Modeling Preconception Perceptions of Pregnancy and Birth: A Qualitative Study of Women Living in Italy

Sydney Rivera
Indiana University
Stephanie Meier
Purdue University West Lafayette
Zeina Naoum
Purdue University West Lafayette
Andrea DeMaria (ademaria@purdue.edu)
Purdue University West Lafayette

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Abstract

Background: Preconception health planning is a recognized resource for optimization of physical and mental-emotional health prior to pregnancy, though few women and providers demonstrate high awareness of preconception health. Furthermore, concerns, fear, and risk perceptions are often absent from the discussion, despite their potential impact on pregnancy and birth decision-making. These themes remain understudied in Italian populations.

Methods: Researchers conducted in-depth interviews in 2017 with 43 reproductive-aged women living in or around Florence, Italy, and currently using the Italian health care system. An expanded grounded theory approach was used to explore pregnancy and birth perceptions. HyperRESEARCH facilitated open and axial coding for thematic analyses.

Results: Themes emerged in the form of three continuous spectrums across which women view pregnancy and birth decision-making in the preconception period. First, participants identified strong social and healthcare support for pregnancy and birth, which at times was perceived as excessive or limiting (*Supported vs. Controlled*). Second, participants contrasted Italian preferences for natural and holistic processes with the medical model of prenatal care and birth (*Natural vs. Medical*). Third, participants constructed pregnancy and birth through risk narratives, placing a high priority on safety (*Safe vs. Risky*). While women described a culture of social support and natural lifestyle preferences, they also emphasized complications and risk, treatment of pregnant women as sick or fragile, seemingly rigorous prenatal care, and birth choices contingent on as-of-yet unexperienced complications. High levels of social and medical control surrounding pregnancy correlated with high levels of perceived risk.

Conclusions: Findings offer opportunities for practitioners to address pregnancy- and birth-related concerns and misinformation through an integrated model demonstrating both the destructive role of risk and control as well as the possibility of a more positive emphasis on safety and support.

Background

Reproductive decisions, including pregnancy and birth, are multi-faceted and relate to individual, social, and provider experiences and preferences (1, 2). An often overlooked aspect of pregnancy knowledge and preparation is preconception health and healthcare (3). Preconception health has been defined as “the provision of healthcare to women of reproductive age and their partners prior to conception in order to optimise a woman’s physical, social and emotional wellbeing and to ensure optimal intra-uterine conditions for the developing fetus” (4). Preconception health planning may serve a beneficial role in understanding pregnancy needs and discussing pregnancy and birth options prior to pregnancy, though few women and providers demonstrate high awareness of preconception health, both internationally and in Italy (5–10). Recent guidelines across European countries suggest preconception planning as one aspect of reproductive health provision to identify fertility timelines and optimize health status (10). Italy offers some preconception clinics accessible for all women, and web-based resources

(www.pensiamociprima.net) for women planning their reproductive lives (10, 11). Missing from this, however, are conversations surrounding Italian women's perceptions of pregnancy, including prevalent concerns, misinformation, and myths in the preconception period (8, 11). Guidelines addressing preconception health may reference mental and emotional health but do not specifically address how to conceptualize pregnancy risk and fear (12). Thus, gaps persist in how best to communicate with women about their concerns, and how various information sources contribute to or reduce common misunderstandings. Accurate and balanced preconception attitudes and beliefs are important, as these factors may impact decisions during pregnancy and birth (5, 13–15).

