of how things happen.

Financial context. Eleven of the fifteen participants discussed the intersecting financial contexts of their clients and themselves. The contractual agreements between doulas and their clients, which hinge upon payment for agreed-upon services, made doulas financially vulnerable during the pandemic. As Kyle explained:

> …my doula contract that I had been using … for 20 years became immediately obsolete because there was no pandemic clause written into it. So now I wasn't able to deliver the services through no fault of my own, um, and we just didn't know what it meant and so the bottom line was that people were not getting the service they signed up for and of course looking to me to figure out what- what this meant for us all professionally and financially and forgive me for not being prepared for a pandemic, for me- for not being financially prepared for a pandemic…

Five doulas resolved this by issuing refunds to clients who requested them, like Kareema, who shared, "I didn't fight anyone on refunds … because I just wanted everyone to feel as safe as they could in the moment and then I also knew that I had things I could pivot into, to continue to create an income." Six doulas offered fee reductions to reflect a shift in the services they offered, like Suzi, who noted that her financial context allowed her to incur a lower income for a period, saying, "I am in a place right now in my life that I didn't need to keep uh, that number of clients,

uh so I was like, just charging them a different fee. And … I think it made people be more at ease."

Other doulas instead opted to adapt their services and largely retain their pricing structure. A few noted that at least a portion of their clients with whom they were already under contract were gracious in honoring their agreements rather than renegotiating, like Monica, who described:

> …our clients also knew that our worlds were falling apart as well, and … we're expensive. And these were people who felt that we were still providing services they had retained us for. So, we did not have people like, 'Oh we can't have you in hospitals, we want our money back.' Which was great um and … we immediately revamped and reached out to our clients and were like … 'Okay, here's what we're going to do.'

Reflecting on underlying reasons for and broader implications of the requests that many doulas received to issue full or partial refunds, Adair reflected on the devaluation of doula services during the pandemic:

> …it felt like, during the first couple months, the role of a doula was devalued for everyone, because they really saw us as a physical support person, and, and it just, yeah … it's weird to have people try to cut down your services, because I price myself based on what's sustainable for my family, you know? It's, my family is supporting your family. It's not just me. When I leave for a birth that's like 72 hours long, I'm leaving my husband at home. We don't have children, but some of these other doulas are leaving their kids at home, and it just became transactional. And, I just hate seeing women's health, and-and mental, and physical, emotional well-being and support getting devalued.

Noemie agreed with this notion, further explaining that although she shifted her practice to offer virtual services and coaching, “I feel like some people are thinking that … like, as a consumer, ‘It’s not worth my money if this person will not be able to support me in person,’ because there are still, I think a big emphasis, on in-person support for doulas.”

Relationship Systems

Participants in the sample described important relationships that contributed to their clients’ and their own social contexts. Namely, these relationship systems consisted of healthcare providers, partners, children, other family members, friends, and other doulas.

Partners. All participants discussed the role that their clients’ partners played during the pandemic. Kyle recalled that during the first days of the shelter-in-place order some hospitals, “were restricting all visitors and even um dads were being kicked out.” Once it became standard policy that at least one visitor was allowed to attend the birth, a majority of clients designated partners as their primary support person. As Stella explained, “I’m really like, working through the partner now, which in some ways is really a special opportunity for partners to feel competent and helpful through the process.”

Fourteen doulas offered live consultation to partners during labor and delivery via a variety of virtual modalities. Additionally, doulas provided partners with information and taught them skills prenatally, enabling them to serve as the sole in-person birthing partner. For example, Rose remarked:

> …it's really nice to see them feeling more motivated to just stand in the space and be not just you know, dad, because it's both of their birth and welcoming the baby, but also be the birth partner and the birth coach for mom, just feeling more motivated, because of all

> the knowledge he gained. And all the, especially the practical, they gain with how to physically support and through breathing and through massage.

Other doulas, such as Nina, also commented on some of the downsides to relying on partners in place of doulas during labor and delivery, particularly because doulas typically provide support to both members of the partnership to some extent:

> The husband is great but the husband is also someone close to them and someone that like sees them in pain and, and, and, you know just a little fearful too, I mean they're like this their wife and they don't know what to do, they don't know … if this is normal, that's normal. When we were there … there was always like that- those moments between, you know, a partner and a doula where they'd look at each other and you kind of nod at them to let them know everything's fine. That wasn't even-that wasn't there for them either.

Healthcare Providers. Fourteen of the fifteen participants reported that a range of healthcare providers, including obstetricians, midwives, and nurses, were important members of their relationship systems. A range of perspectives were shared, including Kyle's positive comment that, "hospital staff has been amazing … they have gone over and above," which contrasted with the experience of one of Stella's clients who shared that, "her prenatal care in the hospital was just really frankly, dodgy, and … she couldn't even get prenatal care and book appointments and see the same provider."

Two doulas discussed their appreciation for working alongside other members of their clients' care teams, like Monica, who shared, "I really love and admire when all of us understand our roles." Noemie described the role each fulfills, saying, "I have a good understanding of the physiological process and the care provider has a good understanding of the medical process of birth, right? So, I see it- I really see it as a counterbalance."

Family and Friends. Overall, participants reported that support from family and friends was more limited in contrast to non-pandemic times. Yet Stella commented on the continued importance of family and friends as members of her clients' relationship systems:

> …we're in this crazy, crazy time where we're feeling very disconnected from family and friends and community, and a doula kind of is on that threshold there that kind of helps you remember where you came from and what you're made, made of. And we talk a lot about like, 'What- How did your mom birth? Or your aunties? Or your grandma? And what does that mean to you? And what do you want to have the same or what do you want to have different?'

Eight of the participants supported families with other children and described challenges these clients faced related to childcare. This was a major reason that some doulas served as the primary labor companion. For example, Monica shared:

> …one client was going to have a second baby and had decided early on that the doula would be the support person in the hospital because it's not that doulas are not allowed, it's just that only one support person is allowed; and the partner would stay at home with the older child.

Other Doulas. Fourteen of the fifteen participants in this sample pointed to other doulas as important members of their relationship systems. Noemie reported coming together with "the doula community, trying to support each other. Trying to figure out, 'How can we make this work?'" Veronica participated in "a weekly meeting with a huge group of doulas to see what people are doing" and swap tips. Chrissie exchanged information with "the doula community, via Facebook or emails or texting," and Kareema received, "a daily update from other peers,

basically, about what the situation was at the applicable hospital, so that I could give my clients the most up-to-date information." Nina summarized:

> …the doulas in the Bay Area have been talking to each other a lot more and sharing this kind of information. So, there's been, it's almost like the doula community has come together to share this kind of information and share things that we can do to help clients through this… I put a database on each hospital, what they're doing what their COVID protocols are and what do they test? Do they test the mom? When do they test the mom? What's the turnaround on the test? And after the test, can they use- they can- can they use nitrous? And to be able to get that information to the source.

Organizational systems

Public Health. Eight participants noted organizational-level contextual factors that influenced their care delivery. Kyle noted that least initially, hospital visitor restrictions were dictated at the level of the department of public health. Further, public health messages, including access to "poor quality information versus high-quality information" about the virus, as Chrissie described it, greatly influenced perinatal care delivery as scientific evidence emerged. Kareema commented on the tension she felt between public health messages and hospital-level policies:

> …the uncertainty was really hard to cope with, especially because there seemed to be fairly conflicting information, or at least, the information seemed to point in one direction, and then the actions that the hospital and the medical-industrial complex were taking seems to be, like in direct opposition to that in a way, just because, I think at that point, a lot of the data seems to suggest that it didn't really impact pregnant people or

> newborns, or fetuses really, that much… So, I think there was a bit of an expectation that it might not impact birth support that much.

Healthcare Systems. Six participants shared observations that the pandemic increased the extent to which birthing people experience challenges navigating hospital systems. Kyle expressed:

> I've said this for many years, but my clients aren't necessarily scared of labor in their body, what they're afraid of is the hospital system and what they're gonna make them do and not let them do and I think what coronavirus has done has- people just feel out of control in so many ways.

Lucy went on to further situate the role of the doula within healthcare systems, saying that doulas:

> …help folks like, justify their decision to give birth in an institution that they don't trust… Doulas are like a Band-Aid to a broken system and a, like a distrust between client and institution… And I was outraged that doulas don't have a union. We don't have collective bargaining power. We don't have any rights. Like, we don't have jack s***. We have no labor protections as workers, and so, we were just out of a job because the institution decided that we were inessential.

Adair added that "it's been very challenging to be working with these larger institutions and have them kind of turn their back on us."

Hospital Policies. Participants unanimously discussed the impacts of hospital policies on their birth doula work, namely visitor restrictions limiting labor and delivery patients to one support person. Stella confessed resistance to these policies that reflected the remarks of most other doulas in the sample, saying, "in the beginning, I was like, 'This cannot be.' I was

obstinate. I, there - I was calling the hospital and demanding answers and trying to figure out like, 'This can't be possible that you would kick us out.'" By the time data collection for this study was wrapping up, participants began reporting that some hospitals were beginning to implement "doula policies" that enabled doulas to re-enter the birth room. According to the participants, the requirements of these policies sometimes included proof of doulas' certifications, a negative COVID test within the past 30 days, a printout of the labor and delivery visitor policy, or other documents.

