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Assessing the international situation of breastfeeding, lactation
consulting and breastfeeding promotion as viewed by international,
interdisciplinary experts and resulting recommendations

Dissertation Thesis

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Abstract

Background

In spite of WHO/UNICEF programs and subsequent measures to promote breastfeeding, breastfeeding still does not represent the norm for infant feeding on a global scale.

Objective

A questionnaire for experts in the field of lactation was designed to assess the international situation of breastfeeding, lactation consulting and breastfeeding promotion including: The experts' work situation with respect to contentedness, motivation and acceptance, the progress of breastfeeding promotion and the identification of remaining obstacles to derive practice-based policy recommendations towards a breastfeeding culture.

Methods

Quantitative evaluations based on closed question items included mainly descriptive statistics. Qualitative methods based on open question items categorised mutually exclusive response groups by paraphrasing.

Results

Lactation consulting is lacking of payment and career opportunities on an international level and needs a firm position in the health care system with reimbursement to the full extent of work. However, lactation consultants describe themselves as mostly contented and idealistically motivated. Societal and political support is poor and research funds are lacking, NCBFs' should gain political weight and take on additional tasks. Health care providers without education in lactation represent a decisive obstacle to breastfeeding. WHO/UNICEF measures remain priority with overdue implementation.

Conclusions

Health policies to protect and promote breastfeeding including legislation, consumer protection and the integration of lactation consulting in the health care systems represent key measures to achieve progress in the implementation of WHO/UNICEF and subsequent programs to re-establish the breastfeeding culture. A basic education of all health-care providers in the lactation field seems indispensable to promote breastfeeding consistently.

Discussion

Breastfeeding support should be prioritized as promotion of a major health resource on a global scale. Facing a global economic and climate crisis it should be an imperative for health policies to re-build the breastfeeding culture with priority to protect our offspring.

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- La Leche League Germany, German and English sections
- Verband Europäischer LaktationsBeraterinnen VELB and ILCA
- Academy of Breastfeeding Medicine ABM

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Abbreviations

AAP	American Academy of Pediatrics
ABM	Academy of Breastfeeding Medicine = international union of physicians to promote breastfeeding
AFS	Arbeitsgemeinschaft Freier Stillgruppen = mother-support group in Germany with voluntary leaders, educated by AFS
bf	Breastfeeding, breastfed
BFH	Baby-friendly Hospital
BFHI	Baby-friendly Hospital Initiative
CDC	Centers for Disease Control and Prevention (USA)
DHHS	United States Department of Health and Human Services
EMBA	European Milk Bank Association
hcp	Health care providers
HMBANA	Human Milk Banking Association of North America
IBCLC	International Board Certified Lactation Consultant
IBFAN	The International Baby Food Action Network
International Code, The Code	The international code for the marketing of breast milk substitutes passed in 1981 by WHO and UNICEF
LC	Lactation Consultant, Lactation Consulting
LLL	La Leche League = international mother support group with voluntary leaders, specialised organization on breastfeeding, counsellor of WHO
NCBF	National Committee for Breastfeeding
NGO	Non-Governmental Organization
PAHO	Pan-American Health Organization
PH	Public health
PR	Public relations
UNICEF	United Nations International Child Emergency Fund
US / USA	United States / United States of America
USDA	United States Department of Agriculture
USAID	United States Agency for International Development
WABA	World Alliance for Breastfeeding Action
WIC	WIC = Special Supplemental Nutrition Program for Women, Infants, and Children, one of the largest nutrition programs in the United States
WHO	World Health Organization

Use of language:

The term “the experts” refers to the responders of the questionnaire.

The term “The Code” refers to the international code for the marketing of breast milk substitutes

“Breastfeeding is nature’s health plan”

Author unknown

Web quotation URL:

<http://www.quote garden.com/breastfeeding.html>

Accessed on 9.02.2014

1. Introduction chapter

1.1. Assessing the topic “breastfeeding”

Healthy nutrition has been acknowledged generally and scientifically as one of the main health promoting factors. This fact given, how important can the start and initiation of nutrition be? Healthy nutrition for humans begins with the natural food as a mammal, which is breastfeeding. However, in the process of industrialisation the natural breastfeeding culture has got lost, that is the knowledge of the art of breastfeeding and the natural transmission from woman to woman and from generation to generation. Since the 1980s, WHO and UNICEF have been developing policies to promote breastfeeding forcefully on an international level. In the first place these measures were meant to curb infant mortality in developing countries, where substitute producers were rampant with unscrupulous marketing strategies. UNICEF states in its 2001 report on children’s state of health: *“Improved breastfeeding practices and reduction of artificial feeding could save an estimated 1.5 million children a year.”*¹

Moreover, the negative impact of not breastfeeding also affects mothers' and infants' health even in industrialised countries, as the German breastfeeding support organization AFS states: *„Artificial milk for humans has a negative impact on the health of children and mothers. Many studies show increased morbidity² and mortality³ of not breastfed children also in industrialised countries.“*⁴

A series of resolutions, programs and new quality standards has developed since, mainly initiated by WHO and UNICEF. The 5 essential measures listed in the following will be described in detail in the theoretical chapter:

- The International Code for the Marketing of Substitutes
- The Ten Steps to Successful Breastfeeding
- The Innocenti Declaration 1990 and 2005
- The National Committee for Breastfeeding
- The Baby-friendly Hospital Initiative

A major health goal of the current WHO program „Health 21“ is the re-establishment of breastfeeding world-wide as the norm. Despite this clearly set goal, the health care systems of industrialised and threshold countries have not yet realised the great potential of breastfeeding as a sustainable resource of health and versatile preventive measure.

*“If a new vaccine became available that could prevent one million or more child deaths a year, and that was moreover cheap, safe, administered orally, and required no cold chain, it would become an immediate public health imperative. Breastfeeding can do all of this and more, but it requires its own “warm chain” of support - that is, skilled care for mothers to build their confidence and show them what to do, and protection from harmful practices. If this warm chain has been lost from the culture or is faulty, then it must be made good by health services.”*⁵

In this 1994 Lancet article the task of re-building the breastfeeding culture is referred to health care providers.

¹ UNICEF: The State of the World's Children 2001

² Ip, Chung et al. 2007

³ Bartick, Reinhold 2010; Arifeen, Black et al. 2001

⁴ AFS: Gefahren der künstlichen Säuglingsernährung 2003

⁵ Editorial The Lancet 1994

In the health care systems of industrialised countries breastfeeding support has been neglected for decades because of predominant artificial feeding, which had been promoted as scientific progress by health care providers in the 1950s⁶, when the decline of breastfeeding reached an all-time low of 20% in the USA. Hospital routines supported primary weaning or early supplementing at delivery or maternity ward.

The first to promote breastfeeding after its decline were volunteers who founded the first peer support group world-wide in 1956: La Leche League, a mother-to-mother support group for breastfeeding⁷. For the support of breastfeeding within health services, an additional education for health care providers has been established in 1985: The International Board Certified Lactation Consultant⁸. Health care providers are being taught forgotten skills and knowledge of lactation consulting for the use in their professions as nurses, midwives or physicians. Since 1994 physicians have founded their own association to meet the special needs of physician education on breastfeeding support, the Academy of Breastfeeding Medicine⁹. ILCA and ABM have taken great efforts to re-build knowledge and skills of breastfeeding support amongst health care providers, while the number of educated lactation consultants and educated physicians is constantly growing. If this trend continues, health services will be enabled to re-build the breastfeeding culture in the future.

1.2 Definition of the dissertation topic

This dissertation - amongst other topics - is approaching the development of the new profession lactation consultant since its initiation in 1985 so far, with respect to the state of professionalism, motivation, current situation and contentedness, and the compliance and support international lactation consultants are currently experiencing. A questionnaire for experts in the field of lactation as main instrument of the study put voluntary and professional lactation consultants into the spotlight, representing the first international approach of this kind within this new discipline. Moreover, researchers on breastfeeding, public health professionals and politicians are included as experts in the field of lactation to approach the development of research on breastfeeding and the implementation of breastfeeding promotion programs so far. Measures to promote and protect breastfeeding are being prioritized by the experts, and expectations of the experts towards protagonists of breastfeeding promotion and expectations of the future development of breastfeeding are being assessed. Since a broad variety of expertise is being merged in this study, it contributes to interdisciplinary exchange and education. The diversified index of contents is meant to enable interdisciplinary scientists to assess the variety of topics easily.

The study has a strong practice relevance, since practitioners of lactation consulting, researchers, health policy makers and public health professionals in the field of lactation answer the expert questionnaire items out of practical experience. Practice-derived policy recommendations to further promote and protect breastfeeding based on the current situation described by the experts are being developed to serve as tool for health policy makers to take adequate action from the starting-point described by the experts.

1.3 Public Health relevance of the dissertation

The study has an above-average public health relevance. Breastfeeding comprises two generations, whose health and life quality are being directly affected by the infant feeding method, while breastfeeding in developing countries even is crucial for survival to curb infant mortality. The chapter “salutogenesis and breastfeeding” explains in detail why not only mother

⁶ <http://www.hmbana.org/index/history>

⁷ <http://www.llli.org/>

⁸ <http://www.ilca.org/i4a/pages/index.cfm?pageid=1>

⁹ <http://www.bfmed.org/About/History.aspx>

and child are concerned by the choice of the feeding method, but moreover families, society, health services, the economics and the environment.

New Public Health issues are relevant for re-building the breastfeeding culture, since re-building the breastfeeding culture implies all main points of the Ottawa Charta¹⁰ including the fields of action:

Fields of action of the Ottawa charta	Action for breastfeeding following the Ottawa Charta
Build healthy public policy	to make use of the uninvested health resource breastfeeding
Create supportive environments	e.g. within modern work environment to successfully combine breastfeeding and work
Strengthen community action	by the baby-friendly community program (see chapter 2)
Develop personal skills	to breastfeed and support breastfeeding
Reorient health services	towards breastfeeding promotion

These goals were meant to be realised by the following three action strategies:

Action strategies of the Ottawa Charta	Action strategies with regard to breastfeeding following the Ottawa Charta action strategies
Advocate	the rights of mothers and children in connection with breastfeeding
Enable / Empower	mothers to breastfeed
Mediate	by a world-wide network of lactation consultants and by telephone and e-mail consulting and publications

It should be emphasized that the non-profit organisation La Leche League has used these strategies with regard to breastfeeding since its foundation in the USA in 1956 three decades before the Ottawa Charta.

Definition of prevention and health promotion¹¹:

- *“Prevention starts from diseases and aims at reducing the risk of morbidity incidence*
- *Health promotion starts from health resources and promotes them”*

Compared to the predominant artificial feeding of children in industrialised countries today, breastfeeding should be classified as preventive measure, since feeding substitutes is connected with health risks (see chapter 2). The classification of breastfeeding as preventive measure might contribute to develop promotion opportunities within the health care system. Moreover, breastfeeding has to be classified a health resource for its sustainable benefits (see chapter 2).

The task of re-building the breastfeeding culture – as defined in the Lancet editorial in 1994 - is a challenging task that requires to re-structure the health care systems by integrating lactation consulting as a profession, setting new quality standards for optimal breastfeeding support, enabling an informed decision-making on infant feeding and providing integrated care with respect to breastfeeding support. All the mentioned issues represent major health goals of the New Public Health to re-orient modern health care systems towards health promotion. As the example of Norway has shown (see chapter 3), this challenging task cannot be accomplished successfully without the support of politicians and a clear health policy to protect and promote breastfeeding.

¹⁰ The first international conference of WHO in Ottawa, Canada on November 21, 1986 passed the Ottawa Charta

¹¹ http://www.public-health.uni-bremen.de/doc/Prof.Dr.PetraKolip_Begrueessung_19.11.04.pdf

1.4 Structure of the dissertation

The exploratory study aims at identifying the international status quo of breastfeeding, lactation consulting, research on breastfeeding and priorities of measures to promote breastfeeding starting from the current situation. The expert questionnaire of this dissertation is designed to understand the status quo of breastfeeding and international lactation consulting and define the most effective measures to promote breastfeeding in a ranking from the practitioners' point of view. Moreover, the study addresses voluntary and professional lactation consultants, researchers on breastfeeding, professionals in the public health field and professionals in health policies by means of an expert questionnaire using quantitative and qualitative methods. The experts have been invited to participate on the occasion of three international lactation conferences in Dassel, Germany and Vienna, Austria in 2008. Data have been evaluated by the statistical software SPSS using descriptive analysis. Qualitative methods have been applied to assess the responses to the open questions¹² by paraphrasing and categorising statements of participants. The main categories have been entered in the statistical software to enable quantitative evaluation of the data. Based on statistical outcome, the experts' opinions have been summarised and discussed. Derived policy recommendations have been ranked and prioritized in a table as basis for active breastfeeding promotion and protection. Possible future trends for the next 15-20 years are also being investigated. Thus, the study has a strong practice-orientation and relevance.

Part I - Introduction

The introduction chapter provides an overview of the dissertation topic, question, structure and public health relevance. Moreover, the reviewed literature and the current mainstream research on breastfeeding are being abstracted.

Part II - Theory

Firstly the preventive and health promoting aspects of breastfeeding are explained and illustrated. Moreover, breastfeeding as resource of health is described with regard to salutogenesis, based on the initial development of the sense of coherence and development of natural coping strategies, which are being outlined from the classical definition of coping strategies within New Public Health. As next topic risks of substitutes are described and discussed with respect to health, economics and environment, as well as the unscrupulous marketing practices of the substitute industry. The history of the breastfeeding culture is described, providing a historical summary of the loss of the breastfeeding culture and including important aspects of breastfeeding in modern society.

In the following, WHO/UNICEF and subsequent measures to re-establish the breastfeeding culture globally are listed and explained chronologically, as well as the foundation of mother support groups with voluntary lactation consultants. The development of new qualifications and quality standards with regard to breastfeeding support in the health care sector and NGOs to promote breastfeeding such as the Academy of Breastfeeding Medicine are described. These protagonists of breastfeeding promotion and their essential statements on breastfeeding promotion are often quoted literally to leave the core statements and the aims and goals described in their original wording, since the protagonists clearly identify and outline the role they intend to play. To avoid deviations, these statements and descriptions have not been reworded to allow a clear positioning of the protagonists within the theoretical part of the dissertation.

In the next chapter, the situation of Norway as role model for successful breastfeeding promotion is described, while a comparison of 3 countries with regard to the integration of lactation

¹² O'Cathain, Thomas 1989

consulting is described. Subsequently, current breastfeeding statistics of several participating countries, as far as available, are quoted.

The last topics discussed in the theory chapter 2 are the relevance of informed or shared decision making for infant nutrition, breastfeeding as learned mothering skill and the public health relevance of the dissertation project.

Part III Aims, methods, proceeding, data collection and expected results

Chapter 3 summarises the aims and objectives of the study and explains the quantitative and qualitative methods applied. The proceeding will be shown in a table divided into three phases: Preliminary, procedure and evaluation. The next chapters focus on expected results, data collection, sample size and the identification of the experts.

Part IV Results

The results chapter 4 follows the order of the questionnaire items and begins with a description of the sample including nationality and residence, age, profession and qualification, sex, personal experience with breastfeeding, age of infants in consultation and frequency of consultations.

Most tables and figures can be found in the results chapter to illustrate distributions, frequencies, mean values, responses to open questions partly translated from German into English and response structures. The quantitative and qualitative evaluations are indicated following the order of the questionnaire. In the annex of the dissertation, an index of tables and figures is listed.

Part V Final chapter: Summary of results and policy recommendations

In the results summary chapter, a selection of main topics with great relevance to the experts is examined by an overall evaluation throughout all relevant quantitative and qualitative responses of the questionnaire to derive policy recommendations. These are shown in a table in detail and are afterwards summarized and merged into ten main policy recommendations.

Part VI Annex and reference list

The reference list includes books and articles as well as internet references. Moreover, the expert questionnaire can be found in the annex, as well as the tables and figures index.

1.5 Reviewed literature

A study of this kind has not been conducted before in the relatively young field of lactation. The literature reviewed for this study shows an interdisciplinary and wide range including paediatrics, gynaecology, obstetrics, nursing, midwifery, nutrition, public health, health policies and more. The protagonists of breastfeeding promotion and their programs¹³ are listed, as are the main policies and strategies to promote breastfeeding. The literature providing evidence of the benefits of breastfeeding¹⁴ and the risks of substitutes is quoted as well. Another topic recurring in the reference list is the application of expert questionnaires¹⁵ and quantitative¹⁶ and qualitative methods¹⁷. As breastfeeding is categorised as resource of health in the sense of salutogenesis, New Public Health references¹⁸ are quoted as well. Based on the attachment theory of John

¹³ Innocenti Declaration on the protection, promotion and support of breastfeeding 2005
<http://innocenti15.net/declaration.pdf.pdf>

¹⁴ Horta, Bahl et al. 2007

¹⁵ Kraut (ed) 1996

¹⁶ Borg, Züll et al. 2007

¹⁷ Bungard, Puhl et al. 1999

¹⁸ Antonovsky 1987

Bowlby¹⁹, the sense of coherence is applied to breastfeeding mothers and infants, thus relating theories dated 1958 to the New Public Health²⁰. The attachment theory research has been continued beside others by the German paediatrician and researcher Karl-Heinz Brisch²¹ and the US paediatrician and researcher Marshall Klaus²². Literature has been searched in: Pubmed, Medline, Medscape, Scholar google and from lactation conferences.

1.6 Current mainstream research on breastfeeding

Australian researchers have contributed to a major progress in understanding the anatomy of the lactating breast. Ultrasounds during feedings underline the new findings. As a matter of fact the majority of research world-wide consists of medical studies, e.g. on the biochemistry of human milk or medical aspects of breastfeeding. Bonding has become a central research topic in the field of lactation, as the focus of the current international conferences 2008/2009 show (e.g. the VELB conference in Vienna 2008 and Deutscher Still- und Laktationskongress „Von der Entbindung zur Bindung“ in Hamburg in November 2009.) Social sciences in industrialised countries currently focus on reasons of women to decide for or against breastfeeding²³ and psychosocial factors²⁴ influencing their decisions, which represents a useful approach to examine motivations of mothers and possible obstacles in their environment. However, this approach is abstracting from the fact that mothers willing to breastfeed might not find the support they need to successfully do so²⁵ in the health care system as decisive factor. This dissertation aims at revealing this deficiency and pointing ways out of this shortcoming.

2. State of the art

The state of the art chapter includes three main topics: The history and loss of the breastfeeding culture including breastfeeding in modern society, the history of breastfeeding promotion and evidence for the benefits of breastfeeding and breastfeeding promotion. The following table shows an overview of topics in categories:

Table 1: State of the art topical overview

Practice of breastfeeding	Breastfeeding support by the health care sector	Scientific theory and evidence
History of the breastfeeding culture	History of Breastfeeding Promotion	Evidence for the benefits of breastfeeding
Breastfeeding in modern society	State of health care providers' education on breastfeeding and BFHI certification	Evidence for breastfeeding promotion
Breastfeeding statistics	The development of the profession Lactation Consultant	Evidence for LC as intervention with significant outcome / impact on breastfeeding rates
Comparison of 4 countries' integration of lactation consulting in the health care sector	Development of WHO/UNICEF and deriving programs to promote breastfeeding, implementation in Norway compared to other countries	Discussion of breastfeeding in terms of New Public Health and salutogenesis

¹⁹ Bowlby 1958

²⁰ Hurrelmann, Laaser et al. 1998

²¹ Brisch, Hellbrügge (eds) 1999

²² Klaus, Kennell et al. 2000

²³ Lange, Schenk et al. 2007; Ahluwalia, Morrow et al. 2005; Quarles, Williams et al. 1994

²⁴ Chambers, McInnes 2006

²⁵ Renfrew, Ross et al. 1998

2.1 Salutogenesis and breastfeeding

2.1.1 Breastfeeding as protective and health promoting factor

Nutrition is one of the decisive factors determining health status. Numerous so-called diseases of civilisation such as diabetes, cardiovascular diseases and allergies occur as a consequence of low-quality and high-calorie nutrition and are often accompanied by obesity²⁶. Breastfeeding provides the optimal start for human nutrition. Therefore WHO and UNICEF have developed the following public health recommendation for infant feeding:

WHO recommends “...6 months exclusive breastfeeding. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.”²⁷

The American Academy of Pediatrics has issued a similar recommendation in 1997: “Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first 6 months after birth... It is recommended that breastfeeding continue for at least 12 months, and thereafter for as long as mutually desired.”²⁸

The recommendation to breastfeed for 6 months exclusively has been based on a 2002 Cochrane review²⁹. Supplementation with artificial milk or other liquids during the first 6 months may impede the health benefits of breastfeeding³⁰, while early supplementing before having completed 4-6 months may be associated with obesity³¹. Nutrition in early infancy has an imprinting effect on lifetimes' metabolism³² and eating behaviour. Patterns of eating are created in early infancy and are hard to correct later on³³. Growth patterns of breastfed and artificially fed infants differ significantly within the first year of life, while breastfed children gain less weight and are leaner than artificially fed infants throughout the first year of life³⁴.

“A review of the research literature on the relationship between early infant feeding and growth indicates that, after the first 3 or 4 months, breast-fed infants in developed countries are lighter than formula-fed infants and have markedly lower adiposity³⁵.” The outcome of a 1998 study consequently suggests that the real energy requirements of infants are actually lower than in the currently valid guidelines³⁶. Moreover, feeding infants with bottles instead of breastfeeding disturbs the infants' self-regulation of quantity intake and might lead to behaviour of bottle-emptying instead of perceiving a feeling of saturation to stop milk intake, a behaviour that becomes obvious in later infancy³⁷ and may favour obesity.

The beginning of healthy nutrition for humans as mammals is breastfeeding. No artificial product can even get close to human milk and breastfeeding, since human milk contains living cells (4,000 in one drop), hormones and antibodies. The ingredients of human milk meet the needs of infants perfectly and adapt to the needs of the baby at each developmental stage. For a good start, the valuable colostrum provides the newborn infant with a high proportion of antibodies, minerals and vitamins, which are easier to absorb than any artificial supplement³⁸.

²⁶ Butte 2001
²⁷ http://www.who.int/nutrition/topics/exclusive_breastfeeding/en/index.html
²⁸ <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;100/6/1035>
²⁹ Kramer, Kakuma 2002
³⁰ Sikorski, Renfrew et al. 2003; Heinig 2001
³¹ Chivers, Hands et al. 2010
³² Oberle, Taschke et al. 2003
³³ Oberle, Taschke et al. 2003
³⁴ Dewey 1998
³⁵ Rogers, Emmett et al. 1997
³⁶ De Bruin, Degenhart et al. 1998
³⁷ Ruowei, Fein et al. 2010
³⁸ Parmesak 2003

Human milk contains lactose to trigger the infant's autonomous digestion and bifidus bacteria for a healthy intestinal flora³⁹. In the first months of life human milk especially promotes brain development by long chains of unsaturated fat and supports the immature immune system leading to lower morbidity rates of breastfed children when compared to not breastfed children⁴⁰. The benefits of breastfeeding are important for healthy and full-term babies, but might be crucial to survive for ill or pre-term infants⁴¹. Breastfeeding as natural nutrition provides long-term health benefits for both mother and child and thus represents a sustainable health promoting⁴² and protecting factor.⁴³ Breastfeeding - amongst other benefits - reduces the child's risk of⁴⁴: gastro-intestinal infection,⁴⁵ respiratory infection⁴⁶, necrotising enterocolitis⁴⁷, urinary tract infection⁴⁸, allergic disease⁴⁹ (eczema⁵⁰ and wheezing)⁵¹, atopia⁵², insulin-dependent diabetes mellitus⁵³, sudden infant death syndrome⁵⁴, chronic disease⁵⁵, childhood leukaemia⁵⁶, obesity⁵⁷, malocclusion⁵⁸, otitis media⁵⁹, and fever after immunization⁶⁰. Breastfeeding mothers - amongst other benefits - are at lower risk of⁶¹: breast cancer⁶², ovarian cancer⁶³, hip fractures⁶⁴, descensus uteri,⁶⁵ metabolic syndrome⁶⁶, obesity⁶⁷, osteoporosis⁶⁸, oesophageal and gastric junction adenocarcinoma⁶⁹.

The above list only represents a selection of preventive factors associated with breastfeeding compared to artificial feeding. Research is still far from explaining the manifold benefits of breastfeeding and the interactive biochemistry of human milk. With regard to benefits, not only human milk itself is most beneficial but moreover the physical process of breastfeeding provides physiological suckling and has positive effects on the infant's jaw development to prevent malocclusion⁷⁰. The facial muscles and dental health of the infant also benefit from

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- 39 Parmesak 2003
 40 <http://www.paho.org/English/AD/FCH/BOB2.pdf>
 41 Callen, Pinelli 2005
 42 Léon-Cava, Lutter 2002
 43 Labbok, Murphy et al. 1995
 44 UNICEF Health benefits of breastfeeding, website of the UK BFHI
<http://www.babyfriendly.org.uk/page.asp?page=20>
 45 Weimer 1999
 46 Wright, Holberg 1989
 47 Jayanti, Seymour et al. 1998 ; Neu 1994
 48 Pisacane A, Grazinno 1992
 49 Verhasselt, Milcent 2008; Host, Halcken 2005; Arshad 2005; Kull, Wickman et al. 2002; Schoetzaue, Filipiak-Pitroff et al. 2002
 50 Kull, Bohrne et al. 2005
 51 Kramer, Chalmers 2001
 52 Saarinen, Kajosaari 1994; Kull, Almquist et al. 2004
 53 Gerestein 1994
 54 Gartner, Morton et al. 2005
 55 Davis 2001
 56 Bader, Mucha et al. 2003
 57 Karaolis-Danckert, Buyken et al. 2008; Arenz, Rückerl et al. 2004; von Kries, Koletzko et al. 1999
 58 Labbok, Hendershot 1987
 59 Faden, Duffy et al. 1998
 60 Pisacane, Continisio et al. 2010
 61 Perl, Zittermann 2003
 62 Abou-Dakn, Wöckel 2006; Newcomb, Storer et al. 1994
 63 Rosenblatt, Thomas 1993
 64 Cumming, Klineberg 1993
 65 Chua, Arulkumaran et al. 1994
 66 Gunderson, Jacobs et al. 2010
 67 Bobrow, Quigley et al. 2009; Binns, Lee et al. 2003 ; Dewey, Heinig et al. 1993
 68 Abou-Dakn, Wöckel 2006; Melton, Bryant et al. 1993
 69 Cronin-Fenton, Murray et al. 2010
 70 von der Ohe 2006; Palmer 1998; Labbok , Hendershot 1987

breastfeeding, while several facial muscles remain untrained by bottle feeding and pacifier suckling⁷¹, which might result in reduced articulation abilities⁷² and droopy facial traits⁷³.

