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Uncertainty, manageability and individuation: A longitudinal qualitative study of women's conceptualisations of risk from pregnancy to breastfeeding—the case of alcohol consumption

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ABSTRACT

Alcohol use during pregnancy and breastfeeding is associated with diverse risks to infant health. As there is no known safe threshold of alcohol consumption, official guidelines advocate a precautionary approach and advise pregnant and breastfeeding women to abstain. Sociological research has shown that women's occasional drinking during pregnancy involves complex responses to risk messages and health recommendations. However, research on women's views on alcohol consumption during breastfeeding is mostly non-existent. Moreover, how and whether women's understandings of the risk change from one period to the next has not been investigated. Based on longitudinal qualitative interviews, this article aims to understand how women make sense of the risk of alcohol consumption from pregnancy to breastfeeding. Using thematic data analysis, we identify three key conceptualisations of alcohol use as a risk. The first one relates to *risk discourses* emphasising scientific uncertainty about low alcohol consumption, strict abstinence as shaped by discourse on "good motherhood" and representation of the pregnant body as permeable. The second conceptualisation focuses on the risk as *manageable* and refers to strategies for controlling consequences of occasional drinking and to representation of woman's body as a filter. The third conceptualisation highlights *individuation* as the way women regard their foetus or infant as a vulnerable and concrete being. By examining the continuity and change of women's views of the issue of alcohol consumption, this article addresses the transition to motherhood through the lens of the risk issue and contributes to the understanding of risk perception over time.

1. Introduction

With a rich tradition of theoretical perspectives, social science research on lay risk perception has investigated many facets of people's interpretations and strategies for dealing with risks in the health field (Lupton, 2013a; Zinn, 2020). However, individual risk perception as a social process over time remains an uncharted area in the qualitative literature. Taking the case of maternal alcohol consumption, this paper examines women's conceptualisations of this risk from pregnancy to breastfeeding.

In early modern Europe, alcohol was widely consumed, and wine especially was considered healthy and a stimulant, including during pregnancy (Martin, 2003). In this cultural context, medical beliefs in the 19th century regarding the negative hereditary effects of alcohol on offspring increased (Armstrong, 2003). In some regions of Switzerland, for example (Favre, 1981), the tradition of serving alcohol to a woman who had just given birth to give her strength and to promote lactation continued until the middle of the 20th century. In the second half of the 20th century, maternal alcohol consumption has become a major public health issue (Armstrong, 2003). The serious adverse effects for the foetus due to heavy prenatal alcohol exposure, including binge drinking, have been well established since the pioneering work in the late 1960s that identified "fetal alcohol syndrome" (FAS) (Jones & Smith, 1973; Lemoine et al., 1968). However, the effects of light drinking are unclear and underresearched (Armstrong, 2003; Mamluk et al., 2017). The multiple individual factors moderating the impact of alcohol on the foetus partly explain the fact that there is no known safe amount of alcohol to consume during pregnancy (Mamluk et al., 2017). Moderate alcohol intake by

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lactating women may also have harmful effects, albeit less serious than prenatal exposure, such as reduced breastfeeding duration, milk production and intake, and changes in infants' sleep (Greiner, 2019). Nevertheless, clinical research is limited, and the consequences of long-term exposure to alcohol during lactation for children remain unknown (Haastrup et al., 2014). In view of the scientific uncertainty regarding the safety of alcohol consumption during pregnancy and breastfeeding, official recommendations in most Western countries draw on the precautionary principle and generally advise pregnant and breastfeeding women to abstain completely from alcohol (Greiner, 2019; Mamluk et al., 2017). Approximately one woman out of six in Europe consumes alcohol during pregnancy, most often at low levels, and more than one mother out of two consumes some alcohol during breastfeeding in Western countries (Haastrup et al., 2014; Mårdby et al., 2017). Whereas women are likely to significantly decrease their consumption once pregnant and to slightly increase it in the postpartum period (Leggat et al., 2021), how and whether women's conceptualisations of abstinence and risk of drinking alcohol change from pregnancy to breastfeeding have not been investigated from a qualitative longitudinal perspective.

1.1. Maternal drinking through the lens of the sociology of risk

Sociological research addressing maternal drinking as a health issue usually acknowledges that "risk" has become a central concept in contemporary societies (Beck, 1992; Giddens, 1990) and in biomedicine (Armstrong, 1995). This literature refers to the process of medicalization and surveillance of maternal bodies, redefining especially pregnancy and foetuses as "at risk" (Hallgrimsdottir & Benner, 2014; Lupton, 2012).

1.1.1. Risk discourses and motherhood

Inspired by the works of the philosopher Michel Foucault, the governmentality approach has been key in characterising "risk discourses" in health (O'Malley, 2008). It argues that discourses on risk avoidance and messages of prevention based on medical knowledge have become the cornerstone of health behaviour regulation, leading individuals to think that it is in their interest to participate in screening programmes and follow healthcare professionals' advice regarding healthy lifestyles. From this perspective, risk discourse has become a means of governing people in modern societies through self-discipline, representing fragmented power exercised from multiple points (O'Malley, 2008). Surrounded by a plethora of recommendations, pregnant women are encouraged to monitor their bodies and to seek out and follow expert knowledge about risks to their foetuses (Bessett, 2010). In addition to abstaining from alcohol, they are advised to practice prenatal physical activity, to control overweight and to avoid smoking (Harper & Rail, 2012; Lupton, 2012). Some scholars have also pointed to the psychological discourses framing pregnancy as a state of psychosocial vulnerability, where pregnant women are expected to manage negative emotions considered a risk, such as anger, guilt or distress (Ballif, 2020). From the governmentality perspective, pregnant women are positioned as self-regulated individuals who bear responsibility for ensuring the health of their foetuses by avoiding any risk. They are also likely to be held accountable should there be a problem with the pregnancy or the foetus (Lupton, 2012).