Additionally, participants discussed that hospital policy evolved, were sometimes difficult to find information about, and depended on which staff members were enforcing them. Lenore observed that some requirements such as whether their clients were required to wear masks during labor and birth, were "dependent on who their nurse is that day." In regard to permitting doulas, Chrissie described that, "there have been times that hospitals have said yes, and then 10 days later said no - so I've had to stay really on top of each hospital." Monica noted that this type of variability between hospitals, between care providers, and from one timeframe to another, existed prior to the pandemic as well, however:

> …ironically, the COVID thing hasn't changed at all how we view hospitals because as a doula coming into the hospital, you can have one nurse who says one thing during a shift and then you have another nurse, come in, say a completely opposite thing, so, the information that gets filtered down the pipeline to the clients anyway, it's always been messy and muddy … with COVID, with everything changing so quickly, every-you know, one day doulas were allowed, one day they weren't allowed, one day partners were not allowed, the next day partners were allowed, and our people are just like- feeling like they're walking on quicksand and we were able to very easily validate that this is how

> hospitals run. You don't know what you're going to get, it's a grab bag every single time you're in the hospital.

Historical context. Overlapping with the unique historical context of the Coronavirus pandemic itself, this study took place during a critical historical moment of the Black Lives Matter movement when protests erupted internationally following several instances of police brutality, namely the killing of George Floyd. Five participants in the sample named connections to birth work, including institutionalized and systemic racism in birth settings, the lack of Black obstetricians and midwives in their area, and the treatment of people of color, particularly women, within healthcare systems broadly. Veronica pointed out that the national conversation led to increased awareness of maternal health disparities from Black women, now with "mainstream media telling them that they have a … higher rate of having a C-section or dying" which led to many of her Black clients inquiring about out-of-hospital birthing options.

Kathy celebrated that doulas "are playing more of a social justice and anti-racism role" and noted that advocacy is one of her primary roles. Monica shared that pre-COVID, she valued providing doula care to, "people of color who hired us because they knew we would protect them." Relatedly, Kareema argued:

> the restrictions the hospitals put into place, they compounded what was already happening, you know? They didn't, they didn't make it safer for Black people, or trans people to give birth in the hospital, they made it even more dangerous. And part of what made it more dangerous was that they excluded all the advocates who could have been there to support those people, you know? In some shape or form …

Chrissie described another overlapping historical contextual factor that impacted doula care in California, particularly the ability to meet outside for in-person prenatal meetings:

> …in addition to having COVID, we have forest fires, um causing air quality like you've never seen before. I mean, there have been times … that you couldn't see the house across the street from you because it's that thick with smoke.

Self-Change Processes

Motivational Processes

All participants reported intentional efforts to bolster their clients' motivation, helping them approach birth largely knowing what to expect, and with goal structures in place, both prior to and during the pandemic.

Outcome Expectancies.[2] Twelve participants described helping clients' set their expectations about the anticipated outcomes of their behaviors and choices. Outcome expectancies may be influenced by "providing information about action-consequence relationships" (Ewart, 1991, p. 935).

Doulas acknowledged the difficulty in predicting what to expect and emphasized that part of their role is in discussing with clients "what it looks like to navigate birth and all of the weird and unexpected things that come up through it," as Kathy described it. Monica emphasized the importance of this piece of her role, saying, "if they don't have an idea about what labor is going to be, there's no wonder there's so much birth trauma in the world because people are set up for the wrong experience."

Veronica's experience working with clients in the past whose labor has been medically induced helped her set expectations with her clients. She described teaching her clients about

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[2] The kappa coefficient for Outcome Expectancies ($\kappa = 0.27$) was notably lower than other codes that were retained in the final coding system and included in subsequent writeup. However, discrepancies were resolved during peer debriefing and determined to be a result of insufficient training (i.e., the second coder missed many instances in which more nuanced action-consequence relationships were discussed, largely only coding for explicit "what to expect" or "expectation setting" examples) rather than concluding that the code was not supported by the data.

interpreting Bishop scores and guiding them in setting realistic expectations about how many days an induction might last. She commented on the utility of this, saying, “If it happens in 24 hours and you were expecting three days, well awesome. But it’s totally different to be expecting 24 hours and have it go 3 days. And then they’re worried that their body’s broken…”

Noemie drew upon the example of vaginal exams to illustrate how she helps clients consider possible outcomes of their decisions or actions:

> …vaginal exams, I think emotionally can make or break my clients and you know, care providers offer them, you know, before labor starts, you know, like at 38 weeks, and I always just kind of run through with my clients, having this information, how is it going to make you feel? Right? Is it going to benefit you? Or is it going to set you back? Right? Because what if there is no action… Sometimes having too much information can just really wear you down, so I always, … I try to help them understand what does this mean to them, and how is it going to affect them emotionally? Because I don’t think that we think about that.

Goal Structures. Thirteen participants also described supporting clients' formation (or re-formation) of self-directive goals or behavioral intentions. Eight doulas drew upon the creation of flexible birth plans as an important example of this process. Adair described that her role commonly includes “restructuring the way people are trying to express their desires and their needs during birth.” Rose also noted that this has largely continued uninterrupted during the pandemic and shared:

> I think empowering them to still advocate for conversations around intervention so that they are not subject, for lack of a better word, to just routine procedures, just so they can still feel like, ‘This is my birth, I'm not just somebody passing through the hospital…’

That they still have preferences and wishes and there can be conversation around that. So, I think that's been important to talk about with my clients.

Monica supports her clients' formation of goal structures by coaching them through creating three birth plans, 1) for the hospital (e.g., "if you want drugs or not," and "newborn procedures," 2) for themselves (e.g., ideas about how to cope with labor), and 3) a cesarean plan after discussing "the different things that could make a family-centered cesarean."

Eleven participants also described their roles during pivotal moments of labor and delivery, both in helping their clients remember and stick to the goal structures they had laid out prenatally and in helping them restructure those goals as needed. As Jody framed it, "as long as mom and baby are doing fine, I remind them that you can ask for more time. More time to try natural methods. And again, if those don't work, then yeah, let's go for an intervention that I call 'tools and solutions.'"

Self-Efficacy. All participants also described supporting clients' belief in their capabilities, which largely hinged upon doulas' own belief in the physiological process of birth. Suzi did this by, "reminding them that, 'Hey, your body knows what to do. Your body didn't keep this baby for nine, ten months, to forget to give birth.' She believed that it was important to emphasize these messages more strongly prenatally, since she would not "be there to be repeating that in their ears over and over, that they can do it, that their body knows what it's doing, that it's all normal."

Lenore shared that many of her clients met with their medical providers for prenatal appointments via phone or video, and she commented that this required them to develop confidence and trust their bodies in unique ways:

> You're normally not taking your own weight and doing your own blood pressure and … having a prenatal appointment with a provider where they don't listen to the baby's heartbeat. I think that has been very anxiety inducing for some people, and also has on the other hand, given other people the opportunity to trust the process a little bit more, to maybe lean into that part of pregnancy that is living in this unknown. I mean, and really having to trust that if something were wrong you would feel, you don't necessarily have to have someone else telling you if your baby is alright or not… And I think that ultimately that is a good thing going into the birth process because there is so much that is unknown and there is so much that is, that a doctor or a midwife even, or even I can't do for them, they have to do it themselves. You know, they are the ones giving birth, and really helping them kind of lean into those feelings, into even if they are uncomfortable, really trust their bodies.

Further, Adair identified the inverse relationship between motivation and fear during labor and delivery:

> I would say, obviously it's looking much different during COVID, but motivating my clients has always- it's always based off of interrupting that fear cycle, of having people worry about not being able to trust their bodies, or fearing that they're out of control, or what's happening around them is in some way making them a victim. All of those mindsets you have to be aware of when you're coming into the birth world and you are a doula. You need to know how to break those cycles, and now it just has, it- you might need to be doing it more than often, you know? More than not, because everyone is so much more stressed out now.

Doulas also conceptualized birth preparation, education, and skills practice as an aspect of building self-efficacy. Five of them mentioned the importance of building partners' confidence as well. For Noemie, this included "practicing the tools for, for coping ahead of time … discover what coping tools they're already using in their present life and how does that transfer to birth and try to work with that." Chrissie also guided her clients through making "affirmation cards that they use throughout their pregnancy, that become almost like a mantra during their labor. Like just something as simple as 'I can do it,' or um, 'My contractions are my strength, um, that is my power.'"

Problem Solving and Decision Making

Participants unanimously described supporting their clients in making decisions or in thinking through a variety of possible future decisions. As Kyle noted, research has shown that "being part of the decision-making process" is a primary factor in what women regard as positive birth experiences. Two doulas referenced the BRAIN acronym, which is a common strategy taught to and by doulas for making informed decisions; Monica explained that it stands for, "benefits, risks, alternatives, intuition, and you know, what if you wait a little bit or do nothing."

Adair identified that one advantage to providing virtual labor support was her ability to quickly fact check information being shared by healthcare providers, for example, by Googling medications or recommendations. As she described it, she acts as, "their own personal Siri, almost, you know? So, I can give them accurate statistics. I can talk to them about the data. I can give them that so they can make a more um, informed decision or informed refusal, um, depending on what, what is coming up during the birth." However, a disadvantage to virtual labor support that several of the doulas faced at times was not being present for decision-making conversations. Kathy addressed this challenge by encouraging clients to ask their providers for

five minutes to think about the decision, and "give me a call and then we can kind of talk, have a little huddle together, like we would in person."