Risk perceptions may shape women's and providers' pregnancy perspectives (13, 16). Risk perceptions in low-risk pregnancy may be problematic if women choose an option based on misinformation (13, 17). Further, providers may be reluctant to engage in shared decision-making regarding women's preferences due to risk over-estimation, medical outcome concerns and liability, and provider-as-expert narratives (16). For example, Donati et al. (18) found that despite some healthcare providers suggesting women wanted C-sections, which was a determining factor in selecting birthing mode, women still preferred vaginal birth (19, 20). Jenkinson, Kruske, and Kildea illustrated low-risk women valued natural birth and desired autonomy in birthing decision-making, even when healthcare providers disagreed with their choices (17). In addition to risk, fear may be associated with pregnancy and birth perceptions and decisions (21–24). Fear of negative birthing outcomes or complications among women correlated with higher elective C-section rates and perinatal interventions, negative attitudes toward birthing experience, and more intense labor pains, while pre-birth fear was associated with C-section preference and less positive perceptions of being pregnant (22, 24). Clustering by fear, attitudes, and beliefs to understand pre-birth perceptions and decisional preferences demonstrated that fear can impact birth experience (22, 24); however, what drives these concerns remains unclear. In Italian populations specifically, fear of negative outcomes or the unknown has been identified as a reason to delay preconception planning (8). Early research described increased fear among pregnant women in Italy compared to non-pregnant controls (25), though preconception fear and perceptions remains understudied in this population.

Pregnancy and birth risk may be socially constructed (1, 14, 15). One study noted pregnancy and birth media portrayals as dangerous increased fear and concerns among their sample (15). Those who witnessed TV shows displaying natural and normal birth, however, expressed fewer concerns and fear. *Normal birth* treats pregnancy, labor, and birth as a natural physiologic process requiring limited unnecessary intervention (e.g., labor induction, pain relief interventions, or surgery) (26).This framework argues birth is natural, healthy, and expected, barring complications (16, 26). Alternative birthing options, often characterized as unsafe within the biomedical paradigm, can result in positive outcomes for women and infants in the appropriate setting (27, 28). In a prospective observational study of birthing pools in Italy, Henderson et al. noted rare adverse outcomes and increased spontaneous vaginal birth, indicating water birth as a safe and acceptable birthing method (28). Prior research also demonstrated alternative labor positions and increased movement allowed women more comfortable labor and birthing experiences with fewer medical interventions (29, 30). Fewer interventions may result in greater birthing satisfaction (17, 31). Women may consider birthing methods and outcomes prior to pregnancy due to

media exposure or social interactions. Thus, addressing risk misperceptions during the preconception period may reduce fears by demonstrating safe and healthy deliveries that align with normal birthing processes (5, 6, 8, 9, 24). Social construction of risk may also stem from social support systems and culture (1, 2, 32–35). How women hear pregnancy and birth discussed among family and friends and in social settings may prime women toward or reduce fear and risk. Prior reproductive health work has shown negative perceptions and experiences are more frequently and vividly recalled than positive (14, 24, 36, 37), which may tie to perceptions of pregnancy and birth.

Little research has detailed women's pregnancy and birthing perceptions in preconception periods in Italy (8, 25, 28, 33, 38, 39). Furthermore, concerns, fear, and risk perceptions are often absent from the discussion. Because preconception is a critical time for reproductive life-planning and addressing both mental and physical health (12), exploring women's experiences, including attitudes toward pregnancy and birth and related decisional factors, is necessary (5). To address this gap, researchers conducted in-depth qualitative interviews with women living in Florence, Italy. As part of a larger mixed-methods project, this study explored pregnancy and birth decision-making. This study sought to understand relevant social and personal factors related to pregnancy and childbirth at preconception among women living in Italy. Findings from this study offer practical opportunities for providers and health communication practitioners to address pregnancy- and birth-related concerns and misinformation.

Methods

This study was part of a larger qualitative investigation conducted from June to July 2017, which explored women's reproductive health decision-making and experiences among Italian women. This manuscript specifically explored social and personal factors related to pregnancy and childbirth. Qualitative methodology allowed for rich insight into pregnancy norms and decision-making.

Recruitment

Eligibility criteria included women of reproductive age (18–45 years old), living in or around the Florence, Italy city centre, using the Italian healthcare system at the time of study enrolment, and proficient in conversational English. Various recruitment strategies were used to increase participation: 1) printed recruitment flyers (in both English and Italian) placed throughout the Florence city centre; 2) social media advertisement (in both English and Italian) to reach a larger audience; and 3) in-person participant recruitment in public areas (e.g., libraries, cafes). All efforts detailed the purpose of the study and researcher contact information for follow-up. Researchers also used snowball sampling (40), where study participants referred other eligible women, to increase participation levels. The use of multiple sampling methods allowed the study to encompass a diverse population of participants and represent the perceptions, attitudes, and behaviours of pregnancy and childbirth.