Breastfeeding is more than mere nutrition and among other things provides skin-to-skin and eye contact. John Bowlby, the founder of the attachment theory, emphasizes that attachment is primarily a process of proximity seeking⁷⁴. Breastfeeding provides proximity including eye and skin to skin contact and thus promotes bonding⁷⁵. Attachment and bonding promote a sense of basic trust and thus represent a lifetime resource of mental health⁷⁶. Based on bonding, breastfeeding has a protective effect against child neglect and abuse⁷⁷. Based on John Bowlby's attachment theory and developmental psychology⁷⁸, the paediatrician Dr. William Sears has implemented the expression "attachment parenting":

*"According to attachment theory, the child forms a strong emotional bond with caregivers during childhood with lifelong consequences. Sensitive and emotionally available parenting helps the child to form a secure attachment style which fosters a child's socio-emotional development and well being. Less sensitive and emotionally available parenting or neglect of the child's needs may result in insecure forms of attachment style, which is a risk factor for many mental health problems. In extreme and rare conditions the child may not form an attachment at all and may suffer from reactive attachment disorder. Principles of attachment parenting aim to increase development of child's secure attachment and decrease insecure attachment. As attachment parenting is not unitary program there have not been conclusive empirical efficacy studies. However, a meta-analysis of 15 attachment studies showed that when mothers were taught to increase their sensitivity to an infant's needs and signals, this increased the development of the child's attachment security"*⁷⁹.

Moreover, mental health benefits are not only on baby's side, but also on the mothers⁸⁰. Breastfeeding empowers her and makes her feel competent in her unique role for her child. Breastfeeding enhances the communication of the mother-baby dyad and strengthens confidence and competence. "As Dr. Derrick Jelliffe, University of California LA's great breastfeeding proponent often said, "Breastfeeding is a confidence game." Nothing gives a new mother more confidence than being able to nurse her baby successfully AND to soothe her baby's cries quickly."⁸¹ The manifold physical⁸² and psychological benefits of breastfeeding for both mother⁸³ and child exceed by far the description above⁸⁴: "Human milk is species specific and provides unique benefits⁸⁵. These include health, nutritional, immunological, developmental, social, economic and environmental benefits⁸⁶. The health benefits including long term decreased risk of a wide range of illnesses and infections last beyond infancy⁸⁷." Therefore breastfeeding represents a natural resource of health in the sense of salutogenesis⁸⁸.

⁷¹ Gomes, Trezza et al. 2006

⁷² Gomes, Trezza et al. 2006

⁷³ von der Ohe 2006

⁷⁴ Bowlby 1958

⁷⁵ Guoth-Gumberger, Hormann 2003

⁷⁶ Bowlby 1951

⁷⁷ Strathearn, Mamun et al. 2009

⁷⁸ Sears W, Sears M 2001

⁷⁹ Bakersmans-Kranenburg, van IJzendoorn et al. 2005

⁸⁰ Schanler 2009; Taveras, Capra et al. 2003

⁸¹ <http://birthproonline.com/page/2/>

⁸² Bauer, Browner et al. 1993

⁸³ Labbok 2001

⁸⁴ <http://www.hmbana.org/downloads/position-paper-donor-milk.pdf>

⁸⁵ Hamosh 2001

⁸⁶ American Academy of Pediatrics. Breastfeeding and the use of human milk. Pediatrics, 1997.

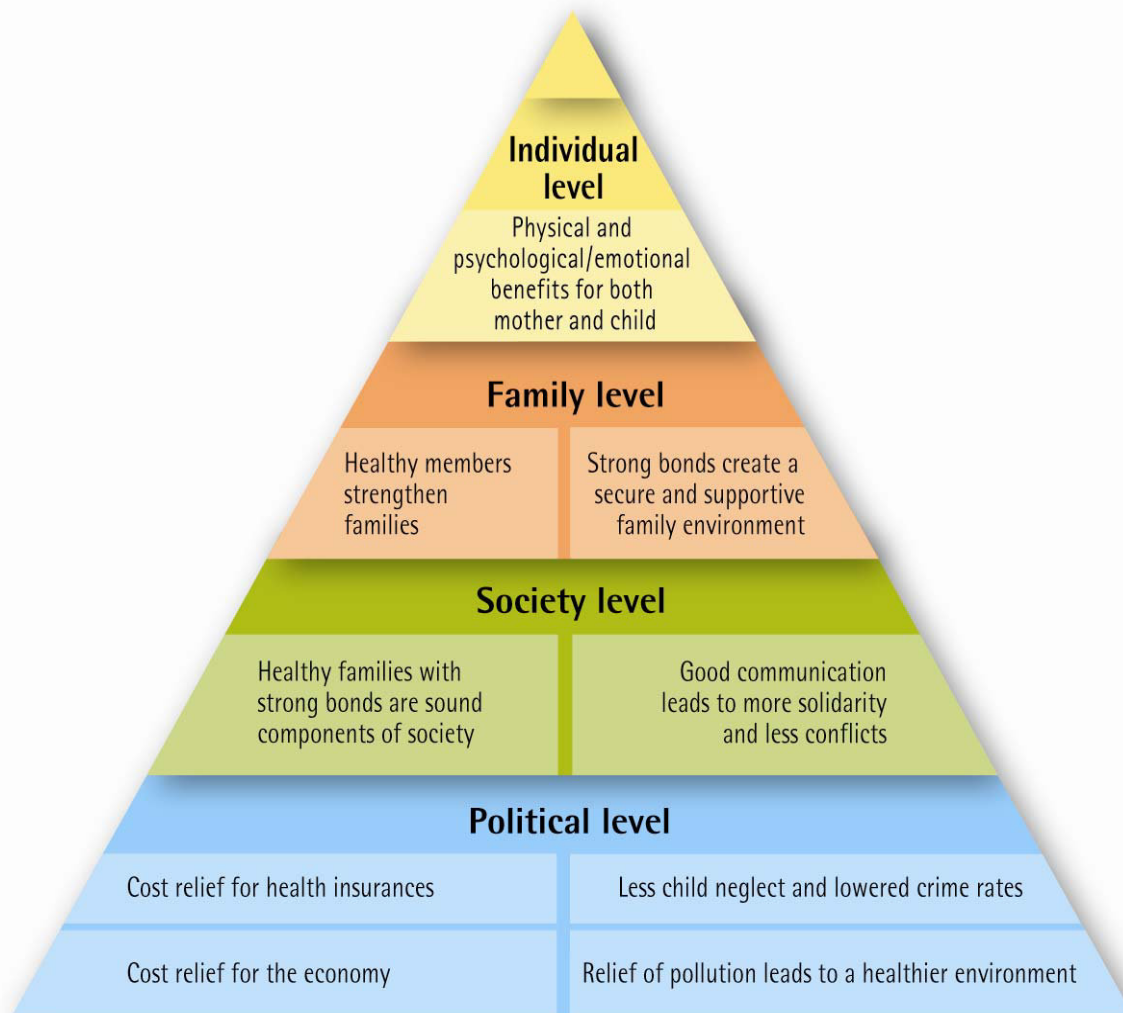
⁸⁷ Oddy 2001; Singhal, Cole et al. 2001; Hanson 1999

⁸⁸ Bengel, Schrittmacher et al. 2001

2.1.2 Sustainable benefits of breastfeeding on different societal levels

The following diagram shows an overview of the sustainable benefits of breastfeeding⁸⁹, which become effective on different levels⁹⁰, based on the compliance with the WHO recommendation:

Figure 1: Sustainable benefits of breastfeeding pyramid by Stefanie Rosin



Individual level - Breastfeeding contributes to optimal sustainable physical and psychological health of mother and child.

Family level - Families enjoy the following benefits: Strong family bonds, quality relations and good communication within the family help minimize conflict potential and strengthen natural coping strategies

Society level: Healthy families are sound components of the community and of society. People with strong bonds demonstrate more solidarity, society experiences less conflicts.

Political level: The health care system⁹¹ and thus the economy are cost-relieved⁹² (see chapter „Risks of substitutes“). The environment is relieved of pollution, while society experiences less child neglect⁹³, and crime rates are lowered⁹⁴.

⁸⁹ Pickering, Morrow et al. 2004; Oddy 2001

⁹⁰ Gartner, Morton et al. 2005

⁹¹ Bailey, Deck 1993

⁹² Ball, Bennett 2001

⁹³ Lvoff NM, Lvoff V et al. 2000

⁹⁴ Brisch, Hellbrügge (Eds) 2003

2.2 Breastfeeding in terms of public health: Natural coping strategies, initiation of the sense of coherence, prevention and health promotion

2.2.1 Natural coping strategies provided by breastfeeding: Definition and outline

The expression “coping strategies” represents a central term within research on stress in the field of psychology. Several scales and models of coping with stress have been developed⁹⁵, while coping theory has traditionally focused on the management of distress. Since the findings of coping strategies were used to counsel and optimally support patients in coping with distress or diseased mental health states, these strategies are mainly being applied on a cognitive level.

The coping strategies introduced in this chapter are provided by nature to support the mother-baby dyad in coping with distress, adaptation and the transition into the new phase of life as mother or child. The mother of a newborn is facing the task to define her role as a mother, even more with her first child, or as a mother of siblings after the second child. Moreover she needs to cope with the distress that comes along with caring for the infant, which means the transition into a new identity with challenging tasks and a significant rise of responsibility. The infant on her side not only has to find her place within her family or society, but moreover has to cope with life outside the uterus. Both of the mother-baby dyad are apt to build a strong relation and bond to each other.

The following natural coping strategies promote and support the above described processes. They are provided by breastfeeding naturally and are experienced, learned and adapted by mother and child. In this chapter natural coping strategies provided by breastfeeding are being newly defined, based on the referenced evidence-based benefits. Even though they are unique during lactation, the experience during this time period might initiate and strengthen coping strategies throughout lifetime. In the following, 6 natural coping strategies are listed and explained:

2.2.2 Six natural coping strategies provided by breastfeeding

1. Natural coping strategy: Hormone states of mother and child during lactation

Lactation has a strong impact on the hormone systems of both mother and child⁹⁶. By breastfeeding the mother learns on a biological level to love her child as oxytocin is set free several times per feeding at each let-down reflex⁹⁷. The child in turn also learns to love his mother by experiencing oxytocin release during breastfeeding from skin-to-skin contact with a health promoting effect:

„Skin-to-skin contact and suckling create an anti stress reaction....The infants cry less, are less frightened and their social exploration and interaction with the mother increase“⁹⁸

The bonding created by breastfeeding lasts throughout childhood and has the long-term effect of protecting the child from neglect and abuse⁹⁹. Besides the oxytocin level, the prolactine level increases during lactation. This hormone calms the mother and helps her to handle her task as new mother in a more relaxed state¹⁰⁰, thus lowering the risk of child abuse or neglect. Mother gets sleepy and tends to take a break or a nap together with baby, which leads to stress reduction.

⁹⁵ Coyne, Downey 1991

⁹⁶ Abou-Dakn, Wöckel 2006; Uvnäs-Moberg, Johansson et al. 2001

⁹⁷ Uvnäs-Moberg 2003, Carter 1998

⁹⁸ Uvnäs-Moberg 2003

⁹⁹ Klaus 1998; Lvoff NM, Lvoff V et al. 2000

¹⁰⁰ Carter, Alternus 1997

2. Natural coping strategy: Pain soothing and therapeutic effect of breastfeeding and suckling

The described oxytocin release is also the reason for the pain soothing effect of breastfeeding¹⁰¹. Moreover, suckling relaxes the baby and even has a therapeutic effect in case of trauma or pain¹⁰². Even the odour of the mother's milk can relieve pain, as a 2009 Japanese study has demonstrated.¹⁰³ To carry the baby in the sense of kangaroo mother care, which often comes with breastfeeding as a result of bonding and proximity-seeking of the child might also contribute to pain relief¹⁰⁴. Moreover, relaxation by suckling supports the infant in stressful situations, such as fear and emotional distress. Breastfed toddlers have the opportunity to cope with new experiences they make resulting from their newly acquired skills (e.g. to walk) by suckling.

3. Natural coping strategy: Stabilisation of vital functions

Skin-to-skin contact provided by breastfeeding adapts and stabilises the vital functions of the infant¹⁰⁵ and may have a positive effect on the infant's head growth¹⁰⁶. Mother's skin heats or cools baby according to each situation and provides the child with an optimal body temperature¹⁰⁷.

4. Natural coping strategy: Initiation of the mother-child communication

Moreover, breastfeeding on cue might represent the basis of mother-child communication. To breastfeed on demand is recommended by lactation consultants at an evidence-based level¹⁰⁸. In the first place the mother needs to watch her baby to be able to perceive the baby's cues for breastfeeding. This happens within the first hour of life for the first time, representing the first need of the child directly after repose from birth. A randomized control trial has proved that early skin-to-skin contact positively impacts on mother-child interaction at 1 year of life¹⁰⁹. In the long run, breastfeeding on cue makes the mother attentive for her baby's signals as the first step to understand her child's needs. Thus breastfeeding promotes the understanding and communication of mother and child as basis for good parenting. A 2009 literature review has indicated that not breastfeeding seems to have particularly negative consequences for the parenting behaviours of single and lower income mothers and therefore recommends the promotion of breastfeeding¹¹⁰.

5. Natural coping strategy: Support and development of the child's immature immune system

The most complex natural coping strategy the infant develops during lactation is the immune response¹¹¹. The child's immature immune system, which is supported within the first weeks of life by passive immunity provided by the placenta, receives a high concentration of antibodies through colostrum, the first milk after birth, which is produced in the first 3-4 days of life. Subsequently the infant receives antibodies to support his immature immune system throughout lactation¹¹². During lactation there are times of lower milk supply, such as the first 3-4 days of life (colostrum) or the time periods when the infant or toddler takes in more solids than his mother's milk. During times of low milk supply, the antibodies rise within the mother's milk, so that it is guaranteed that the infant is always supplied with sufficient antibodies¹¹³. In case of

¹⁰¹ Uvnäs-Moberg 1998

¹⁰² Meißner 2005

¹⁰³ Nishitani, Miyamura et al. 2009

¹⁰⁴ Warnock, Castral et al. 2009

¹⁰⁵ Moore, Anderson et al. 2007 ; Chan, Wang et al. 2000

¹⁰⁶ Rojas, Kaplan et al. 2003

¹⁰⁷ Chaudhuri 2008; Chan, Wang et al. 2000

¹⁰⁸ WHO: Evidence for the ten steps to successful breastfeeding Geneva 1998

¹⁰⁹ Bystrova, Ivanova et al. 2009

¹¹⁰ Gutman, Brown et al. 2009

¹¹¹ Pabst et. al. 1989

¹¹² Goldman 1993

¹¹³ Prentice 1996

illness, the child' behaviour supports the healing process in the following way: When the infant or toddler begins to feel ill, he increases suckling to stimulate milk production. As long as the illness lasts, the child restricts himself to his mother's milk. Breast milk is easy to digest and thus decreases energy consumption from digestion. The antibodies of his mother's milk and the light food intake support the infant's healing process. The infant or toddler starts eating solids again when his instinct tells him to do so and he feels strong enough after recovery¹¹⁴. An optimized healing process based on breastfeeding can be observed as well after immunization¹¹⁵.

Mother's immune system supports her infant's immature immune system directly and indirectly during lactation: On one hand the baby receives the needed antibodies from her¹¹⁶ and on the other hand the infant experiences her mother's adequate immune response as stimulation for the own immune system. This is one of the reasons why LLL supports the infant's self-determined weaning to make sure the child does not need his mother's support any longer, which also applies to the child's emotional and developmental needs. In summary it can be stated that the experience of mother's immune response and the physical support of the mother with antibodies¹¹⁷ help the child develop and establish autonomous coping strategies: The infant's immature immune system is supported and stimulated¹¹⁸ by his mother's milk¹¹⁹.

6. Natural coping strategy: Optimization of the infant's intestinal flora, organ functions and brain development

Moreover, the infant's intestinal flora is developed optimally by human milk. Colostrum provides the bifidus bacterium¹²⁰, while the brush border is developed to the optimal extent for maximum performance, thus providing sustainable health. The organ functions are being optimised as well by exclusive breastfeeding. The brain development is supported by the unsaturated fatty acids from human milk¹²¹.

2.2.3 Natural coping strategies provided by breastfeeding overview

The word salutogenesis means „genesis of health“. Within this New Public Health paradigm, health resources, coping strategies and protective or risk factors are being defined to achieve the sustainable maintenance of an optimal health state. In the following table coping strategies provided by breastfeeding are being derived from the referenced benefits of breastfeeding for both mother and child.

Table 2: Natural coping strategies provided by breastfeeding

Mother	Child
Coping with the task to mother her child by building emotional bonds, supported by oxytocin release at each let-down during breastfeeding (6-8 on average at each meal) ¹²²	Coping with the temperatures outside the uterus: Adaptation and stabilisation of body temperature by proximity to the mother ¹²³ and skin-to-skin contact ¹²⁴

¹¹⁴ Experience description of toddlers' behaviour reported in mother support groups

¹¹⁵ Pisacane, Continisio et al. 2010

¹¹⁶ Jackson, Nazar 2006

¹¹⁷ Newburg, Walker 2007

¹¹⁸ Oddy 2001

¹¹⁹ Labbok, Clark et al. 2004

¹²⁰ Parlesak 2003

¹²¹ <http://www.askdrsears.com/html/2/t021600.asp>

¹²² Uvnäs-Moberg 2003

¹²³ Conde-Agudelo, Diaz-Rossello 2003; Bystrova, Widström et al. 2003

¹²⁴ Ludington-Hoe, Lewis et al. 2006

Coping with the stressful time as new mother by prolactine (stress release, calms down the mother) ¹²⁵	Coping with an autonomous vital system: Adaptation and stabilisation of vital functions (breathing, heartbeat rhythm) in proximity to the mother ¹²⁶
Coping with stress by neuroendocrine and behavioural responses to acute stress exposure in lactating women ¹²⁷	Coping with pain ¹²⁸ (e.g. teething)
Coping with anxiety as new mother because of improved response to stressors of the autonomic nervous system (ANS) ¹²⁹	Coping with stress and fear – suckling relaxes ¹³⁰
Coping with insecurity as new mother – playing a unique role for her child strengthens mother's feeling of competence. ¹³¹	Coping with birth trauma (e.g. vacuum birth) by using the therapeutic effect of breastfeeding (oxytocin and suckling) ¹³²
	Coping with illness by receiving antibodies and experiencing the mother's immune response to occurring illnesses ¹³³
Coping with the transition into motherhood and mother's new role: Breastfeeding and carrying baby ¹³⁴ makes motherhood easy and enables the mother to fulfil her task well ¹³⁵ , thus strengthening the feeling of competence as mother ¹³⁶	Coping with the need to bond led by hormones (oxytocin) ¹³⁷
Coping with the need to understand baby: Breastfeeding on cue triggers mother-child communication, enhances understanding, forms the basis of communication ¹³⁸	Coping with the need to communicate by showing cues to breastfeed as first communication in life ¹³⁹ and thus developing cognitive abilities ¹⁴⁰
Coping with the financial needs of the greater family without unnecessary costs ¹⁴¹	Coping with life outside the uterus: Finding the first place in life in proximity to the mother ¹⁴² with her body as the infant's natural environment ¹⁴³
	Coping with the integration in the family as social environment by building strong bonds with the mother ¹⁴⁴

- ¹²⁵ Carter, Alternus 1997
¹²⁶ McCain, Ludington-Heo et al. 2005
¹²⁷ Groer MW 2005; Heinrich, Neumann 2002
¹²⁸ Johnston, Stevens et al. 2003
¹²⁹ Mezzacappa, Kelsey et al. 2005
¹³⁰ Meißner 2005
¹³¹ Bowlby 1958
¹³² Meißner 2005
¹³³ Howie, Forsyth et al. 1990
¹³⁴ Tessier, Cristo et al. 1998
¹³⁵ Winnicott 1956
¹³⁶ Lvoff NM, Lvoff V et al. 2000
¹³⁷ Odent 2007
¹³⁸ Klaus M, Klaus P et al. 2000
¹³⁹ Henzinger U 2006; Papousek M, Papousek H 1990
¹⁴⁰ Morrow-Tlucak, Houde et al. 1988
¹⁴¹ Jarosz 1993
¹⁴² Henzinger 2006
¹⁴³ Charpak, Ruiz et al. 2005
¹⁴⁴ Charpak, Ruiz et al. 2005

2.2.4 The initiation of the sense of coherence by breastfeeding

Another central term of salutogenesis is the „sense of coherence“ as an important health promoting factor. The sense of coherence is defined by a positive self-perception, belief in your own abilities, optimism and a feeling of being embedded in society, e.g. being supported and experiencing self-efficacy. The key expressions of the sense of coherence are: The sense of comprehensibility, the sense of manageability and the sense of meaningfulness. Successful breastfeeding in the sense of the WHO recommendation provides both mother and baby with a strong sense of coherence. The main factors involved are shown in the following table:

Table 3: Sense of coherence provided by breastfeeding for mother and child

Mother	Child
Playing a unique role for her child strengthens mother's feeling of competence and meaningfulness ¹⁴⁵	Successful bonding signals the child to be welcome, wanted and loved, thus strengthening the sense of coherence and creating a positive self-perception ¹⁴⁶
The understanding of baby by breastfeeding on cue provides the feeling that mother knows her baby very well and is competent in bringing up her child and strengthens her sense of coherence (manageability) ¹⁴⁷	Successful communication with the mother by showing breastfeeding cues, which are answered immediately, confirms baby in self-efficacy, provides comprehensibility and manageability of needs like hunger or proximity-seeking ¹⁴⁸ . Strong evidence gives proof of breastfeeding promoting baby's cognitive development ¹⁴⁹ .
	Finding the first place in life in the proximity to the mother with her body as the infant's natural environment makes baby feel welcome, wanted and loved and makes baby feel supported ¹⁵⁰
	The successful integration in the family as social environment by bonding to the mother strengthens the feeling of meaningfulness and self-efficacy and makes baby feel embedded in society ¹⁵¹
	Reliable reactions of the mother strengthen baby's basic sense of trust and provide the positive experience of self-efficacy and meaningfulness ¹⁵²

The salutogenetic effect of breastfeeding, as it has been explicated in detail in the previous chapters is based on the large body of evidence on the benefits of breastfeeding. A 2000 Lithuanian study¹⁵³ has attempted to measure the sense of coherence with regard to breastfeeding by using the incomplete Antonovsky SOC scale¹⁵⁴, whether mothers' sense of coherence at maternity ward has an effect on breastfeeding duration. The sample comprised 460 mothers and found a significant correlation of breastfeeding duration with the sense of meaningfulness.

¹⁴⁵ Borrmann, Schücking 2006

¹⁴⁶ Brisch, Hellbrügge 2003

¹⁴⁷ Klaus M, Klaus P et al. 2000

¹⁴⁸ Klaus M, Klaus P et al. 2000

¹⁴⁹ Kramer, Aboud et al. 2008

¹⁵⁰ Sears W, Sears M 2001

¹⁵¹ Charpak, Ruiz et al. 2005

¹⁵² Bowlby 1958

¹⁵³ Markuniene 2000

¹⁵⁴ Antonovsky 1987

2.2.5 Is breastfeeding a preventive measure?

Based on the large body of evidence of its benefits breastfeeding should be classified a preventive measure compared to substitute feeding. The prophylactic benefits of breastfeeding compared to substitutes are evident on 2 levels: The psychological level¹⁵⁵, shown by the attachment theory¹⁵⁶, and on the physical level¹⁵⁷. There are numerous health benefits for both mother and child (see previous chapter). Moreover, the classification of breastfeeding as preventive measure might lead to an upgraded valuation in the health care system. It might facilitate new possibilities of breastfeeding promotion.

However, in the long run WHO and UNICEF actively promote the re-establishment of the breastfeeding culture world-wide as the norm. Thus, the classification of breastfeeding as preventive measure would become unnecessary over time¹⁵⁸.