Chrissie described that a large part of her decision-making support was summarizing and reflecting back to clients what they communicated. She provided the example, "As she would talk about her fears, I would just say, 'So what I hear you saying is blah blah blah blah blah.' And she would say, 'Yes! And,' and so that helped her to like get to a point that she realized a number of things…" The idea of fear negatively impacting women's ability to make decisions effectively came up in several interviews. Kareema eloquently described her approach:

> I just don't think that, well, in my experience decisions made out of that place, out of that fear and panic, are better for, like, you know, deciding how to survive an attack from a tiger than where to give birth. I think right, if at all possible, it, it works better, even if you make the same decision, I think if you can make the decision from a place of grounded clarity, then it just hits different, because it kind of allows you to consider … the potential impact of your choice, but also to integrate it, you know, so it sort of sits in your body better. So … I was saying, like, 'Hey, let's do some grounding. Let's, you know, look at the fear and process it, let's um, think about, like, you know, what could be your objections.'

Generating Options and Alternatives. One specific component of decision-making, identifying possible options, strategies, or alternatives, was explicitly mentioned as an important role of the birth doula by all participants in the sample. The doulas described offering options and ideas during labor, including position changes, movement, tools like birth balls and heat packs, or even when it might be time to use the restroom. They also helped clients recognize choices underlying the decision to utilize medical interventions; for example, if a client's

contractions became more intense following initiation of Pitocin, Chrissie might help them generate options such as, “We could turn it down. You could turn it off. You could change your position.”

Generative Capabilities

Another unanimously endorsed aspect of birth doula care was the provision of procedural and declarative knowledge and the scaffolding of information processing, retrieval, and attention deployment. Ewart (1991) conceptualized that the previously discussed processes of problem-solving, goal formulation, appraisal of one’s capabilities, and predicting the consequences of one’s behaviors *draw upon* various knowledge and cognitive schemas.

Sharing Procedural Knowledge. The birth doula’s role included teaching skills or procedures that may include comfort measures (e.g., massage, Rebozo, the “double hip squeeze”), positions, breastfeeding, communication strategies, breathing techniques, and other “how-tos.” Fourteen doulas clarified that they needed to teach many of these skills prenatally since they would not be physically present during labor and delivery. For example, Adair described teaching partners to do some of these things via video conference, such as showing them, “specifically where the sacrum is on the body and where to put your hands and kind of leading them through this whole process of how to do counter pressure, how to do Spinning Babies techniques, what laboring positions look like in different areas of your home.”

Though Kareema celebrated the “really heartwarming and beautiful” bonding that emerged as a product of instilling confidence in the partner in this way, she also acknowledged challenges of teaching comfort techniques remotely. She offered Rebozo techniques as an example, and described that when she teaches them in person:

> "I can see where you're holding it and move your hand or say, 'Oh, hold it here,' or 'I can feel the tension that you're pulling it with.' Or I can say, you know, 'Look at my hand,' you know, 'Put your hand on the cloth here while I do this,' and you can see what I'm doing and then emulate it by copying what I'm doing. But when we're doing it virtually, that's a very different thing… I'm not getting like the energetic sense of whether you're feeling confident or not about what you're doing and what you're seeing me do. I'm not getting the, you know, the touch feedback of like, 'Yes, that's the right tension,' or 'Yes, you timed the Rails correctly,' or even, like, 'Yes, you found the, you know, the hip bones, like I demonstrated,' right?

Sharing Declarative Knowledge / Information Processing & Retrieval. All fifteen doulas in the sample discussed the importance of informational support, including supporting clients in acquiring, organizing, recording, retrieving, or displaying information, as well as sharing facts directly. Namely, this entailed providing clients with "evidence-based resources to support their learning," as Rose explained. Veronica reported regularly sending scientific research to her clients or, for clients who are less versed in interpreting empirical data, she reported sometimes directing them to resources like Evidence Based Birth, which is a "website where this nurse, Rebecca Dekker, has taken a lot of different studies and kind of just broken them down to the key components and said like, this is what this data is showing us, um, but kind of walking people through that in a no nonsense, minimally biased way."

The mountain of birth-related information the doulas in this sample shared with their clients was reflected in their prenatal education, video tutorials, informational emails, and the statistics they rattled off from memory. Some examples of doulas' approaches to distilling information include Stella's "How to be a partner in the hospital without your doula" step-by-

step guide, Kyle's "COVID packing list" for what to bring to the hospital, Adair's list of resources and referrals (e.g., yoga instructors, mental health counselors, childbirth educators), and Veronica's "pre-birth walkthrough on Zoom."

Four doulas also labelled their role in encouraging clients to acquire additional information from their providers. Suzi shared that, "it's an honor that people contact us as the first line [of defense] for everything," but that when clients inquire about medical issues, she might say something like, "'Hey you know, it sounds like this. Why don't you text your doctor, or email your doctor?' Or something like, 'Oh this sounds intense. Why don't you call…a nurse line…?'" Further, five doulas noted that in person, they often facilitate communication between clients and their medical providers and emphasized to their clients the increased importance of being curious and asking questions in the absence of their doula.

Sharing Mental Health Strategies. All participants described sharing wisdom related to mental health or offering emotional support. Together, the 15 doulas in this sample catalogued a host of interventions and strategies used to target mental and emotional health. Chrissie and Kathy used body scan and progressive muscle relaxation scripts and mindfulness. Jody worked "a lot with mindset. Slowing down momentum of thought, you know, changing a thought into a positive perspective." Everyone offered validation and space for emotional processing. Suzi offered suggestions that she regarded as even more important due to shelter-in-place, like "Make sure to get some sun every day," and "Make sure you talk to a human every day." Veronica shared, "we do a lot of kind of ad hoc couples counseling um not that we're really trained counselors…" Monica focused on, "basic stuff, talking about breathing, you know, how to use your breath, and talk a bit about, you know, the sympathetic versus the parasympathetic nervous systems, and how breathing can help all of that."

Perhaps reflective of exposure to cognitive-behavioral based approaches, Kareema explained her application of mental health strategies to navigating childbirth:

> …in general, I really pay attention to myself and my body, because my body is like most bodies, really good at signaling when things are awry. And what I found is that the more I pay attention, the earlier I noticed that I'm feeling stressed or activated or scared or whatever, and the less likely I am to automatically take that feeling as fact kind of thing or even more potentially damaging … made decisions and operate under the assumption that the thoughts I had are true based on the feelings I had in response to those thoughts. I talk about that sort of thing a lot to my clients, and from the get-go, a big part of my service involves really encouraging my clients to consider what are the ways that stress or fear or trauma shows up in their bodies? How do they notice when they've been activated? How do they respond to that activation? You know? Is it like, when they fight? Do they notice it when they finally blow up and they're yelling at their partner or child or whatever? Or do they notice it when they first ball their fists, you know? And then and then what are some ways that they found effective to get grounded, so for some people that's meditation and yoga, and all of that stuff, but for other people, it's prayer, and, you know, spending time with a loved one, or it's seeing a therapist or whatever. So really encouraging them to sink even further into that practice of paying attention, noticing, and, and, and then making a choice.

Attention Deployment. Twelve participants described supporting their clients in determining what information to attend to or directing their clients' attention to more useful thoughts. For example, Jody labeled the importance of "focusing on positive birth stories and not so much the scary ones" during pregnancy. Adair believed that a primary role of the doula is "to

keep people present in an abstract moment" rather than allowing their minds to get caught up in the "panic and uncertainty." Veronica summarized the power of attention deployment, within the context of medical providers communicating risk to patients:

> "any time you tell someone that their baby's at risk, even if you were to tell them that your baby- there's a .05% chance that something could go wrong, that's the only thing they're going to fixate on, that thing that could go wrong. They're not thinking about the 99.05% that everything will go well…"

Suzi went on to explain that, "They hear everything that's happening in labor and suggested in labor as an emergency, a lot of them do, so pausing that moment was not possible without a doula present in the room."

Meanwhile, Stella directed her clients' attention in order to empower them and foster a sense of common humanity with other women:

> There are 300,000 other women birthing at the same time you are, and so helping them feel connected to motherhood and birthing as a rite of passage and as this important event, not just something they need to like get over, and survive, but something that they could actually come through feeling really capable and strong.

Social Interaction Processes

Social action theory views action capabilities as a function of the individual's social relationships. The doulas in this sample undeniably provided social support (emotional, instrumental, psychological, and other support) to their clients, and in some ways, this social support was bidirectional. Suzi emphasized how emotionally connected she becomes with her clients, sharing that, "It's like you become that person's best friend for those, you know, that period of time… I can't see how to do this work without being emotional and involved with

them emotionally." Three doulas labeled the challenges associated with building close doula-client relationships remotely during the pandemic, like Noemie, who shared:

> Virtual versus in-person, I think that, you know, how we, we build relationships and build rapport is still really an in-person thing, you know looking at somebody, making eye contact, looking at their body. I mean, that's kind of the nature of my work, I'm really observing you know, how is-how is a birthing person responding to the contractions, you know? What is her body doing? What does it look like? What is tense? What does her face say?

Conversely, the social processes that occurred between doulas and clients during the pandemic may have held even *more* significance than non-pandemic circumstances in some cases. Lenore "cried with a few clients," and "hugged them probably for the first time when no one else has been except maybe their partner. And they're just needing to be touched in a lot of ways." One of Stella's clients shared with her:

> …that one of the hardships, the biggest emotional hardships, is that pregnancy is such a celebrated thing in our culture, and our communities and no one knew she was pregnant, no one could see her belly growing and see her as this person who was full of life and with a belly growing all the time and I- that really stuck out to me, so for me to be able to sit there and see her in person and celebrate her and see her grow I think meant a lot to her.

Feedback and Suggestions. Although all doulas acknowledged receiving feedback or suggestions from their clients in some form or another, participants shared a general consensus that adaptations to their services were shaped almost entirely by the ideation of individual doulas

or via collaboration by the doula community. Rose labeled, “I'm just kind of learning as I go as far as what's showing up and what they're needing and intuitively figuring that out.”