Interviews

In-depth individual interviews were conducted in English at a location convenient to participant and researcher (e.g., private spaces cafes, university offices, rooms in public libraries). Researchers obtained written informed consent prior to each interview, including written and verbal consent to be audio record. Interviews lasted approximately one hour and were audio-recorded using the SoundNote iPad application. Researchers with graduate-level qualitative methodology training conducted the interviews following a semi-structured interview protocol, which allowed flexibility for the researcher to add, change or rearrange questions. Additionally, participants were able to introduce new and relevant concepts during the interview process, allowing them to narrate their experiences (40, 41). Interviews began by asking the participant general questions about her daily routine to increase disclosure and build rapport (40). Interviews also inquired into women's pregnancy perceptions and experiences, pregnancy care, and social support (see Table 1). This range of questions allowed women to discuss pregnancy holistically. Interviews continued until data reached theoretical saturation and study concepts were fully developed. After interview completion, participants were asked to complete a brief sociodemographic survey to capture participant characteristics (e.g. age, education, marital status, sexual orientation, sexual behaviors). All research materials collected via interviews and demographic surveys were kept confidential and separate from identifiable information, to minimize risk. To compensate for time and efforts, all participants received a 20-Euro gift card.

Table 1
Interview Topics and Selected Questions

Topic	Questions
Pregnancy Perceptions	*Describe the pregnancy culture in your community. Is it something that is positive? Supported?*)
Pregnancy Experiences	*Are women more likely to use the private or public healthcare system for pregnancy-related visits?* *How do women typically deliver? Vaginal birth or cesarean section?* *How do women choose the delivery method that is right for them?*
Pregnancy Care	*What factors do women consider when deciding where to birth?* *Where do women most often birth: at home? hospital? birthing center?*
Social Support During Pregnancy & Birth	*Who do women bring as a support team for their birthing process?*

Analyses

All interviews were transcribed verbatim throughout the study period, along with any memos and observer comments to highlight emerging data trends and maintain reflexivity (41). Researchers used techniques from grounded theory for a constant comparative method of data analysis. This inductive approach highlights participant voices (42). Participant words, phrases, and experiences provided *in vivo codes* (42). HyperRESEARCH 3.7.5, a qualitative data management program, assisted in data input and

organization. Researchers completed iterative line-by-line open and axial coding to build conceptual categories. Open coding applied impression codes to portions of data based upon meaning established in the initial transcript reading (42). Axial coding identified relationships between codes and to broader patterns (42). A constant comparative approach within and between interviews allowed researchers to identify emergent themes. Interrelationships between themes were identified and iteratively reviewed for consistent patterns within and between participant responses. Themes were then plotted into a visual model reflective of their expressed associations, verified within stated participant experiences and viewpoints. Researchers met frequently to discuss the emerging themes and model and to ensure consistency and accuracy. All discrepancies were resolved via consensus.

Ethical Considerations

The last author's institutional review board, with a letter of support from the Italian partner university, approved this study. All research procedures conformed to all ethical principles for medical research on human subjects. Participants were adequately informed of the study and were notified of their right to withdraw participation at any point in the interview without explanation. Participants also provided both written and verbal informed consent to participate in the interview and to be audio recorded (for transcription purposes). Upon transcription completion, interview audio files were destroyed from electronic devices. Demographics forms did not have a section for participant names, as the forms were used to provide de-identified information about the interview sample. Interview consent forms were kept separate from the data and demographics forms and kept in a secure, locked location.

Results

Overall, 43 reproductive-aged women (M = 31.9±6.1 years) without children, living in or near Florence, Italy, completed in-depth interviews. Most participants indicated they were in a non-marital relationship (67.4%, n = 29), with some indicating they were married (11.6%, n = 5) or single (19.6%, n = 9). Most participants self-identified as heterosexual (83.7%, n = 36), while others self-identified as bisexual (14.0%, n = 6) or homosexual (2.3%, n = 1). Most participants had some college or completed a college degree (86.0%, n = 37), while 6 participants (14.0%) completed a high school education or less.