2.2.6 Is breastfeeding a resource of health?

Breastfeeding is a sustainable resource of health, as elucidated in the previous chapter including 2 tables on natural coping strategies and the sense of coherence connected with breastfeeding. Breastfeeding according to WHO recommendations has manifold sustainable benefits on the physical and psychological level. Labbok, Murphy et al.¹⁵⁹ and the ABM consider the promotion of breastfeeding “protecting a natural resource”. Moreover, the sense of coherence for both mother and child is strengthened:

The baby gains a good feeling of self-efficacy by experiencing a reliable reaction of his mother during breastfeeding on cue. His needs are being perceived and satisfied directly and adequately. Moreover, breastfeeding provides proximity to the mother, including skin-to-skin and eye contact. Based on the attachment theory, scientists have shown that intense contact enables the infant to establish relationships. Being permanently close to the attachment figure, bonding and a sense of basic trust are created as foundation for a life-long sense of coherence. In summary it can be stated that breastfeeding is part of the natural and effective initiation of the sense of coherence.

The mother on her side experiences her competence to feed her child all by herself (empowerment). She plays a unique role for her child. Breastfeeding on cue improves her perception of the infant’s signals and enables her to learn her competence as a mother rapidly and thus gain security in her new role. According to John Bowlby, the founder of the attachment theory, there is a biological system to promote bonding, of which breastfeeding is a decisive part. The close bonding created during the breastfeeding period builds the foundation of the mother-child relation throughout all phases of child-growth¹⁶⁰ and supports in difficult periods like adolescence¹⁶¹. The empowerment of the mother in her competence and unique role for the child contributes to the positive self-perception of the mother and her sense of coherence.

The whole family profits from a solid mother-child relationship as foundation for all other relations in the family. Secondarily society also benefits from positive mother-child relations,

¹⁵⁵ Oddy, Kendall et al 2009

¹⁵⁶ Klaus M, Klaus P et al. 2000

¹⁵⁷ Bartick, Reinhold 2010; Marini, Agosti et al. 2008; Saarinen UM 2008; Van den Hazel, Zuurbier 2006; Arshad 2005; Gore, Custovic 2002; von Kries, Koletzko et al. 1999; Saarinen, Kajosaari 1995; Popkin, Adair et al. 1990

¹⁵⁸ http://www.afs-stillen.de/shop/download/FB-Keine_Vorteile2008.pdf

¹⁵⁹ Labbok, Murphy et al. 1995

¹⁶⁰ Klaus M, Klaus P et al. 2000

¹⁶¹ Canelli, Bachar 1997

because society consists of families. Society also benefits from people capable of establishing positive relations and able to approach other people positively, as learnt in early childhood.

Moreover, the environment benefits from natural and healthy child nutrition, as will be explained in the next chapter. Breastfeeding thus contributes to the protection of the environment. The salutogenesis theory also applies to the sustainment of our natural environment. To sustain the natural living environment in spite of industrialisation protects the most supportive environment available¹⁶². In summary breastfeeding represents a natural resource of health primarily for mother and child, but secondarily also for the family, society and the environment.

2.3 Risks of substitutes with regard to health, costs and the environment

2.3.1 Health risks of artificial infant feeding

The benefits of breastfeeding as infant's natural nutrition can only be described incompletely by the sciences. The following diseases have double the incidence in artificially fed children, when compared to children who are breastfed according to the WHO recommendation (see chapter 1 - background)¹⁶³:

Infectious diseases, otitis media, respiratory infections, obesity, allergies, malocclusion.

The risk of diabetes mellitus increases by 33% in children not breastfed according to WHO recommendations.

In 1968 Dr. Derrick Jelliffe coined the term "commerciogenic malnutrition" to describe the impact of industry marketing practices on infant health.¹⁶⁴ Li and Fein have shown that the infant's bottle-emptying behaviour might contribute to obesity as an independent factor.¹⁶⁵

Obesity and malnutrition are fundamental triggers for the primary causes of mortality in industrialised countries: Diseases of civilisation such as cardiovascular diseases, diabetes and cancer. By not promoting breastfeeding we miss the opportunity for sustainable and in the long run free-of-charge prevention and health promotion in the health care system.

Besides the risk of increased morbidity, infant mortality is increased substantially on a global scale by artificial infant feeding¹⁶⁶, not only in developing countries but also in industrialised countries¹⁶⁷.

Moreover, the coliform *Enterobacter sakazakii* is hard to eliminate in infant formula and needs a risk management, since it has led to infant infections and meningitis in the past, which have been documented since 1961¹⁶⁸. Other contaminations or missing elements in formula have been fatal for infants in the past, e.g. the Humana substitute milk scandal in Israel 2003¹⁶⁹ and the China 2008 scandal with 6 deaths and 296,000 diseased infants.¹⁷⁰

¹⁶² Claßen 2008

¹⁶³ AFS Reich-Schottky 2003

¹⁶⁴ Jelliffe D, Jelliffe E 1978

¹⁶⁵ Li, Fein et al. 2008

¹⁶⁶ Jones, Steketee et al. 2004

¹⁶⁷ Bartick, Reinhold 2010

¹⁶⁸ Gurtler, Kornacki et al. 2005

¹⁶⁹ <http://www.n-tv.de/archiv/Humana-raeumt-Fehler-ein-article99804.html>

¹⁷⁰ Guan, Fan et al. 2009 ; <http://www.n-tv.de/panorama/Todesstrafen-verhaengt-article49402.html>

2.3.2 Costs caused in the health care system by morbidity from substitute feeding

The attempt to determine cost-savings from breastfeeding for the national economy is bound to fail due to the manifold health promoting effects breastfeeding provides. Obesity for itself is a time bomb for health. The numerous immediate and long-term physical and mental negative consequences for public health e.g. the imprinting of inadequate eating behaviour can hardly be expressed in figures.

However, US paediatricians have dared the attempt and calculated US\$ 331-475 in the 1st year of life per child alone due to respiratory infections, otitis media and gastro-intestinal infections¹⁷¹ Costs for the health care system¹⁷² in the first half year of life of artificially fed children are double compared to breastfed infants in the United States¹⁷³ Estimates of the annual damage for the US national economy amount to 3-4 billion US\$ per year.

Another Italian 2006 study of Cattaneo and Ronfani et al. confirms and stresses the US research results. The study conclusion is cited in the following:¹⁷⁴

“CONCLUSION: Lack of breastfeeding and higher use and cost of health care are significantly associated.”

2.3.3 Economic loss by artificial feeding using the example of the USA

The United States Breastfeeding Committee has stated the following annual costs deriving from artificial infant feeding:

- \$2 billion per year spent by families for substitutes
- \$578 million per year in federal funds is spent by the Agriculture's Special Supplemental Nutrition Program for Women, Infants and Children (WIC) to buy formula for non-breastfed babies. Every 10% bf increase would save WIC \$750,000 per year
- \$1.3 billion extra costs per year for insurers to cover sick-child office visits and prescriptions to treat the 3 most common illnesses: Respiratory infections, otitis media and diarrhoea in the first year of life¹⁷⁵
- \$3.6 – 7 billion excess dollars are spent every year on conditions and diseases that are preventable by breastfeeding¹⁷⁶

A 2010 US study has presented a new paediatric cost calculation caused by the currently suboptimal breastfeeding practice in the United States, which is not in accordance with the WHO recommendation:¹⁷⁷

- \$13 billion per year could be saved if 90% of US infants were breastfed exclusively in the first 6 months of life and 911 deaths would be prevented.
- \$10.5 billion per year could be saved if 80% of US infants were breastfed exclusively in the first 6 months of life and 741 deaths would be prevented.

¹⁷¹ Weimer 1999

¹⁷² Riordan 1997

¹⁷³ Hoey, Ware 1997

¹⁷⁴ Cattaneo, Ronfani et al. 2006

¹⁷⁵ Weimer 2001

¹⁷⁶ Ball, Wright 1999

¹⁷⁷ Bartick, Reinhold 2010

The suboptimal breastfeeding practice in the United States might be due to a lack of breastfeeding support by health services, as might be the case in most industrialised countries today except in Norway and Sweden.

2.3.4 Pollution and waste of energy resources caused by artificial feeding

Artificial feeding of infants results in the following detrimental factors:

- Complex production of artificial nutrition based on cow's milk
- Production of pacifiers, teats and bottles
- Production of bottle heaters and cleansers
- Transport, storage and sale of the above mentioned products
- Heating and cooling the substitute for each meal and – if necessary – heating during transport for at least one year per child with an average of 6 meals in 24 hours

The environmental burden, ecological damage and waste of energy are preventable by breastfeeding.

2.4 Background historical: The loss of the breastfeeding culture

2.4.1 Breastfeeding in early stages of evolution

In the early stages of human evolution breastfeeding was essential for the survival of babies and toddlers¹⁷⁸ Breastfeeding enabled mothers to satisfy the thirst and hunger of their children even in times of shortage of food or water. Moreover, the optimal support of brain development and the immune system was indispensable in the permanent struggle for survival.

2.4.2 Wet nursing and human milk banking

Already 3 millenniums before Christ wet nursing was known and documented in a Sumerian lullaby.¹⁷⁹ „*In the 11th century it was en vogue not to breastfeed and to engage a wet nurse as member of the upper class, which even was adopted by the middle class in the 19th century.*¹⁸⁰

The Code of Hamurabi of 2250 BC described the attributes of a good wet nurse, since children were thought to inherit the physical, mental and emotional traits of their wet nurse through the breast milk. In the 13th century wet nursing was one of the best paid professions for women in Europe, while they were allowed to nurse up to 7 infants at a time.

Throughout the history of mankind the assistance at birth and breastfeeding by other women has been part of women's culture over the millenniums. In the first place there have been experienced women assisting other women at birth and with breastfeeding. Women, who showed to be talented in this assistance and gained work experience, started the profession of midwives. Until the 17th century, midwives were responsible for births, birth control and abortion In the 18th century surgeons got involved in births firstly in Europe, as medical men began to assert that their modern scientific processes were better for mothers and infants than the folk-medical midwives. Subsequently midwives have been replaced by physicians as responsible obstetricians. This development has gone along with a trend towards increasing birth interventions and surgery, which justify the presence of physicians at birth. Several studies

¹⁷⁸ Greening 2005

¹⁷⁹ Niehüser, Tönz 2003

¹⁸⁰ Schmid, Pohlandt 2004

suggest that birth should be given back into the hands of midwives to prevent the association with pathology of this natural process¹⁸¹. With regard to health promotion and salutogenesis birth interventions are counterproductive, as recent studies have shown¹⁸². Moreover interventions at birth do handicap the successful initiation of breastfeeding¹⁸³. Therefore WHO has recommended a natural birth since 1985¹⁸⁴.

There are no statistics on breastfeeding before the 19th century, because it was still not a research topic. Industrialisation made bottle feeding popular. Mothers started to work outside of their homes, which made breastfeeding more difficult. In the USA, the breastfeeding rate dropped to 20% in the 1950s.

Human milk banks have developed in Europe since the beginning of the 20th century¹⁸⁵:

“Human milk banks have existed in Europe since the establishment of the first bank in Vienna, Austria in 1909. The 1930’s and 1940’s saw the introduction of milk banks on a wider scale throughout Europe and since that time the numbers have fluctuated according to the popularity of breastfeeding, the availability of formula milk, financial influences and as a result of the emergence of HIV infection. There are no published figures providing the numbers of milk banks in all European countries, the extent of milk banking and the use of donor milk.”

They were established to provide infants whose mothers were unable to breastfeed with human milk. Today human milk banks provide pre-term or ill babies with mothers unable or not willing to breastfeed¹⁸⁶:

“Some of the most famous North American consumers were the Dionne quintuplets, born premature in northern Quebec, Canada in the 1930’s and provided with 8,000 ounces of donor milk from both Canadian and American donors. A year later, British quadruplets received donor milk from the Queen Charlotte Milk bank which is still in operation today. Most of these early banks collected and distributed unprocessed milk to ill and premature infants.”

For pre-term babies human milk has a preventive effect against necrotising enterocolitis¹⁸⁷ amongst other benefits. Human milk is even used in therapy for patients of all ages e.g. to treat cancer or possible metabolic disease or to nourish babies or toddlers at temporary inability of mothers to continue breastfeeding, e.g. because of a severe disease of the mother¹⁸⁸.

“Over the last one hundred years, the interest in human milk has come almost full circle with the understanding that although artificial feeding products are continually improving, human milk provides factors not replicated in any other source of nutrition. In addition, provision of a safe source of donor milk, supports breastfeeding by clearly indicating that human milk cannot be replaced. In the twenty-first century, donor milk banking is once again blossoming.”¹⁸⁹

¹⁸¹ Sayn-Wittgenstein, Kolip et al. 2005

¹⁸² Hellmers, Schücking 2007

¹⁸³ Odent 2008

¹⁸⁴ WHO Joint Interregional Conference on Appropriate Technology for Birth. Fortaleza, Brazil, 22 - 26 April 1985

¹⁸⁵ <http://europeanmilkbanking.com/>

¹⁸⁶ <http://www.hmbana.org/index/history>

¹⁸⁷ Jayanti, Seymour et al. 1998; Neu 1994

¹⁸⁸ Jones: “Additional applications of donor breastmilk” European Milk Bank Association International Symposium on 26 September 2009 in Vienna, Austria

¹⁸⁹ <http://www.hmbana.org/index/history>

2.4.3 Breastfeeding in modern age: Modern work environment and disadvantaged families

Several studies have indicated that the modern work environment might be an obstacle to breastfeeding¹⁹⁰. A Canadian 1999 cohort study identified working full-time or intending to within the first year of the infant's life as risk factor for early cessation of breastfeeding¹⁹¹, amongst other studies¹⁹², which especially applies to low-income mothers¹⁹³. Most studies do not state a coherence of the initiation of breastfeeding with work, with the exception of work taken on within 6 weeks post partum¹⁹⁴. However, a coherence of the duration and exclusivity of breastfeeding with work outside the home could be observed¹⁹⁵. A 1999 US-American study has identified a competition of breastfeeding with work¹⁹⁶. In the USA and Switzerland, for instance, maternity leave is limited to a few weeks, which is not in favour of breastfeeding as recommended by WHO. The example of Norway gives proof of a maternity leave of 10-12 months or 2,5 hours per day breastfeeding breaks to be favourable for the combination of breastfeeding with modern work requirements (see chapter Norway).

In 1985 Avrum and Katcher et al. tested a pumping facility at an US American hospital as work place and found this accommodation in combination with the encouragement of the employer suitable to increase breastfeeding duration¹⁹⁷. However, the study of Fein and Mandal et al.¹⁹⁸ suggests that breastfeeding might best be continued during employment by bringing the infant to daycares near the workplace to be able to breastfeed during breastfeeding breaks. This method is more in favour of successful continuation of breastfeeding at work than pumping at the workplace and transporting the milk to the day care. Another favourable precondition for the initiation and duration of breastfeeding might be a part-time job¹⁹⁹. Compared to planned full-time work within the first year after birth a part-time job is much more favourable for breastfeeding, while a full-time job seems to reduce breastfeeding duration by an average of 8.6 weeks²⁰⁰. Valdes and Pugin et al. found out in a 2000 controlled intervention trial that continued clinical support can provide working mothers with enough encouragement and support to successfully combine breastfeeding with work satisfactorily, so that they would recommend it to their friends²⁰¹. Enabling mothers to combine working and breastfeeding – as e.g. by the return-to-work breastfeeding assessment tool for lactation consultants²⁰² - might prevent maternal depressive symptoms, as a 2003 cohort study has given evidence of²⁰³. Programs, interventions and tools to successfully combine breastfeeding and work have been suggested in the literature throughout the last decades, but often are bound to fail due to a lack of administrative backing²⁰⁴ or because they are not being implemented at all, probably due to a lack of funds or political commitment to the task.

In most industrialised countries the preconditions for this successful care model are missing, e.g. adequate breaks for breastfeeding, nurseries at the workplace or sufficient part-time work

¹⁹⁰ Yimyam 2006; Allotti, Cotrell et al 1998

¹⁹¹ Kehler, Chaput et al. 1999

¹⁹² Arora, McJunkin et al. 2000 ; Bick, MacArthur et al. 1998; Corbett-Dick, Bezek 1997; Ryan, Gilbert 1989

¹⁹³ Kimbro 2006

¹⁹⁴ Noble 2001

¹⁹⁵ Dearden, Quan et al. 2002

¹⁹⁶ Roe, Whittington et al. 1999

¹⁹⁷ Avrum, Katcher et al. 1985

¹⁹⁸ Fein, Mandal et al. 2008

¹⁹⁹ Lindberg 1996; Faden, O'Campo et al. 1991

²⁰⁰ Fein, Roe 1998

²⁰¹ Valdes, Pugin et al. 2000

²⁰² Bar-Yam 1998

²⁰³ Taveras, Capra et al.. 2003

²⁰⁴ Stokamer CL 1990

opportunities²⁰⁵. The establishment of daycares at work places in combination with breastfeeding breaks, suitable part-time job opportunities for breastfeeding mothers and adequate maternal leave might be classified as a task in the sense of the New Public Health to build healthy environments for the mother-baby dyad. Employers might be convinced to support such new structures by the evidence that they would benefit from less sick-leaves of mothers for their ill children because of the protective antibodies in human milk²⁰⁶.

The necessary legislation to promote breastfeeding is being claimed on a political level by the international labour organisation ILO comprising prolonged maternity leave, authorization to interrupt work for the purpose of breastfeeding and protection from dismissal during maternity leave. This approach is putting the right to breastfeed in the wider context of support for women's rights, recognizing the dual roles of women, and institutionalizing and legitimating support for breastfeeding²⁰⁷. In Germany for instance mothers do have the opportunity to take breastfeeding breaks²⁰⁸, but the practice of breastfeeding or pumping at work is hardly being used due to a lack of societal acceptance or fear of losing the job²⁰⁹. This indicates that legislation alone does not guarantee the successful promotion of breastfeeding, but the societal and employer's support are crucial as well in combination with optimal legislation. A 2010 US study has revealed employers accommodations for breastfeeding and fathers' attitudes, which amongst others derived from the public images of breastfeeding, as decisive factors for mothers' choice of breast milk as the sole infant feeding method²¹⁰.

In many countries today a low social status of mothers represents a barrier to breastfeeding²¹¹. A social gap between breastfeeding and substitute feeding mothers could be observed²¹². The group of mothers less likely to breastfeed includes: low income, young (mainly teenage) and less educated mothers²¹³. In this respect studies have described the ambivalence of low-income mothers towards breastfeeding²¹⁴ and the belief that breastfeeding on one hand is beneficial for the infants, but on the other hand restricts mothers' activities²¹⁵. Several US studies have introduced the "Best start" intervention to low-income patients and observed the increase of breastfeeding rates by this simple low-cost intervention²¹⁶. A 2000 US study has recommended breastfeeding promotion at high school age as effective intervention²¹⁷. A 2005 Cochrane Review has detected effective educational interventions to promote breastfeeding initiation rates among women on low incomes in the USA²¹⁸. However, a 2005 study concluded the independence of demographic factors according to a national survey of baby-friendly hospitals in the USA²¹⁹.

Besides the support of the health care system, success with breastfeeding may also depend on social support²²⁰, e.g. of the fathers²²¹, relatives²²², society²²³ and the media. A 2002 study has

²⁰⁵ Galtry 2003

²⁰⁶ Cohen, Mrtek et al 1995

²⁰⁷ Gibbons G 1987

²⁰⁸ § 7 Mutterschutzgesetz (German Social Law)

²⁰⁹ Müller-Aregger 2005

²¹⁰ Vaaler, Castrucci et al. 2010

²¹¹ Ogunlesi 2010; Gutman, Brown et al 2009 ; Kohlhuber, Rebhan et al. 2008; Chambers, McInnes 2006; Kehler, Chaput et al. 1999; Riva, Banderali et al. 1999; Alotti, Cotrell et al. 1998

²¹² Renfrew, Hall 2008; Lange, Schenk et al. 2007; Seibt 2006; Dyson, McCormick et al. 2005

²¹³ Yngve, Sjöström 2001

²¹⁴ Kaufmann, Deenadayalan et al. 2009

²¹⁵ Zimmermann, Guttman 2001

²¹⁶ Ryser FG 2004; Brenda, Hartley et al. 1996

²¹⁷ Leffler 2000

²¹⁸ Dyson, McCormick et al. 2005

²¹⁹ Merewood, Mehta et al. 2005

²²⁰ Meedya, Fahi et al. 2010

indicated the correlation of close relatives' breastfeeding practices and mothers' initiation and duration of breastfeeding²²⁴. Therefore educational programs should not only address mothers, but also fathers and relatives and society as a whole, since successful breastfeeding needs social estimation and support²²⁵. Social support for breastfeeding comprises a vast variety, e.g. the acceptance of breastfeeding in public²²⁶, the image of breastfeeding and opinions or evaluations communicated to the mother by the social environment. A 2003 German study has detected an interaction of social support and oxytocin, and the fact that social support has the same calming and soothing effect as oxytocin²²⁷. This means on the other hand, that low social estimation of breastfeeding might decrease the milk supply by putting mothers under emotional stress, since stress sets free adrenaline and cortisol, which blocks the let-down reflex to release the milk to the child²²⁸. This "inability to breastfeed" perceived by mothers represents one of the main reasons for mothers to stop breastfeeding, according to the previously mentioned studies. This coherence stresses the great role social support plays in the establishment and maintenance of breastfeeding, as studies have given evidence of²²⁹, and demonstrates on the other hand the vulnerability of the special mother-child relation that comes with breastfeeding. Social support for breastfeeding seems to be low in general in today's predominant bottle-feeding culture in industrialised countries²³⁰, but appears extremely low beyond 12 months of breastfeeding²³¹. This social attitude is conflicting with breastfeeding in general and moreover with the WHO recommendation to breastfeed for 2 years and beyond.

In the past, the United States WIC program has focused on distributing formula to disadvantaged families, as can be seen in the above list by the 578 million US dollars spent per year by the United States for formula. This practice represented a promotion of formula-feeding within the low-income class by the US government. However, the social gap with regard to breastfeeding has not only been observed in the United States, but in many industrialised countries, as for instance in Germany.²³² As Tuttle and Dewey have proved in 1994, the support of breastfeeding in disadvantaged groups such as Hmong women in California might lead to the prevention of mortality and morbidity and to substantial cost savings.²³³ Studies of this kind have triggered a paradigm shift of US health policies towards the promotion of breastfeeding rather than continuing to distribute formula to disadvantaged people²³⁴.

2.5 Substitute industry

"Throughout the ages, when maternal milk was unavailable and wet nursing not possible, many different substances were tried in order to feed young babies. Prior to the mid 19th century most of these products resulted in the death of the infant. By the late 19th century, with the beginning of milk analysis, the first infant "formulas" were developed. Due to its availability, cow's milk, although very different to human milk, was used in the development of these "formulas." These early infant "formulas" often provided by the individual physician, involved complicated methods of modification of cow's milk. Improvement in food processing led to the development of

²²¹ Pisacane, Continisio et al. 2005; Wolfberg, Michels et al. 2004; Rose, Warrington et al. 2004; Arora, McJunkin et al. 2000; Littmann, VanderBrug et al. 1994

²²² Kohlhuber, Rebhan et al. 2008; Rose, Warrington et al. 2004; Alotti, Cotrell et al. 1998

²²³ McIntyre, Hiller 2001; Lee 1999; Raj, Plichta 1998; Buckner, Matsubara 1993

²²⁴ Meyerink 2002

²²⁵ Humphreys, Thompson et al. 2002

²²⁶ McIntyre, Hiller et al. 2001

²²⁷ Heinrichs, Baumgartner et al. 2003

²²⁸ Odent 2007

²²⁹ Langer, Campero et al. 1998

²³⁰ Hannan, Li et al. 2005

²³¹ Hills-Bonczyk, Tromiczak et al. 2007

²³² Lange, Schenk et al. 2007

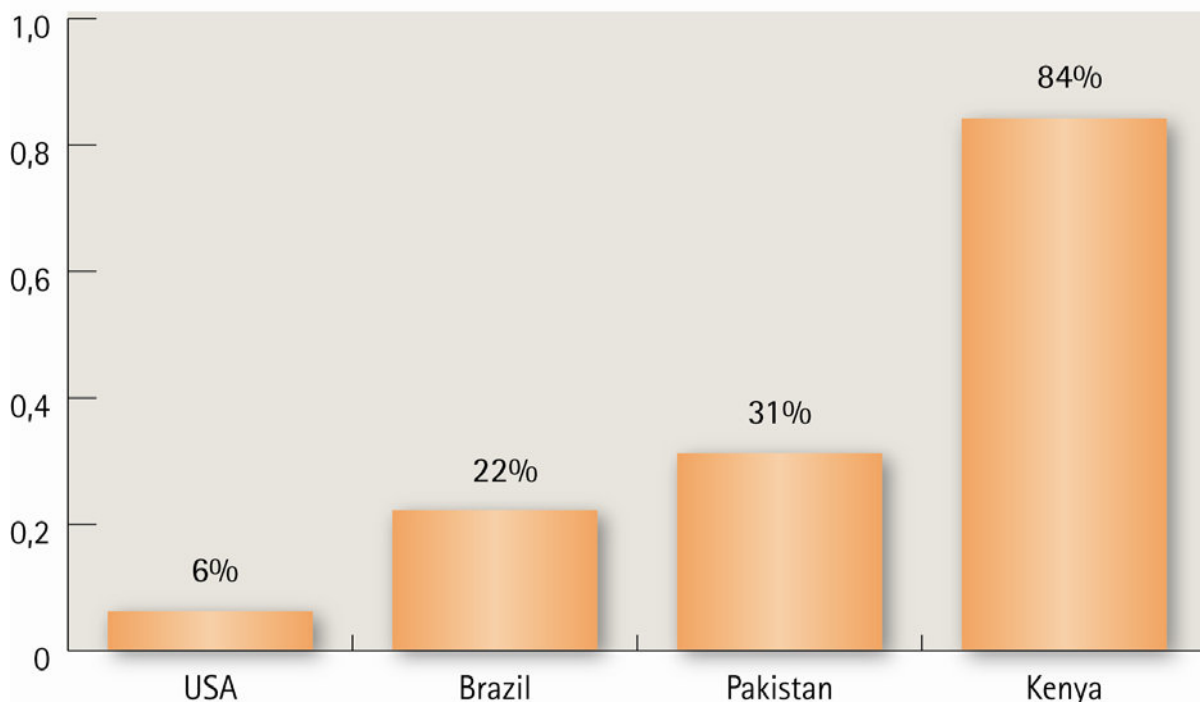
²³³ Montgomery, Splett 1997; Tuttle Dewey 1996

²³⁴ <http://www.fns.usda.gov/ora/MENU/Published/WIC/WIC.htm>

condensed and powdered formulas which were easier to use. "Formulas" have continued to evolve and are still a "work in progress" over one hundred years later. During the first half of the twentieth century a number of cultural changes resulted in the replacement of human milk by artificial feeding as the normal method of infant feeding. These cultural changes included medicalization of birth, changing physician and women's roles, increasing influence of science and increasing advertising of "formula." By the 1950's, most hospitals and health professionals in the developed world promoted artificial feeding as the feeding method of choice."²³⁵

Encouraged by enormous profits in Europe during the so-called economic miracle in the 1950s, substitute producers began to market their products world-wide. The global player Nestlé proceeded unscrupulously by selling their products to developing countries, where necessary requirements for bottle feeding are lacking, such as clean drinking water, sufficient firewood to boil the mostly contaminated water and a basic literacy of people to read the label instructions. Poverty is a high risk factor when using substitutes²³⁶. In a situation of shortage of resources in a developing country, a mother who has stopped breastfeeding to use formula might not find clean water to prepare the formula. Firewood might also not always be available, disabling her to boil the contaminated water before preparation of the artificial substitute 6-8 times in 24 hours daily. Moreover, the mother might be illiterate and not able to read the instructions with changing recommendations for different ages of her child. However, poverty might also prevent mothers from using as much powder as prescribed and tempt her to stretch the artificial milk with water. The following diagram explains poverty as a risk factor for using formula by showing a comparative cost calculation for substitutes in different countries:²³⁷:

Figure 2: Costs per year for substitutes as percentage of salary



**Formula cost comparison USA - developing countries:
What is the rest of the family to eat?**

²³⁵ <http://www.hmbana.org/index/history>

²³⁶ Lange, Schenk et al. 2007

²³⁷ Krasselt, Scherbaum 2003

This „profit before health“ policy of substitute producers has already killed millions of infants world-wide²³⁸.