Most notably, feedback came in the form of gratitude, motivation, and reassurance. Adair’s clients have “been grateful for whatever help or assistance they can get in any way, shape, or form.” One of Monica’s clients shared, “‘We knew what to expect going in and that gave us so much confidence.” Kareema’s clients were “extremely expressive about their gratitude for, you know, my willingness to adapt to, you know, to really listen to and ask about what felt safe to them, to really support them in being grounded.”

Action States

Health Protective Action

Doulas reported that both they and their clients established new, interconnected health habits or ways of being in response to the pandemic circumstances.

To Prevent Contracting COVID-19 and Reduce Community Spread. All doulas described the collaboration that occurred between doulas and clients to problem solve virus contamination itself, some leaning more towards simply following their clients’ leads and others negotiating more actively. This resulted in actions from doulas and their clients that included masking, social distancing, air purifiers and open windows, taking temperatures prior to meetings, doulas being COVID tested regularly, quarantine periods following in-hospital work, and limiting other social contact as much as possible.

Beyond the action states established by doulas and their clients, hospital policies greatly influenced the safety measures that were taken. Stella appreciated that during labor and delivery in hospital settings, “the birthing person usually does not wear a mask because breathing in labor

with a mask on is so hard," while Jody recalled attending a birth in which, "the laboring client had to wear her mask the entire time." Chrissie labelled how much protocols vary, illustrating:

> Um, at this hospital you will have to get tested for COVID. At that hospital you won't have to get tested unless you have symptoms. Um, at this hospital you'll have to get tested; he can't be with you while you wait an hour and a half for the test results. If you're negative, then he can come in and they're gonna assume he's negative. At this other hospital you're both gonna have to get tested. At this one hospital, you both have to wear masks. At this other hospital you don't have to wear a mask, but he has to wear a mask. There's been a lot of details along those lines.

Use of Virtual Technology. Another action state that doulas and clients adapted to during the pandemic was relying on a variety of virtual technologies to interact remotely, primarily video conferencing technologies (e.g., Zoom, Facetime) and Bluetooth speakers or wireless earbuds. This switch to virtual support demanded a high degree of adjustment and a learning curve for many doulas. Kyle joked, "I was like, 'What's this Zoom? What are we doing now?' and had to learn all of that technology." She commented on the shift to virtual support:

> In non-pandemic days, we would never encourage someone to be connected to a screen or technology in their labor. It was always, 'Put the screen down,' and it's not that you even have to tell someone, she- she doesn't want to be connected to technology in her labor.

Noemie elaborated further on the drawbacks of communicating and coaching via video conference during labor and delivery:

> Well, and especially since birth, when you're really in the thick of it, it's not, it's not really a verbal act. It's not a thinking woman's process. When you're giving birth, you

know, that side of your brain, you need to be able to tune it, to tune it out. You don't want to be in that part of your brain, right? That's, it's, that part of your brain really slows down labor. People that can really go inside and move, um, you know, it moves things along a lot faster.

In general, this sample emphasized that virtual support was neither their nor their clients' preference. Three doulas, like Lucy, expressed that they "did not get into this work to be in front of a screen all the time." Adair highlighted that partners were often burdened with facilitating the use of virtual technology:

…the responsibility falls onto them when- when you're doing a virtual birth and you know, it's not only their responsibility to have their hands in there and they don't get a break to go and get themselves water or eat food themselves, but they also have the added responsibility of setting up the technology and ensuring that, the doula is on the line, the phone is plugged in, all of this stuff. They're angling the camera or they're bringing the phone closer to the partner because there's a variety of different ways in which you can engage with a couple through technology during birth. It's falling onto them, so it's just more stress onto them, which is so hard to see as, as a doula because your job is to support and help alleviate some of these responsibilities or help support that transition, and you feel like you're adding to it, at some times.

On the flip side, virtual technology increased accessibility for one of Chrissie's clients' partner, which was beneficial for their communication. She shared:

Now her husband is deaf, so um we had- On Zoom, you can have closed captioning, so um the Zoom actually helped us with that because he was not only able to read my lips on the screen, but he was also able to get the closed captioning on the screen as well.

Sleep, Nutrition, Physical Activity, and Other Self-Care Behaviors. The shift from pre-pandemic health behaviors to pandemic action states was mentioned less frequently than might have been predicted, perhaps reflecting that health behaviors were not top-of-mind priorities for doulas and their clients during the pandemic. Six doulas referred to nutrition, two doulas mentioned physical activity, and six clients mentioned sleep action states – mainly within the context of challenges getting access to food during in-hospital births, restrictions on movement during labor and delivery (e.g., not being permitted to walk the halls), and the doulas' own challenges with sleep deprivation while supporting long labors, each of which was exacerbated with COVID policies that restricted "ins and outs."

Further, participants commented on self-care challenges associated with the doula profession in general, including missing sleep due to overnight birth support, barriers to consistent exercise and nutrition routines, negative impacts on the immune system, and other lifestyle compromises. For example, Jody shared that, "It can be really hard on the body. You just come home, crash, or you're eating some fast food and it's just, which I mean, you do what you gotta do, but it can just take its toll after a while." Lucy also noted barriers to sustainable health behaviors in part because of her "erratic schedule" and argued that "without labor protections, it cannot be sustainable or humane work for the individual practitioner to engage in."

Outcomes

Doulas monitor a variety of outcomes, including maternal physical and mental health, infant health, and parent-child bonding. The doulas in this sample shared a belief that doulas and the interventions they deliver improve birth outcomes, and many expressed frustrations that virtual practice during COVID-19 limited their efficacy.

One important maternal physical health outcome that doulas routinely monitored is preeclampsia, despite doulas, as nonmedical providers, not being "allowed to take a blood pressure," according to Veronica. She has been "seeing a lot more preeclampsia than really ever I have seen in my entire practice. That's probably because of stress." To illustrate the value of doula care in this arena, Nina shared that she identified that a client's headache two days following hospital discharge was a sign of postpartum preeclampsia and recommended that she call her provider. Other doulas discussed ways psychosocial interventions could be implemented to address high blood pressure.

Maternal mental and emotional health, including postpartum depression and anxiety, was another commonly discussed outcome. Rose shared: "I do know that having support is huge, both during pregnancy and as a new mom, so I just really appreciate that doula care can just be … that eye that is looking out." So, she actively monitors mental and emotional health, starting during her first prenatal appointment when she assesses "whether that's something that they struggled with, and something to look out for." Suzi noted that postpartum depression may be more likely following births in which "women felt completely disempowered" as many have during the pandemic. Nina voiced, "I love the fact that they feel comfortable enough to talk to us about this," and supported her clients by referring them to therapists who offer Zoom meetings.

Ten doulas also mentioned infant wellbeing, including health and bonding, as an important outcome that can be improved by doula care. Six mentioned facilitating breastfeeding or offering guidance on newborn care. Monica summarized the long-term impact of doula care, saying, "there are studies out there that say if you have a better birth experience, you have a better postpartum, and if you have a better postpartum, you are a better parent."

Induction. Ten doulas observed a greater prevalence of labor inductions during the pandemic, including Suzi who commented, "my induction rate went up the sky." Nina offered the example of clients who were offered inductions during check-ups at or near full-term, and were told, "'Well, you're here … let's induce you.' Because they didn't want them to be, you know, to do this whole, like, go home and come back, go outside, be exposed and come back again kind of deal." Some doulas, such as Lenore, also perceived that providers recommended *earlier* inductions than they had previously, including one of her clients who was urged to be electively induced at 40 weeks because "they were fearing a surge in COVID patients at the hospital or in the Bay Area in general." Veronica believed that inductions are often:

> …less to do with evidence base and more to do with an attempt to have a well-organized, managed floor; they're trying to control the traffic coming in so that they'll have enough staff to handle everybody. It has very little to do with actual risk to the client themselves.

Similarly, these doulas perceived greater urgency from hospitals and providers to move labors along quickly, for example, using Pitocin more readily or offering cesareans earlier. As Lenore hypothesized:

> They don't want the client to be there as long, just at the hospital in general, so they've pushed maybe a more aggressive approach than they would have in the past if a labor was going a little more slowly than they want it to.

Epidural. Eleven doulas noted that epidural rates have also likely increased during the pandemic. Kyle reported that *none* of her clients delivered their baby without medical pain management since the pandemic began because they were "just trying to get through it as unscathed as possible," so she's been "helping people prepare for an epidural labor" during prenatal appointments. Three doulas pointed out that many of the individuals who seek out doula

services desire an unmedicated birth, so they have been in a position to normalize the use of epidurals within this context. For example, Stella remarked:

> I feel like the epidural is stepping in as the doula in a lot of these births that are all in the hospital. And when I have clients that are very set on having an unmedicated birth, yet they have to be induced … I want them to know that it's okay to get the help and not to have to feel like they're suffering or alone … if you don't have the support, we don't want you to be traumatized and maybe the best idea is for you to be numb…

Another reason that doulas believed that research may reveal that epidural rates increased during the pandemic is that many hospitals did not offer nitrous oxide, which many of their clients would have planned to use for pain management. Jody concluded that "their options are: Go natural or get an epidural. So that's a bit disappointing."