Feminist analyses have challenged risk discourses as a neoliberal strategy of controlling women's bodies in terms of the moralisation of motherhood (Harper & Rail, 2012). For example, women consuming an occasional drink while pregnant or those feeding their infants with formula milk instead of breastfeeding are likely to be labelled bad mothers (Lee, 2008). The emphasis of risk discourses on individual women's responsibility for child health has also been challenged for overlooking the socioeconomic factors of pregnancy that are beyond women's control (Ruhl, 1999). Some scholars have linked the emphasis on maternal responsibility to a fetocentric ideological context, implying that the foetus receives a higher priority over the woman who carries it (Lupton, 2012; Markens et al., 1997). Prevailing risk discourses have also been challenged for encouraging women to experience their pregnancy primarily under the lens of fear of a possible misfortune they should anticipate and avoid (O'Malley, 2008). Scholars have also been critical of policy approaches that interpret lack of evidence regarding low levels of drinking as risky, stressing that "FASD [Foetal Alcohol Spectrum Disorder] has been increasingly defined as potentially experienced by *any* child conceived by any woman who drank *any* alcohol" (Lee et al., 2022, p. 20). The precautionary approach on which the abstinence policy is based has been criticised on the one hand as a strategy for managing scientific uncertainty, and on the other hand, as an instrument of moral judgment on motherhood and control over women's autonomy (Armstrong, 2003; Lee et al., 2022; Leppo et al., 2014; Thom et al., 2020). Some scholars have also challenged the alarmist tone of public health discourse focussing on complete abstinence from alcohol during pregnancy, characterising such discourse as a "moral panic" (Bell et al., 2009).

1.1.2. Women's experiences of and responses to risk in pregnancy and breastfeeding

A large body of research supports the argument that the experience of motherhood is strongly influenced by risk discourses in terms of women's awareness of risk, adherence to expert recommendations for risk avoidance and the moral sense of individual responsibility. In particular, women's compliance with the alcohol abstinence guideline is shaped by the mother's duty to ensure the best development of their baby (Jones & Telenta, 2012; Lee, 2008), the fear of being responsible if the baby has health problems (Loxton et al., 2013) and feelings of guilt after consuming alcohol (Holland et al., 2016).

Albeit pervasive, the concept of "risk discourses" does not do justice to the complex ways in which mothers perceive and respond to the issue of alcohol consumption. While internalizing risk discourses to some extent, they are reflexive and active individuals who interpret, evaluate, negotiate and even resist prenatal norms and public health messages (Burton-Jeangros, 2011; Markens et al., 1997; Root & Browner, 2001). Avoiding harm to the baby is clearly the paramount reason why mothers abstain from or reduce alcohol consumption. Yet, women's perception of occasional drinking during pregnancy as safe involves complex interpreting and responding to risk messages, scientific uncertainty and health recommendations. For example, women often define an acceptable consumption of alcohol based on criteria such as frequency, quantity, type of alcohol, stage of pregnancy, social circumstances and personal experience of risk (Hammer & Inglin, 2014; Holland et al., 2016; Martinelli et al., 2021). Alcohol's relaxing effects or pleasurable taste may also intervene in negotiating the abstinence rule (Holland et al., 2016; Loxton et al., 2013). Moreover, women's responses to the risk must be situated within their social context (Meurk et al., 2014; Popova et al., 2021), including peer pressure to drink (Jones & Telenta, 2012) and partner influence (Hammer, 2019). Whereas discourses of maternal responsibility define abstinence as the norm, there are competing discourses, such as the autonomy allowing women to define an acceptable level of consumption according to their personal risk perception (Benoit et al., 2015). The material or psychological context of everyday life also matters, for example, when drinking is used as a coping strategy for women experiencing pregnancy and postpartum as stressful periods (Martinelli et al., 2021).

1.2. The sociocultural approach to lay risk perception

This paper draws on a sociocultural approach to analyse lay experiences of alcohol consumption as a risk. Our study is situated within a "weak constructionist" perspective (Lupton, 2013a), which examines how the meaning of risk is socially constructed. While recognizing that low and moderate alcohol consumption may have harmful effects on the foetus and child, we aim to understand how women make sense of this risk and respond to it. The sociocultural approach is based on several core premises that informed our analysis. First, against the cognitive and rationalist assumptions of psychological and technico-scientific theories, people's interpretations of risk are not to be evaluated according to their

proximity to expert assessments but understood *per se* as social logics shaped by values, social norms and shared representations in particular cultural contexts (Lupton, 2013a). Second, people use multiple strategies facing uncertainty and rely upon various sources of knowledge when interpreting risks, such as experience-based knowledge, emotions, intuition and lay advice (Root & Browner, 2001; Zinn, 2020). Third, the sociocultural approach underlines the moral meaning of risk, as health risks innately categorize good and bad behaviours (Douglas, 1992). In contexts where the foetus has become a "precious" entity (Lupton, 2012), the moral dimension of risk avoidance that is incumbent upon mothers is reinforced. We therefore aim to explore women's understanding of alcohol use as a risk situated within the social and cultural contexts of their everyday lives.

1.3. Risk perception as a social process over time

The development of risk understanding over time has been identified as an important aspect of the risk perception research agenda. Indeed, "rather than remaining static, risk rationalities are often constantly shifting and changing in response to changes in personal experience, local knowledge networks and expert knowledges" (Lupton, 2013a, p. 153). However, an in-depth exploration of how lay meanings of risk change or remain the same at the individual level remains lacking. Typically, existing studies are predominantly psychological and cognitive and use quantitative measures to capture the change or stability of the perceived riskiness of hazardous activities. Moreover, qualitative studies examining people's understandings of health risks have privileged cross-sectional research designs. Among qualitative longitudinal studies about mothers' experiences (e.g., Jarvie, 2016; Ross, 2016; Schmied & Lupton, 2001), to our knowledge, none have focussed on the issue of alcohol consumption. Finally, research on women's views on drinking during the lactation period is mostly non-existent, with few exceptions (Gouilhers et al., 2021; Giglia & Binns, 2007). To fill these gaps and better understand risk perception as a social process over time, we developed a longitudinal qualitative study, as described in the next section.

