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## Women's perceptions, knowledge and breastfeeding decision-making

Oosterhoff, Alberta Tonnise

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# 1

## General introduction

*“Would the minister be willing to commit to achieving an increase in the percentage of mothers who breastfeed their children until the age of six months? I could suggest a reasonable percentage for this in a motion.”*

Esmé Wiegman-van Meppelen Scheppink, Dutch member of parliament

14 November 2007



Since ancient times, the feeding of infants – with human, animal, or artificial milk – has been the primary concern of parents all over the world. Infant feeding choices are reported to be determined by access to human milk and by the availability of substitutes, as well as by factors such as sociocultural, economic, medical, or practical conditions (Maher, 1992). Others (non-parents) also contribute to the discussion on whether to feed infants with breast milk or with substitutes.

This doctoral thesis emerged from the way this issue was addressed in the Netherlands in 2008. At that time, breastfeeding was high on the Dutch national political agenda. The background to addressing infant feeding in parliament was the discrepancy between the infant feeding recommendations of the World Health Organization (WHO) that infants should be exclusively breastfed until the age of six months (WHO, 2003) and the high rates of breastfeeding discontinuation in the first months after birth in the Netherlands (Lanting & Wouwe, 2007). In November 2007, a motion was submitted (see above quote, Wiegman-van Meppelen Scheppink) and carried in the parliament (Dutch Parliament, 2007). Following the adoption of this motion, the Dutch Ministry of Health, Welfare, and Sport issued a statement in April 2008, which included the aim of increasing the percentage of women who were still breastfeeding their infants until the age of six months to 40% by 2011 (Dutch Ministry of Health, Welfare, and Sport, 2008a).

This government involvement in infant feeding prompted various responses in the Netherlands. It produced emotional reactions among women and on social media, for example, women exchanged opinions on whether they needed national government recommendations when choosing to breastfeed or not. It enlivened discussions among families, health professionals, researchers, and the general public, and this was reflected in commentaries in newspapers and magazines (Rijk et al., 2008; Roeser, 2013).

Later that same year, a government nutrition report was published that restated the aim of increasing the percentage of women breastfeeding their infants until the age of six months to 40% by 2011 (Dutch Ministry of Health, Welfare, and Sport, 2008b). Although this report began with the phrase ‘parents, not government, decide whether to breastfeed or not’ (Dutch Ministry of Health, Welfare, and Sport, 2008b), the recommendation to breastfeed your child until six months of age had already become both a medical and moral appeal to women. This was reinforced by some breastfeeding organisations that were engaged in promoting long-term breastfeeding, such as the ‘Breastfeeding Information Centre’ (Kenniscentrum Borstvoeding) and the ‘Natural Breastfeeding Association’ (Vereniging Borstvoeding Natuurlijk).

The recommendation to extend breastfeeding duration coincided with another Dutch government campaign (Taskforce parttime plus), which encouraged women to enter full-time jobs with the aim of reducing the expansion of part-time employment among

women (Dutch Ministry of Social Affairs and Employment, 2007). Consequently, some women perceived this as pressure to conform to increasing expectations with regard to both reproductive and productive roles (Marshall et al., 2007; Rijk et al., 2008). Although the government nutrition report contained the aim of including arrangements for leave and expressing breast milk at work in labour agreements to make it easier for women who want to combine work and breastfeeding, full-time employment was often perceived by women as being discouraged because of limited childcare facilities and facilities for expressing breast milk (Vogel et al., 2009).

The coincidence of the two recommendations (i.e. to extend breastfeeding duration and to engage in full-time employment) further stimulated the discourse on infant feeding practice and women's roles among the individuals and groups involved (Rijk et al., 2008) and also among academics from various disciplines, including ethics. For example, Fahlquist and Roeser (2011) argued that the way breastfeeding is promoted by some breastfeeding organisations does not respect women as autonomous beings capable of making their own decisions for themselves and their families. The tendency toward the moralisation of breastfeeding was also reported in publications from other countries (Earle, 2002; Hauck & Irurita, 2003; Rosin, 2009; Ryan et al., 2010).