Figure 3

A 1991 photo documents this problem: It shows a Pakistani mother with her twins aged 6 months (the boy on the left, the girl on the right). The mother had been told that her milk was only sufficient for one child. So she continued breastfeeding the boy, while the girl received contaminated substitutes. The girl died one day after the picture was taken.²³⁹

Besides the unscrupulous marketing practices of substitute producers, the main obstacles for breastfeeding today are the loss of knowledge and skills of both women and health care providers. This dissertation attempts at identifying remaining obstacles to an effective promotion of breastfeeding by taking a close look at the current international situation of breastfeeding and lactation consulting world-wide.

2.6 The history of breastfeeding promotion initiated by WHO and UNICEF

2.6.1 The International Code of marketing of breast milk substitutes 1981

Confronted with the unscrupulous marketing strategies WHO and UNICEF have been searching for a solution to reduce infant mortality effectively and rapidly:

Public Health experts all over the world realised that education on the benefits of breastfeeding could not prevent its decline. The spreading commerciogenic malnutrition required the protection of mothers and children from inappropriate marketing strategies. In 1981 the international code was passed by the World Health Assembly WHA and adopted by UNICEF. The code represents the international community's answer to the unethical marketing strategies of corporate groups.

The code has been amended in the following years and is internationally valid. The obligation to comply with the Code is independent of national legislation. The central goal of the code is the protection and promotion of breastfeeding. Health care providers should communicate correct information to parents. The following selected regulations are included²⁴⁰:

- No advertisement for substitutes in public and in the health care system
- No free samples to mothers and no direct contact between companies and mothers
- No company staff as nutrition consultants
- No free samples or presents to health care providers and no direct contact between companies and health care providers
- Risk labels on packaging of substitutes
- Labelling without baby photos, no idealisation of substitutes

²³⁸ http://www.who.int/nutrition/topics/lancetseries_maternal_and_childundernutrition/en/index.html

²³⁹ Photo: UNICEF – Islamabad Children's Hospital. 1991

²⁴⁰ Adelberger 2003

2.6.2 The international baby food action network IBFAN and the world alliance for breastfeeding action WABA

Two international networks IBFAN and WABA were founded in 1979 (IBFAN) and 1991 (WABA) with the aim to protect, promote and support breastfeeding world-wide in support of the WHO / UNICEF resolutions²⁴¹:

IBFAN is one of the longest-surviving single-issue Organizations. IBFAN was founded on October 12th, 1979 after the joint meeting of WHO and UNICEF on Infant and Young Child Feeding. One of the founding members stated:

“IBFAN... will provide an international framework for the continuation of our work. It will allow us to continue our vigilance and provide the focus for citizen participation. It will enable us to follow up the recommendations of this meeting - to spread new perspectives gained and to monitor compliance (with the International Code)”²⁴².

One of the main tasks of IBFAN is to implement and monitor the Code.

The World Alliance for Breastfeeding Action WABA was formed on 14 February, 1991²⁴³. WABA is a global network of organizations and individuals who believe breastfeeding is the right of all children and mothers and who dedicate themselves to protect, promote and support this right. WABA acts on the Innocenti Declaration and works in liaison with UNICEF.

2.6.3 The ten steps to successful breastfeeding by WHO and UNICEF 1989

In 1989 WHO and UNICEF passed the 10 steps to successful breastfeeding as an action strategy and global guideline for health care providers²⁴⁴. These are in summary:

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
2. Train all healthcare staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within an hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
7. Practice "rooming in" by allowing mother and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats, pacifiers, dummies, or soothers to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birthing centre.

The ten steps to successful breastfeeding are evidence-based²⁴⁵. Several studies have proved their effectiveness²⁴⁶. Even if less than 5 steps are implemented, long-term breastfeeding rates do increase²⁴⁷. A 2007 Taiwan study found a dose-response between number of ten-steps practices

²⁴¹ WHO: Global strategy for infant and young child feeding, Geneva 2003

²⁴² http://www.ibfan.org/site2005/Pages/article.php?art_id=5&iui=1

²⁴³ <http://www.waba.org.my/>

²⁴⁴ WHO: Evidence for the ten steps to successful breastfeeding, Geneva 1998

²⁴⁵ WHO: Evidence for the ten steps to successful breastfeeding, Geneva 1998

²⁴⁶ Fairbank, O'Meara et al. 2000

²⁴⁷ Dulon, Kersting et al. 2003

experienced and breastfeeding²⁴⁸. Accordingly a 2007 review recommended all of the 10 steps in combination to be effective in the promotion of breastfeeding²⁴⁹.

The ten steps to successful breastfeeding include integrated care starting with information on breastfeeding during pregnancy, guidelines for hospitals and continued support after discharge from hospitals. The ten steps to successful breastfeeding represent the basis of a new quality standard in the health care system: The baby-friendly hospital (see chapter BFHI).

2.6.4 Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding 1990 and 2005

The Innocenti Declaration was passed as a result of the WHO/UNICEF conference from 30.07. – 01.08.1990 in Spedale degli Innocenti in Florence, Italy and fostered the world-wide promotion of breastfeeding. It was adopted by the 45th World Health Assembly in May 1992 in Resolution WHA 45.34²⁵⁰. The Innocenti Declaration sets the following four main operational targets:

All Governments should have:

- appointed a national breastfeeding coordinator of appropriate authority, and established a multi-sectored breastfeeding committee composed of representatives from relevant government departments, non-governmental Organizations, and health professional associations;
- ensured that every facility providing maternity services practises all ten of the Ten Steps to Successful Breastfeeding;
- taken action to give effect to the principles and aim of all Articles of the International Code and subsequent relevant World Health Assembly Resolutions in their entirety;
- enacted imaginative legislation protecting the breastfeeding rights of working women and established means for its enforcement."

All these instruments focus on the International Code as the minimum requirement, the starting-point for effective action. These goals were supposed to be implemented by 1995. The questionnaire of this dissertation was designed to assess the status quo reached so far.

2.6.5 The baby-friendly hospital - a WHO/UNICEF initiative and new quality standard in the health care system since 1991

Successful initiation and adequate duration of breastfeeding according to the WHO recommendation are closely related to the quality of post partum care²⁵¹. Based on the 10 steps to successful breastfeeding the baby-friendly hospital initiative BFHI was founded in 1991 and plays a key role in the promotion of breastfeeding²⁵². This initiative was to spread all over the world and thus enable the re-establishment of the breastfeeding culture. The BFHI was developed to promote implementation of the second operational target of the Innocenti Declaration:

“Ensure that every facility providing maternity services fully practices all ten of the Ten Steps to Successful Breastfeeding set out in the joint WHO/UNICEF statement „Protecting, promoting and supporting breastfeeding: The special role of maternity services“²⁵³.

²⁴⁸ Li-Yin, Chen-Jei et al. 2007

²⁴⁹ Forster, McLachlan 2007

²⁵⁰ WHO / UNICEF conference in Florence, Italy: *Innocenti Declaration on the protection, promotion and support of breastfeeding*. UNICEF Nutrition Cluster (H-8F), New York: 1990 and 2005.

²⁵¹ Popkin, Canahuatia et al 1991

²⁵² Hannula, Kaunonen 2008; Forster, McLachlan 2007; Philipp, Merewood 2004

²⁵³ WHO: Evidence for the ten steps to successful breastfeeding. Geneva, 1998

In today's hospital routines of industrialised countries the ten steps to successful breastfeeding on the majority are not yet implemented²⁵⁴. Supplementing routines are common practice, since they have established during decades of artificial feeding and make care at maternity ward easier²⁵⁵ than the more time-consuming lactation consultancy. In times of staff reduction to save costs it has become even harder to overcome the supplementing routines, since it takes a lot of effort and a developmental process of several years with documentation, education of staff and the definition of new standards and guidelines to be implemented in daily routines to fulfil the baby-friendly quality standard²⁵⁶.

Statistics show: If initiation of exclusive breastfeeding according to the ten steps fails at the maternity service level and mothers leave the hospital supplementing, the majority of mothers weans completely within 3 months²⁵⁷. Many studies have indicated the negative impact of supplementing routines in the maternity ward on breastfeeding duration²⁵⁸, which gives evidence of the key role maternity health services play in re-establishing the breastfeeding culture. Moreover several studies have provided evidence for the difference certified hospitals do make in breastfeeding initiation, duration and exclusivity²⁵⁹, as recommended by WHO. The certification baby-friendly might also be successfully implemented in neonatal intensive care units to improve the health of pre-term and sick children²⁶⁰. Therefore the certification "baby-friendly" is not only ideal for the promotion of breastfeeding, but moreover represents an adequate tool for quality assurance of lactation consulting in the health care system. In Germany for instance 51 hospitals are certified as of December 2009. One of the German certified hospitals – St. Joseph in Berlin – has even certified the paediatric clinic as baby-friendly in 2007 as world-wide innovation²⁶¹. Compared to the about 1,200 obstetric institutions in Germany the certified hospitals only represent 3,75 %, which indicates a failure of the health care system to promote breastfeeding at the key institution. Currently about 20,000 baby-friendly hospitals in about 125 countries have been certified world-wide²⁶², which reveals a great need for action to re-build the breastfeeding culture on an international level²⁶³.

2.6.6 The National Breastfeeding Committee

Initiated by the first Innocenti Declaration in 1991, many countries world-wide have founded their National Breastfeeding Committee. The time frame for the implementation of the main goals of the Innocenti Declaration by 1995 was missed in the majority of countries excluding Norway. There is still a strong need for action world-wide to meet the goals of the Innocenti Declaration. The questionnaire provides an evaluation of the National Breastfeeding Committee's work in the practitioners' countries of residence.

2.6.7 The global strategy for infant and young child feeding by WHO and UNICEF

In 2002, WHO and UNICEF issued the global strategy for infant and young child feeding based on the previously mentioned strategies and the best available scientific and epidemiological evidence. It was designed as a guide for action and participation to rekindle the world interest in the urgent need to protect and promote breastfeeding, to ensure survival of children and improve

²⁵⁴ Giovanni M, Riva E et al. 2005

²⁵⁵ Cloherty, Alexander 2004

²⁵⁶ Philipp, Merewood 2004

²⁵⁷ Kersting, Dulon 2002; Blomquist ; Perez-Escamilla, Pollitt et al. 1994

²⁵⁸ Blomquist, Jonsbo et al. 1994

²⁵⁹ Spybi, McCormick et al. 2009; Merewood, Mehta et al. 2005

²⁶⁰ Merewood, Philipp et al. 2003

²⁶¹ <http://sjk.de/Neonatologie.30.0.html>

²⁶² http://www.who.int/nutrition/publications/infantfeeding/9789241594998_s4.pdf

²⁶³ Philipp, Merewood 2004

children's health status by optimal nutrition. The questionnaire addresses practitioners to assess the implementation of WHO and UNICEF measures on an international level so far.

2.7 NGOs for the promotion of breastfeeding

2.7.1 The foundation of La Leche League

“In the 1950s

- *Formula was providing scientifically perfect food for babies*
- *Anaesthesia was saving mothers from the horrors of childbirth*
- *Bottles were making it easy for anyone to care for the baby*
- *Schedules and discipline from the moment of birth were preventing babies from ruling their parent's lives*

In 1956, seven women joined together in a movement that was to change the face of motherhood in America. They have devoted their lives to bringing mother and baby back together again”²⁶⁴.

In 1956 La Leche League was founded in Chicago as one of the first support groups world-wide. Founded by 7 housewives, who had started to support each other in the art of breastfeeding, they were surprised to meet a great interest throughout the country. They named their Organization „La Leche League“, because at that time it would have been a scandal to print the word „breast“. Moreover, the founders did not want to embarrass people receiving their invitations to group meetings. „La Leche“ is the Spanish word for milk, which did not reveal its meaning to the public right away.

La Leche League not only spread in the United States, but world-wide. Today, La Leche League International is represented in 68 countries. The LLLI mission is carried out by thousands of accredited volunteer leaders, who are mothers having received training by LLL and have breastfed their own children for at least one year each. LLL leaders provide breastfeeding support to mothers worldwide by offering monthly support groups and supporting breastfeeding mothers via telephone and internet. Over 43,000 Leaders have been accredited in the past 50 years. In 2008, LLL leaders provided support to over 200,000 women world-wide²⁶⁵. In an LLL mother-to-mother support group participants experience lay support of educated LLL leaders as well as peer support of participating mothers. A 2008 US study has given evidence for the effectiveness of peer support by lay people²⁶⁶. A 1999 Mexican study has proven that early and repeated contact with peer counsellors educated by LLL was associated with a significant increase in breastfeeding exclusivity and duration²⁶⁷. A 2003 Cochrane review has confirmed that lay support effectively promotes exclusive breastfeeding. The effectiveness of peer support also becomes obvious in Norway as a role model for the successful re-establishment of the breastfeeding culture, which is amongst other factors due to the peer support of the mother-support group Ammehjelpen (see chapter Norway). La Leche League is a non-profit Organization specialised in breastfeeding. LLL International counsels the World Health Organization in the field of lactation.

²⁶⁴ Lowman 1978

²⁶⁵ La Leche League International Annual Report 2007-2008

²⁶⁶ Chung, Raman et al. 2008

²⁶⁷ Morrow, Guerrero et al. 1999

2.7.2 The Academy of Breastfeeding Medicine ABM founded in 1993

At the occasion of an international meeting of Lactation consultants in 1993, physicians identified several common needs, including sharing resources on physician education and breastfeeding management issues.

„The Academy of Breastfeeding Medicine is a worldwide organization of physicians dedicated to the promotion, protection and support of breastfeeding and human lactation. Our mission is to unite members of the various medical specialties with this common purpose through:

- ***Physician education***
- ***Expansion of knowledge in both breastfeeding science and human lactation***
- ***Facilitation of optimal breastfeeding practices***
- ***Encouragement of the exchange of information among organizations***²⁶⁸

The Organization's initial two-day meeting took place in Stanford, CA, in the summer of 1994. ABM is now an international multi-specialty physician organization, with more than 500 members from more than 50 countries. ABM is a core partner of the World Alliance for Breastfeeding Action, affiliated with the United Nations Department of Public Information. The organization has held an Annual International Meeting since 1995²⁶⁹.

The founding of ABM represents an important step towards health care providers re-building the breastfeeding culture according to The Lancet's 1994 postulation „A warm chain for breastfeeding“, quoted in the preamble²⁷⁰.

2.8 Subsequent programs for the promotion of breastfeeding based on WHO / UNICEF measures

2.8.1 The US American and European Blueprints for action for the protection, promotion and support of breastfeeding

In 2000, the US Department for Health and Human Services launched the US American Blueprint for Action. In 2004, the European blueprint for action²⁷¹ on the promotion of breastfeeding was launched, based on the above mentioned WHO global strategy and the European Action Plan for Food and Nutrition Policy 2007 – 2012. After the implementation project in several European countries, it was revised in 2008 by the participants of the project under the direction of Adriano Cattaneo from the Unit for Health Services Research and International Health in Trieste, Italy.

The main fields of action of both blueprints for action are communication, training, protection, promotion and support of breastfeeding in the health care system, in society and at the work place, education of the public, monitoring and research. In the USA, the blueprint for action was taken on in 2002 by the paper: Reclaiming breastfeeding for the United States, which is attempting to point out the current need for action with regard to breastfeeding protection and promotion in the United States.²⁷² Numerous measures have to be taken to facilitate breastfeeding in modern society and within the health care sector, as the US breastfeeding

²⁶⁸ ABM website: <http://www.bfmed.org/>

²⁶⁹ <http://www.bfmed.org/About/History.aspx>

²⁷⁰ Editorial The Lancet 1994

²⁷¹ EU Project on the Promotion of Breastfeeding in Europe, Trieste 2008

²⁷² Cadwell, Turner-Maffei 2002

committee emphasizes with the “Breastfeeding promotion act” of 9 June 2010²⁷³. The European Blueprint for action has been followed up by the 2007 paper “Promotion of Breastfeeding in Europe: Pilot Testing the Blueprint for Action”. This dissertation study takes on the need for further research postulated in the blueprints for action to assess the current 2008 situation on an international level.

2.8.2 The baby-friendly community and the US community intervention program

New Zealand and Canada have implemented a 7 points program to promote breastfeeding at the community level. The 7 points plan to become a baby-friendly community is based on the 10 steps to successful breastfeeding for obstetric institutions. The 7 points are in detail:

1. Have a written breastfeeding policy that routinely is communicated to all staff and volunteers
2. Train all health care providers in the knowledge and skills necessary to implement the breastfeeding policy
3. Inform pregnant women and their families about the benefits and management of breastfeeding
4. Support mothers to establish and maintain exclusive breastfeeding to six months
5. Encourage sustained breastfeeding beyond six months to two years or more, alongside the introduction of appropriate, adequate and safe complementary foods
6. Provide a welcoming atmosphere for breastfeeding families
7. Promote collaboration among health services, and between health services and the local community

In New Zealand, for instance, the New Zealand Breastfeeding Authority NZBA²⁷⁴ provides a National Baby Friendly Community Coordinator, based in Christchurch. In Canada, the National Breastfeeding Committee is responsible for the community program²⁷⁵.

Another international community intervention program was included in the LINKAGES program, released in 1996 by the United States Agency for International Development (USAID) as a 10-year program to improve breastfeeding practices rapidly and at scale. This program has been conducted most successfully in Bolivia, Ghana and Madagascar²⁷⁶. Such programs also meet the WHO/UNICEF goals of the “Global Strategy for infant and young child feeding”, which have included community programs as new operational target.

2.9 Lactation consulting in the health care system

2.9.1 Education quality of health care providers in the lactation field

Currently the certification process of the baby-friendly hospitals focuses mainly on the education of the hospital health care staff on lactation and lactation consulting. LC's tasks as defined by the “Scope of practice for IBCLCs” and the “Code of ethics for IBCLCs” on the IBLCE homepage include the education of other health care providers.²⁷⁷ This reveals the deficits in health care providers' initial educations as physicians²⁷⁸ or nurses²⁷⁹, which does not include sufficient

²⁷³ <http://www.usbreastfeeding.org/LegislationPolicy/ActionCampaigns/BreastfeedingPromotionAct/tabid/115/Default.aspx>

²⁷⁴ <http://www.babyfriendly.org.nz/>

²⁷⁵ [http://breastfeedingcanada.ca/pdf/BFI%20Ind%20Community%20\(3\)%20March%2024%2004.pdf](http://breastfeedingcanada.ca/pdf/BFI%20Ind%20Community%20(3)%20March%2024%2004.pdf)

²⁷⁶ Quinn, Guyon et.al 2005

²⁷⁷ http://www.iblce-europe.org/Start_1.htm

²⁷⁸ Szucs, Miracle et al. 2009 ; Pesco, Pletta et al. 2002

²⁷⁹ Patton, Beaman et al. 1996 ; Freed, Clark et al. 1996

information on breastfeeding²⁸⁰. However, health care providers as first caregivers for mothers post partum are decisive for the successful initiation of breastfeeding, since mothers often quote problems with lactation as reasons to stop breastfeeding²⁸¹.

Nurses have reported breastfeeding training and management as lacking in their educational programs.²⁸² Midwives show a large variation of breastfeeding knowledge. A 2007 study revealed that the midwives included were no more skilled than senior student midwives.²⁸³ A 2008 Australian study has shown that midwives with own positive breastfeeding experience are better at supporting breastfeeding than midwives without positive breastfeeding experience²⁸⁴. Physicians often are not adequately prepared for the breastfeeding management role in either medical school, residency²⁸⁵ or clinic²⁸⁶. Breastfeeding training provided in medical and nursing programs does not offer sufficient didactic or clinical hours to enable development of expertise in this complex modality²⁸⁷. However, educational interventions for both health care providers and mothers can make a difference for the successful initiation of breastfeeding²⁸⁸.

The lack of education of health care providers²⁸⁹ results in inconsistent advice to breastfeeding mothers²⁹⁰, which derive rather from their own breastfeeding experience than from evidence²⁹¹. A 2003 study on attitudes of health care providers towards breastfeeding concluded that *many women did not report receiving positive breastfeeding messages from their health caregivers and hospital staff. A perceived neutral attitude from the hospital staff is related to not breastfeeding beyond 6 weeks...*²⁹²

Moreover, integrated care with regard to breastfeeding is bound to fail without standard knowledge of health care providers. This shortcoming conflicts with the promotion of breastfeeding, since the initiation of breastfeeding is a very vulnerable and sensitive period of time, in which the inconsistency of counselling might easily lead to the failure of successful breastfeeding²⁹³. Studies have given evidence of health care providers' training having a positive effect on breastfeeding rates, e.g. increased duration²⁹⁴ or exclusivity²⁹⁵. Standard education of health services makes part of Norway's strategy to successfully promote breastfeeding.

The foundation of ABM also gives proof of the deficiency in physician's education²⁹⁶: ABM was founded mainly to establish knowledge and skills of lactation consulting amongst physicians²⁹⁷. As a 1999 study has clearly shown, paediatricians have significant educational needs and deficits in the area of breastfeeding management²⁹⁸. Physicians play a decisive role in the successful initiation and continuation of breastfeeding²⁹⁹. They should therefore play a more active role in

²⁸⁰ Seibt, Deneke 2004; Hellings, Howe 2000

²⁸¹ Kersting, Dulon 2002; Bick, MacArthur et al. 1998

²⁸² Register, Eren et al. 2000

²⁸³ Law, Dunn et al. 2007

²⁸⁴ Creedy, Cantrill et al. 2008

²⁸⁵ Bunik, Gao et al. 2006

²⁸⁶ Khoury, Hinton et al. 2002

²⁸⁷ Register, Eren et al. 2000

²⁸⁸ Labarere J, Gelbert-Baudine 2005; Cox, Turnbull 1998

²⁸⁹ Naylor, Wester 1989

²⁹⁰ Seibt 2006

²⁹¹ Szucs, Miracle et al. 2009

²⁹² DiGirolamo, Lawrence et al. 2003

²⁹³ Seibt 2006

²⁹⁴ Tappin, Britten et al. 2006; Cattaneo, Buzzetti 2001; Taddei, Westphal et al. 2000

²⁹⁵ Cattaneo, Buzzetti 2001

²⁹⁶ Leavitt, Martinez et al. 2009

²⁹⁷ Bunik, Gao et al 2006

²⁹⁸ Schanler, O'Connor et al. 1999.

²⁹⁹ Leavitt, Martinez et al. 2009

education during pregnancy and additional consulting during the lactation period³⁰⁰. Hoffman even postulated in 1989 that paediatricians should lead the way in breastfeeding promotion³⁰¹.