Our research question involves reflecting on sociological continuity or discontinuity between the periods of pregnancy and breastfeeding. The idea of continuity is supported by discourses on intensive motherhood and parental determinism, which extend the moralisation of maternal responsibility from pregnancy into the postpartum and pre-pregnancy periods (Jarvie, 2016; Lowe, 2016). Likewise, the cultural construction of the foetal body as an "other", a separate or "independent" individual endowed with personhood (Hanson, 2004; Lupton, 2013c), implies a common normative context shaping the mother's role during pregnancy and the postnatal period (Lowe, 2016). However, continuity may be questioned by looking at the diverse ways in which mothers conceptualise the unborn/child. For example, feelings of connectedness or "oneness" reported by some mothers when breastfeeding their baby indicate that individuation may be ambiguous or incomplete (Lupton, 2013c). As for the maternal–foetal relationship, it has been shown to be complex and uncertain. For example, the routinisation of prenatal tests may lead women to suspend the identification of the foetus as a baby until the results rule out abnormalities (Rothman, 1988). Studies have also emphasised the variability and fluidity of women's perceptions of the unborn, as they do not necessarily regard their foetus as human or as a distinct body (Lupton, 2013b; Markens et al., 1997; Schmied & Lupton, 2001). The connection between the maternal–foetal relationship and perception of risk is suggested by pregnant women who reported being less stringent about alcohol abstinence, as they became more aware of the foetus and reassured about its proper development (Ross, 2012). The understanding of risk perception therefore needs to focus on whether women consider their foetus or infant as a full being and particularly as "at risk" or vulnerable to mother's behaviours.

2. Data and methods

Our research question aims to explore how women make sense of alcohol consumption as a health-related risk and whether their conceptualisations of this risk change over time. To meet our research objectives, we opted for a longitudinal qualitative research design, which is particularly appropriate when the focus of the analysis is on change or continuity in life events, such as the transition to motherhood (McLeod & Thomson, 2009). We therefore interviewed the same women during pregnancy and breastfeeding. As argued by Thomson and Holland (2003), a longitudinal interviewing approach enables to the identification of changes or continuities of individuals' particular narratives over time. We are specifically interested in understanding how women's risk perceptions of alcohol consumption are shaped by the context of pregnancy and early postpartum.

The data analysed in this paper are drawn from semi-directive interviews with a purposive sample of 46 heterosexual couples living in Switzerland. The research team involved sociologists and midwifery researchers. Couples were eligible to participate if the woman did not abstain from drinking alcohol before getting pregnant, if she was not treated for alcohol addiction before or during pregnancy and if she intended to breastfeed.

The couples were first interviewed between 20 and 40 weeks of pregnancy, and both partners were interviewed separately (hereafter "pregnancy interviews"). They were interviewed a second time between 12 and 24 weeks postpartum, and only the women were interviewed (hereafter "breastfeeding interviews"). No participants withdrew from the study. The whole corpus included a total of 138 interviews, which were conducted face-to-face, except for four interviews with women and five with male partners conducted at a distance. For the purpose of this paper, we used interviews with women only.

We recruited couples in French-speaking and German-speaking areas of Switzerland using snowball sampling, as well as displaying flyer presentations of the study in different places, such as prenatal centres, antenatal classes and maternity hospitals. Interviews were conducted in French, German, Swiss-German and a few in English by two female researchers experienced in qualitative interviewing (SG and IR). Due to ethical considerations involved in researching couples about health topics (Lowton, 2018), we organised the recruitment to protect female participants' interests and used them as gatekeepers. Women were therefore first asked about their willingness to participate. If they agreed, they were asked to provide the researcher with the coordinates of their partner. Prior to the interview, both partners were e-mailed an information sheet describing the study and an informed consent form, which they signed in the presence of the interviewer. The pregnancy interview guide covered the following main topics: experience of pregnancy and professional follow-up, changes in daily life habits, especially in alcohol use and perception of alcohol use during pregnancy as a health risk. The breastfeeding interview guide addressed woman's experience of birth and postpartum, changes in everyday life since childbirth and experience of breastfeeding and alcohol use as a health risk.

The pregnancy interviews were conducted from October 2017 to August 2018 and lasted 78 and 66 min on average for the women and their male partners, respectively. The breastfeeding interviews lasted 58 min on average and occurred from March 2018 to March 2019. All interviews were conducted at the location of the participants' choice and were digitally recorded and transcribed verbatim. All participants' names were replaced with pseudonyms. The study protocol was submitted to the Swiss Association of Research Ethics Committees, who ruled that our study did not fall within the formal scope of the Swiss Federal Act on Research involving Human Beings (Human Research Act). We conducted all stages of the research under the ethical guidelines of the Swiss Academy of Humanities and Social Sciences, which followed the principles of the Helsinki Declaration.

2.1. Sample description

Most of the 46 couples were expecting their first child ($n = 27$), 13 had one child and six had two children or more. The women and men were, on average, 35 and 38 years old, respectively. Most female participants had a tertiary level of education (39 out of 46), and 16 worked in healthcare. A majority of the women reported abstaining from alcohol during pregnancy and expressed a more flexible attitude towards drinking during breastfeeding. The remainder were roughly equally divided between interviewees reporting alcohol abstinence during pregnancy and breastfeeding, with some tolerating rare exceptions, on the one hand, and others reporting consuming alcohol occasionally during pregnancy and breastfeeding, on the other hand. Only a few interviewees reported consuming even less or no alcohol during breastfeeding compared to their habits while pregnant. All women breastfed exclusively or partially for a minimum of 3 months, except for four who stopped breastfeeding early in the postpartum period.