Suzi told a story of two clients who have experienced the epidural "come out from their backs" such that "everything is wet, and the epidural medication is just going on the bed" in a hospital during the pandemic without their doula, as an illustration of the value of having doulas present as a "witness in the room." Suzi had never seen this prior to her work during the pandemic and regretted that she had not been able to attend these births because she could have prevented or quickly recognized the problem. She began further emphasizing with clients:

> what to expect from each intervention, because I, you know, you think that people know that, 'Okay, if you have an epidural, you're not supposed to feel anything.' People actually don't know. They see someone, you know, a partner sees someone in bed in extreme pain, and doesn't have the mindset because he's so emotional too. He doesn't have the mindset to say something, to say - and maybe he thought - to say out loud, 'Something is wrong here. She's in too much pain, since she had an epidural.'

Cesarean. Seven doulas discussed cesarean sections, including Kyle's prediction that "the cesarean rate has jumped like crazy," and Nina's observation that hospitals are discharging patients to return home much sooner after birth than was typical before, even following surgical deliveries that often require 3-4 days of aftercare, in order to reduce possible virus exposures.

Doulas also shared stories of supporting clients whose births they could not attend and who did not fully understand why the cesarean occurred. Nina summarized that when a doula is present in the hospital:

> We can ask questions. 'Okay, why is this? Can we do this instead? Can we do that instead?' A lot of times, we can try to see is there any other options to things … but as a couple that's never had a child and going into that kind of environment, they don't know, they just do whatever the doctor says, and whatever the, you know, which is it's not bad, but there is options, there is other things that, you know, are not thought of right away, or, you know, 'Hey, remember,' you know, 'The other doctor actually said that we can labor a little bit longer this way, or do this instead.' So, that was that was frustrating for us.

Kyle offered reassurance about the spike in cesareans, inductions, epidurals, and other interventions that the doulas in this sample hypothesized, reminding us that:

> …when we look back on the long-term studies of what women report and consider being a positive birth experience, it's never gone back to whether she's had a cesarean or whether she has had an unmedicated labor or whatever the outcome. What women report is being positive in their labor experiences: feeling in control, feeling supported, and being part of the decision-making process.

The Role of the Doula

Together, the birth doulas in this sample depicted their role as one of providing tailored, whole-person care that included: "informational, physical, and emotional support," and keeping clients "present in an abstract moment" according to Adair;" being a "constant support person in whatever capacity is possible," according to Stella; "helping them feel confident and supported," according to Rose; bridging "that gap between communicating with the care provider," according to Noemie; and acting as "advocates" or "supporting clients in advocating for themselves" according to Lenore, Kathy, Lucy, and Stella. Analogies included Monica's comparison to "a tour guide," Chrissie's similarity to "a navigator," and Jody's view of herself as a "beacon reminding you of who you are."

Emotional support was the component of care most consistently threaded throughout participants' conceptualizations of the role of the doula. Throughout the 15 interviews, words stemming from "emotion" (including emotional, emotionally, and emotions) were spoken by participants a total of 121 times. A few doulas noted that emotional support is particularly salient because of a gap that exists in labor and delivery settings. Veronica articulated:

> I think there's no other care provider, really, in the birthing community of midwives and OB's and nurses, um whose job it is specifically to think about that kind of outcome. So that's where the role- the doula's really, really unique, that we're thinking about the emotional outcome and recovery and not just happy, healthy.

Emotional support is broadly understood as an important component of doula care in the literature; the COVID-19 pandemic simply increased the degree to which doulas were called upon to play a stress management role as their clients adapted. As Kathy described, doula interventions often target "fears or anxieties specific to birth or parenting or pregnancy or postpartum, and so now with this extra layer of COVID, it's this like it takes more time to, to

navigate that." Doulas are trained to understand the intersection between psychosocial stress and birth experiences (e.g., four of Kyle's clients went into labor during the week following the enactment of hospital visitor restrictions which she attributed to the idea that "stress causes women to go into labor and they were very much under stress"). Nine doulas in this sample mentioned themes along these lines, like Kareema who observed:

> …there were a lot of people in the birth community who were really outraged to be excluded that way because it seemed to us that a natural response for somebody who is getting ready to give birth, to their response to what was happening would be a heightened fear, heightened panic, heightened stress, um which, as we know, has a massive impact on outcomes and on the experience.

Another key characteristic of doula care that was described by fourteen participants is the highly *individualized* services that they offer. Further, since doula care is highly individualized care by definition, the negotiations and tailoring of services that occurred during this time was not unique. Lenore not only believed in "unique care to specific people," but she asserted that doulas encourage patient-centered approaches from others. In her words, birth doulas "force providers to look at clients uniquely ... and as a, as a specific, not as a group of people." Veronica elaborated:

> I always tell my clients literally in the first interview, 'My job is to make sure you're not treated like a textbook, you're treated like an individual with an individual baby and in that, it's all up to you. If you want to be like, "Oh this textbook stuff is exactly what I want," I'm fine with that because it's you making your choice. But if you want to know more, if you want to understand more, then I'm going to help you with that.' COVID just added another layer.

During the pandemic, participants recognized that many of these aspects of doula care were even more valuable and continued uninterrupted, such as emotional and informational support, while other components, namely physical support, became less feasible. Kareema summarized, “I think that we continue to play the role that we always have, of supporting folks, being a container for people to have their experiences.”

Attitudes. The birth doulas in this sample represented a seemingly balanced view, as evidenced by a strikingly even number of coding references listed under “positive” (45 coding references across 13 participants) and “negative” (44 coding references across 13 participants) attitudes toward doulas' roles and responsibilities within the context of the pandemic. Participants experienced silver linings amidst the challenges, and clients still received value from the services they received despite the compromises that were required. Reflective of this balance between challenges and benefits, Jody admitted:

> I have found for myself personally I was a little burnt out. And so, this kind of pause if you would, even though it's hit financially, a place that’s not very comfortable, you know, it has certainly given me the time to kind of recuperate, maintain health, and family, and household. And so, having had these experiences where I'm satisfied, the client’s been very satisfied with this remote support, it it's, it's kind of a very comfortable place to be because I'm not getting up at two in the morning, in the pouring rain, rushing to a hospital.

Additionally, eight participants commented on learning opportunities that emerged from their adaptation to new action states. These learnings included the use of technology, providing verbal support and communicating more articulately (Kareema “got way, way, way, way better

at using, words, to explain, express, and direct the experience because I didn't have the crutch of my touch cues"), instilling confidence in the birth partner, and about COVID-19 itself.

Beliefs. The belief that doulas are essential was unanimously endorsed. Yet Suzi also acknowledged that some doulas agreed that they should not attend in-hospital births during the pandemic. She stated:

> I never thought that a doula would agree with the fact that they shouldn't be in the hospital. I was really shocked when I heard, when I learned that some doulas were like, 'No, yeah. We shouldn't be there.' Because some doulas, uh um are health compromised. And I'm like, 'Yeah, but you're not putting the woman that's giving birth in first place. If you are health compromised, you shouldn't go in there, not doulas in general.' So fine like, 'I can, I'm sick, or I can be sick. I will find you another doula because you need support.' Rather than say, 'Yeah, no doulas should be there,' … it is very important to see more in a broad way, you know, see the birth world, not our little world.

More reflective of the voices represented in the present study sample, when Stella learned that she had been labeled non-essential at the outset of the pandemic, her first thought was, "'I am certainly essential!' Like, my role in the birth is really important and game-changing for so many families."

DISCUSSION

This study used a contextually bound qualitative case study methodology in which 15 birth doulas, the primary informants, were the embedded units of analysis. Its emphasis on context yielded a nuanced depiction of birth doula care on multiple levels, capturing individual experiences and interactions between doulas and clients and the influences of setting, organizational factors, historical timeframe, and other components of the bioecological system. The final sample included birth doulas working across the San Francisco Bay Area who represented various demographic and professional diversity; thus, we may cautiously presume that their voices capture a robust range of experiences.

Participants confirmed that birth doulas continued to serve clients during the pandemic via in-person, remote, and hybrid formats. Some of their services continued uninterrupted, including aspects of emotional and informational support; other services newly emerged, such as instructional videos and increased emphasis on self-advocacy; and many services were adapted, such as the transition of physical support to birth partners and communication via various virtual modalities. Doulas drew from their own intuition and collaboration with other doulas when ideating and implementing adjustments to their services, only receiving limited feedback, suggestions, and motivation from clients.

The results of this study also confirmed doulas' provision of individualized services that targeted their clients' psychological change mechanisms, including problem-solving (decision-making and generating options/alternatives), motivational processes (outcome expectancies, self-efficacy, and goal structures), and generative capabilities (information processing and retrieval, attention deployment, and sharing knowledge). These interventions facilitated pregnant women's adaptation to the experience of being pregnant during a pandemic, including both perinatal and

virus-related action states. Further, the anecdotal observations offered by doulas in this sample underscored reasons for the even more substantive influence that doulas enact on birth outcomes (e.g., cesarean, epidural, and induction rates) outside of pandemic circumstances when they are permitted to offer in-hospital care.

Overall, social action theory, which has classically been applied to health behavior changes such as tobacco cessation, physical activity, and diet, provided a useful and relevant framework for examining the transition from old pre-COVID-19 action states to new ones within peripartum populations. The present study extended existing social action theory literature by considering a novel application to a *professional* social relationship. Birth doulas and their clients shared interlinked action scripts, and each affected the other's ability to carry out health-protective actions and attain valued goals. However, the "degree of action linkage" (Ewart, 1991, p. 934) between doulas and clients may have been lower than that of, e.g., family or household members (despite Rose's analogy that doulas often become "like a family member, but professionally"), as their daily routines remained largely separate. Further, social support processes mainly flowed from doula to client rather than bidirectionally due to the professional nature of the relationship. In this way, the idea of *social interdependence* emphasized by social action theory was not fully supported by the present data.