To provide health care providers with sufficient knowledge and skills on breastfeeding, several programs have been developed, of which 2 have already been evaluated up-to-date:

1. The WHO 40 hours training course
2. The breastfeeding support skills tool BeSST is a questionnaire and video tool used to assess practitioners' knowledge and skills on breastfeeding. The tool has proved reliability and validity.³⁰²
3. The “best start” breastfeeding education program is meant for midwives. The intervention study has tested whether a 4 hour positioning and support to latch-on course represents an effective intervention to increase midwives' knowledge and problem-solving skills. The training scored a large and significant effect, compared to the control group. Moreover it is a low-cost intervention with a great effect on breastfeeding promotion, since the main factor causing early weaning within the first 3 months are sore nipples and a low milk supply, which can both be prevented by immediate post-partum support of a knowledgeable professional.³⁰³

British researchers findings of a 2007 survey of health care providers detected inconsistency in training and a poor knowledge of evidence-based practice. Nearly 50% of responders had no access to breastfeeding policies. The researchers concluded that evidence-based training with a practical component and access to effective written policies is required for all health professionals with responsibility for breastfeeding mothers³⁰⁴.

The state of the art of health care providers' education in the lactation field leads to the following conclusion: It is a clear task within quality assurance in modern health care systems to implement adequate lactation knowledge and skills in health care providers' primary educations and at the same time train practitioners in the health care system as further education. As of today the health care systems of industrialised countries fail to support breastfeeding, which does not enable mothers to make an evidence-based choice in infant feeding in the first place.

2.9.2 The additional qualification International Board Certified Lactation Consultant since 1985 and the effect of LC on breastfeeding promotion

To promote breastfeeding effectively in the health care system, the qualification „International Board Certified Lactation Consultant“ was initiated in 1985 as additional education for health care providers, mainly in the field of maternity health care, e.g. for obstetricians, gynaecologists, paediatricians, nurses and midwives. In Germany, for instance, there are currently 1240 International Board Certified Lactation Consultants³⁰⁵ by the end of 2009, in Austria 342, 416 in Switzerland, 389 in the Netherlands, 200 in Italy and 176 in Belgium.

Many studies have examined determinants of primary or early weaning or determinants of the successful initiation or duration of breastfeeding³⁰⁶. One of the main determinants found in the literature were mothers' problems with breastfeeding such as sore nipples, mastitis or insufficient

³⁰⁰ Lawrence 1982

³⁰¹ Hoffman 1989

³⁰² Hall Moran, Dinwoodie 1999

³⁰³ Law, Dunn et al. 2007

³⁰⁴ Wallace, Kosmala-Anderson 2007

³⁰⁵ http://www.iblce-europe.org/Start_1.htm

³⁰⁶ Kersting, Dulon 2002; Bick, MacArthur et al. 1998

milk supply³⁰⁷. Mothers have stated in several studies that the support for breastfeeding by health services is poor at all stages of lactation: During pregnancy, in hospitals and after hospital discharge³⁰⁸. A review of 10 years literature from 1999-2000 provides evidence for this coherence by the statement of mothers that weaning within the first 6 months post partum is mainly due to perceived difficulties with breastfeeding rather than due to maternal choice³⁰⁹. The mentioned symptoms strongly indicate a lack of breastfeeding support by health services. As already mentioned in the literature chapter, the reasons for not breastfeeding suggest rather a failure of health services than a lack of mothers' motivation.

Lactation consultants give significantly more positive encouragement than either nurses or physicians.³¹⁰ As stated in the previous chapter on health care providers, a positive attitude and the encouragement of health care providers are crucial for the successful initiation of breastfeeding³¹¹.

The skilled and knowledgeable breastfeeding support of lactation consultants contributes to mothers' contentedness: On a 5 point Likert scale, an average of 95% of mothers rated LC's service as supportive, very supportive, useful or extremely useful³¹². In a 2006 randomized controlled trial mothers described the pre-and postnatal individualised encouragement, guidance and support of a trained lactation consultant as key in their decision to initiate and maintain breastfeeding³¹³.

*The IBCLC is the professional with the greatest knowledge and skills regarding breastfeeding. Primary care providers, nurses and physicians have regular contact with breastfeeding mothers, but they do not have this same level of knowledge or skill and are limited in providing support by the competing demands and time constraints in primary care.*³¹⁴

With respect to the development of IBCLC standards and definitions of competences, the La Leche League International supported this process by facilitating a panel of 60 international experts with different professional backgrounds within and outside the health care sector. By 1985, the standards, competences and scopes of practice have been defined³¹⁵ and the International Board of Lactation Consultant Examiners was founded.

*The IBCLC is the only internationally recognized credential in breastfeeding support. Certification is awarded upon completion of extensive clinical experience with breastfeeding mothers, educational credits in lactation, and a passing score on the lactation consultants' examination*³¹⁶. *IBCLCs must re-certify by acquiring continued education recognition points over five years and must retake the certification examination after ten years. According to the International Board of Lactation Examiners, the professional Organization for IBCLCs, the scope of practice for IBCLCs include:*

Working collaboratively with primary care providers to assure appropriate clinical / practical management of breastfeeding and lactation in order to protect, promote and support breastfeeding. Such practice includes providing education, counselling and clinical/practical management to allow breastfeeding to be seen as the expected way in which healthy newborns

³⁰⁷ Seibt 2006; Pisacane, Continisio et al. 2005; Kersting, Dulon 2002; Guise, Palda et al. 2002;

³⁰⁸ Seibt 2006

³⁰⁹ Dennis 2006

³¹⁰ Humenick, Hill et al. 1998

³¹¹ DiGirolamo, Lawrence et al. 2003

³¹² Lawlor-Smith, McIntyre et al 1997

³¹³ Memmott, Bonuck 2006

³¹⁴ Thurman, Jackson Allen 2008

³¹⁵ Riordan 2005

³¹⁶ Blenkinsop 2002

are to be fed as well as to prevent and solve breastfeeding problems. Education efforts extend to the community as well as to breastfeeding families and health care colleagues. Additionally, the International Board of Lactation Consultant Examiners adopted a discipline committee and code of ethics that applies to all IBCLCs³¹⁷.

In several recent studies, the effect of breastfeeding interventions has been examined and confirmed:

Breastfeeding support offered by knowledgeable professionals can enable mothers and families to overcome breastfeeding obstacles and is often cited in the literature as a way to promote breastfeeding³¹⁸. The CDC Guide to Breastfeeding Interventions³¹⁹ defines professional support as “any counselling or behavioural interventions to improve breastfeeding outcomes, such as helping with a lactation crisis or working with other health care providers”. Shealy et al further identify professional support as an evidence-based intervention that effectively increases the proportion of women who continue breastfeeding for up to six months. A Cochrane review³²⁰ of support for breastfeeding mothers found that professional support by medical, nursing and allied health professionals, including nutritionists, was effective in prolonging breastfeeding and concluded that more research into the appropriate training for professionals is needed³²¹

The decisive outcome to further develop lactation consulting as profession is the following: Evidence has been found that professional support of the mother-baby dyad leads to significant increase of exclusive breastfeeding³²², initiation and duration. As Auerbach, Riordan and Gross have stated in 2000, the role of Lactation Consultants in the Health Care Systems becomes increasingly visible and spreads in many health care environments³²³. Brent and Redd et al. have described in 1995 the effective intervention and integrated care program of LCs attained in a low-income population.³²⁴ In a randomised controlled study, Gagnon, Dougherty et al. have shown the effectiveness of lactational postpartum care by nurses after early discharge from hospital.³²⁵ A similar result was achieved by Lieu and Wikler et al., who found out that lactation consulting amongst other interventions had a positive effect on clinical outcome and mothers' satisfaction in perinatal care.³²⁶ A 2001 Canadian study found out that amongst others, the main barriers to breastfeeding for mothers are a lack of support and a lack of knowledge of breastfeeding management³²⁷. A 2003 Cochrane review suggests that supplementary breastfeeding support should be provided as part of routine health service provision, since there is clear evidence for the effectiveness of professional support on the duration of any breastfeeding³²⁸. The effectiveness of LC education and intervention was confirmed by an evidence based study with RCT methods by Bonuck and Trombley, who found out in 2005, that the best practice intervention by lactation consultants is effective in increasing breastfeeding duration and intensity³²⁹. The conclusion is clear: A political commitment to breastfeeding promotion should result in upgrading the profession LC and its integration into the health care system.

³¹⁷ Thurman, Jackson Allen 2008

³¹⁸ Britton, McCormick et al 2007; de Olivera, Camado et al 2001; Guise, Palda et al 2003; Wambach, Campbell et al 2005

³¹⁹ Shealy, Li et al 2005

³²⁰ Britton, McCormick et al 2007

³²¹ Thurman, Jackson Allen 2008

³²² Aidam, Escamilla et al. 2005

³²³ Auerbach, Riordan et al. 2005

³²⁴ Brent, Redd et al. 1995

³²⁵ Gagnon, Dougherty et al. 2002

³²⁶ Lieu, Wikler et al. 1998

³²⁷ Hogan 2001

³²⁸ Sikorski, Renfrew et al. 2003

³²⁹ Bonuck, Trombley et al. 2005

2.9.3 Integration of lactation consulting into health care systems of industrialised countries using the examples of Germany, the USA and the Netherlands

USA and Germany

In most health care systems of industrialised countries excluding Norway lactation consulting is only marginally paid by health insurances, e.g. for work in hospital. In Germany only midwives have the opportunity to bill health insurances for a limited number of lactation consultancies during their home visits to mothers after birth. Therefore the German union of lactation consultants is currently (2009) taking steps to improve the situation:

„Negotiations with the German union of health insurances VdEk showed that the legal basis is missing to reimburse lactation consulting by health insurances, since free-lance or part-time lactation consultants are not included as care providers in the health care system according to the Code of the Social Law. We will apply to the Ministry of Health for the necessary change in the law in autumn 2009..... We hope to finally achieve a regular compensation of lactation consultants by health insurances in Germany.“³³⁰

Payment of lactation consultants in an in-hospital setting is an issue, as well. The care and attention a new breastfeeding mother needs is time-consuming and not covered by health insurances. In Germany the health care system currently does not provide the opportunity to pay exclusive lactation consulting at delivery or maternity ward and only provides marginal fees for lactation consulting (e.g. in case of mastitis treatment). The few lactation consultants working as exclusive LCs in hospitals are usually paid like nurses doing regular service, which brings about problems for the service schedules, especially in the current times of high workload for each staff member.

In the USA, a payment survey for IBCLCs has been conducted from October 2007 to January 2008 by the United States Lactation Consultant Association ULSCA³³¹ revealing similar problems like in Germany. Payment and working hours were questioned in the following work settings: Prenatal consultations, inpatient hospital settings, outpatient hospital settings, public health agencies, obstetrical/paediatric office settings and private practice (office visits, home visits and phone consultations). The following quotations from the survey describe the obstacles this young profession is currently facing:

„Salary Ranges According to Work Settings

There has never been an official report of salaries for International Board Certified Lactation Consultants. Gathering this data is very useful for hiring practices, employment options, and marketing strategies. Researching the topic of salaries on sources such as www.payscale.com for other professions such as the registered nurse will give median hourly rates according to years of experience for the United States. This type of report is not available for the IBCLC, resulting in lower salary ranges. Many times the registered nurse (RN) must take a salary cut to enter into a new position as an IBCLC after she sits for the certifying exam by the International Board of Lactation Consultant Examiners (IBCLE). Sometimes a deterrent for individuals to function as the lactation consultant is garnered by losing seniority upon entering a new job classification of “lactation specialist”. Therefore, reporting these findings is invaluable to steer hiring practices which are not impairing new colleagues from entering into the field of lactation. The report on the website at www.payscale.com did not give salaries for the category of IBCLCs.

³³⁰

<http://www.bdl-stillen.de/>

³³¹

<http://www.uslcaonline.org/aboutus.html>

Obstetrical/Paediatric Office Settings

Most obstetrical and paediatric settings hire the lactation consultant as an employee rather than as an independent consultant (88.5% versus 11.5%). Inferences about the employee is that she may function in other capacities and not be hired solely for lactation. Her time available for performing lactation consultations may be limited. Discussions with other IBCLCs in these settings demonstrate dual roles such as functioning as the nurse practitioner with lactation as a part of her role. The problem with these kinds of work assignments is that the role of the IBCLC is not clearly defined. Thus, other health care professionals and patients do not acknowledge the role of the IBCLC and often equate her as the nurse doing the breastfeeding-related assessments and management of typical problems. The future of our profession will not unfold if the definition of the IBCLC is not succinctly defined and declared by the rest of the health care team.

Private Practice – Office Visits

.....Follow-ups are most commonly \$50 or less, but also range as \$51-\$70 and \$71-\$90. This wide range of fees demonstrates the lack of professional standardization for fees for service. This is not to be misinterpreted as “price-fixing”, but as proposing that the profession adhere to similar fees based on similar clinical interventions and outcomes.....

Summary/Highlights: *Findings of this survey gathering experience provide interesting facts regarding our current status as health care professionals.*

- *Majority of respondents work in hospital settings.*
- *Majority of reported salaries ranged from \$30-\$34/hour.*
- *Majority of respondents do not track their reimbursement rates, and therefore do not know the percentage of their coverage for lactation services....*

Next Steps:

- *Offer educational sessions to inform the IBCLC on the development of separate cost centers within the hospital settings and how to work with the financial departments to form this type of unit so that tracking of reimbursement rates can be done.*
- *Marketing strategies to boost the recognition of the IBCLC as a unique health care provider.*
- *Inform the IBCLC on ways to work within the billing departments of hospital settings/doctor offices, and/or hiring an independent biller or billing agency for the independent IBCLC in private practice.*
- *Collaborate with the licensure committee of USLCA to strive towards possible licensure or registered status for the role of the IBCLC.*

*USLCA BOD – Reimbursement United States Lactation Consultant Association.*³³²

The Netherlands

In the Netherlands health insurances have triggered a substantial improvement of LC payment. PR has played a decisive role in this positive development.

An insurance company has advertised lactation consulting as special service for their insurants on the radio several times a day. This advert has triggered the payment of LC services by other insurance companies. Today lactation consulting is being reimbursed by most insurance companies in the Netherlands, as can be seen by the reimbursement list on the website of their lactation consultants union³³³. The different fees and indications show the need of action to unify the service and to pay the LC performance to the full extent of work.

³³² United States Lactation Consultant Association: Insurance reimbursement survey results 2008

³³³ Nederlandse Vereniging van Lactatiekundigen
<http://www.nvborstvoeding.nl/upload/Overzicht%20vergoedingen%202010.pdf>

This example also shows that PR might be the decisive factor for the promotion of breastfeeding and therefore represents a major topic of this study.

In summary we can state that the new profession Lactation Consultant is struggling for a clear profile and value in the health care system, which professional unions of lactation consultants in the USA, Germany and The Netherlands amongst others are currently developing and claiming on a political level.

2.9.4 The current situation: Poor breastfeeding support in most industrialised countries by health services

As indicated in the previous chapters on the loss of the breastfeeding culture, breastfeeding has been replaced by formula feeding in the times of the “economic miracle” after World War II. This change brought about a loss of skills and knowledge amongst health care providers in breastfeeding support³³⁴. As described in the previous chapters, health services today show an eminent lack of skills and knowledge regarding breastfeeding support³³⁵.

WHO/UNICEF, European, national and community programs have been developed since the 1980’s to resolve this shortcoming. The new quality standard “Baby-friendly hospital” for obstetric institutions has been established to optimally promote, support and re-establish breastfeeding during pregnancy, at maternity service level and after hospital discharge. The new education IBCLC for health service personnel including physicians, nurses and midwives has been established. However, today’s figures of the implementation of these measures so far give proof of a poor support of breastfeeding by health services:

Today, there are only 91 certified baby-friendly hospitals following the ten steps to successful breastfeeding in the United States compared to 3,000 maternity care institutions, representing only 3%. In Germany, there are currently only 51 baby-friendly hospitals compared to about 1,200 obstetric institutions, representing only 4%. This means that the evidence-based 10 steps to successful breastfeeding are only marginally practiced in the USA and in Germany with the predictable outcome of low breastfeeding rates.

The number of IBCLCs in the United States amounts to 10,249 in 2010, in Germany there are 1,240 IBCLCs in 2010³³⁶. The poor education of health care providers in the field of lactation has been discussed in the previous chapters. Compared to about 40,000 health care providers in Germany for instance, 1,240 lactation consultants currently can hardly equalise the deficits of their colleagues with insufficient education in the lactation field. Since LCs are not authorised within the health care system to implement the evidence-based quality standards of the LC education in their work environment, there seems to be no reasonable chance for lactation consultants to re-build the breastfeeding culture within health services in the current situation. As of today, the effort is bound to fail due to a lack of administrative backing for LCs and the upgrade and valuation of breastfeeding in the health care system with a clear profile and policy.

In summary of all the factors mentioned, the conclusion is clear that breastfeeding support is very poor and marginal in most industrialised countries, as shown by the examples of the United States and Germany, with the exception of Norway and Sweden.

³³⁴ Seibt, Deneke 2004

³³⁵ Smale, Renfrew et al. 2006

³³⁶ http://www.iblce-europe.org/Start_1.htm

In the following table, breastfeeding statistics of several participating countries are compared by the percentage of ever breastfed infants:

Table 4: Current breastfeeding statistics

Country	Norway ³³⁷	Germany ³³⁸	Ireland*	Romania ³³⁹	USA ³⁴⁰	Italy ³⁴¹	Austria ³⁴²	Sweden
Stat. Year	2000	2004	2009	2009	2006	2007	2006	2007
Initiation	99	91	47	95	70	90	93	98
Infant age 3 months	92	36		55			60	
6 months	80	10	10	41	40	45	55	72
12 months	40				20	15	16	19
17 months	17							

*Figures based on the report of participating experts resident in the respective country

The above statistic emphasises the outstanding position of Norway, which has clearly reached the WHO and UNICEF goals. The fact that Norway has bf statistic of toddlers at 17 months of age underlines the compliance with the WHO recommendation. Following the successful example of Norway, Sweden has developed the national breastfeeding culture towards high breastfeeding rates, also due to the standard certification of hospitals as baby-friendly by 2007³⁴³.

Germany, Romania, Italy and Austria show high initiation rates of bf over 90%. The rapid decline indicates a poor support of bf in the health care systems. The USA have a lower initiation rate with only 70%, but a longer duration than Germany and Romania with 20% still breastfeeding at 12 months, according to the recommendations of the American Academy of Pediatrics. Ireland shows a very low initiation rate and a very low breastfeeding rate of 10% at the age of 6 months.

The lack of the baby-friendly quality standard seems to result in high early weaning rates³⁴⁴. Early weaning indicates a poor support of bf by the health care systems, while lacking rates of bf toddlers indicate the ignorance of the WHO recommendations. Only Norway has bf rates for toddlers according to the WHO recommendation to bf for 2 years and beyond.

However, the responsible researcher for the European blueprint for action Adriano Cattaneo doubts the validity of current breastfeeding statistics as an outcome of his 2006 study³⁴⁵, which has revealed statistics to be misleading for Italy. Cattaneo assumes that this invalidity of breastfeeding statistics might apply to other countries, too. This shortcoming is partly due to vague definitions of breastfeeding and partly due to non-representative samples included in the examinations of breastfeeding rates.

³³⁷ Nylander. 2000

³³⁸ Kersting 2002

³³⁹ Romanian Ministry of Health and UNICEF: Reproductive Health Survey. Bukarest; 2005.

³⁴⁰ http://www.cdc.gov/BREASTFEEDING/DATA/NIS_data/

³⁴¹ http://ec.europa.eu/health/ph_projects/2002/promotion/promotion_2002_18_en.htm

³⁴² http://www.bmgfj.gv.at/cms/site/attachments/5/2/4/CH0775/CMS1177050007867/kurzfassung_saeuglingsernaehrung_heute_druckversion_08_2009.pdf

³⁴³ http://ec.europa.eu/health/ph_projects/2002/promotion/promotion_2002_18_en.htm

³⁴⁴ Kersting 2002

³⁴⁵ Cattaneo, Davanzo et al. 2006

2.9.5 Norway as example for the successful promotion of breastfeeding in an industrialised country, followed by Sweden

Norway is the only industrialised country that has clearly reached the WHO and UNICEF goals to promote breastfeeding. Since the 1970 it has taken 4 decades of intense political work with the Norwegian WHO Director-General Dr. G.H. Brundland as one of the main protagonists to reach the goal³⁴⁶, and the current statistics show high breastfeeding rates in the sense of the WHO recommendation (year 2000 statistics):³⁴⁷ The breastfeeding initiation rate is 99 %, at 3 months of age there are 92% breastfed infants, at 6 months of age 80% of the infants are breastfed, at 9 months of age 65% are breastfed, at 12 months of age 40% are breastfed and at 17 months of age 17% of the toddlers are breastfed. This breastfeeding rate of toddlers is unique in industrialised countries.

The following factors have contributed to this success:

- Political support
- Official allowance of breastfeeding in public
- Intense educational programs for health care providers
- The baby-friendly hospital is the quality standard in Norway
- Birth is mainly in the hands of midwives (physicians are only involved on the decision of midwives), as recommended by WHO in 1985³⁴⁸ in the sense of a natural birth
- Well-baby clinics focus on lactation consulting after discharge from hospital
- Maternity leave for 10-12 months at high interim wage continuation payment (80-100%) and two and a half hours breastfeeding breaks per working day to breastfeed at home or at the workplace
- The mother-support group Ammehjelpen has a strong nation-wide network and co-operates with health care providers
- The foundation of a Breastfeeding Centre with the following tasks:
 - Increase the knowledge of breastfeeding on a national level and ensure nation-wide competence
 - Establish and distribute “best practice” standards
 - Contribute to research on breastfeeding and human milk
 - Advice and counsel health care professionals
 - Counsel health authorities, politicians, media etc.
 - Assist in creating a society supportive of breastfeeding
 - Co-operate internationally to promote breastfeeding

The above description shows that all WHO and UNICEF recommendations have been put into practice: The ten steps to successful breastfeeding are being followed strictly, since the BFH is standard in Norway. With the implementation of this standard, integrated care is guaranteed as well, since the BFH certification includes integrated care consisting of pre-natal class as preparation courses during pregnancy, best practice based on the ten steps at birth and on maternity ward and follow-up after discharge from hospital by support groups and the well-baby clinics.

On one hand, lactation consulting has been successfully integrated into the health care system, while on the other hand there is a strong network of volunteers running mother support groups

³⁴⁶ Liestol, Rosenberg et al. 1988

³⁴⁷ http://www.who.int/director-general/speeches/2000/english/20000313_infant_feeding.html

³⁴⁸ WHO Europe 1985

and supporting breastfeeding mothers with telephone and e-mail consultations free-of-charge, mainly the mother support group „Ammehjelpen“, similar to LLL and the German AFS.

Compared to other industrialised countries, most of the health care providers in Norway are sufficiently educated on lactation consulting by a one-year extra training, and agree on the importance of the WHO/UNICEF goals, so that there is a concerted promotion of breastfeeding throughout the country with health care providers and volunteers in co-operation. As another important factor for breastfeeding, natural birth is being promoted in Norway by leaving birth in the hands of midwives. With this practice, unnecessary birth interventions are being prevented, which represents a very important precondition for breastfeeding as a natural process. Moreover, the unique Norwegian breastfeeding centre takes on political and educational tasks to further re-establish the breastfeeding culture in society, to counsel health care providers and contribute to research free of commercial interests and in accordance with the Code. Further, international co-operation is a target of the breastfeeding centre. The development in Norway gives proof of the effectiveness of WHO/UNICEF measures. It is possible to re-establish the breastfeeding culture in industrialised countries by following the WHO/UNICEF measures. With the implementation and the resulting support of breastfeeding, mothers are being enabled to successfully breastfeed, as the unique development of Norway shows.

However, the success in Norway should not be taken for granted, as one of the protagonists of breastfeeding promotion Dr. Gro Nylander puts it:

„The breastfeeding-rate at present appears to be higher than in any other Western country. But we must keep on fighting: The importance of breastfeeding must be taught and explained, understanding does not come by itself,“³⁴⁹

The results of the expert questionnaire confirm the successful implementation of WHO / UNICEF measures and a strong support of breastfeeding with measurable outcome. The 4 Norwegian residents' responses are significantly different from the other participants' responses with respect to compliance and support and their situation as lactation consultants, which became evident in cross tables calculating with the exact Fisher test.

However, due to the low number of Norwegians taking part in the expert questionnaire with only 4 responders, the values are statistically significant with the exact Fisher test, but do not represent a size of statistical relevance. In the following, an example of the significant results is shown:

The National Committee for Breastfeeding is promoting breastfeeding successfully in my country of residence:

Residence Country	Sample	Valid	Missing	I totally disagree	I rather disagree	I rather agree	I totally agree	p
Norway	301	4	297	0	0	0	4	0,001
Rest	301	278	23	36	89	111	33	

As could be derived from the current breastfeeding statistics in the preceding chapter, Sweden follows the successful example of Norway and is developing towards re-building the breastfeeding culture. If this trend continues, Sweden will share the outstanding position of Norway in the near future.