2.2. Data analysis

The data analysis aimed first to identify how women conceptualised the risk of alcohol consumption during pregnancy and breastfeeding. Second, we used a comparative approach to track women's conceptualisations of risk over time to understand how and whether their experience and perceptions of risk had changed or remained the same from pregnancy to early postpartum. To this end, we analysed the data drawing on the principles of longitudinal qualitative research as a flexible methodology combining deductive and inductive strategies, cross-sectional profiling and diachronic dimensions (Tuthill et al., 2020). Following the familiarisation of the data, we applied thematic coding as a method of data reduction, which aimed to identify recurrent patterns based on a constant back and forth between the data and developing categories and the examination of similarities and differences (Braun & Clarke, 2006). We first analysed the interviews at a cross-sectional level by developing a preliminary list of codes specifically for pregnancy and breastfeeding interviews. The initial coding framework reflected our research questions and emerging themes from the data, and was tested independently by the team members on a subset of transcripts. Discussions among team members allowed us to revise and finalise the coding frameworks, which were then applied to all the data with the help of Atlas.ti software. Moreover, we created a summary document for each couple to preserve the contextual meaning of their accounts. Using the categories of the coding frameworks, these summary documents synthesised the content of the couples' three interviews, including analytic memos and key interview quotations. Regular team meetings ensured the stabilisation of code definitions and the consistency of the coding process. Throughout the research, the research team met regularly to discuss the emerging findings and their interpretations, enhancing the trustworthiness of the data analysis.

For the purpose of this paper, we used only the "pregnancy" and "breastfeeding" interviews conducted with women, totalling 92 interviews. We conducted a closer analysis specifically on the codes related to drinking habits before pregnancy and changes during pregnancy and breastfeeding, everyday experiences, perception of alcohol use and recommendations by adding new codes and refining initial codes. We developed an individual longitudinal comparison by contrasting women's narratives about alcohol consumption during pregnancy and breastfeeding across the whole sample. This allowed us to identify three overarching themes capturing the interviewees' most significant conceptualisations of alcohol use as a risk and to trace participants' continuity or change between pregnancy and breastfeeding.

3. Findings

3.1. Scientific uncertainty and risk discourses

The first main conceptualisation related to risk discourses, with the issues of risk avoidance, scientific uncertainty and motherhood prevailing in the pregnancy interviews. All interviewees indicated knowing that alcohol consumption could be harmful for the foetus, with some of them mentioning severe adverse effects, such as physical malformations, organ dysfunctions or cognitive problems.

3.1.1. Avoiding risk as the most reasonable option during pregnancy

Women's views about drinking during pregnancy were strongly shaped by scientific uncertainty. Acknowledging the inconclusive evidence about low alcohol intake, many interviewees followed the precautionary principle and chose not to take any risk by being abstinent for the baby's sake. Fear associated with uncertainty often guided women's choice of a strict "zero alcohol" policy:

> I always thought that we didn't know when alcohol could be dangerous for a child, and that not to drink at all [during pregnancy] was recommended, so I decided not to drink at all (…) even if they told me that a glass once in a while would be ok, I don't think I'd really enjoy drinking it, so I think I'd better not drink it. (Gabrielle, P[1])

Only a few women took it for granted that any alcohol intake was risky. While opting for abstinence, the interviewees were more likely to reckon that very low consumption now and then was likely harmless for the foetus.

Other women reported not being strictly abstinent and interpreted scientific uncertainty as allowing tolerance for low alcohol consumption. They deemed their consumption as safe because of the very low and infrequent quantities involved ("some sips of wine" or "half a glass of champagne"). By describing these occasions as "exceptions" justified by special events, such as Christmas or a wedding, these interviewees highlighted that these occasions represented some transgression of strict abstinence as their guiding rule. Moreover, they often articulated their own limit of consumption—typically not more than a whole glass or never hard liquor—thus aligning themselves with the identity of a cautious and responsible mother.

Anticipated feelings of self-blame for a possible health issue with the child or regrets following exceptions to abstinence were often evident in women's accounts. For example, Paulina related drinking once "half a glass of wine" during her first pregnancy, which left her with "such a guilty conscience" and feeling like a bad mother: "For me it was like: I put my child in danger for no reason whatsoever" (P). Pregnant with her second child, Paulina was still affected by this experience: "If you want to be sure, just leave it out. I was thinking that, if something does happen later [to the baby] (…) I'd always think, well, was it because of this? Is it why the child's not well?" (P).

Moral resonance of risk avoidance was often related to the interviewees' emphasis on maternal responsibility, in terms of duty to do one's best for the baby or privileging the foetus' over the pregnant woman's desires. For Manuela, who indicated that she was totally abstinent, the child's health must prevail over pregnant women's autonomy:

> You have responsibility for the child (…) you can say 'it's my body, I'll do what I want with it', but in my opinion, during pregnancy you can't do that … as women we're in a different role there (…) we have so many restrictions and we give away our body, but it's the way it is and we have to take it seriously. (P)

[1] "P" stands for "pregnancy interview" and "BF" for "breastfeeding interview".

3.1.2. Permeable body

Along with scientific uncertainty and moralisation of drinking, women's representation of the pregnant body as permeable was central to their understanding of risk. Permeability refers to the notion expressed in many interviews that any alcohol ingested passes directly to the foetus through the blood, implying a straight physiological connection between both bodies. Several participants underlined the fact that the placenta offers no protection to foetus: "For me, my body is 100% linked to my baby's body (…) anything that potentially goes into my blood will go into hers" (Olivia, P). As to Isalyn, her strict abstinence was confirmed by what she read in a medical study: that "the placenta couldn't stop alcohol, and the child really had no defense, and I said to myself: now it's clear and I know what to do!" (P). If scientific uncertainty regarding an occasional drink could cast doubt on the right behaviour for some women, others were convinced of the imperative of abstinence by the physiological representation of continuous risk from mother to foetus.

3.1.3. Challenging risk discourses

Several women were sceptical about the message that any amount of alcohol should be avoided during pregnancy and reported occasional drinking or exceptions. In light of the inconclusive scientific evidence about the effects of low amounts of alcohol, they viewed strict abstinence recommendations as "exaggerated" (Anja, P) or doubted that it was "necessary at this point" (Nina, P). Some of them also articulated a broader criticism of policy approaches and health moralism. For example, Estelle indicated an ideology of policing pregnant women with guilt and blame:

> There's a lot of social control over women's behaviour, well beyond what we are sure has an impact. There's a kind of morality that goes with it, I'm quite convinced of that, so there are moral issues that go beyond the real medical issues (Estelle, P).