Participants' interview responses often highlighted the presence of a spectrum of opinion around a given belief. Preconception perspectives around pregnancy and birth in this population can thus be modeled as three intersecting continuums over which beliefs are held and decisions are made: supported vs. controlled, medical vs. natural, and safe vs. risky (see Fig. 1).

Supported vs. Controlled

Participants described pregnancy as a period of support and excitement, particularly tied to social networks. One participant said, "it seems pretty positive in how [pregnancy is] perceived and how people live through their pregnancy. I think it's a very assisted process. Not just from the health system, but also from a family support system perspective [P46]." In addition to available group prenatal classes, women

considered the role of their social circle as vital to information-seeking and problem management: “So, when you have an issue, a concern, you talk with your friends, with your family...It’s the same in case of pregnancy so people talk [P01].” Support was also described as practical, in the form of “friends that can help you do everything as soon as you’re pregnant; everyone starts to help you [P16].” Though this suggests social support, others perceived constant assistance and attention as challenging or frustrating. One participant suggested,

When you’re pregnant everyone is treating you as if you are sick, like you cannot do anything. Although this is just the culture of course, women that are pregnant end up working and…still being themselves… [P31].

Pregnancy-associated social treatment in this sense was a barrier to women’s daily lives. Prenatal care was similarly perceived as a form of support that is helpful and positive, but at times can feel regimented or excessive. One participant explained,

I was surprised because they give you this small notebook, inside you have all the analysis, all the ultrasound you have to do. You have your plan and you have to follow it. It...is mandatory to go and organize your pregnancy period with a doctor [P25].

Many saw this as a benefit, “because [women] are really followed […] you don’t have to worry about anything and you have all your appointments with the public system [P32].” Others felt it was too much, describing the burden of constant “analysis to check if everything is ok, if the baby is ok; many, many checkups [P06],” Reflecting how some women were bothered by overly attentive social support, excess medical attention may contribute to pregnant women being “view[ed] like [they are] sick” [P02].

Natural vs. Medical

Cultural attitudes suggested a desire to incorporate natural lifestyle choices into pregnancy experience. One participant emphasized this, suggesting:

The vibe among [Italian] mothers is to be as natural as possible…so most women prefer the natural option. There is…a movement of women who prefer the less intrusive, they prefer to have the most natural as possible experience—before, during, and after—so less drugs, less surgery, less intervention, less medical action [P26].

Participants valued cultural norms related to holistic health and well-being in pregnancy. This was in contrast to how some women felt like pregnancy was viewed, either by society at large or by the healthcare system. One participant described prenatal care as “a whole protocol,” elaborating with:

I’ve heard that lately in the last maybe 20 years or so in Italy, pregnancy is too medicalized, that there are too many exams, too many parameters to reach, too many doctor’s appointments, too many ultrasounds...while it should be a natural thing [P30].

Despite cultural preferences towards natural lifestyle choices, health care patterns still suggested strong influence of the biomedical model on birth.

In that same vein, participants described varied views of vaginal birth and C-section. Many participants recognized vaginal birth as the preferred method barring medical complications. One woman explained, “in Italy, there is a tendency to deliver vaginally and only to do ‘the cutting’ [C-section] if there is an issue that required it medically [P24].” However, others noted perceptions of high C-section rates: “in Italy, at the moment, it’s very trendy to [deliver] by C-section because it’s now very easy… [P43].” This participant continued on to say, “because [doctors] just give you a date…and that’s it. And many woman, they use it now, even if they don’t need it for health….” According to this participant, rates rose because of convenience for both provider and patient to treat birth as a medical rather than natural process.

Safe vs. Risky

Throughout discussion of various aspects of pregnancy and birth decision-making, participants expressed concerns, often constructing the process as “risky.” Risk mitigation was a predominant theme; because of “complications, you want to be in a structured [situation] [P15].” This started from the beginning with prenatal care: “People take prenatal care very seriously [P46].” Safety and risk also affected decisions regarding C-section:

Usually it depends on the health and the safety for the women and the baby, if they have a pregnancy that is already a risk they prefer to prearrange a birth…other cases, a lot of people prefer normal birth just because they think it’s more natural and very often…they try to let you have a normal birth but if they realize you don’t have enough strength or you are having problems, they just choose the other option because it’s safer [P08].