#### *International guidelines and health claims*

The involvement of Dutch government in infant feeding was supported by national breastfeeding promotion campaigns. These campaigns were based on international guidelines drawn up by WHO as a global strategy (WHO, 2003). In the Netherlands, the Health Council of the Netherlands (Nationale Gezondheidsraad) and the Netherlands Nutrition Centre (Stichting Voedingscentrum Nederland) were the institutions charged with communicating these guidelines to health care professionals and the public.

To interpret the global WHO guidelines, the context of the introduction of formula milk products in developing countries must be taken into account. In some parts of the developing world, formula imports rose rapidly in the 1960s and 1970s. However, because of a lack of hygienic conditions, formula use resulted in an increase in infant morbidity and mortality (Huffman et al., 2001). To improve infant health and safety, WHO engaged in discouraging the industry from marketing artificial feeding products in developing countries. The marketing code that prohibited any promotional activities for formula milk before the age of four months was an important manoeuvre on the road to prohibiting the marketing of formula (WHO, 1981). The international government support established in the Innocenti Declaration (1991) was a considerable achievement.

The increased infant health risks that result from using formula in poor hygienic conditions prompted the claim that breastfeeding exclusively is the best infant feeding

method globally. WHO issued a global recommendation that infants be breastfed exclusively until between four and six months of age, with no other liquids or solid foods being introduced before this time (WHO, 1989). This recommendation was summarised in ‘ten steps’ to be followed by maternity professionals around the world (WHO, 1998). Subsequently, in 1991, WHO launched the international Baby-Friendly Hospital Initiative (BFHI). According to this initiative, health professionals should provide adequate support to breastfeeding women; it also offers a certification system for maternity care organisations. To qualify for BFHI certification, these organisations must endorse the ten steps (WHO, 1998) and incorporate them into the health care they provide.

Until 2001, the health benefits of exclusive breastfeeding were thus claimed to be optimal for infants when breastfed until between four and six months of age. In 2001, the recommended optimal duration of breastfeeding was extended to six months, following a WHO report on an expert consultation (WHO, 2001) and a study on the optimal duration of exclusive breastfeeding (Kramer & Kakuma, 2002). Based on these studies, it was concluded that there was no physical or nutritional necessity to introduce any substitutes or supplementary foods before the age of six months. Apart from introducing supplements such as iron and zinc from the age of four months, exclusive breastfeeding was presented as being adequate for an infant’s energy intake until the age of six months (Kramer & Kakuma, 2002). Accordingly, the global guidelines concerning the optimal duration of exclusive breastfeeding were modified to six months (WHO, 2003). Correspondingly, the marketing code was also updated, and the initial four months of age was modified to six months (WHO, 2008).

The health benefits of breastfeeding for both infant and mother have been reported in many studies and literature reviews (Smithers & McIntyre, 2010; Rossum et al., 2005) and also systematic reviews (Kramer & Kakuma, 2002, 2012; Avery, 2013). Reported health benefits for the infant include reduced risk of gastrointestinal and respiratory infections, reduced risk of inflammatory skin disease, allergy, and obesity (Howie, 2002; Owen et al., 2005; Ryan et al., 2001). Breastfeeding is also reported to be positively associated with cognitive and neurological development (Fergusson et al., 1982). Health benefits for the mother are reported to include a reduced risk of premenopausal breast cancer and rheumatoid arthritis, more rapid postpartum weight loss, and delayed resumption of menses (Brinton et al., 1995; Howie & McNeilly, 1982; Lefebvre & Voorhoeve, 1998). In addition to physical health benefits, breastfeeding is positively associated with the development of the bond between mother and child (Jansen et al., 2008).

In general, the health claims mentioned above have been endorsed by health care professionals. Consequently, ‘breast is best’ (Kramer, 2010) has become a slogan that is also accepted among the majority of professionals and by the general public. However,

the literature reports controversy among researchers about the evidence in breastfeeding studies. It is difficult to confirm the health claims on the basis of clinical evidence because breastfeeding is not an 'on-off variable', and it is not feasible to randomly assign women to experimental groups, as would be necessary for a randomised controlled trial (Avery, 2013). In addition, comparative studies such as sibling studies (Colen & Ramey, 2014) demonstrate a selection bias in breastfeeding studies. Because of higher breastfeeding rates among higher socioeconomic groups, it might then be possible to explain the beneficial effects of breastfeeding by differences in socioeconomic circumstances (Colen & Ramey, 2014). Some of the authors who have reviewed the evidence therefore suggest that the time is right to reappraise the recommendations (Fewtrell et al., 2007, 2011).