Among those who questioned the abstinence rule, some reported drinking every so often without concern, whereas others were confused in practice or expressed bad conscience when consuming some alcohol. Rahel illustrated this ambivalence. Although she considered the recommendation of abstinence as "a bit too authoritarian" (P), Rahel explained that her own drinking guideline was dictated by her "guilty conscience" and that she would not "feel comfortable" if she drank more often than "half a glass of wine" more or less every 2 weeks.

3.2. Manageability

The second conceptualisation called "manageability" of risk referred to the perception that some alcohol consumption was allowed, and active strategies were available to control consequences of drinking. With some exceptions, this conceptualisation was most evident with drinking during breastfeeding. While limited to low amounts, many women indeed reported either drinking a little more and/or more often than when they were pregnant or drinking again after being abstinent during pregnancy. Most viewed alcohol intake during breastfeeding as having less serious potential health consequences for the baby than during pregnancy. Moreover, compared to pregnancy, they often felt more relaxed towards drinking during breastfeeding, describing it as "less of a problem" because "there's choice" (Lara) or associating this period with "more freedom" to drink (Sally).

3.2.1. Reconciling having a glass with no risk taking

Manageability, from the interviewees' perspective, referred to the possibility of reconciling two practices that they most often deemed fundamentally antagonistic during pregnancy. Many women emphasised that during breastfeeding occasional alcohol consumption was again an option and no longer seen as conflicting in principle neither with their condition nor with medical recommendations. To have a drink and to breastfeed as part of fulfilling maternal duties were therefore viewed as compatible in practice and in terms of social norms. For example, after strict abstinence during pregnancy, Muriel emphasised her responsibility to protect her baby while indicating that a low consumption of alcohol was permitted:

> I've just been breastfeeding, it's hot outside, I'll have a shandy or a glass of wine and that's all. Sometimes my husband offers me Baileys, but I say "that's enough, I'm careful because I'm breastfeeding". I'm happy to drink, but you have to be careful with [the baby]. (BF)

3.2.2. Strategies and filter-body as a resource

For the interviewees, the safety of an occasional drink during breastfeeding was subject to certain strategies aimed at avoiding putting the baby at risk. The participants referred to "solutions" (Lara, BF), such as the use of formula milk or the storing of maternal milk, as in the case of Coralie, who felt more comfortable drinking a little while breastfeeding than during pregnancy: "If you got a lot of milk, you can pump up your milk … you can find tricks" (BF). The main strategy was to respect a certain period between alcohol intake and the next feeding, reflecting the tolerance displayed in some official recommendations while advocating abstinence (Greiner, 2019; Maloney et al., 2011). The delay, from 2 to 8 h, depending on the interviewees, was viewed as the time required to eliminate alcohol in their body. This management of the risk entailed anticipation, timing the alcohol consumption and controlling the amount consumed:

> I had half a glass of red wine again the other night. But I'm very careful to drink this alcohol after his last feed of the evening, knowing he won't ask again before 6 am, so it will be largely evacuated". (Fabienne, BF)

Estelle clearly expressed, like others, that the issue of time made drinking during breastfeeding different and easier: "The advantage of breastfeeding is that there's a question of timing […] You can say: 'normally the next feed is in 4 h so there will be almost nothing [alcohol] left', which is not the case with pregnancy" (BF).

The representation of the body as a filter lies at the core of timing as a means of managing the risk during breastfeeding. Several women articulated this idea of their bodies operating a gradual chemical elimination of the alcohol ingested, resulting in a reduced or removed risk for the baby. They emphasised the difference between the filter-body with protective properties and the pregnant permeable body that is devoid of them. For example, Manuela, who endorsed the strict abstinence rule when pregnant, was more relaxed with drinking in the postpartum:

> I take it more lightly (…) during pregnancy it goes straight into the blood and the child gets it entirely. With milk, it's another thing, it just passes into the milk, but not in the pure alcohol content that it has during pregnancy. (BF)

A few interviewees pointed to the maternal milk as a filter, instead of bloodstream: "The relation has changed … there is no more blood passing through … I have the impression that the milk filters the alcohol much more [than the placenta]" (Barbara, BF). Hélène contrasted the continuous risk in the case of the pregnant permeable body with a discontinuous and lesser risk in the case of the breastfeeding filter-body:

> Before, what I ingested went directly to [the baby] since it was in my body. Whereas now I can eliminate what I ingest before he drinks the milk I produce … I use my body for the benefit of my body [during breastfeeding] (…) it's quite different because as a foetus, he would have had it continuously. (BF)

Here, Hélène clearly described her body functioning as a critical resource for controlling the consequences of drinking.

3.2.3. Conditional manageability

Despite the shared perception of much more flexibility in alcohol

consumption during breastfeeding than during pregnancy, putting it into practice was not straightforward. In addition to counting the time, manageability involved various conditions, such as pumping breast milk, planning and preparing a bottle of formula before going out and some predictability in daily life activities, including the foreseeability of the baby's drinking patterns. The latter explained why the question of having a drink did not arise at least several weeks after birth, when feeds became more regular and spaced out. The interviewees also often referred to the few opportunities to go out, tiredness or household demands. Several of them stated that they would be unable to drink more than a glass because looking after children took up all their attention and because they felt the effects of alcohol more quickly than before. As during pregnancy, social judgment during breastfeeding restricted several women's drinking patterns. Nevertheless, some found strategies to resist public disapproval: "people see that I have a child and I'm breastfeeding and I still drink alcohol, and before a stupid comment comes, I say 'one glass is okay!', like that" (Anja, BF). Finally, manageability also hinged upon the value placed on maternal milk, as well as upon mothers' capacity to pump milk. Some interviewees limited their opportunities to consume alcohol because of difficulties in building up milk stock. In sum, not drinking above a certain limit or frequency during breastfeeding was often related to physical contingencies and daily life circumstances or constraints, rather than to true concerns with the health risk of alcohol intake for the baby.