Complications were consistently of concern, with the desire for safety being placed ahead of personal birth goals:

In my dream, I want to give birth in water. But when you are pregnant, you forget about all these things and you just want the best things for you and your child. So, you just choose the best hospital you can… and you try to make the best choice for you, your health, and your child…because in that situation, everything can happen so you have to be prepared [P25].

Preparation and responsibility were considered motherly ideals, and necessitated careful consideration of risk. Most participants expressed similar viewpoints in preferring the structure and safety of hospitals over other options such as birth centers or home births, “because [at the hospital] they feel more protected [P18].” One participant said, “I think people could find it dangerous because…if something doesn’t go well you need to have all the resources at the hospital, which you wouldn’t be able to have [P42].” Birth was framed as dependent on preparation and resources to evade adverse outcomes.

Discussion

Researchers conducted in-depth interviews with women to explore pregnancy and birth perceptions in Italy. Themes emerged in the form of continuous spectrums across which women view pregnancy and birth decision-making in the preconception period. First, participants identified strong social and healthcare support for pregnancy and birth, which at times was perceived as excessive or limiting. Second, participants contrasted Italian preferences for natural and holistic processes with the medical model of prenatal care and birth. Third, participants constructed pregnancy and birth through risk narratives, placing a high priority on safety. While women described a culture of social support and natural lifestyle preferences, they also emphasized complications and risk, treatment of pregnant women as sick or fragile, seemingly rigorous prenatal care, and birth choices contingent on as-of-yet unexperienced complications. Prospective pregnancy and birth decision-making even at preconception represent a delicate balancing act across several tipping scales.

Social networks emerged in participant discussions. Most women described female friends and family members as critical sources of assistance during pregnancy. Particularly, social networks provided opportunities to learn from others' pregnancy, labor, and birthing experiences and vet information. This aligns with prior literature indicating women lean on social support systems to celebrate pregnancy and aid in pregnancy-related decision-making (20, 33). Additionally, participants described the healthcare system as a community support system, particularly in the form of prenatal care and courses. Women highlighted the emotional support offered by pregnancy groups as illustrative of the positive value Italians place on pregnancy and childbirth. This finding extends work demonstrating the significance of Italian prenatal courses centered on interpersonal relationships in improving pregnancy care and reducing women's concerns (33). Social networks and healthcare structures provided women opportunities to experience pregnancy within a larger social support framework.

Contrasting social support perceptions and societal value of pregnant women in Italy, some participants also noted pregnant women were perceived as unable, too fragile, or too ill to complete daily tasks. This finding elaborates on literature suggesting pregnancy affects women's self-identity, positioning them within illness or infantilized narratives (43). Italian pregnancy norms, though mostly positive, may impact women's agency by reducing their identity to only their pregnancy state. Treating women as ill or incapable during pregnancy decreases women's autonomy and may result in a negative pregnancy experience, with social systems and medical treatment protocols making them feel more controlled than supported. This demonstrates that social systems can both facilitate and impede how women view pregnancy in preconception periods. Social norms may sway women towards beliefs of pregnancy as a period of reduced ability or increased concern, building a narrative of pregnancy-associated risk and fear (15) and threatening autonomy preferences among women living in Italy (44). A perception trending towards the "control" end of the spectrum may feed the perception of pregnancy as risky and dangerous. Conversely, this may lead to women relying on or even desiring controlling systems as a mechanism of risk mitigation.