Additionally, this study extended the idea of action states to a more *time-limited* case (i.e., the peripartum period) than is typical, which points to another area where these data did not fully fit the theory. Social action theorists have conceptualized psychological adaptation processes as a means to *sustain* behavioral change, which may not reflect the often time-limited nature of phenomena examined in this study, including global pandemic circumstances, doula-client relationships, behaviors required to bolster health during pregnancy, and mental health

strategies to endure labor and delivery. Although this diverges somewhat from the way adaptations to new action states have been discussed in the social action theory literature, the model itself holds up when applying it to this social relationship and phenomena within broader social and environmental systems.

These data also highlighted one possible deficit in the social action theory framework and a corresponding potential addition to the theory. The data highlighted the importance of *historical context* as an action context not discussed by Ewart (1991), namely chronosystem factors related to the COVID-19 pandemic and the Black Lives Matter movement. Bronfenbrenner's 1979 bioecological systems theory underscores the utility of considering this contextual influence when understanding the situation of individuals and social relationships within broader environments.

Yet the framework fueled a theory-driven coding system that was well-supported by the data. This may indicate two conclusions: 1) that social action theory is a conceptually useful addition to the birth doula literature and 2) that birth doula care is a socially and emotionally involved profession in which action scripts at times become highly interlinked.

As the birth doula literature grows, the profound positive impacts of doula care on a range of birth outcomes are further underscored. These include maternal and infant mortality and morbidity, cesarean rates, and maternal satisfaction (e.g., the 27 studies included in a 2017 systematic review by Bohren, Hofmeyr, Sakala, Fukuzawa, and Cuthbert). The research community is now working to pinpoint what aspects of doula care these results may be attributed to. The novel landscape of the pandemic offered a unique opportunity to examine the nuanced services that doulas provide, beyond those which are dependent on hands-on, close contact. Ensuring representation in the literature of how doulas and their clients adapted to the COVID-

19 pandemic is inherently important. It also offered meaningful clues into the nature of these professional relationships more generally. Namely, this study illuminated the influence that doulas enact on psychological mechanisms. Further, commentary provided by the doulas in this sample featured important information about the value of serving as “an extra eye” or “witness in the room,” as Suzi articulated. Doulas may bridge patient-provider gaps, as they are educated about birth-related topics but do not act in the role of a medical provider while also being emotionally connected but not acting in the role of a family member.

Implications for Policy and Practice

The services doulas provided during the COVID-19 crisis point to ways the workforce could be elevated or further mobilized, with the goals of 1) improving access to quality care for all birthing individuals, 2) acknowledgment of birth doulas as essential members of the care team by hospitals and healthcare providers, and 3) reducing power differentials (between recognized hospital employees and doulas, as well as between patients and their care providers). These goals both hinge upon and in turn, could serve to increase the likelihood of doulas’ eventual recognition by health insurers as a reimbursable service. At the time of this write-up, four bills related to Medicaid coverage for doula care had been passed (in New Jersey, Indiana, Oregon, and Minnesota). Another thirty-four bills had been introduced during the current legislative session (National Health Law Program, 2021). This frenzied policy activity is a product of decades of work by doulas and other birth workers in partnership with researchers, lawyers, policymakers, and other advocates; in large part, it also reflects the current state of urgency around increasing access to doula care for vulnerable populations, especially Black women.

This research yielded additional evidence that birth doula care offers a means to increasing access to patient-centered, culturally humble, linguistically accessible, individually

tailored care and advocacy within medical contexts that may not make such investments. Community-based doula models are well-equipped to support the most impacted communities by birth disparities (Robles, 2019), and integration of doulas into collaborative maternity care models may also hold promise. The doulas in this sample described gracefully and respectfully partnering with their clients' care teams and celebrated when each member of the team served their unique function. Hospitals and care providers ought to embrace the utility and importance of adding birth doulas to labor and delivery care teams whenever possible, as they provide *complementary* care to that provided by medical providers. Birth doulas are responsive to aspects of care that physicians, midwives, and nurses simply are not trained or employed to address sufficiently.

Further, the present study's findings emphasize that doulas may be equipped to fill mental health services gaps during the perinatal period, both one-on-one and via facilitation of classes and support groups. Doulas also seem to serve a social work function in some cases, issue referrals, connect clients to community services, advocate for vulnerable populations, and guide individuals and families through navigating institutions and systems with which they are unfamiliar. The extent to which birth doulas' current training and certification requirements reflect the need to attend to such a wide gamut of factors is difficult to discern due to variability across certifying bodies. This research points to a need for deeper doula training related to the psychological change mechanisms with which they work. For example, an audit of doula training content and certification requirements might assess ways in which motivational processes, problem-solving, and generative capabilities could be more explicitly discussed. The doulas in this sample described a wide range of interventions related to these mechanisms, which highlights 1) that doulas are unique in their approaches and thus well-suited to deliver

individualized and culturally adapted care, yet also 2) that increased availability of a menu of approaches used by their peers and supported by the literature may reduce the extent to which each doula is reinventing the wheel in her practice, so to speak, and further elevate the doula workforce's positive impacts on psychological processes.

Nonetheless, the participants in this sample supported their clients in transforming fear and uncertainty into confidence and preparedness, which is a key strength of doula care both within and outside of the pandemic context. Adair reminded us:

> It's always been like a transitionary role? There's end-of-life doulas, there's doulas that help people transition after child loss transitioning or like having pregnancy through transitions of genders and identity, and to me, it's always represented kind of an abstract field of helping people move through difficult times.

Reconnecting with this conceptualization of the doula's role, in which they *facilitate transitions*, there is an opportunity to expand the application of doula care. This might elevate the existence of doulas in end-of-life care, bereavement, termination of pregnancy, and gender transitions. Additionally, there may be opportunities to expand into other areas such as new chronic illness diagnoses.

Even within labor and delivery doula work, Kareema made an important point that "the world severely underutilizes us, because they don't completely understand what we do, or how we contribute to that space." The impact of hospital visitor restrictions on birth doula care highlights a glaring opportunity to reevaluate the doula's physical and philosophical place within the healthcare system. The same systems that recently deemed them non-essential visitors are now presented with a historical moment to reset and reimagine the integration of doulas within hospital settings.

Further, these interviews revealed an opportunity to provide doulas themselves with more appropriate mental health services. Many participants expressed deep appreciation for the opportunity to reflect on and to some extent, emotionally process the personal and professional stressors they experienced delivering doula care during the pandemic. Suzi highlighted a limitation of seeking counseling services on these issues:

> I can, you know, speak with a therapist and talk about this, but I can tell on his face that he's not getting it because it's not his world. You know, you cannot even understand what's the difference of a woman having someone there or not. Like, you cannot see on a deep level as I see, as a doula sees, or someone who is passionate about birth sees.

Suzi's comment was reflected in other sentiments shared by participants that their work is often "trauma-adjacent" as Lucy described it or that she is "getting paid to absorb other people's trauma." A few participants cried during our conversations, and others stated matter-of-factly just how taxing the work can be. Yet when asked, "Why did you become a doula?" Stella replies, "Why wouldn't you? This is the greatest job in the world." Thus, there is an incredible need for mental health resources and practitioners that serve the unique needs of *doulas*, just as they serve the unique mental and emotional needs of their clients, in order to sustain the work that doulas and their clients regard as so undeniably essential.

Limitations and Future Directions

One important limitation of the methodology employed that points to a potentially valuable future direction is the present study's failure to solicit the voices of mothers contracted to work with doulas during this time. Social action theory emphasizes the bidirectional nature of relationships between persons (e.g., doulas and their clients) and their contexts (e.g., doulas and the healthcare system or institutional policies). Thus, future studies ought to integrate doulas

intended or *perceived* impact with the reported experiences of their clients. Surveying doula-client dyads could provide important insights into, for example, whether a doula's intentions to empower her client results in her client reporting feelings of empowerment. Despite this limitation, the present study is appropriate in scope as a preliminary application of social action theory to doula care, as this conceptual framework has not previously been utilized for this or similar types of health services, to the best of our knowledge.

The present study was also limited in that it did not assess the quantitative impact of doula interventions and psychological mechanisms of change on maternal and child outcomes. Future research could systematically examine the implementation of doula interventions revealed in this quantitative study and measure the effects of these interventions on birth outcomes such as cesarean rates, length of labor, preeclampsia, maternal satisfaction with the birth experience, or postpartum mood disorder prevalence. Intervention research could also target improvements to doula training and practical tools such as client handouts, perhaps via greater collaboration among doulas and increased standardization of the services each is equipped to provide.

Lastly, we recommend with the utmost gravity that doulas' voices are included in the determination of future directions and offered seats at any table where decisions are made about policies, laws, insurance structures, employment, or any other aspect of the philosophical and practical positioning of birth doulas within the healthcare system. The birth doulas that we spoke to were incredibly insightful, eager to contribute, and ought to be centered as experts in all action planning and research going forward.

Strengths and Concluding Remarks

This study's methodology appropriately reflected its research questions and purpose. For example, our use of semi-structured qualitative interviews reflected the early stage of current

literature about psychological change processes on which doulas enact influence (e.g., most research on doula care refers to "emotional support" without diving to the granular level at which this research examined various mechanisms). Additionally, the pairing of a survey instrument with open-ended interview questions yielded both vertical and horizontal data on contextual factors, which was appropriately reflective of both the research objectives and the theoretical framework. This explicit examination of multi-level contextual influences revealed important institutional factors that contribute to many of the challenges birthing individuals face and that doulas play a role in addressing, particularly highlighting how little power both doulas and birthing folks continue to hold within the US healthcare system despite recent movement towards patient-centered and collaborative care models broadly.