3.2.4. Manageability within risk discourses

For a minority of interviewees, the issue of drinking during breastfeeding was shaped by risk discourses in the same way as during pregnancy. They were unsure about the official recommendations about how long it took for breast milk to be free of alcohol, how much alcohol can be metabolized by the baby, or how much alcohol actually passes through the milk and what the possible effects are on baby's health. Fear that alcohol interfered with milk production or taste was also expressed. Some of these interviewees disregarded the option of waiting sufficient time between a glass and nursing, viewing it as unsafe, charged with mental load and excessive constraints rather than a true opportunity. Others experienced lingering anxiety when consuming some alcohol, persistent feelings of guilt and tension over maternal responsibility. For example, Anne took "three or four sips, just for the taste" and waited a few hours before breastfeeding. Anne thought, however, that the risk was still there and felt guilty: "I was told that you can drink just after breastfeeding and if you leave a space of 2 or 3 h. So I admit I've done it before, but it's true that each time I'm not serene, it's weird" (BF).

The manageability of drinking during breastfeeding could therefore be restricted but also invalidated by risk discourses, as exemplified by Isalyn. She deemed drinking during both pregnancy and breastfeeding as unacceptable and in contradiction with maternal duties towards the child; "If we embark on the project to have a child, it's to do our best (…) it's a matter of responsibility and respect, otherwise you might as well not have a child" (P). In both periods, her choice to strictly abstain reflected her fear and trying to avoid any feeling of guilt. For example, in the second interview, Isalyn recounted how shocked she was when she had breastfed her first child in the middle of the night, forgetting that she had drunk in the evening: "I was completely panicked at the thought of having made him drink alcohol (…) since then I'm in doubt" (BF).

3.3. Individuation

The third conceptualisation of risk, called individuation, refers to the process by which women conceive of their (un)born being as having qualities that define her or him as a person or human. "(Un)born being" is used here as an umbrella term for foetus and infant (Lupton, 2013b). The link between risk perception and individuation was articulated by many women and was mainly related to the vulnerability and concreteness of the (un)born being.

3.3.1. Vulnerability

A shared narrative in our study was that the foetus was characterised by greater physiological vulnerability than the infant. Most often, women regarded the consequences of prenatal alcohol exposure as more serious than during breastfeeding, which justified a more cautious attitude than after the baby was born: "I drank a bit more than during pregnancy (…) it wouldn't be the same risk as during pregnancy (…) he's not at risk of having a malformation now!" (Rosa, BF).

The vulnerability of the foetus as opposed to the child was linked to the representation of the pregnant body as permeable but also to the perception of the foetus as a being in the making, characterised by physiological immaturity or unfinished anatomical development. For Vanessa, the level of vulnerability clearly changed from one period to another. Whereas she was meticulous while pregnant, arguing that there was no safe consumption during pregnancy, Vanessa had a glass of wine now and then during breastfeeding:

> [The baby] is no longer developing, [whilst] in the belly I always feel that [the baby] is growing and that there can be damage. I think if there's still some [alcohol] in the milk somehow, there certainly can't be any damage, as long as it's not regular and excessive. (BF)

Moreover, several interviewees considered the infant, unlike the foetus, as being able to withstand a mouthful of alcohol being consumed by the mother. Patricia developed a sharp differentiation between pregnancy and breastfeeding, viewing the child as "completed" and much less subject to the serious consequences of alcohol exposure:

> It changes a lot, because I see that the development is done and it's good, so there's no fear of having very serious things (…) babies who are breastfed tolerate even a little bit of alcohol better than during pregnancy (…) if he wakes up once and then drinks a bit of alcohol, it's no big deal. (BF)

The greater physiological vulnerability associated with the foetus often implied that the mother no longer saw herself as bearing full responsibility for managing the baby's risk exposure after birth. This was particularly explicit in some women stressing the numerous environmental risks beyond their control to which the infant was inevitably exposed:

> It's now a bigger baby, who is anyway already confronted with a whole bunch of other [risks] … exhaust gas, cigarette smoke and various toxins, so I try to protect him as much as possible, but I don't wrap him in cotton wool because it's not possible, so there's a kind of fatality (…) when I was pregnant I felt a bit more responsible for what came in. (Estelle, BF)

Whereas several women roughly contrasted the fragile foetus with the infant less at risk, others regarded vulnerability as extending after birth and did not see a substantial difference between the two periods. Gabrielle illustrated this perceived continuous physiological vulnerability, which mirrored her strong feeling of maternal responsibility. While acknowledging that the consequences of alcohol were more serious for the foetus, she emphasised that alcohol remains "dangerous" for the infant whose liver is "growing, not quite mature" (BF).

3.3.2. Concrete versus abstract being

The second aspect of individuation involved the child as a concrete being as opposed to the foetus, who was more abstract. Several women deemed the risk of alcohol use during pregnancy more salient than during breastfeeding because of the ontological uncertainty of the foetus's condition. The foetus's health status was often described as fundamentally unknown, despite reassuring results from ultrasounds. For example, Nina, who was "more relaxed about drinking alcohol while breastfeeding than during pregnancy" (BF), expressed two contrasting risk perceptions: one determined by the unknown foetus and the other by the visible child characterised by a knowable health status. According to

Nina, "as long as the baby's in utero, not having a direct view of the baby and [not knowing] whether it is in good health, that makes [it stressful] (…) in the absence of proof or direct view … it's better not to tempt the devil with the medication, with the alcohol, etc. I'm scared that it could have an impact on the foetus (…) whereas seeing the baby, he's there every day, I can see that he's fine" (BF).