2.9.6 The relevance of informed or shared decision-making for infant nutrition

An informed decision on infant feeding is much more complex and comprehensive than any other informed decisions in the health care sector, e.g. on medication or surgery. For a decision on infant feeding it takes an educational program to arouse the understanding of breastfeeding and the child care philosophy connected to breastfeeding on cue. A 2002 study has shown that the infant feeding practice of close relatives amongst other factors is decisive for the mothers' choice,³⁵⁰ which makes education for mothers and relatives even more important against the background of the wide-spread bottle-feeding culture³⁵¹. A 2000 British study has given evidence for the manipulative and misleading strategies of print media³⁵² and TV broadcasts attempting to maintain the bottle feeding culture and to harm the image of breastfeeding in public³⁵³:

*“Bottle feeding was shown more often than breast feeding and was presented as less problematic. Bottle feeding was associated with “ordinary” families whereas breast feeding was associated with middle class or celebrity women. The health risks of formula milk and the health benefits of breast feeding were rarely mentioned. **Conclusions:** The media rarely present positive information on breast feeding, even though this feeding practice is associated with the most health benefits. Health professionals and policy makers should be aware of patterns in media coverage and the cultural background within which women make decisions about infant feeding.”*

According to UNICEF the Convention on the Rights of a Child means that:

“States Parties are placed under an obligation to ensure that the advantages of breastfeeding are universally understood and to take appropriate measures to achieve this goal. This can only be accomplished if the information reaching the general public, and parents in particular, is factual, objective, and not prepared with a view to persuading mothers to forgo or diminish breastfeeding and use an artificial product in the mistaken belief that it is equivalent to breastfeeding”³⁵⁴.

In the times of the economic miracle, health care providers have been promoting formula feeding as scientific progress to parents: *“By the 1950's, most hospitals and health professionals in the developed world promoted artificial feeding as the feeding method of choice”³⁵⁵.* Moreover, governments would promote formula by distributing it to disadvantaged families e.g. in the US WIC program³⁵⁶ instead of investing in health education and enabling mothers to breastfeed. Over the last decades science has given evidence for breastfeeding as irreplaceable and sustainable health resource³⁵⁷. Therefore health care providers today should be capable of supporting parents to an objective and informed decision-making on infant nutrition³⁵⁸. Parents should be educated during pregnancy on the risks of substitutes and benefits of breastfeeding to make an adequate choice for their infant's nutrition based on objective information³⁵⁹ free of

³⁵⁰ Mayerink 2002; Humphrey, Thompson et al. 1998; Baranowski, Bee et al. 1981

³⁵¹ McIntyre, Hiller 2001

³⁵² Stang, Hoss et al. 2010

³⁵³ Henderson, Kitzinger et al. 2000

³⁵⁴ Progress Report on the Baby Friendly Hospital Initiative, UNICEF New York: January; 1998.

³⁵⁵ <http://www.hmbana.org/index/history>

³⁵⁶ Tuttle, Dewey 1996

³⁵⁷ Labbok 2004

³⁵⁸ Ontario Public Health Association Breastfeeding Workgroup: *Informed decision making and infant feeding position paper*, Ontario; 2007.

³⁵⁹ Lawrence 1982 ; Losch, Dungy et al. 1995; Lieu Wikler et al. 1998

commercial interests. Several studies have emphasized the decisive importance of prenatal classes to successful breastfeeding³⁶⁰.

Regarding breastfeeding it takes an educational program for an informed decision, since the topic is very complex and the breastfeeding culture has got lost. Therefore an educational class makes part of the baby-friendly quality standard³⁶¹. This service is not included in regular health care standards of industrialised countries, except in Norway and Sweden. This shortcoming suggests the conclusion that an informed decision on infant feeding is rather the exception than the norm in most industrialised countries today. With regard to breastfeeding support, health services already seem to fail at the stage of decision-making. Moreover, the attitude of health care providers towards breastfeeding has a strong impact on mothers' decision to breastfeed. Even a neutral attitude of health care providers does impede breastfeeding³⁶², since it takes the clear and explicit encouragement of surrounding people to establish breastfeeding against the bottle-feeding background. A 2000 US review on interventions to promote breastfeeding therefore recommends the following measures³⁶³:

“The authors’ judgement is that there is sufficient evidence of effectiveness for practitioners and policy-makers to consider the following:

- *an internal review of existing breastfeeding education programmes to increase the availability of good practice health education programmes*
- *increased implementation of peer support programmes, particularly targeting women from low-income groups*
- *implementation of a ‘package’ of interventions at national and local levels with particular emphasis on peer support programmes and good practice health education activities combined with structural changes to maternity ward practices*
- *revision of the ‘Good practice guidance to the NHS’ on breastfeeding.”*

Recent studies have also approached the topic of how to reach low-income or teenage women. Their special needs might best be met by the “Best start” intervention as effective low-cost intervention³⁶⁴, while breastfeeding promotion at high school age was shown as effective intervention to reach young potential mothers³⁶⁵. A 2005 Cochrane Review has detected effective educational interventions to promote breastfeeding initiation rates among women on low incomes in the USA³⁶⁶.

2.9.7 Breastfeeding as learned mothering skill

Many studies have already shown that interventions such as prenatal classes with information on breastfeeding result in longer duration of breastfeeding³⁶⁷. This is due to the fact that breastfeeding has to be learnt by new mothers³⁶⁸ and cannot be assumed as natural behaviour³⁶⁹. New mothers need role models, which today are mainly provided by mother support groups for breastfeeding, since mothers' own mothers or relatives in the majority did not breastfeed. Moreover, mothers need a lot of support and devoted care³⁷⁰ to establish successful

³⁶⁰ Guise, Palda et al. 2003; Hogan 2001 ; Fairbank, O’Meara et al. 2000

³⁶¹ WHO: The evidence for the ten steps to successful breastfeeding 1998

³⁶² DiGiulamo, Lawrence et al. 2006

³⁶³ Fairbank, O’Meara et al. 2000

³⁶⁴ Ryser FG 2004; Brenda, Hartley et al. 1996

³⁶⁵ Leffler 2000

³⁶⁶ Dyson, McCormick et al. 2005

³⁶⁷ Arda S., Grandolfo M.2009

³⁶⁸ Avery, Zimmermann et al. 2009

³⁶⁹ Bartlett 2006 ; Raj, Plichta 1998

³⁷⁰ Mitra, Khoury et al. 2003

breastfeeding, which becomes evident by the fact that most cultures throughout mankind's history have provided special care for mothers in child-bed for about 6 weeks to 3 months post partum³⁷¹.

2.9.8 The relevance of integrated care for the promotion of breastfeeding

Integrated care represents an important part of the baby-friendly concept, as the „10 steps to successful breastfeeding“ show. In the following the main measures providing integrated care are listed:

- Education and consulting on breastfeeding during pregnancy
- Bonding within the 1st hour after birth
- Showing correct latch-on techniques and supporting mothers in the initial phase of breastfeeding especially in the first 3 days and providing rooming-in³⁷²
- Follow-up care after hospital discharge
- Continued lactation consulting by all health care providers involved
- Offering a mother-to-mother breastfeeding group and continued lactation consulting

By these measures, continued lactation consulting might be ensured and thus optimal support for all mothers and families is provided. Several studies focussing on the influence health services have on breast feeding practice emphasize the importance of integrated care³⁷³, as suggested by the above list.³⁷⁴ A 2004 Croatian study has concluded that the initiation of breastfeeding might best be supported by certified baby-friendly hospitals, but the duration of breastfeeding is mainly influenced by postnatal support after hospital discharge, such as community support³⁷⁵. A 2008 review has concluded that integrated care starting from pregnancy throughout interpartum and post partum care is essential to successfully promote breastfeeding³⁷⁶.

The integrated care includes medical professionals of different fields³⁷⁷, who all need to be on the same informational level with regard to breastfeeding: Gynaecologists and paediatricians in and outside of hospital, nurses and midwives, but also health services as a whole taking care of breastfeeding mothers and their children.

2.9.9 Breastfeeding, human rights and feminism

UNICEF: The Convention on the rights of the child 1991³⁷⁸

In the following, a relevant selection of the convention regulations can be found. Amongst other contractual states the German Bundestag has adopted the convention of children's rights on 5 April 1992:

„The contractual states approve the right of the child for the optimal state of health. The contractual states take efforts to realise this right optimally and take adequate measures to:

- *Reduce infant and child mortality*
- *Reduce infant and child morbidity and malnutrition as part of basic health care*
- *To develop prevention*
- *To abolish traditions harmful to the children's health*”³⁷⁹

³⁷¹ Kotte 2008

³⁷² Froozani, Permezhadeh et al. 1999

³⁷³ Chung, Raman et al. 2008 ; Hogan 2001

³⁷⁴ Lieu Wikler et al. 1998 ; Losch, Dungy et al. 1995; Lawrence 1982

³⁷⁵ Bosnjak, Batinica et al. 2004

³⁷⁶ Hannula, Kaunonen et al. 2008

³⁷⁷ Schaeffer, Ewers 2006

³⁷⁸ <http://www.unicef.org/crc/>

WABA

The World Alliance for Breastfeeding Action³⁸⁰ WABA promoted the world breastfeeding week in 2000 with the slogan: „Breastfeeding – a basic right“

„WABA does not accept sponsoring of substitute producers and asks everyone in support of the world breastfeeding week to respect and support this policy. WABA points out that the optimal health status of mothers and children can only be obtained by mothers having the opportunity to breastfeed until 6 months of age and to continue breastfeeding with adequate supplements until 2 years of age and beyond.“

As elucidated in the chapter “salutogenesis and breastfeeding” not only the child’s health is affected by the infant feeding method, but also the mother experiences numerous sustainable health benefits from breastfeeding. The right to breastfeed with political and societal support has been claimed on the occasion of the 2008 conference “Breastfeeding and feminism: A focus on reproductive health, rights and justice”³⁸¹ in a holistic approach within the reproductive health continuum based on the following selected principles:

- *Breastfeeding is a maternal and child health imperative and reproductive right.*
- *It is important to re-orient the paradigm from the current view that breastfeeding is a "lifestyle choice," to a paradigm that views breastfeeding as a reproductive health, rights and social justice issue so as to ensure the social, economic and political conditions necessary to promote success;*
- *Women's decisions to breastfeed should not result in the loss of their economic security or any rights or privileges to which they are otherwise entitled.*

Gro Nylander also stresses the importance of enabling women to breastfeed as feminist approach when she explains the successful re-establishment of the breastfeeding culture in her country Norway³⁸²: *“In Norway many women fought both fights at once: Not only did we want equal work for equal pay, we also wanted the right to use our bodies the way they were meant to - e.g. to breastfeed.”*

WHO

Breastfeeding promotion remains a priority goal of WHO and UNICEF. Aim no. 3 of the WHA resolution „Health 21“ is the promotion of breastfeeding according to the resolutions passed so far. The risks of substitutes have been illustrated in the first chapters: Infant mortality, loss of health and life quality, waste of resources, pollution of the environment, cost burden for families (in developing countries even impoverishment), short-term and long-term costs for the health care system and society.

The public health relevance of breastfeeding promotion comes out clearly in the following quotation of a 1996 study:

“In fact, investments in breast feeding promotion are among the most cost-effective health interventions. The cost effectiveness of breast feeding promotion programs improved as

³⁷⁹ Koopmann 2000

³⁸⁰ <http://www.waba.org.my/whatwedo/wbw/wbw00/wbw2000.htm>

³⁸¹ Labbok, Smith et al. 2008

³⁸² Nylander 2001

*programs became institutionalized. These findings show that such programs are a very efficient way of improving the health status of children.”*³⁸³

The promotion and protection of breastfeeding remains a priority on the agenda of WHO, as the recent 63rd World Health Assembly of 21st May has emphasized³⁸⁴:

“Infant and young child nutrition

Recognizing that improved breastfeeding practices alone could save the lives of one million children under five and complementary feeding along with continual breastfeeding for up to two years or beyond could save the lives of another half million children each year, a resolution was adopted on infant and young child nutrition. The resolution calls on Member States to increase political commitment, and put in place stronger laws to protect and promote breastfeeding and regulate the marketing of breast-milk substitutes. It also calls for strengthening of nutritional surveillance systems and improved use of MDG indicators to monitor progress. Moreover, it requests WHO to develop a comprehensive implementation plan on infant and young child nutrition for preliminary discussion at the next World Health Assembly and finalization at the Sixty-Fifth World Health Assembly.”

There is a world-wide need for action to accomplish the defined WHO and UNICEF goals. This dissertation is designed to contribute to these goals.

3. Dissertation aims and methods, proceeding and expected outcome

3.1 Question of the dissertation

The study aims at assessing the current international situation of breastfeeding, research and lactation consulting and possible trends of breastfeeding. Statistics show that breastfeeding is still far from being the norm on an international level, as intended by WHO and UNICEF programs since the 1980s. Since the profession „lactation consultant“ has only been implemented in 1985, such a survey has not been conducted or published before.

3.2 Aims

The explorative study aims at identifying the international status quo of breastfeeding, lactation consulting, promotion of breastfeeding and research on breastfeeding by means of an expert questionnaire. This background given, the questionnaire spotlights the new profession “lactation consultant” and investigates the current contentedness of lactation consultants, also regarding the limited payment in the health care systems for this specialty, which needs additional qualification. Possible future trends of breastfeeding for the next 15-20 years are also being investigated.

Another aim of the study is to identify and prioritise effective measures for the promotion of breastfeeding in the current situation. The outcome of the questionnaire will lead to a deeper insight in the priorities of measures for the promotion of breastfeeding on an international level.

The presentation and discussion of results aims at:

- Describing the current situation of breastfeeding and lactation consulting
- Detecting problem areas
- Indicating possible solutions

³⁸³ Horton, Sanghvi et al. 1996

³⁸⁴ http://www.who.int/child_adolescent_health/news/archive/2010/17_5_10/en/index.html

3.3 Methods quantitative – Statistical evaluation of the expert questionnaire

In this study, an expert questionnaire was chosen as main instrument, since the field of lactation is still young and rarely assessed. The new profession „lactation consultant“ raised the interest in the current situation of this young domain. Assessing the current situation of lactation might lead to new insights and strategies in newly defined fields of action.

The expert questionnaire is designed to investigate the status quo of breastfeeding and the situation of breastfeeding promotion. The new professional group of lactation consultants is put into the spotlight to find out which role Lactation Consultants play in the health care system, and whether their counselling is being accepted and supported up-to-date. The questionnaire for experts represents the quantitative part of this study.³⁸⁵ Statistical methods are applied to define frequencies, rankings and coherences. The questionnaire has been pre-tested and adapted during the period of conception to be well understood by the experts.

The experts' responses have been entered into an SPSS data bank. Data quality checks included the following:

1. Plausibility checks of distributions
2. A final language check of the translated responses from German into English by a native English speaker
3. Further inquiries by e-mail in the case of missing values or unclear responses

Main statistical techniques applied encompass the examination of frequency distribution, calculation of percentage, ratio, mean value, mean value ranking and standard deviation. Associations were examined with cross tables (chi square). Statistical analyses have been conducted with the software “SPSS”.

3.4 Methods qualitative – open questions evaluated by paraphrasing

The questionnaire includes 13 open questions.³⁸⁶ 10 of the open questions amend a closed question item to obtain a deeper insight in the experts' opinions in addition to the results of the closed questions. Out of these 10 open questions, 2 questions allow the responders to add remarks from their point of view³⁸⁷ to describe their current situation as LC or as researcher.³⁸⁸

The remaining 3 open questions³⁸⁹ aim at identifying the experts' expectations towards The National Committee for Breastfeeding (if any in their country of residence), Health Policies and Health Sciences. The minority of German responses have been translated into English and finally checked by a native English speaker.

The responses have been categorised by means of paraphrasing, supported by Excel computer software³⁹⁰. Mutually exclusive response groups and sub-categories have been categorised and entered into the statistical software SPSS as new variables. The data have been evaluated, presented in tables, diagrams or rankings and discussed.

³⁸⁵ Kirchhoff, Kuhnt 2008

³⁸⁶ Bungard 1997

³⁸⁷ Evans, Lambert et al. 2005

³⁸⁸ Geer 1988

³⁸⁹ Pope, Mays 2000

³⁹⁰ Meyer, Avery 2009

The open questions have been evaluated by qualitative methods³⁹¹ with the following procedure:

1. Translation of German answers into English as standard language.
2. Identification of response groups with similar statements by means of paraphrasing
3. Categorisation of mutually exclusive main response groups and sub-categories
4. Data entry of main categories into the statistical program SPSS
5. Statistical evaluation of data
6. Evaluation and discussion of results
7. Presentation of results in diagrams or tables

3.5 Structure of the bilingual expert questionnaire (German-English)

The expert questionnaire consists of five main parts: The first part includes general information on the experts. Part II defines the work situation of the participating lactation consultants. Part III includes questions for researchers. Part IV includes questions for all responders with a majority of open questions. Part VI includes all responders and refers to future prospects. In the following, the contents of the five parts are defined in detail:

Part I – Information on yourself: In the beginning, the nationalities and residence countries of the international experts, sex and birth year, the profession and the personal experience with breastfeeding are questioned.

Part II – Questions for all lactation consultants including volunteers and health care providers. Qualification as LC, year of accreditation, age of infants consulted, number of mothers consulted per month, no. of LC hours per week, classification as voluntary or paid work, payment estimation, LC work esteem and open question on wish for esteem. The first closed question is on the motivation as LC to find priority motivations of LCs. The second closed question refers to the compliance and acceptance of the LC work. The third closed question refers to the status quo and publicity of WHO / UNICEF recommendations and measures and the evaluation of the NCBF work.

Part III – Questions for researchers, public health experts or health policy makers
The questions refer to the current situation of researchers, fund raising in the field of lactation research, the status quo and publicity of WHO / UNICEF recommendations and measures and the evaluation of the NCBF work.

Part IV – Questions for all responders
State of contentedness or discontentedness with open questions on reasons, priority evaluation of effective measures to promote breastfeeding, open questions concerning other effective measures on the promotion of breastfeeding, expectations towards the NCBF, health policies and health sciences.

Part V – Forecast and future prospects
4 scenarios on the future of breastfeeding are suggested to evaluate the probability of realisation within the next 15-20 years. The questionnaire ends with an open question on the personal estimation of future trends.

The complete expert questionnaire (4 pages) can be found in the annex.

³⁹¹ Züll, Mohler: Computerunterstützte Inhaltsanalyse: Codierung und Analyse von Antworten auf offene Fragen. ZUMA How-to-Reihe, Nr.8
http://www.gesis.org/fileadmin/upload/forschung/publikationen/gesis_reihen/howto/how-to8cz.pdf

3.6 Proceeding

Table 5: Proceeding of the dissertation

Preliminary	Procedure	Evaluation
Research on literature in libraries	Distribution and collection of questionnaires at 3 international conferences	SPSS-supported descriptive statistical analysis
Internet research on literature based on PubMed, Medline, Medscape and Scholar Google	Translation of German answers into English	Evaluation of open questions supported by Excel software
Identification of experts and conferences	Data input of quantitative data	Summary of results
Formulation of key questions	Further enquiries of understanding or in case of missing values to participants by e-mail	Discussion of deviating opinions (e-mail questioning)
Pre-tests of the expert questionnaire	Assessing the qualitative data: 1. Paraphrasing statements to identify similar response groups 2. Categorisation of mutually exclusive main response groups and sub-categories	Results following the order of the questionnaire and conclusions structured by main topics
Conception, design and print of the bilingual expert questionnaire	Data entry of main categories into the statistical software SPSS	Discussion and prospects

3.7 Data collection and sample size

Data have been collected at 3 international conferences, with a majority of participating lactation consultants:

- La Leche League Germany annual conference
September 26-28, 2008 in Dassel, Germany
- The VELB (European Lactation Consultant Association) conference „A world-wide view on breastfeeding“
October 1-3, 2008 in Vienna, Austria:
- The Academy of Breastfeeding Medicine conference
October 4-6, 2008 in Vienna, Austria

Sample size: About 900 questionnaires have been distributed by the author of the dissertation at the above mentioned conferences with a response rate of 301 questionnaires. The majority of questionnaires (272) were returned to the conference information desk by the responders, where they have been collected by the author of the dissertation. 29 questionnaires were returned by mail to the author of the dissertation by end of 2008.

3.8 Identification of experts

The following 3 conferences have been selected, because participants were in the majority active lactation consultants with different backgrounds:

- LLL leaders are volunteer lactation consultants, but generally not professional health care providers
- IBCLCs are health care providers and experience directly the impact of health policies
- ABM participants are physicians with a special interest in lactation

The intention of the expert questionnaire is an understanding of the current situation of breastfeeding and lactation consulting, which might best be achieved by asking practitioners from different fields of action. Practitioners might best identify remaining obstacles and name and prioritise effective measures for the promotion of breastfeeding. Moreover, opinions of researchers, professionals in the public health field and health policy makers could be collected at the largest conference „A world-wide view on breastfeeding“, thus adding an interdisciplinary dimension to the study. All conference participants were eligible to take part in the study.

3.9.1 Key questions

1. What motivates lactation consultants on job?
2. How is the lactation consulting accepted by mothers and their environment?
3. How supportive are health care providers in general towards breastfeeding?
4. What is the current situation of breastfeeding promotion?
5. What is the current situation of research on breastfeeding?
6. How contented are lactation consultants and researchers with their current situation?
7. Which effective measures might be implemented in which priority ranking to promote breastfeeding efficiently today?
8. What do the participants expect from the National Committee for breastfeeding, health policies and health sciences?
9. Which future trends will occur in the next 15-20 years?

3.9.2 Expected outcome

The current work situation of lactation consultants is difficult regarding acknowledgement and payment, because the new specialty “lactation consultant” is still in the process of developing towards professionalism. The acceptance of society, work environment and media is poor, representing an additional burden for lactation consultants. The implementation of WHO and UNICEF recommendations and measures for the promotion of breastfeeding is slow and dissatisfying.

3.9.3 Research dissemination

Findings from the study will be presented at international breastfeeding and medical conferences and published in international academic journals. The dissertation might also serve as scientific foundation for political action.

4. Results

The results chapter follows the order of the questionnaire to evaluate the items and presents the results in the sequence of the questionnaire items. The last chapters of the results chapter treat limitations of the questionnaire items and methods criticism.

The “summary of results” chapter as part of the final chapter merges the results according to the following main topics:

- The work situation of lactation consultants with regard to Payment, Acknowledgement, Motivation, Compliance, Support of LC work
- Breastfeeding and lactation consulting in the health care system
- Research on breastfeeding
- Effective measures for the promotion of breastfeeding
- Health policy and breastfeeding

Policy recommendations are being derived from the results and edited in a table, highlighting priority measures and protagonists with a key function in breastfeeding promotion.

4.1 Part I - Sample description

4.1.1 Response rates and conference distribution

Nearly 900 questionnaires have been distributed at the above mentioned conferences. The total response rate was 301. The response rate is composed as follows

LLL Germany annual conference Dassel, Germany 2008

At the LLL conference in Dassel, 75 LLL leaders participated, of which 44 returned the questionnaire. The main participating nationalities were German and American.

VELB conference „A world-wide view on breastfeeding“ Vienna, Austria 2008

More than 900 experts from 54 countries world-wide attended the VELB conference in Vienna. 233 experts from 36 countries returned the questionnaire.

Academy of Breastfeeding Medicine conference Vienna, Austria 2008

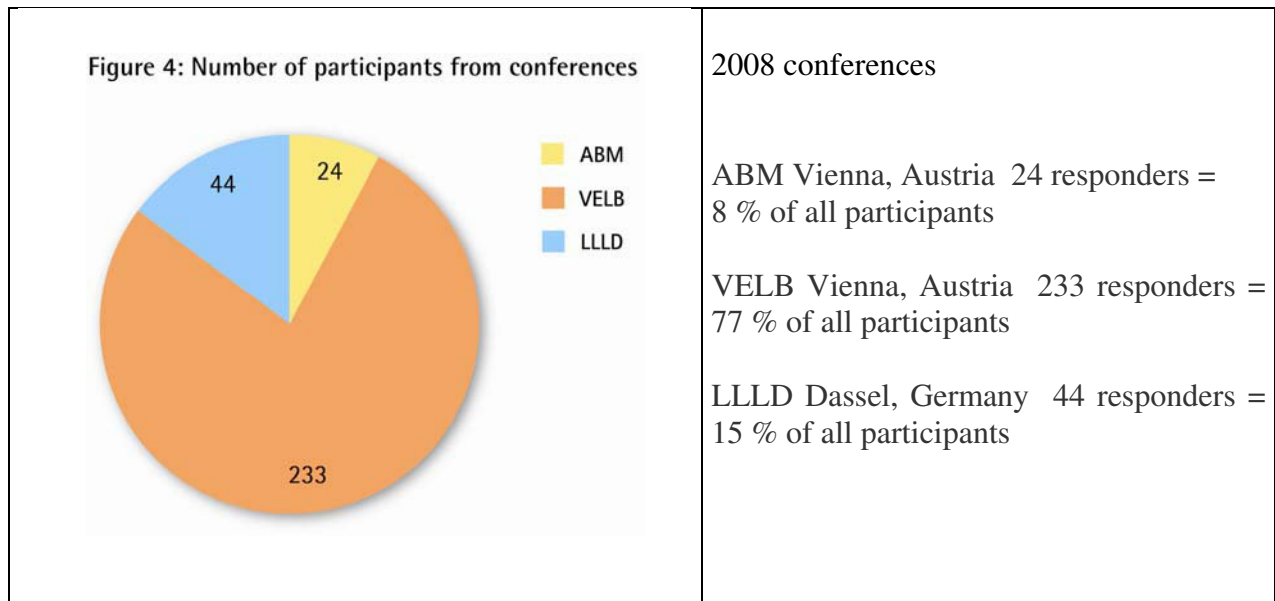
About 70 experts attended the ABM conference, which followed the VELB conference. Some of the experts have attended both Vienna conferences, thus lowering the expected response rate of the ABM sample. However, 24 physicians returned the questionnaire.