Another controversy involves mother-to-infant transmission of diseases such as HIV/AIDS through breast milk (Brahmbhatt & Gray, 2000; Størdal, 2010). In addition, the transmission of medications, polychlorinated biphenyls (PBCs), or dioxins (Lanting, 1999) through breast milk could be reasons not to breastfeed under certain circumstances.

In general, it could be argued that the advantages of prolonged breastfeeding duration in developing countries do not necessarily apply to the developed areas of the world. Consequently, this could mean that the rationale for global recommendations needs to be reconsidered.

Apart from these reasons from a biomedical perspective, reported advantages of breastfeeding are that it is convenient and cheap. These advantages are emphasised by Dutch breastfeeding organisations engaged in promoting breastfeeding, such as the Breastfeeding Information Centre and the Natural Breastfeeding Association. Reported disadvantages of breastfeeding are uncertainty about how much the infant drinks (Dykes & Williams, 1999) and that the infant's father is not able to feed the baby. The latter might interfere with both the development of the bond between father and infant (Earle, 2002) and the equal distribution of productive and reproductive tasks between women and men (Rijk et al., 2008).

#### *Campaigns, surveys, and research in the Netherlands*

The considerations mentioned above shaped the breastfeeding discourse in the Netherlands in 2008. There were some nuances among the various institutions in the way they interpreted the global guidelines to breastfeed exclusively until six months, ranging from a rather strict interpretation by some of the Dutch breastfeeding organisations such as the Breastfeeding Information Centre and the Natural Breastfeeding Association to a broader interpretation by organisations such as the Netherlands Nutrition Centre. In general, the biomedical perspective – which emphasises the health benefits of breastfeeding – was predominant in the breastfeeding discourse, and the WHO health claims were adopted

as the basis for health care interventions and policy and for breastfeeding promotion campaigns.

The first step to increase Dutch breastfeeding rates was to adopt the BFHI (launched by WHO in 1991) in 1996. The certification was supervised by the Dutch BFHI accrediting body 'Breastfeeding Care Association' (Stichting zorg voor borstvoeding). Virtually all maternity organisations in the Netherlands (such as hospitals, midwife clinics, maternity, and baby and youth health care organisations) have been certified to date (Dutch Ministry of Health, Welfare, and Sport, 2008c). Maternity care in the Netherlands includes antenatal, perinatal, and postnatal obstetric clinical care and midwifery home care (Kools et al., 2006). This creates a unique system of integrated care, based on the communication and patient information exchange between health care professionals (Herschderfer et al., 2002). This means that parents can choose to deliver at home, and so can also initiate breastfeeding at home. Currently, 25% to 30% of Dutch women give birth at home (Lanting et al., 2005). Postnatal care at home includes support for breastfeeding initiation and duration; 95% of women make use of postnatal maternity care at home for an average of seven days (Statistics Netherlands, 2011). After one month, the baby clinics provide the postnatal care. There is no organised integrated professional care between day 8 and day 30.

A few years after the BFHI was introduced, the Netherlands Nutrition Centre launched the 'Master Plan for Breastfeeding' (Masterplan Borstvoeding). This included two campaigns (2002–2006 and 2007–2011), and addressed breastfeeding duration in particular, preferably until the age of six months, following the modified WHO global guidelines (WHO, 2003). The statement issued by the Dutch Ministry of Health (2008a) containing the aim of increasing the percentage of women who breastfeed until six months to 40% by 2011 coincided with the start of the second (2007–2011) campaign.