Other women held the almost exact opposite risk perception. Indeed, they emphasised the concreteness of the infant as rendering the risk more real or salient than during pregnancy. The concreteness of the baby made them reluctant to drink during breastfeeding, although they were likely to perceive the health effects of postnatal alcohol exposure as much less harmful for the baby than during pregnancy. For example, Coralie abstained from drinking the first two and a half months of breastfeeding because her baby, she said, was "there": "It was more in this side where visually … [drinking] has a concrete direct incidence because you have the little cutie that is there in your arms" (BF). Some accounts strongly revealed the link between the infant's concrete presence and his emotional connection with him, implying a feeling of increased personal responsibility. Anne clearly illustrated the link between individuation and risk perception. She stressed that her baby was tangible and clearly different from being inside the womb: "It's another stage". When pregnant, Anne drank wine "about ten times, three or four swigs, sometimes a glass" (P). She felt much guiltier for drinking during breastfeeding and viewed its consequences as more serious than during pregnancy, where "[the foetus] is still abstract" and the risk was "invisible" (BF). Moreover, Anne's heightened sensibility was linked to the image, unlike most interviewees, of a permeable connection between her and her baby during breastfeeding: "Everything I drink goes straight into her blood … into my breast and then into her body, I'm less comfortable, I feel very guilty" (BF).

In Barbara's account, the concreteness of the infant was meaningful and tellingly illustrated the loose connection between the seriousness of health consequences and awareness of risk. She abstained from alcohol during pregnancy but felt more sensitive to the risk during breastfeeding because of a more intense emotional connection with her child, whom she regarded as a full individual. Barbara's concern with the adverse effects of drinking shifted from "mental or physical disability" during pregnancy to her child's psychological development during breastfeeding. Barbara clearly differentiated the nature of the being in utero from the new-born:

> There's another dimension, suddenly … it's no longer a merely lambda foetus that you don't know, that you don't know what it is, and there's a medical risk or not. All of a sudden, it's really about her, about her personality, it's difficult to express. (BF)

4. Discussion

The present study explored the social dynamics of women's conceptualisations of the risk of alcohol consumption from pregnancy to breastfeeding. Overall, our findings confirm that lay risk understandings do not merely reflect official recommendations and expert information but are complex responses involving moral and cognitive judgements, social values, emotions and diverse sources of knowledge (Douglas, 1992; Lupton, 2013a; Martinelli et al., 2021; Root & Browner, 2001; Zinn, 2020).

A key contribution of our study lies in the identification of three main conceptualisations of risk in terms of scientific uncertainty and risk discourses, manageability and individuation. The first one reveals that women's views and experiences are primarily shaped by scientific uncertainty about the effects of low drinking, leading them to err on the side of caution. The imperative of risk avoidance was surrounded by moral norms of motherhood, such as the internalisation of personal responsibility to ensure the health of the baby and anticipated feelings of guilt in the case of perceived deviance from official recommendations. The "better safe than sorry" approach subsumes the intrication of medical and moral components in lay risk reasoning, mirroring the risk culture that values anticipation and avoidance of physical and psychological bad outcomes (Giddens, 1991). This first conceptualisation aligns with prior research showing the centrality of risk discourses in shaping different facets of women's contemporary experiences of pregnancy (Hammer & Burton-Jeangros, 2013; Harper & Rail, 2012; Jarvie, 2016; Lupton, 2012; Ruhl, 1999). Our findings also support research indicating that the pervasiveness of risk discourses does not rule out the expression of challenging or resistant views towards medical norms and related motherhood discourses (Burton-Jeangros, 2011; Holland et al., 2016; Lee, 2008; Murphy, 2000; Root & Browner, 2001). Indeed, women are often confused by the lack of consistent information but are also aware of the inconclusive evidence regarding the effects of low or moderate alcohol consumption. Faced with these uncertainties, some women opt for abstinence, reflecting the precautionary principle, whereas others – especially during pregnancy – adopt more flexible attitudes towards the acceptability of occasional alcohol consumption (Hammer & Rapp, 2022; Martinelli et al., 2021; Meurk et al., 2014; Popova et al., 2021).

The second conceptualisation of the risk of alcohol use as manageable, most evident in breastfeeding interviews, fills an important gap in the literature considering the almost non-existent qualitative research on women's perspective of drinking alcohol in early postpartum (Greiner, 2019; Popova et al., 2021). In comparison to their pregnancy experience, we found that women were likely to express a relatively more relaxed attitude towards alcohol consumption during breastfeeding, consistent with Giglia and Binns (2007). Manageability especially highlighted women's feelings of control over the consequences of alcohol intake, although to a greater extent during breastfeeding than during pregnancy. At the core of women's agency towards this risk lay the maternal body as a resource to mitigate or eliminate alcohol and its possible effects, along with the capacity to anticipate one's course of action and to calculate time. This embodied management of risk was clearly distinct from women's strategies during pregnancy, which primarily concerned abstaining or restricting to small doses they deemed harmless. Manageability during breastfeeding should, however, not be overstated, as its application in practice was conditional on maternal role demands, daily tasks and the ability of the mother to breastfeed as well (Chautems, 2021). This underlines the importance of situating lay meanings of risk in everyday life constraints, pleasures and opportunities (Gouilhers et al., 2021).

The third conceptualisation of risk refers to individuation, defined as the subjective attribution of personhood to the (un)born being (Lupton, 2013b) in terms of vulnerability and concreteness. Despite research exploring the sociocultural meanings of the unborn (Hanson, 2004; Lupton, 2013b), little work has addressed how women's ideas about their foetus shape risk perception. In our study, most often, the vulnerable foetus was contrasted against the infant perceived as more physiologically developed or full being and therefore less at risk of alcohol use during breastfeeding. We found a more complex picture regarding the concreteness of the (un)born. Indeed, for some women, the increased salience of risk was related to the invisibility and abstractness of the foetus, characterized by ontological uncertainty regarding its health. Others expressed greater reluctance towards drinking during breastfeeding than during pregnancy due to the baby's concreteness, rather than to possible health effects of alcohol consumption that they acknowledged as less serious during breastfeeding. In another study, some women also perceived drinking during breastfeeding as a more serious issue than during pregnancy (Martinelli et al., 2021). Confirming work on women's variable concepts of the (un)born child (Lupton, 2013b; Ross, 2016; Schmied & Lupton, 2001), our findings show that individuation is a key element shaping women's understanding of risk and sense of maternal responsibility.