The nationality and residence countries are listed alphabetically in the following and will be described in detail in the following chapter:

Australia, Austria, Belgium, Bosnia-Herzegovina, Canada, China, Croatia, Denmark, Ethiopia, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Iran, Italy, Israel, Japan, Korea, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Spain, Sweden, Switzerland, Uganda, United Arab Emirates, United States of America

Participants – conference distribution

Based on about 1,000 experts who have attended the 3 conferences, the response rate of 301 constitutes a representative sample of the experts with 30,1%:



4.1.2 Nationalities, residence countries, continents and industrialisation

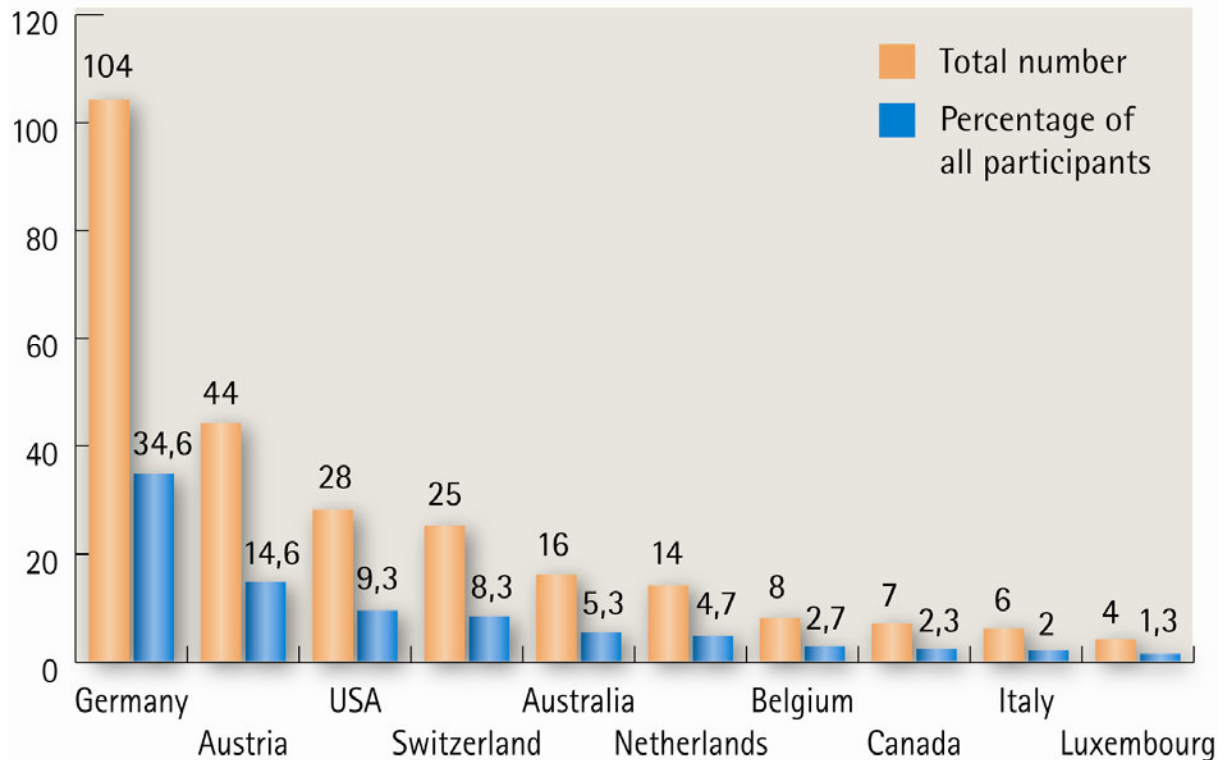
The division of residents and nationalities has been made to identify the residence country as work environment of each participant as well as the nationality background. The statements of responders to the open questions refer to the situation in the resident country, which represents the work environment.

2 new variables have been added to the SPSS statistical database to find out possible differences between the experts according to continents or states of industrialisation of their residence countries.

Nationalities Top Ten

The German nationality was dominant with about one third of participants, followed by Austrians representing nearly one eighth of participants. The top ten nationalities included the continents Europe, Australia and USA and Canada.

Figure 5: Nationalities Top Ten

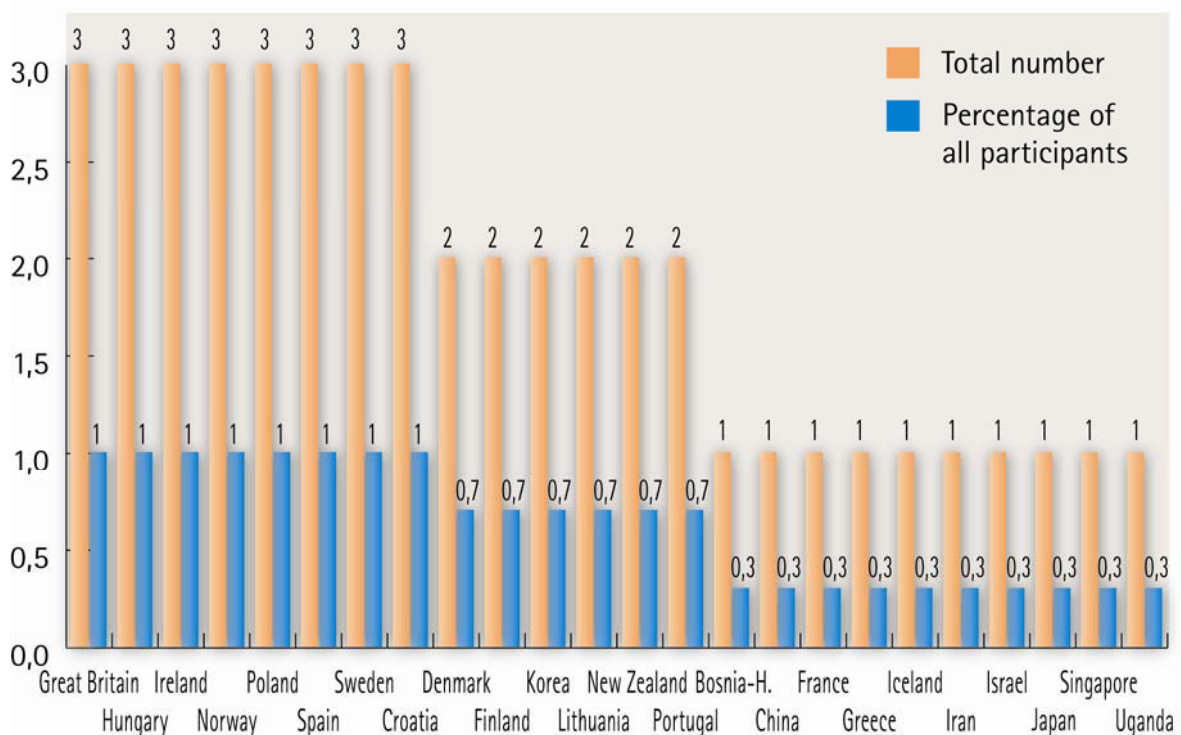


Germans represent about one third of nationalities in the sample, which might allow conclusions for Germany and German experts.

Nationalities 11 - 34

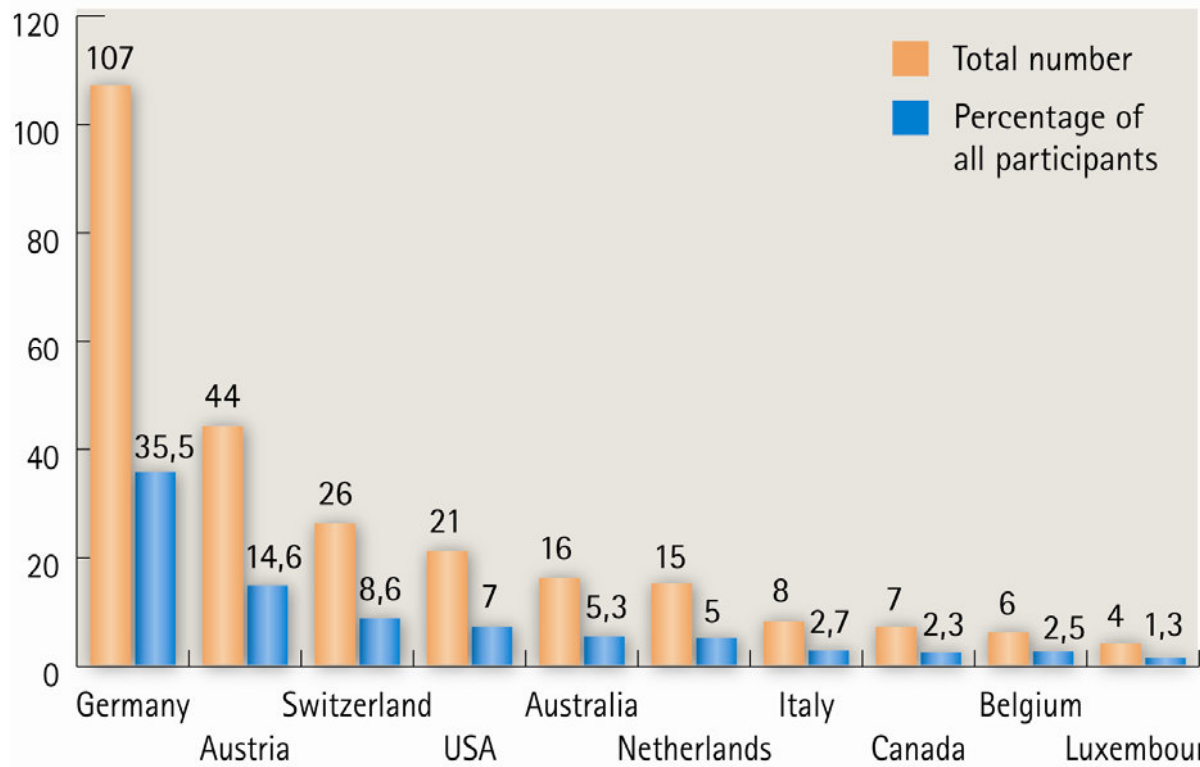
Starting with rank 11, the remaining 27 nationalities are represented by 1-3 participants, who do not make a representative sample for their country.

Figure 6: Nationalities 11 - 34



Residents Top Ten

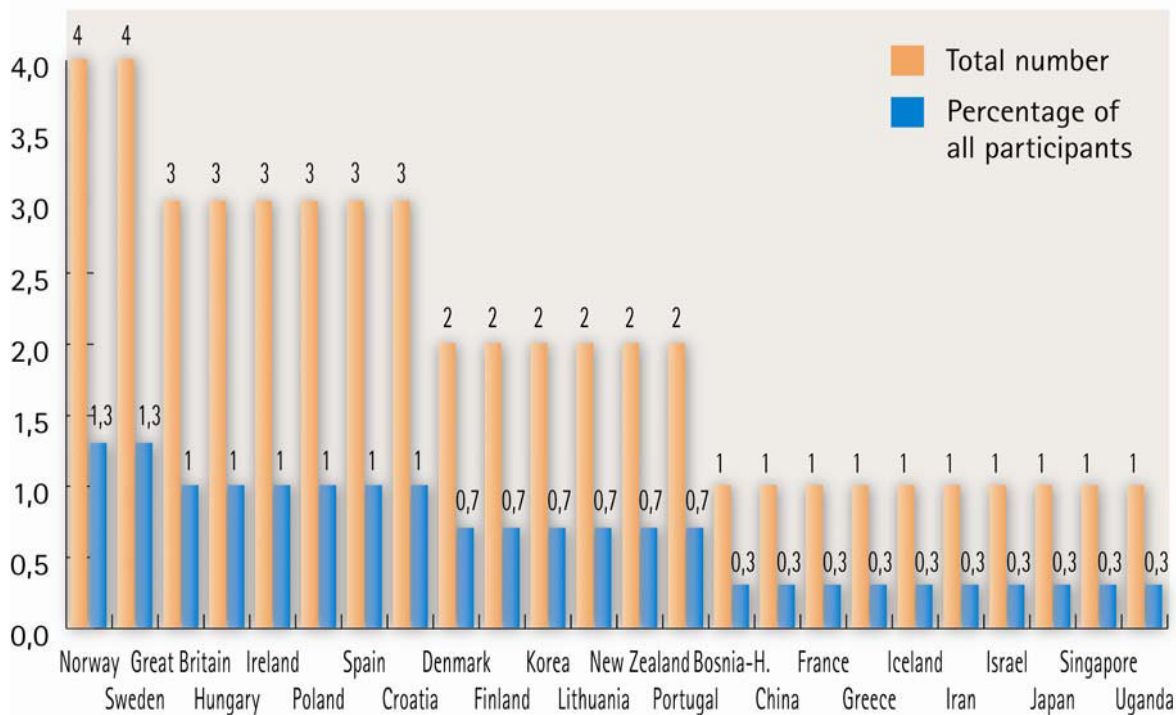
Figure 7: Residents Top Ten



Germans represent about one third of residents in the sample, which might allow conclusions for Germany and German experts.

Residents 11 - 34

Figure 8: Residents 11 - 34



The residents only differ slightly from the nationalities with only 10 migrants within the sample. However, evaluations will be conducted mainly based on residence, because the majority of questions refer to the work environment of participants.

2 new variables have been created in the statistical software program based on the residence countries: Residence continents categorised into strong industrialised countries, industrialising countries and developing countries.

Continents

All 3 conferences were international, but held in European countries: Germany and Austria. Therefore the participation of European experts was predominant:

Table 6: Continents – participants' nationalities and residences

Number of Experts	Europe	USA and Canada	Australia and New Zealand	Asia	Africa
Nationalities	240	35	18	7	1
Residents	244	28	18	9	2

Regarding the continents, there were only few differences between nationality and residence countries: Only 4 participants from other continents (USA and Canada) became European residents, while Asia recorded 2 migrants and Africa 1. The effects on evaluation within a sample of 301 experts seem to be negligible.

Categorisation of countries according to industrialisation

Regarding the industrialisation, 3 categories were distinguished with the following frequency distribution:

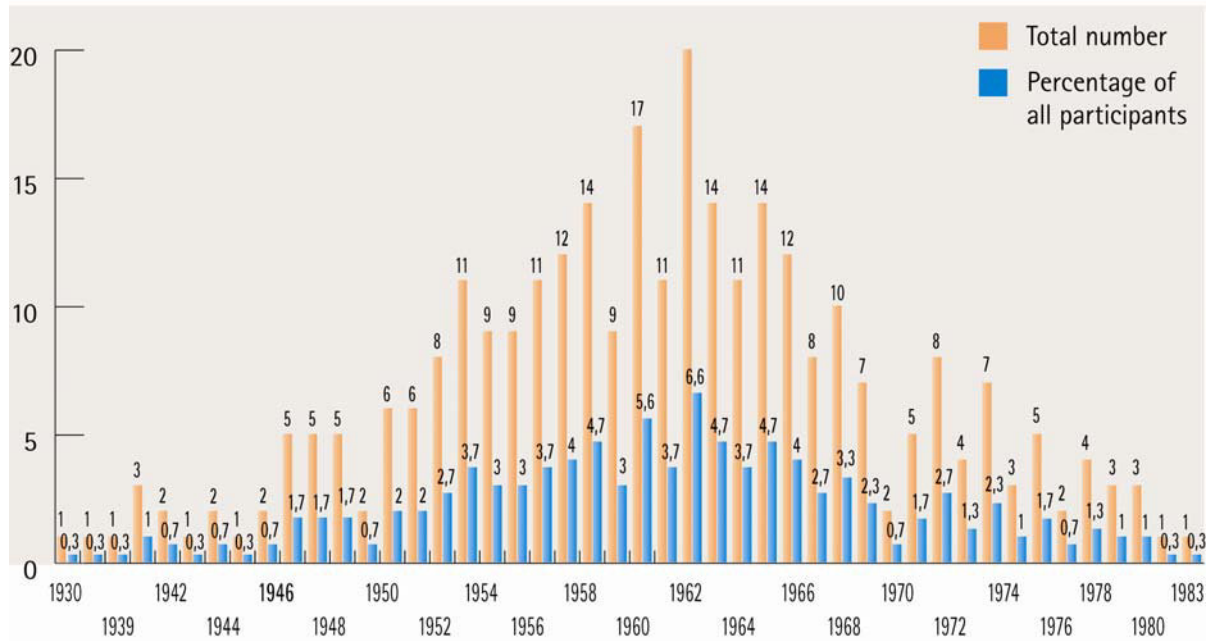
- | | |
|------------------------------------|----------------------|
| 1. Strong industrialised countries | 283 responders = 94% |
| 2. Industrialising countries | 16 responders = 5,3% |
| 3. Developing countries | 2 responders = 0,7% |

The majority of responders is resident in strong industrialised countries. The minority of 6% of responders from developing or industrialising countries cannot be compared statistically to strong industrialised countries.

4.1.3 Age of the experts

The range of the age of experts reaches from 78 years of age in the conference year 2008 (born in 1930) to 24 years of age (born in 1984). The peak was in the birth year 1963 with 45 years of age in the conference year 2008. The age distribution on the birth year scale was symmetric with values decreasing equally and steadily on both sides of the peak. Most experts were born between 1953 and 1974 (222 experts = 74%).

Figure 9: Age of the experts



4.1.4 Sex of experts Female / Male

The sex ration was 99% female to 1% male.

At the LLL conference, the rate of female LC s represented 100%. = 44 female participants

At the VELB conference, the ratio was 233 female : 3 male participants = 99% : 1%

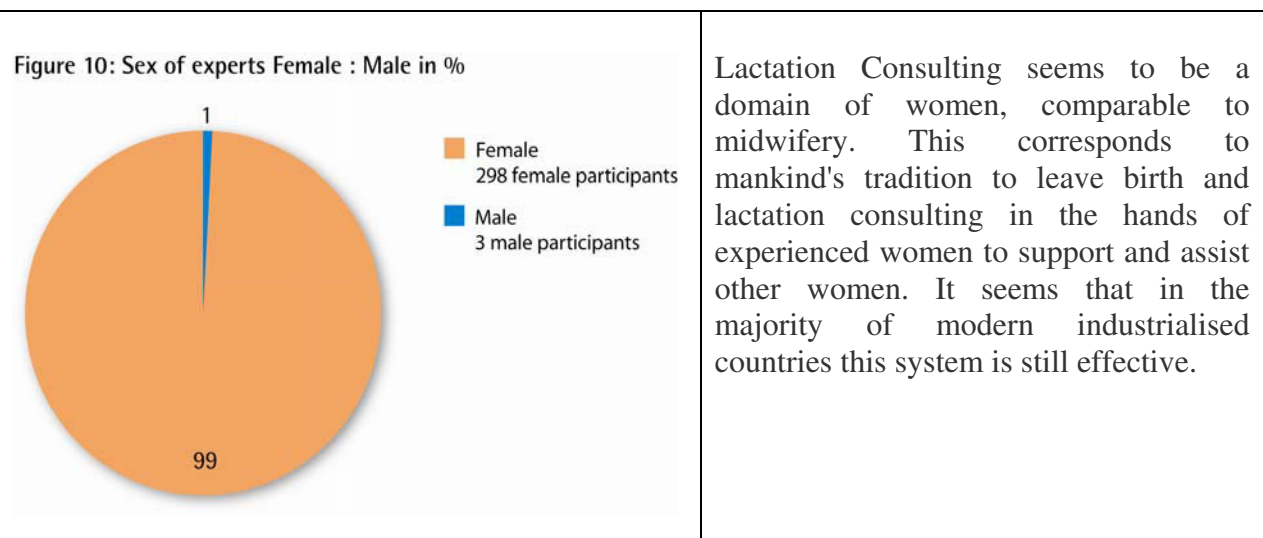
At the ABM conference, the ratio was 100% female participants

The overall sex ratio is:

Female: 297 experts = 99%

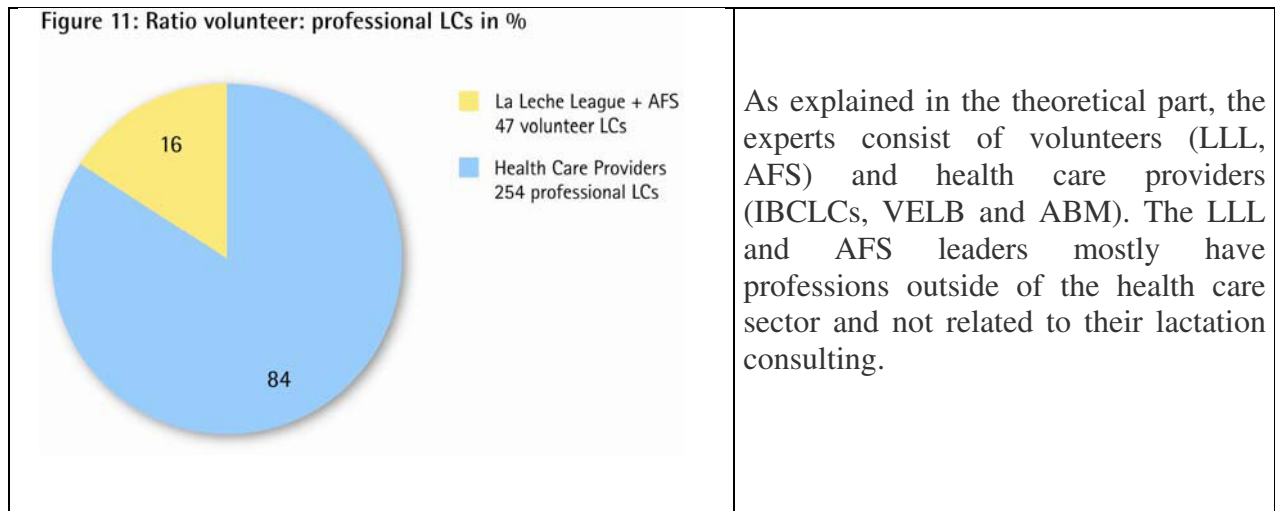
Male: 3 experts = 1%

The majority of responders is female. Statistically, the comparison of statements of the minority of 1% male responders to the statements of female responders with 99% does not make sense.



4.1.5 Ratio volunteers : professionals in the lactation field

Ratio volunteer LC s (LLL + AFS) 15% compared to professionals in the lactation field 85 %:
Health care providers, researchers, public health professionals, health policy makers



Double qualifications

There have been 23 IBCLCs also qualified as LLL leaders and 3 IBCLCs also qualified as AFS leaders. 3 IBCLCs have been also educated by the Australian Breastfeeding Association.

4.1.6 Professions of the experts

The following figure gives an overview of the experts' professions: Physicians, Nurses including Midwives, Researchers, Public Health Professionals, Health policy makers, Others

Figure 12: Professions in %

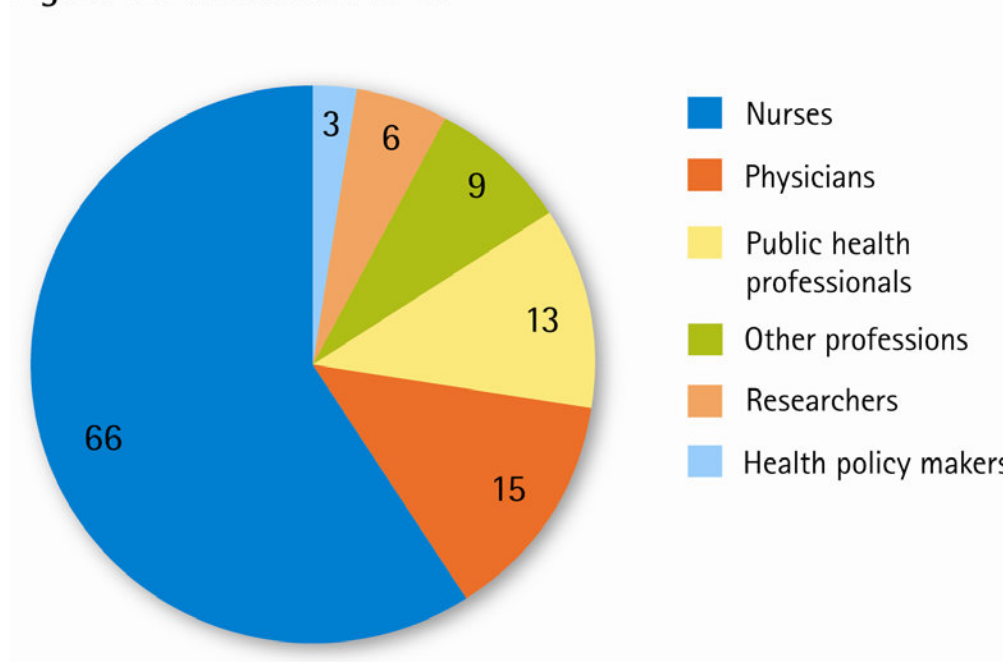


Table 7: Professions ratio

Number of responders	Category	Percentage of all responses
199	Nurses including midwives	66 %
44	Physicians	15 %
39	Public Health Professionals	13 %
28	Other professions	9 %
19	Researchers	6 %
8	Health policy makers	3 %

Nurses including midwives (53 midwives = 18%) represent the major profession of experts with 199 responders = 66%, followed by physicians with 44 responders = 15%, public health professionals with 39 responders = 13%, researchers with 19 responders = 6% and health policy makers with 8 responders = 3%. Other professions represent 28 responders = 9%, most of them refer to LLL leaders. The above mentioned percentages exceed 100% because some participants have combined professions, such as: physician combined with public health professional or nurse working as exclusive LC. In the following, the professions are split into specialty fields:

44 PHYSICIANS = 14,6% of all participants

Figure 13: Professions split into specialty fields: Physicians

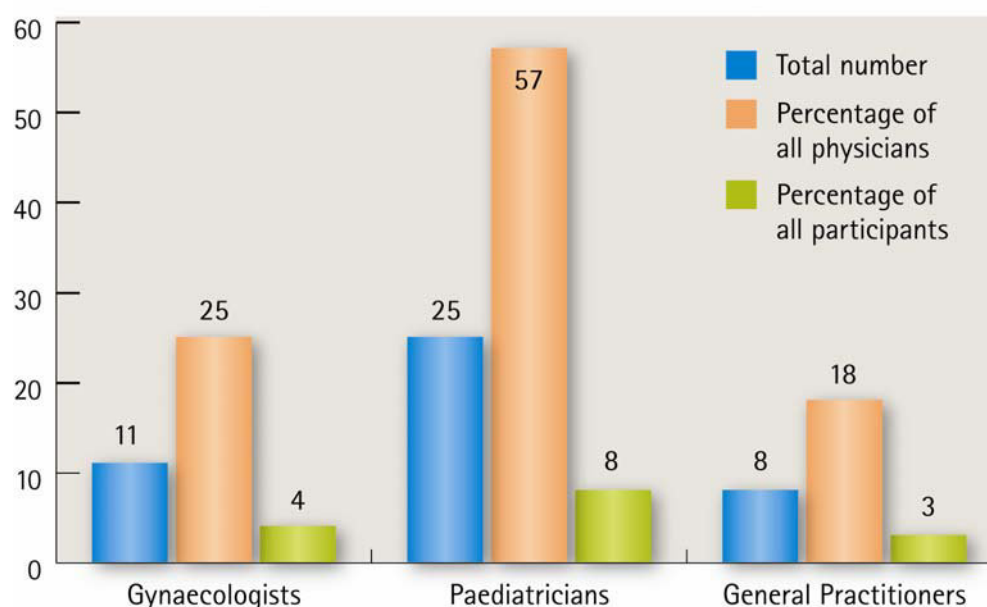


Table 8: Physicians split into specialty fields

Number of responses	Category	Percentage of all physicians	Percentage of all responses
25	Paediatricians	57 %	8 %
11	Gynaecologists	25 %	4 %
8	General Practitioners	18 %	3 %

More than half of the physicians are paediatricians with 57%, while 25% are gynaecologists. These two specialties have the strongest relation to lactation. 18 % are general practitioners.