Since the BFHI was launched in 1996, the Netherlands Nutrition Centre and the Dutch BFHI accrediting body commissioned the Netherlands Organisation for Applied Scientific Research (Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek – TNO) to measure national breastfeeding rates by conducting annual or biannual cross-sectional surveys (1997/1998, 2000/2001, 2001/2002, 2002/2003, 2006, and 2007). The certification of professionals from 1996 onward had been positively associated with breastfeeding initiation and continuation. The percentage of infants who were breastfed exclusively until six months had increased from 8% in 1997 to 14% in 1999, most likely because of the introduction of BFHI. However, the increase was more profound in initiation rates than it was in duration rates, and the absolute duration of exclusive breastfeeding by mothers who had received BFHI care was similar to those who had not received these services (Lanting et al., 2003; Lanting & Wouwe, 2006).



In 2002, at the start of the 2002–2006 campaign, 17% of women were still breastfeeding at six months. The aim for 2006 was to increase this percentage to 25% (Drongelen, 2008). In 2005, a Dutch study on the health benefits of breastfeeding reported that health benefits for infants increase when they are exclusively breastfed for six months, with the explicit assumption that more health benefits would be gained by promoting and facilitating breastfeeding in the first month than by focussing on extending breastfeeding duration to six months (Rossum et al., 2005). Consequently, although the campaign continued to recommend breastfeeding until the age of six months, the emphasis was on breastfeeding in the first month.

In 2007, breastfeeding rates did not increase further (Lanting & Wouwe, 2007). At the start of the 2007–2011 campaign, the breastfeeding initiation rate was 81%; after one month this was 48%, at three months 30%, and at six months 13% for exclusive breastfeeding and 19% for any breastfeeding (Lanting & Wouwe, 2007). The objective of increasing the percentage of women who were still breastfeeding at six months to 40% by 2011 – which had been the aim of the Dutch Ministry of Health, Welfare, and Sport in 2008 – was, therefore, rather ambitious. In 2013, the Netherlands Nutrition Centre readjusted the guidelines for exclusive breastfeeding until six months to until between four and six months. This allowed for variation in the interpretations of breastfeeding recommendations among maternity care professionals throughout the country (Drongelen, 2014).

#### *Women's decisions to initiate and continue or discontinue breastfeeding*

Research findings in the Netherlands were consistent with findings from international studies that showed that breastfeeding rates are higher in women who are older and who have higher educational backgrounds (Bulk-Bunschoten et al., 2001; Rossem et al., 2009; Scott et al., 1999). Women who intend to breastfeed usually form their intention early: 67% of women decide during the first trimester of gestation or even earlier (Lanting & Wouwe, 2007). Not all women who intend to start breastfeeding actually do so (Kerkhoff & Wouwe, 2008). It is not known how many women who intend to start formula feeding actually start breastfeeding instead. So, if initiation rates are a reflection of intentions, then intention rates are high. Discontinuation of breastfeeding is reported to be associated with low self-efficacy in the women and low social support (Kools, 2004). With regard to breastfeeding duration, the discrepancy between intention and practice is mentioned as being associated with low satisfaction in women (Kerkhoff & Wouwe, 2008).

A cross-sectional survey in 2007 showed that the most important reasons for stopping breastfeeding were 'pain', 'not enough milk', and 'work' (Lanting & Wouwe, 2007). In 2007, more women indicated that work was an important reason for stopping breastfeeding than in 2003: for women with high socioeconomic backgrounds, work was

the main reason (33%) in 2007, whereas in 2003 only 16% of the women in this group mentioned work as the main reason. Of all reasons mentioned in 2007, 28% were in the category 'other reasons'. An example of the reasons mentioned in this category is 'expressing milk was difficult'. Expressing milk, then, might also be a work-related reason. The cross-sectional study thus generated a classification of the reasons reported, but did not improve understanding of precisely what underlies these reasons, or why campaigns and interventions do not result in increased breastfeeding duration.

The 2008 government nutrition report also proposed conducting research on women's underlying reasons for stopping or continuing breastfeeding in the first few months. In response to this, a national qualitative focus group study was conducted (Vogel et al., 2009). This study identified 'work', 'autonomy', and 'breastfeeding didn't go as expected' as important themes. Although the identification of these themes contributed to defining recommendations for practice and policy, these results were not obtained from a systematic analysis of in-depth information. Therefore, we conducted individual in-depth interviews during our research to further explore the reasons underlying women's decisions to stop or continue breastfeeding in the first month after delivery, and systematically analysed the transcripts with theory.