Another strength lied in the methodological strategies implemented to bolster rigor and demonstrate the integrity of findings to readers. These included the use of member checks, multiple coders, peer debriefing, intercoder reliability statistics, the inclusion of all respondent voices, maintaining an audit trail, and ongoing reflexivity to increase transparency around biases. Together, we hope that these methods have elevated and emphasized the sample's authentic voices and positionality.

Overall, this study adds to growing literature demonstrating the profound value of birth doulas and uncovers important deficits in their current integration into hospital systems. The present study focused on the context of the COVID-19 pandemic, yet its findings contain important clues into nuanced reasons underlying the positive association between doula care and perinatal outcomes. These include interventions that both target and harness (sometimes explicitly and at other times implicitly) motivational appraisal, problem-solving, generative capabilities, and social interaction processes to improve perinatal *experiences* in addition to the

birth outcomes that are attended to more broadly within obstetrics and gynecology. At the heart of what makes their work so special, birth doulas facilitate transitions and support psychological change mechanisms, pandemic or not.

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APPENDIX A: LETTER FROM THE UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO SENT MARCH 18, 2020

"To Our UCSF Pregnant Families,

As some of you may have heard, the San Francisco Department of Public Health issued an Order of the Health Officer on March 13th restricting visitors to all hospitals in San Francisco in an effort to protect against COVID-19. Given the increase in coronavirus transmission in our community, this is a crucial step to help protect our patients, our healthcare workers, and our larger community.

UCSF Birth Center will continue to allow one support person per patient. We midwives, nurses, and obstetricians at UCSF believe that women in labor particularly benefit from the one-on-one support of a person they trust, and we have worked hard to create a special exception to this policy for patients admitted to the Birth Center. What this means is that each Birth Center patient can identify one person to be their designated support person during their stay. Examples of a support person are a family member, friend, or doula.

In order to implement this policy as safely as possible, we need your help. Your identified support person must follow CDC personal hygiene practices, including frequent hand washing and minimizing direct physical contact with others in the hospital. And of course, anyone showing symptoms of flu-like illnesses simply cannot come. Your visitor cannot swap with another person as to minimize the overall number of people coming in and out of the hospital.

We want to reassure you that we at UCSF have been working hard for weeks to prepare for coronavirus in our community. We are committed to continuing to providing the best possible care for all of our pregnant patients, whatever the weeks ahead may hold for our city. We recognize these are uncertain times, and anxious times for all of us, and we promise to support you in every way that we can.

We look forward to seeing you at the birth center and meeting your support team via FaceTime or Skype while we help your families grow!

In solidarity,

The UCSF Birth Center Team"

APPENDIX B: QUALITATIVE INTERVIEW GUIDE

Hello! My name is Jodie Lisenbee and I'm a doctoral student in Health Psychology at UNC Charlotte. Before arriving at graduate school, I also volunteered as a birth doula in San Francisco. First, thank you so much for agreeing to participate in this study, especially during this unprecedented pandemic. I'm going to ask you a series of about 10 or so questions to which there are no right or wrong answers. I'm hoping to gain your unique perspective and encourage you to reflect openly and honestly on your experiences as a birth doula. I also would like to remind you to avoid using any identifying information about your clients or their providers, in order to protect their privacy. What initial questions or concerns might you have for me before we begin?

Semi-Structured Interview Guide

Order	Question	Sample prompts (optional; at interviewer's discretion)
1.	To start, please describe what your doula care services typically looked like pre-COVID-19.	
2.	Now, reflecting on the circumstances of the Coronavirus pandemic, what sort of factors have you encountered that may have impacted your doula care?	- In addition to what you've just shared… Any circumstances that have *impeded* your services? Any that have *facilitated* them? - What do you know about hospital policies in your area that impact doulas?
3.	In what ways, if any, have your doula services been impacted by these various factors? Please describe what aspects of your services may have continued uninterrupted, newly emerged, or that you have adapted.	- What do you attribute X to?
4.	What role, if any, have your clients played in informing these adaptations of your services?	- [If "none"] For example, by motivating you, providing feedback or suggestions, or offering other forms of support.
5.	To what extent have you and your clients supported one another in coping with the unique circumstances of the Coronavirus pandemic?	- For example, emotionally, psychologically, socially, instrumentally, or in other ways. - Could you provide an example of this?

6.	Next, I will ask about a few more specific ways you may have offered support to your clients. First, how, if at all, have you supported your clients in adjusting their *expectations* or adapting their birth-related *goals*?	- How have you supported changes to the birth plan?
7.	How, if at all, have you supported your clients in *problem-solving* or *strategizing*?	
8.	How, if at all, have you supported your clients' *motivation* for reaching their desired outcomes, or their belief in their *capabilities* to do so, in light of Coronavirus?	- In what ways is this similar or different from what you typically do?
9.	Finally, please tell me about a specific client who has delivered her baby during the Coronavirus pandemic. Walk me through how her birth experience ultimately played out, particularly the role *you* played.	- What about her experience was different due to COVID-19 than you imagine it would have been otherwise? - How did things work out for her?
10.	Just one or two more questions now. Reflecting on this conversation and any other aspects of your experiences, how would you philosophically describe the role that doulas have played within the context of the Coronavirus pandemic overall?	
11.	What else would you like to share with me that you think is important for me to know regarding your role as a doula?	- What messages do you want to communicate to others related to these topics?

Thank you very much for taking the time to speak with me today and for advancing my understanding of these topics. This project will serve as my thesis project and hopefully be published in an academic journal in the future. Is there any further information I could provide for you before our interview comes to a close?

APPENDIX C: QUANTITATIVE SURVEY INSTRUMENT

Eligibility

1. Do you work as a...
    - Birth doula (or labor doula)
    - Postpartum doula (or postnatal doula)
    - Both a birth doula and a postpartum doula

[If YES to Postpartum doula] □ Exclude / End of survey

2. In what county of the Bay Area in California do you live?
    - Alameda County
    - Contra Costa County
    - Marin County
    - Napa County
    - San Francisco County
    - San Mateo County
    - Santa Clara County
    - Solano County
    - Sonoma County
    - I do not live in the Bay Area of California

[If "I do not live in the Bay Area of California"] □ Exclude / End of survey

3. How many years have you been working as a birth doula? _____

[If LESS THAN 1] □ Exclude / End of survey

4. What is your age? _____

[If LESS THAN 18] □ Exclude / End of survey

5. In 2019, approximately how many births did you attend as the primary birth doula (i.e., how many birth clients did you work with)? _____

[If LESS THAN 2] □ Exclude / End of survey

6. What percentage of the births you attended in 2019 took place in a hospital?
    - Less than 25%
    - 25-50%
    - 51-75%
    - Greater than 75%

[If "Less than 25%"] □ Exclude / End of survey

7. How many clients were you already under contract to work with as a birth doula when Coronavirus-related hospital visitor restrictions were enacted in March 2020 (i.e., how many clients with estimated due dates between about March 13, 2020 to present)?
    - 0
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6+

[If LESS THAN 2] □ Exclude / End of survey

[ROUTE TO CONSENT FORM IF ELIGIBLE]

Doula services

8. Which of the following best describes your birth doula practice?
    - Solo practice
    - Group practice with two to four doulas
    - Group practice with five or more doulas
    - Hospital-employed
    - Clinic-employed
    - Agency model
    - Volunteer work only
    - Some other type of practice (please specify) _____
9. On average, about how many clients do you work with as a birth doula per month?
    - 0
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6+
10. In 2019, about how many clients did you provide *pro bono* services for (i.e., free of charge / volunteer services)? _____
11. In 2019, about how many clients did you offer *sliding scale* fee arrangements for (i.e., reduced prices based on the client's ability to pay)? _____
12. On average, how many times do you meet with a client **prenatally**, as part of your birth doula services?
    - I do not meet with clients prenatally
    - Once
    - Twice
    - Three or more times
13. On average, how many times do you meet with a client **postpartum**, as part of your birth doula services?
    - I do not meet with clients postpartum
    - Once
    - Twice
    - Three or more times
14. Do you hold any of the following certifications?
    - Birth doula (or labor doula) certification
    - Postpartum doula (or postnatal doula) certification
    - Nurse midwife
    - Midwife's assistant or monotrice
    - Lactation consultant (IBCLC)
    - Certified childbirth educator
    - Other certification(s) (please specify) _____
15. [If YES to any] Please specify the certifying body for each of the certifications you indicated above (e.g., DONA, CAPPA, ICEA, ILCA, ProDoula). _____
16. [If YES to any] How many years have you been certified as a ____?

17. Do you offer any additional related services?
    - Birth preparation classes
    - Prenatal consultations
    - Placenta encapsulation
    - Sleep consultation/coaching
    - Pregnancy fitness
    - Prenatal yoga
    - Bereavement doula services
    - Night nurse, baby nurse, nanny, babysitting, or mother's helper
    - HypnoBirthing education
    - Other service(s) (please specify) _____

Impacts of COVID-19

18. Did the hospital(s) at which you primarily attend births enact visitor restrictions in response to COVID-19?
    - Yes
    - No
19. [If YES] Did these visitor restrictions apply to doulas (i.e., doulas were classified as "visitors," and their presence was limited).
    - Yes
    - No
20. Were any changes made to the financial agreements between you and your clients in response to COVID-19?
    - Yes
    - No
21. [If YES] Please briefly describe what changes were made to your financial agreements, to the extent that you are comfortable. (Text entry box)
22. To what extent was your income impacted by COVID-19?
    - Extremely impacted
    - Very impacted
    - Somewhat impacted
    - Slightly impacted
    - Not at all impacted
23. What additional training, professional development or informational support have you sought during this time? (Text entry box)
24. What sources have you looked to for guidance on doula care during the Coronavirus pandemic? (Text entry box)
25. Which of the following communication platforms have you utilized to share or seek information with other doulas during the current pandemic?
    - Facebook
    - Instagram
    - Twitter
    - Reddit
    - Pinterest
    - Tumblr
    - Phone calls
    - Video calls (e.g., Zoom, WebEx, FaceTime, Google Hangouts)

- Text messaging
- Other (please specify) _____
- I have not exchanged information with other doulas during the current pandemic.