While neglected in the risk perception literature with some notable exceptions (Lupton, 2013a; Root & Browner, 2001), the significance of the body was also illustrated in our study by the representations of the

maternal body as permeable and as a filter, which underlay to some extent women's perceptions of severity of risk and controllability. The "permeable body" suggested an immediate or direct transmission of alcohol as a dangerous substance from the mother to the (un)born. Historically, medicalization has contributed to a perception of growing responsibility of the pregnant woman towards her future child, with the placenta wall being increasingly understood as permeable and the maternal body as a risky rather than a protective environment (Hanson, 2004; Lupton, 2013b). Our findings showed that, the "filter-body", which was most often associated with breastfeeding, involved the perception of a reduced risk compared with pregnancy, resulting from the maternal body, which eliminates alcohol in the bloodstream over time. This suggested a delayed but also a mediated risk, as some interviewees thought that the very passage of alcohol from blood to maternal milk implied a dilution of the quantity of alcohol.

Another important contribution of this study is the continuity or changes of women's views from pregnancy to breastfeeding. By examining lay concepts of risk as a social process and highlighting that they are not static over time, our longitudinal analysis fills a research gap in risk perception (Lupton, 2013a). Our study indicated a dominant pattern of risk conceptualisation shifting from being shaped by risk discourses and scientific uncertainty in pregnancy to "risk manageability" in breastfeeding. However, for a minority of interviewees, risk discourses and scientific uncertainty operated as a continuous significant frame in both periods. Overall, they viewed the issue of alcohol consumption similarly in the transition to motherhood, focussing on the precautionary principle, concerns regarding inconclusive scientific evidence, the norms of being a "good mother", and anticipated blame. While further research is needed, such continuity of risk perception resonates with the strength of the language of risk and medical norms, which are pervasive (Burton--Jeangros, 2011) and with the extension of maternal responsibility and intensive motherhood discourses beyond pregnancy (Jarvie, 2016; Lee, 2008; Lowe, 2016). Several scholars have indeed suggested that contemporary parenting culture has been increasingly influenced by "at risk" child perceptions and professional advice, focussing on the activities of parents being dictated by the fear of harming children (Lee et al., 2014). Discourses on "parental determinism" or "intensive parenting" emphasise the responsibility of parents, especially mothers, for ensuring the health and safety of their babies and foetuses, who are viewed as particularly vulnerable and requiring protection (Hays, 1996; Lee et al., 2014; Leppo et al., 2014).

As noted above, social theorists such as Beck (1992), Douglas (1992), Giddens (1990; 1991) and the proponents of the governmentality approach have contributed in identifying the "risk discourses" surrounding pregnant women, as well as the cultural significance of risk in contemporary societies. Nevertheless, these perspectives have been criticized for their emphasis on institutional risk discourses, therefore overlooking individuals' experiences of risk (Lupton, 2013a). The theories of Beck and Giddens have in particular been challenged for "making little attempt to engage with the many nuances, contradictions and varieties of risk perception in the contexts of everyday life" (Wilkinson, 2006, p. 27). In this respect, our study highlights the complex and dynamic ways in which pregnant and breastfeeding women make sense of alcohol use as a risk. Indeed, the three lay conceptualisations bring into play not only the expert or institutional definition of the risk but also involve its symbolic, moral and embodied features, as well as the individual's agency. We have also shown that there may be tensions between these dimensions, resulting in ambivalent or conflicting interpretations of risk. Focussing on how contexts shape individual experiences is important to better understand the sociocultural construction of risk and uncertainty. Our longitudinal approach has demonstrated that women's interpretations of risk changed over time in terms of pregnancy and breastfeeding, confirming the situated nature of risk awareness and anxiety.

Our findings also have implications for health professionals. As previously reported (Giglia & Binns, 2007), our interviewees were unclear about the effects of alcohol on infant and lactation performance, the circulation of alcohol in the body from blood to maternal milk and the metabolism of alcohol degradation. The participants also expressed a lack of information about the specific consequences and mechanisms of alcohol regarding the foetus, thus confirming the need to improve communication about the risk, including the lack of conclusive research and alcohol metabolism in the mother and foetus/infant's body (Hammer & Rapp, 2022; Jones & Telenta, 2012; Loxton et al., 2013; Popova et al., 2021). Healthcare professionals should adapt the way they provide information to women's knowledge of the risk and be cognizant of their conceptions about body functioning, the role of the placenta and the effects of alcohol, as some would perceive alcohol consumption as riskier during breastfeeding, whereas others would perceive alcohol consumption as riskier during pregnancy. Finally, healthcare professionals need to be sensitive to the difficulties (future) mothers encounter in everyday life in their efforts to abstain from or restrict their consumption (Gouilhers et al., 2019; Schölin & Fitzgerald, 2019), and should favour continuous counselling to them.

This study has three limitations that merit consideration. First, our sample included only women living in a relationship, who were mainly well-educated and few were from low educational backgrounds. Therefore, our findings cannot be generalised to all social groups. Further investigation is needed to explore whether other conceptualisations of alcohol risk can be found. Second, although transition to motherhood is a complex and not linear process, often varying from one woman to another (Ross, 2016; Schmied & Lupton, 2001), further understanding of the development of perception of risk of alcohol use over time would benefit from conducting interviews with all participants at the same stage of pregnancy and breastfeeding. Third, the information on our participants' drinking patterns during pregnancy and breastfeeding is inevitably a rough description, since the aim of our study was not to measure women's behaviours but to understand their views about alcohol use as a risk.

5. Conclusion

This qualitative longitudinal study offers key insights into women's perceptions of the risk of alcohol consumption. Our findings confirm that women's narratives primarily concern the acceptability of low alcohol consumption during pregnancy and breastfeeding, and not that of high and/or frequent consumption, which they fully recognise as dangerous. Within this context, we have demonstrated that individual risk understandings are complex and shaped at once by expert knowledge and recommendations, responses to the risk as situated in the context of everyday life and the embodied experience of the risk. Our findings also reveal the changing meaning of risk from pregnancy to breastfeeding, shifting many women from strict to more flexible positions regarding alcohol consumption.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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