#### *General objective and overall research question*

The previous section describes the breastfeeding discourse and its sociocultural and medical context in the Netherlands. Breastfeeding practice takes place within the complex reality of a woman's everyday life. Capturing this complex reality requires in-depth qualitative research. In our research project, we collected empirical data by conducting in-depth interviews aimed at becoming acquainted with the emic point of view – that is, the women's own perspectives. Interpretive analysis, along with theory, was used to analyse the empirical data. The interpretive paradigm was the overall underlying paradigm.

The general objective of the research was to gain insight into the perceptions of women in their decisions to stop or continue breastfeeding in the first month by collecting empirical data and using different theoretical frameworks for analysis.

The overall research question was: 'What reasons underlie women's decisions to stop or continue breastfeeding in the first month after delivery?'

#### *Methodological framework*

This research was characterised by the linkage of empirical data to theory (Snow et al., 2003), which was guided by the methodological framework of the Hutter-Hennink qualitative research cycle (HH-QRC) (Hennink et al., 2011). Various theories were used, and these theories were important at different stages of the research: during its design,

during data collection, and also during the analysis. When designing the research, theory played a role in defining specific research questions, and during data collection it guided the identification of the topics for the interview guide. In the analysis, theory had a role to play when applying grounded theory (Charmaz, 2001; Glaser & Strauss, 1967; Strauss & Corbin, 1990) and when applying the data search strategy of analytic questioning (Hennink et al., 2011) using sensitising concepts (Blumer, 1954; Bowen, 2006; Charmaz et al., 2003; Thornberg, 2012). The continuous application of theory in interaction with empirical data using both deductive and inductive reasoning provides a deeper understanding and thus contributes to the scientific body of knowledge on breastfeeding. Ultimately, this approach aims to contribute to defining recommendations for practice by addressing women in their social environment and also by addressing health care providers and policymakers.

#### *Deductive theories and specific research questions*

The overall research question was initially addressed from the health behaviour perspective that has predominated the discourse on how to promote breastfeeding and increase initiation and duration rates. The theory of planned behaviour (Ajzen, 1991; Fishbein & Ajzen, 1975) was chosen as the deductive theory and guided the data collection. Over the course of the research process, the research findings and the inferences made resulted in the definition of new questions, which required additional theory. As a result, the theoretical framework of the research project is characterised by theoretical pluralism (Wiley, 1992), and consists of the theory of planned behaviour (Ajzen, 1991; Duckett et al., 1998; Fishbein & Ajzen, 1975), the concept of health literacy (Nielsen-Bohlman et al., 2004; Nutbeam, 2000), and the theory of local health care systems (Kleinman, 1980). The way these three theories were applied in the research project is explained further in Chapter 2 of this thesis.

The three specific research questions were:

‘What are women’s perceptions of breastfeeding during the period of intention?’ (Chapter 3).

‘Can the concept and levels of health literacy be used to understand women’s breastfeeding decision-making?’ (Chapter 4).

‘What sources do women use to obtain breastfeeding knowledge?’ (Chapter 5).

#### *Outline of the thesis*

Chapter 2 addresses the methodological framework of the overall research project. It introduces the HH-QRC, and explains how this model contributes to linking empirical data to theory.

Chapter 3 describes the study on perceptions during the period of intention. The theoretical framework in this study was the theory of planned behaviour. Empirical data from the first dataset – obtained during 16 prepartum and postpartum in-depth interviews among women with middle and high socioeconomic status (SES) – were analysed using grounded theory. Based on the findings of this study, a second dataset was collected during another series of ten interviews among women with low SES.

Chapter 4 addresses the health literacy of breastfeeding women. This study was based on 26 interviews from the first and second dataset, and included women with middle and high SES as well as low SES. Four cases are presented as examples.

Chapter 5 addresses the way women obtain breastfeeding knowledge from different sources. This study used the empirical data from both datasets, and combined grounded theory and the theoretical framework of local health care systems.

Chapter 6 provides a synthesis of the research findings and a general discussion of the overall research project.

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