The same risk-control feedback loop is present in considerations of birth decisions, including where and how to give birth. Participants noted preferences for vaginal birth in the healthcare system that aligned

with their preconception preferences. These data support literature suggesting women prefer and are satisfied with vaginal birth in most cases (18, 38, 45). With regards to other choices, such as birth outside the hospital or water birth, women expressed an expectation that they forgo their desires for whatever is deemed safe by their healthcare provider. These findings elaborate on previous literature (8, 21–23), highlighting fear as a moderator of pregnancy experience and decisions. While there are certainly circumstances requiring specific medical approaches or interventions, women without known risk factors have options for pursuing desired alternatives safely and should be aware of these choices. Placing a priority on risk aversion over personal decision-making, even in the preconception stage, represents another example of risk overestimation leading women to defer to a controlled medical model. This finding emphasizes a need for increased patient-provider communication about birth modes to ensure women are fully informed about relative benefits and risks of available birthing choices, beginning in the preconception period (5, 7, 8, 10). Preconception planning represents a critical opportunity to discuss reproductive goals and construct birth as, on average, normal and safe. This illustrates the need for patient-provider partnership in understanding risk factors and underlying fears, and how to address these, particularly on the part of the provider as providers' risk misperceptions may exacerbate women's concerns (13).

In our model, the interrelating poles of "risky" and "controlled" sit on axes opposite of, respectively, "safe" and "supported." Positive aspects expressed by participants in our study included excitement, relational value, and practical and informational assistance freely provided to Italian women through pregnancy and birth. Prenatal care was perceived by some as helpful and well-organized, with the option for increased social support through prenatal group care. Despite multiple references to risk, particularly regarding birth, participants in our study did seem to feel that "safe" pregnancy and birth were available to them, albeit at times at the expense of personal desire or autonomy. Framed properly, these interrelated positive factors could serve to create an effective characterization of pregnancy and birth as normal and safe, with medical attention and social systems present to support women and keep them healthy through the process, rather than protect or prevent risks. A "safe-supported" rather than a "risky-controlled" cycle may decrease preconception fear-based perspectives and lead to decreased anxiety and improved outcomes through the pregnancy and birth period (5, 7, 24). Feeling supported on an individual and societal level may contribute to a sense of safety, conversely allowing women to freely utilize support systems without them becoming a threat to autonomy. Pregnant patients and healthcare providers should also understand that both of these cycles can persist in either a medically-focused or a naturally-focused system of care. Thus, decisions regarding where on this continuum women should receive healthcare can be based in personal factors including goals, preferences, and *real, individual* (rather than theoretical, socially-perceived) health risk factors.

Our findings extend fear literature due to the high number of nulliparous women in this sample who described safety concerns as a decisional factor in a future pregnancy, demonstrating the pervasiveness of risk narratives among Italian women. Risk overestimation may result in decision-making that does not reflect women's actual birthing preferences. Fear and risk narratives may relate to lacking understanding of normal birth (13, 43), with participants describing birth as too medicalized, while also subscribing to

overarching fears about the dangers of pregnancy and birth. Rather than birth observed as a natural and normal process, these prevalent perceptions construct pregnancy as a disease process requiring intervention to avert risk even among low-risk women (13, 17, 31, 46). Women may benefit from discussion with providers emphasizing differences between natural and atypical pregnancy, labor, and birth during prenatal and preconception care (5, 6, 8). Highly organized prenatal care, while making some women feel cared for and looked after, was at times perceived as excessive or creating undue concern around the very risks it was built to prevent. Therefore, reframing prenatal care represents a clear opportunity for countering misinformation by making it clear that prenatal testing, check-ups, and behavior modifications are a normal, preventative measure, rather than an indication that problems are likely or expected. This same perspective should also be applied to preconception care as women seek to optimize pre-pregnancy health. Addressing these concerns prior to pregnancy may increase women's autonomy in future birthing choice and reduce fears impacting pregnancy experience that may stem from social norms. This aligns with prior literature suggesting adoption of and support for normal birth in practice (13, 16, 28, 46) improves birth outcomes and reduces unnecessary surgical intervention (47, 48). These recommendations must also be considered in light of the Covid-19 pandemic and the profound psychological impact globally and in Italy, with a recent online survey of women in Italy demonstrating decreased safety and increased fear perceptions related to pregnancy (49). While preconception care has typically focused on physical health, applying existing models of preconception care delivery (4) to address psychological needs surrounding risk and fear could be highly beneficial in ensuring women feel comfortable and confident to address their pregnancy and birth decisions with autonomy.