26. Have you utilized video conferencing technology (e.g., Zoom, WebEx, FaceTime, Google Hangouts) to meet with your clients during COVID-19?
    - Yes (please specify the service used) _____
    - No

COVID-19 Exposure and Family Impact Survey (CEFIS)

Please tell us about your family's experiences during the novel Coronavirus (COVID-19) pandemic. In answering these questions, please think about what has happened from March 2020 to the present, due to COVID-19. By family we mean people who live in your household, extended family, and close friends who you consider "like family."

Part 1. Please answer Yes or No for each of the following statements.

1. We had a "stay at home" order ☐Yes ☐No
2. Our schools / child care centers were closed ☐Yes ☐No
3. Our child/ren's education was disrupted ☐Yes ☐No
4. We were unable to visit or care for a family member ☐Yes ☐No
5. Our family lived separately for health, safety or job demands ☐Yes ☐No
6. Someone moved into (or back into) our home ☐Yes ☐No
7. We had to move out of our home ☐Yes ☐No
8. Someone in the family kept working outside the home (essential personnel) ☐Yes ☐No
9. Someone in the family is a healthcare provider/first responder providing direct care ☐Yes ☐No
10. We had difficulty getting food ☐Yes ☐No
11. We had difficulty getting medicine ☐Yes ☐No
12. We had difficulty getting health care when we needed it ☐Yes ☐No
13. We had difficulty getting other essentials ☐Yes ☐No (if Yes, specify) _____
14. We self-quarantined due to travel or possible exposure ☐Yes ☐No
15. Our family income decreased ☐Yes ☐No
16. A member of the family had to cut back hours at work ☐Yes ☐No
17. A member of the family was required to stop working (expect to be called back) ☐Yes ☐No
18. A member of the family lost their job permanently ☐Yes ☐No
19. We lost health insurance/benefits ☐Yes ☐No
20. We missed an important family event or it was canceled (e.g., wedding, graduation, birth,

funeral, travel [including vacation], other) ☐Yes ☐No

21. Someone in the family was exposed to someone with COVID-19 ☐Yes ☐No
Who (e.g. myself, my child, my spouse, my parent, etc) _____
22. Someone in the family had symptoms or was diagnosed with COVID-19 ☐Yes ☐No
Who _____
23. Someone in the family was hospitalized for COVID-19 ☐Yes ☐No
Who _____
24. Someone in the family was in the Intensive Care Unit (ICU) for COVID-19 ☐Yes ☐No
Who _____
25. Someone in the family died from COVID-19 ☐Yes ☐No
Who_____

Part 2. COVID-19 may have many impacts on you and your family life. In general, how has the COVID-19 pandemic affected each of the following?

26. Parenting
    - ☐ Made it a lot better
    - ☐ Made it a little better
    - ☐ Made it a little worse
    - ☐ Made it a lot worse
    - ☐ Not applicable
27. How family members get along with each other
    - ☐ Made it a lot better
    - ☐ Made it a little better
    - ☐ Made it a little worse
    - ☐ Made it a lot worse
    - ☐ Not applicable
28. Ability to care for your child with [add illness/condition]
    - ☐ Made it a lot better
    - ☐ Made it a little better
    - ☐ Made it a little worse
    - ☐ Made it a lot worse
    - ☐ Not applicable
29. Ability to care for other children in your family
    - ☐ Made it a lot better
    - ☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

30. Ability to care for older adults or people with disabilities in your family

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

31. Your physical well-being – exercise

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

32. Your physical well-being – eating

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

33. Your physical well-being – sleeping

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

34. Your emotional well-being – anxiety

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

35. Your emotional well-being – mood

☐ Made it a lot better

☐ Made it a little better

☐ Made it a little worse

☐ Made it a lot worse

☐ Not applicable

36. Overall, how much distress have you experienced related to COVID-19?

1 = No distress
2
3
4
5
6
7
8
9
10 = Extreme distress

37. In general, across all your children, how much distress have your children experienced related to COVID-19?

1 = No distress
2
3
4
5
6
7
8
9
10 = Extreme distress

Part 3. Please tell us about other effects of COVID-19 on your child/ren and your family, both negative and/or positive. (Text entry box)

Demographics

1. Are you of Hispanic or Latino origin?
    - Yes
    - No
2. What is your race (select all that apply)?
    - American Indian or Alaska Native
    - Asian
    - Black or African American
    - Native Hawaiian or Other Pacific Islander

- White
- Some other race (please specify) _____

3. What is your gender?
    - Female
    - Male
    - Non-binary/ transgender
    - Prefer to self-describe _____
    - Prefer not to say
4. Do you know how to speak any other language(s) in addition to English?
    - Yes (please specify) _____
    - No

[If YES] With approximately what percent of your birth doula clients do you primarily speak a language other than English?

- Less than 25%
- 25-50%
- 51-75%
- Greater than 75%

5. What is your household income?
    - Less than $20,000
    - $20,000 to $34,999
    - $35,000 to $49,999
    - $50,000 to $74,999
    - $75,000 to $99,999
    - $100,000 to $149,999
    - $150,000 to $199,999
    - $200,000 or more
6. What is your highest level of education?
    - High school or less
    - Some college / Associate's degree
    - College or postsecondary degree
7. Do you have a physical disability?
    - Yes
    - No
8. What is your marital status?
    - Single
    - Married
    - Divorced
    - Partnered but not married
9. How many children do you have?
    - 0
    - 1
    - 2
    - 3
    - 4+
10. What is your political affiliation?
    - Republican

- Democrat
- Independent
- Another political affiliation (please specify) _____

[PAGE BREAK]

Gift card info
As a reminder, we are required to keep a tracking sheet with the names and addresses of all individuals who receive gift cards for tax purposes only. The information you provide below will be kept completely separate from the research data to protect your confidentiality.

Please provide your **mailing address** below:

Preferred **email address** for electronic gift card:

APPENDIX D: PRELIMINARY CODING SYSTEM

Category: Action Contexts

Subcategory 1: Settings

Code: PHYSICAL – HOME ENVIRONMENT
Code: PHYSICAL – HEALTH CARE SETTING
Code: PHYSICAL – WORK ENVIRONMENT
Code: TASK – ROLES AND RESPONSIBILITIES
Code: TASK – ACTIVITIES OF DAILY LIVING
Code: TASK – CHILDBIRTH PREPARATION
Code: SOCIAL ENVIRONMENT

Subcategory 2: Relationship systems

Code: FAMILY AND FRIENDS
Code: PARTNER
Code: OTHER MOTHERS
Code: ONLINE COMMUNITIES

Subcategory 1: Organizational systems

Code: GOVERNMENT
Code: ECONOMIC
Code: VOCATIONAL
Code: EDUCATIONAL
Code: HEALTH CARE SYSTEMS
Code: HOSPITAL POLICIES
Code: PUBLIC HEALTH MESSAGES

Category: Self-Change Processes

Subcategory 1: Motivational processes

Code: OUTCOME EXPECTANCIES
Code: SELF-EFFICACY
Code: GOAL STRUCTURES

Subcategory 2: Problem solving

Code: DECISION-MAKING
Code: GENERATING OPTIONS/ALTERNATIVES

Subcategory 3: Generative capabilities

Code: INFORMATION PROCESSING/RETRIEVAL
Code: ATTENTION DEPLOYMENT
Code: SHARING KNOWLEDGE – FACTUAL/INFORMATIONAL
Code: SHARING KNOWLEDGE – PROCEDURAL/SKILLS

Subcategory 4: Social interaction processes

Code: BIDIRECTIONAL
Code: ONE WAY: DOULA TO CLIENT
Code: ONE WAY: CLIENT TO DOULA

Category: Action States (Habits)

Subcategory 1: Health protective action

Code: TO PREVENT CONTRACTING COVID-19 - SELF
Code: TO REDUCE COMMUNITY SPREAD – OTHERS
Code: FOR MATERNAL HEALTH

Code: FOR INFANT HEALTH
Code: NUTRITION
Code: PHYSICAL ACTIVITY
Code: SLEEP
Code: SUBSTANCE USE
Code: STRESS MANAGEMENT / CARING FOR MENTAL HEALTH

Subcategory 2: Outcomes

Code: INFANT HEALTH
Code: MATERNAL PHYSICAL HEALTH
Code: MATERNAL MENTAL HEALTH

Category: Role of the Doula (VALUES CODES)

Subcategory 1: Values

Code: RELATIONAL AUTONOMY
Code: EMPOWERMENT

Subcategory 2: Attitudes

Code: POSITIVE/OPTIMISTIC/HOPEFUL
Code: NEGATIVE/PESSIMISTIC/HOPELESS

Subcategory 3: Beliefs

Code: DOULAS ARE ESSENTIAL
Code: DOULAS OUGHT TO STAY HOME