Strengths and Limitations

Qualitative methods allowed for in-depth insight into pregnancy and birth attitudes, perceptions, experiences; however, several limitations existed. This study is among the first of its kind to utilize a qualitative approach to explore pregnancy behaviors, influences, and perspectives in Italy and publish in English. Cultural appropriateness of the instrument was reviewed and approved by in-country, Italian experts. Interviews were conducted with women who were comfortable speaking conversational English, which may have limited perspectives and vocabulary, therefore, some insights may not have been adequately captured. Additionally, women in this sample had higher education levels and were employed, which is to be expected from women capable of interviewing in English, thus limiting generalizability to women who may differ demographically and geographically. Future research should explore this content in both Italian and English. The majority of interview participants were recruited from their workplaces in or near the Florence city center; therefore, generalizability is limited. However, the study methodology provides a basis upon which to explore family planning and pregnancy perspectives in other contexts, specifically those with similar cultural values (i.e., conservative, family-oriented, religious), suggesting the transferability of the work (50).

Interviews were conducted by several research assistants trained in graduate-level methodologies and immersed in the community as part of an extended study abroad experience. The in-depth individual interview methodology, coupled with investigator triangulation, or using multiple researchers to mitigate

any bias or influence, contributes to study credibility (51). The team met regularly and discussed interview experiences and emerging data trends to inform any necessary protocol adjustments and allowed the primary investigator to monitor coding and data reliability. Researcher memos, all codebook iterations, and data from all stages (i.e., raw data, audio, transcriptions, coded data) related to this study remain preserved, supporting confirmability of the research (52). Despite the limitations, our study provides a meaningful contribution to the pregnancy literature and offers novel information regarding preconception perceptions among a sample of women living in Italy. Future research should include interviews and focus groups with pregnant and postpartum women to further elucidate experiences and decision-making related to Italian social norms across various geographic regions where health outcomes differ.

Conclusions

Social networks and healthcare structures facilitate a shared pregnancy experience among women. Therefore, these should be considered vital sources of emotional support and information provision in campaigns and interventions aimed at improving women's knowledge about pregnancy and birthing options and reducing women's associated concerns and fears. Additionally, the Internet, smartphone applications, and social media may provide opportunities to address misinformation, particularly women's pregnancy and birth risk perceptions. Healthcare providers serve important and influential roles in decision-making. Providers should initiate discussions as appropriate to explore women's birth and decisional role preferences. The preconception period may provide an opportune time to address pregnancy and birth safety and concerns using a normal birth paradigm, including during general and gynecological appointments. Our model of preconception pregnancy and birth perspectives serves as a guide for individual discussions as well as broader public health interventions seeking to address risk and fear narratives. With further consideration and research, it is also possible that this model may prove useful in balancing perspectives during pregnancy, throughout prenatal care and at the time of birth decision-making.

This study offers insight into women's perceptions of pregnancy and birth in Italy and suggests a model for both interpreting and molding associated perspectives. Findings offer practical opportunities for providers and health communication practitioners to address pregnancy- and birth-related concerns and misinformation. Increasing opportunities for women and providers to engage in risk- and fear-reducing communication, especially at preconception periods, may empower women in their pregnancy and birth choices.

Declarations

Ethics approval and consent to participate

This study was approved by the Purdue Institutional Review Board with a letter of support from Florence University of the Arts. All participants of this study provided written informed consent.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

Availability of data and materials

The dataset used and analyzed for the current study are available from the corresponding author upon reasonable request.

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Authors' contributions

The study and study materials were conceived and designed by SR and ALD. Data were collected by SR and ALD. All authors shared responsibility for data analysis and interpretation. SR and SM drafted the manuscript with multiple revisions throughout the drafting process by ZN and ALD. All authors read and approved the final manuscript.

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Figures

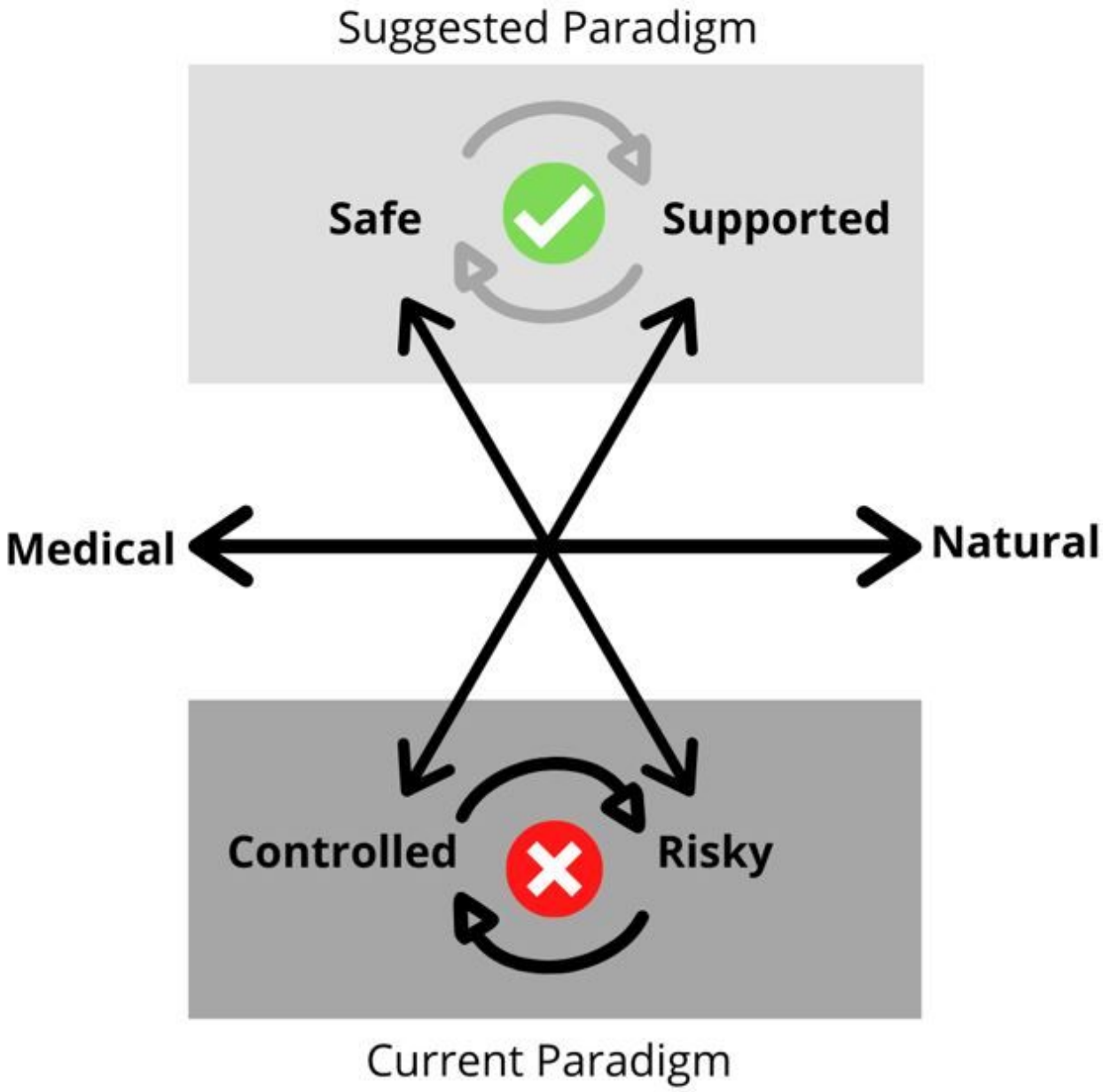

Figure 1

A model of pregnancy and birth conceptualization in the preconception period. Pregnancy and birth exist on a series of continuous spectrums. Significant interplay between the safe-risky and supported-controlled spectrums can lead to either negative (current paradigm) or positive (suggested paradigm) perception cycles. Either cycle can exist within either medically or naturally inclined healthcare, a spectrum which is based on personal preferences and individual (rather than perceived) health risk.