199 NURSES = 66% of all participants

The nurses also show a high percentage of paediatric nurses with 26 % of all nurses, which is nearly equal to midwives (27% of all nurses) and maternity care nurses (24% of all nurses). 13% of all nurses have the opportunity to work as exclusive LCs representing only 9% of all participants and scoring a low exclusive LC's ratio.

Figure 14: Professions split into specialty fields: Nurses

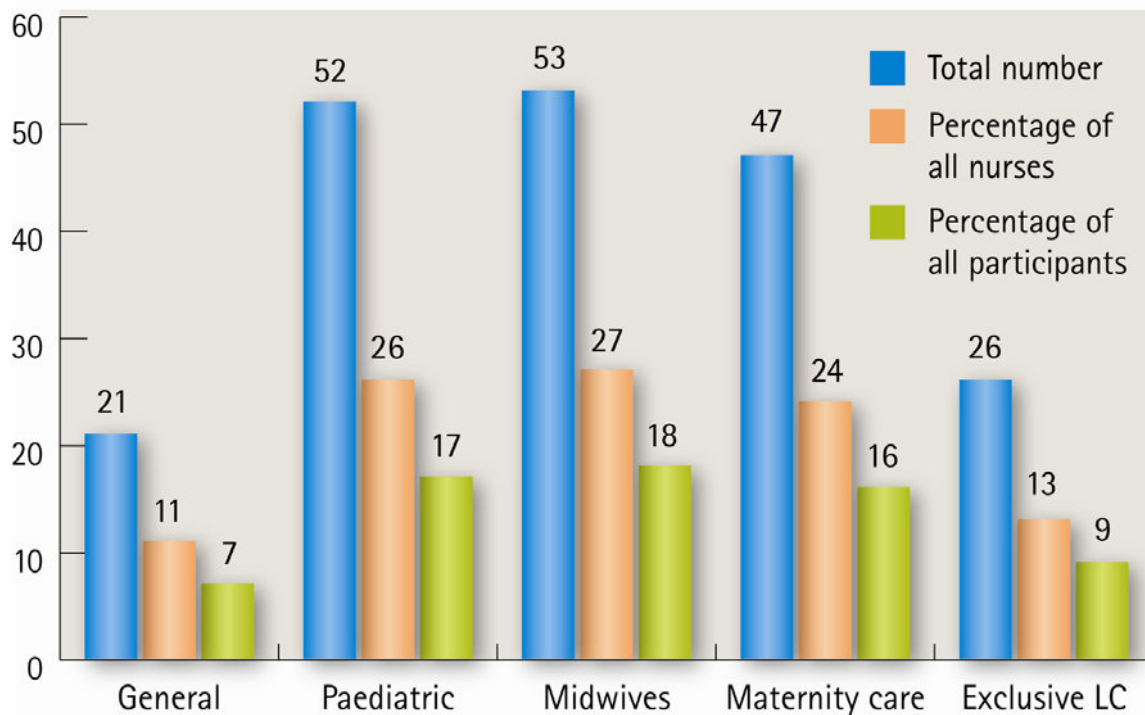


Table 9: Nurses split into specialty fields

Number of responses	Category	Percentage of all nurses	Percentage of all responses
53	Midwives	27 %	18 %
52	Paediatric Nurses	26 %	17 %
47	Maternity care nurses	24 %	16 %
26	Exclusive lactation consultants	13 %	9 %
21	General nurses	11 %	7 %

The evaluation of contentedness will show that many nurses wish to work as exclusive LC, while working opportunities seem to be rare.

19 RESEARCHERS = 6,3% of all participants

Amongst the experts there was a minor ratio of researchers with 6,3% of all participants

Table 10: Researchers split into specialty fields

Number of responses	Category	Percentage of all researchers	Percentage of all responses
7	Medical	37 %	2 %
7	Public Health	37 %	2 %
1	Natural sciences	5 %	0,3 %
1	Psychology	5 %	0,3 %
1	Political Scientists	5 %	0,3 %
1	Social Sciences	5 %	0,3 %
1	Epidemiology	5 %	0,3 %

39 Professionals in the public health sector = 13% of all participants

The ratio of public health professionals is about double the researcher's ratio with 13%.

Table 11: Public health professionals split into specialty fields

Number of responses	Category	Percentage of all public health prof.	Percentage of all responses
16	Education of health care providers	41 %	6 %
10	Social and health services	26 %	3 %
7	Infant nutrition	18 %	2 %
2	BFH coordinator	5 %	1 %
1	NCBF member	3 %	0,3 %
1	Support of health care providers	3 %	0,3 %
1	Prevention	3 %	0,3 %
1	Infant nutrition and NCBF	3 %	0,3 %

8 Health policy makers = 3% of all participants

The ratio of health policy makers was minor with 3%.

Table 12: Health policy makers split into specialty fields

Number of responses	Category	Percentage of all health policy makers	Percentage of all responses
3	Advocacy for breastfeeding	38 %	1 %
2	Government advisor	2 %	0,7 %
1	Local public health department	1 %	0,3 %
1	Health ministry	1 %	0,3 %
1	National and international policies	1 %	0,3 %

28 Other professions

The ratio of other professions is 9%, mainly recruiting of LLL leaders.

Table 13: Other professions split into specialty fields

Number of responses	Category	Percentage of all other professions	Percentage of all responses
7	Graduate pedagogue or teacher	25 %	2 %
3	Psychologist or psychotherapist	11 %	1 %
3	Administration graduate, public official	11 %	1 %
2	Bank clerk	7 %	0,7 %
2	Parent's counsellor	7 %	0,7 %
1	Bookseller	4 %	0,3 %
1	Lecturer	4 %	0,3 %
1	Translator	4 %	0,3 %
1	TV journalist	4 %	0,3 %
1	Student	4 %	0,3 %
1	Optician	4 %	0,3 %
1	Dental Hygienist	4 %	0,3 %
1	Consultant for medical products	4 %	0,3 %
1	Physiotherapist	4 %	0,3 %
1	Speech therapist	4 %	0,3 %
1	Bio-medical analyst	4 %	0,3 %

25% of the other profession category is represented by teachers, 11% by psychologists. There are several professions within the public health sector such as optician, dental hygienist, consultant for medical products, physiotherapist, speech therapist and bio-medical analyst. The experts have a wide range of interdisciplinary professions. Statistical evaluations will show whether volunteers' views differ from professional lactation consultants' views. Evaluations might also indicate differences in the estimation of problem areas or priorities of measures for the promotion of breastfeeding between the profession groups.

4.1.7 Personal experience with bf

Total valid: 294 responses = 97,7 %

As explained in the theoretical part of the dissertation, LLL leaders need personal breastfeeding experience to be eligible for the education (see chapter La Leche League). For the LLL experts the high scores in personal breastfeeding experience had to be expected. The overall scores were as follows:

Figure 15: Personal experience with breastfeeding

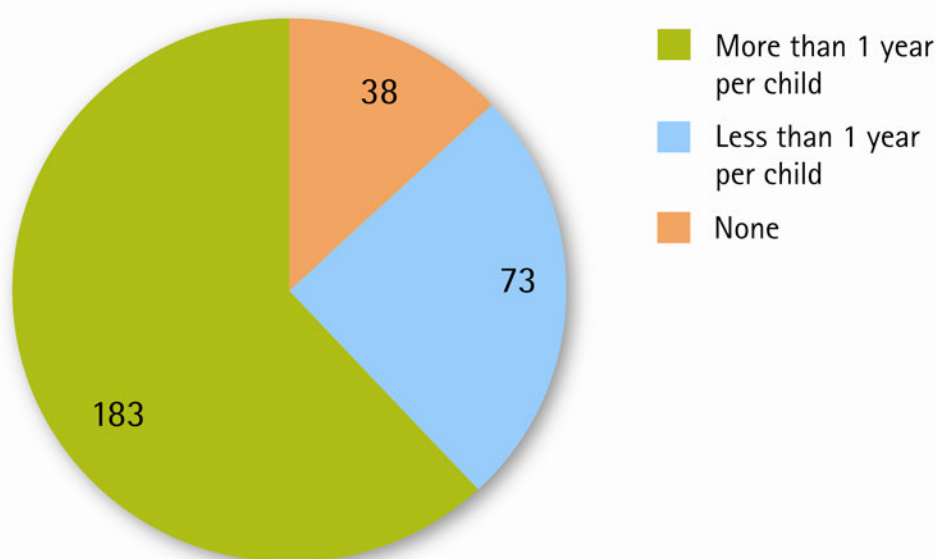


Table 14: Personal experience with breastfeeding

Number of responses	Category	Percentage of all bf personal experience	Percentage of all responses
183	More than 1 year per child	62,2 %	60,8 %
73	Less than 1 year per child	24,8 %	24,3 %
38	None	12,9 %	12,6 %
256	Breastfeeding experience	87 %	85 %

However, it was surprising that professional lactation consultants, who do not need to have personal experience with breastfeeding scored 87% of personal experience in this question. The non-experienced experts include the male participants and probably the participants without children of their own. Unfortunately, this was not questioned, but it can be assumed that the real scores minus the males and childless participants even exceed 90%!

The second remarkable result of this item is the high score of long-term breast feeders over 1 year with 62%. The experts show very high scores of personal breastfeeding experience. This result might indicate that lactation consulting in spite of industrialisation still is a cultural asset of women, which might best be passed on from experienced mothers to other women.

4.1.8 LC qualification and year of accreditation

298 valid answers

The main LC qualification was IBCLC (227 responders = 76%), followed by LLL (64 responders = 22%), health care providers with no additional LC qualification (24 responders = 8%), AFS (6 responders = 2%), 3 responders = 1% educated by the Australian Breastfeeding Association, 2 responders = 0,7% breastfeeding mothers and 1 responder = 0,3% educated in a 40 hour course of WHO and UNICEF. 9% (= 29 responses) regarding qualifications were combined with another qualification within the possible answer range.

The fact that 2 mothers responded in the „others“ category of qualifications that they are qualified as breastfeeding mothers, confirms the assumption of breastfeeding as cultural asset of women passed on by experienced mothers to other mothers.

Table 15: Qualification of lactation consultants

Number of responses	Category	Percentage of all qualifications
198	IBCLCs	66 %
41	La Leche League leaders	14 %
24	Health care providers	8 %
23	IBCLC + LLL	8 %
3	Arbeitsgemeinschaft Freier Stillgruppen AFS	1 %
3	IBCLC + AFS	1 %
3	IBCLC + Australian Breastfeeding Association	1 %
2	Breastfeeding mothers	0,7 %
1	WHO/UNICEF 40h course	0,3 %

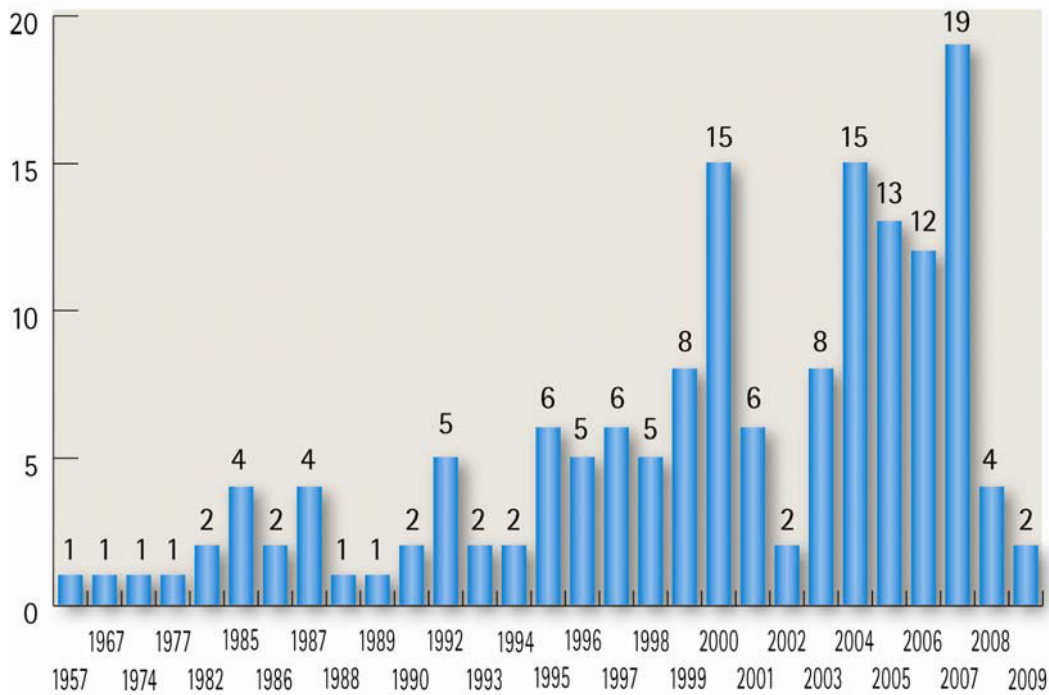
Year of accreditation as LC

The response rate was only 155 = 51%, since the question was placed disadvantageously in the questionnaire. The peak of accreditations was between 2000 and 2007 with 90 accreditations = 58% of the valid answers. Since most LCs are qualified IBCLCs (227 responders – see preceding question on qualification), this result had to be expected, because the IBCLC qualification was only implemented in 1985 and has spread ever since. Earlier qualifications are mainly LLL or AFS leaders.

The high increase of IBCLC qualifications between 2000 and 2007 indicates a rapid growth of LC skills and knowledge within the international health care sectors.

The following figure shows the number of experts qualified in the respective years:

Figure 16: Year of accreditation as LC



4.1.9 Lactation consultancy: Definitions of activities

The distribution of children's ages at lactation consultancy resulted in nearly equal values with a slight decrease of the toddler rate. This might be due to the fact that currently toddlers are not frequently being breastfed in industrialised countries or due to a lack of personal experience with breastfeeding toddlers (see question personal experience with breastfeeding). The equal distribution shows that lactation consultants aspire competence and work experience at all developmental stages during lactation:

Figure 17: LC for age of children

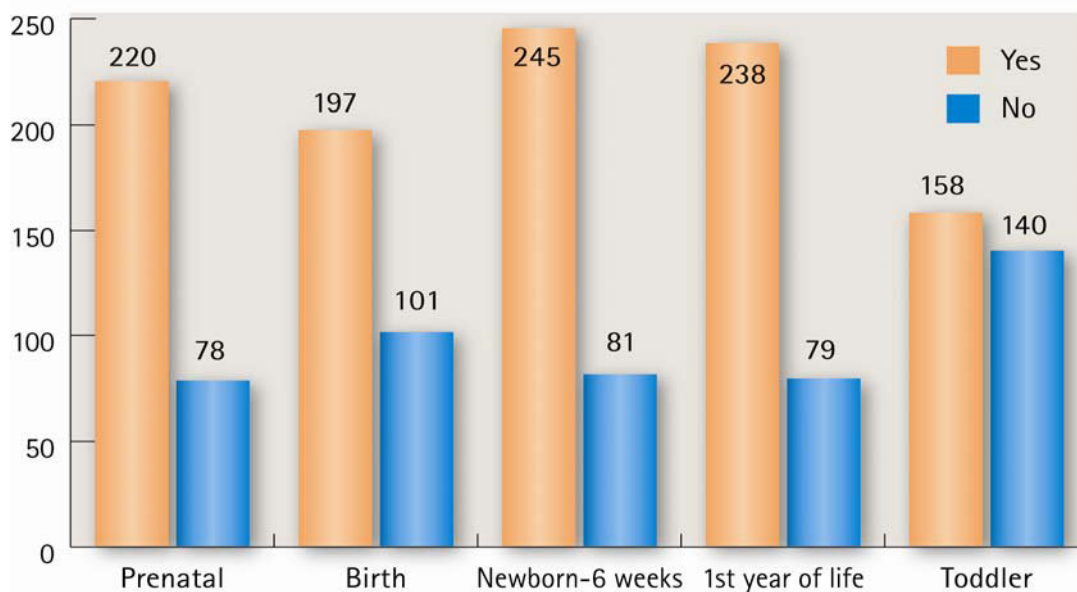
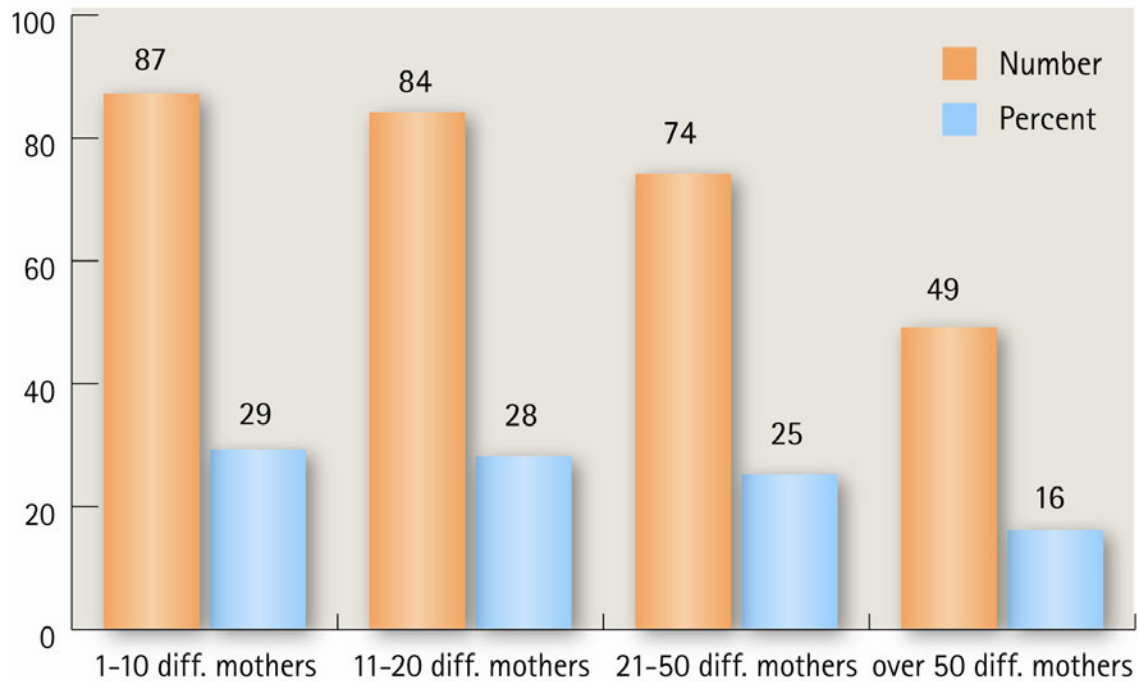
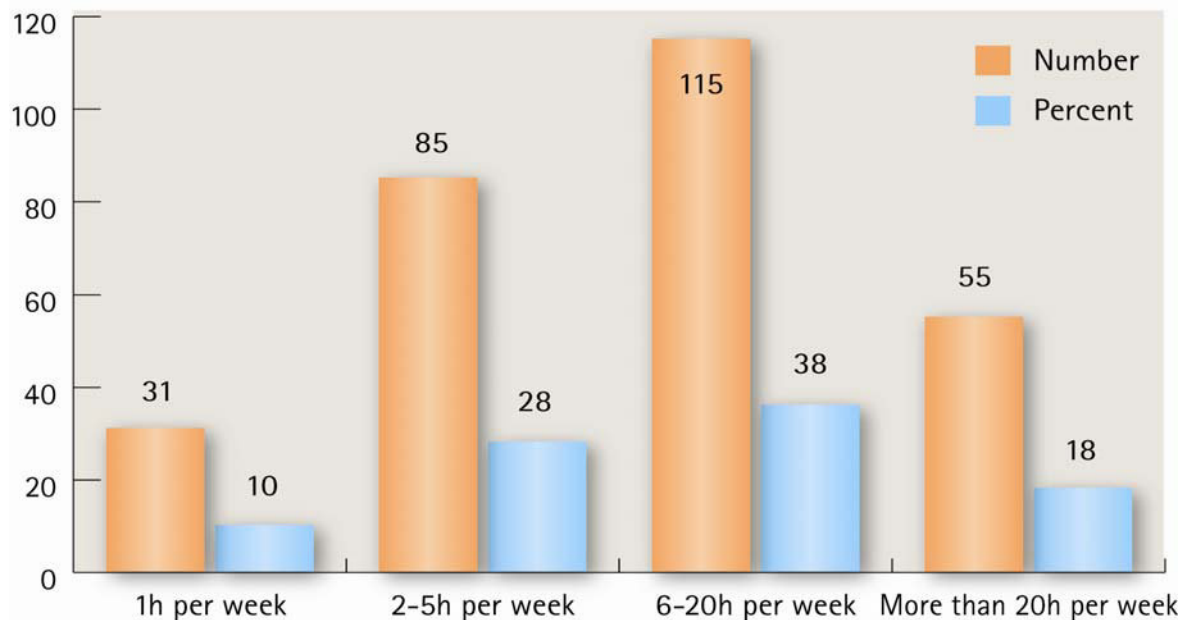


Figure 18a: Number of different mothers

There is a broad range within the number of different mothers consulted in one month. 29% of Lactation consultants consult on average 1-10 different mothers per month, 26% consult 11-20 mothers, 25% consult 21-50 mothers and 16% over 50 different mothers per month. The distribution shows a wide range of working situations as LC, and indicates the lack of standard definitions by the health care systems.

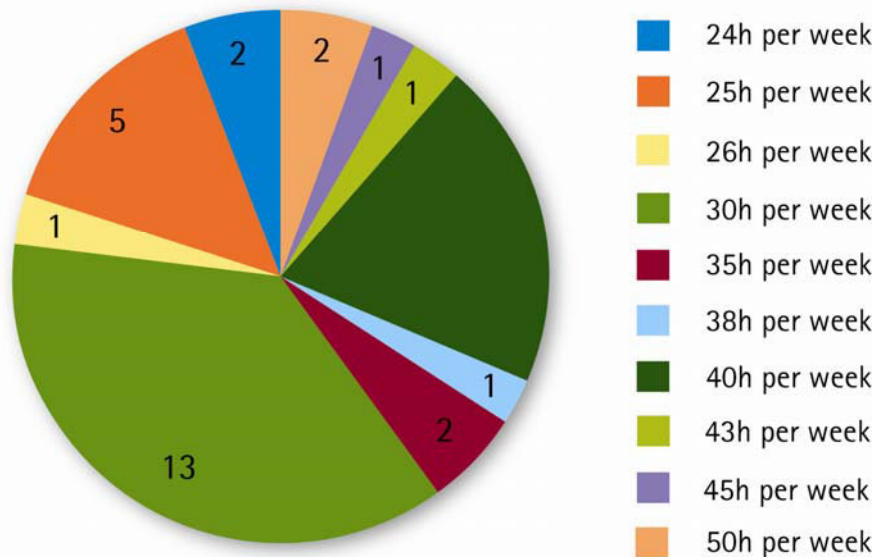
Figure 18b: Number of Lactation Consultancies per week

Accordingly, the percentage of only 2-5h per weeks spent on lactation consulting amounts to 28 percent. This response group mainly consists of volunteers (LLL, AFS). The peak lies at 20h per week showing that LC predominantly makes part of the job as nurse or midwife and therefore only amounts to 6-20h per week.

However, there is a group of 18% with more than 20 h LC per week with a range of 24-50 hours per week LC. This group consists mainly of exclusive lactation consultants, while 50h per week represent a very high score, which was unexpected.

More than 20h per week, specifically:

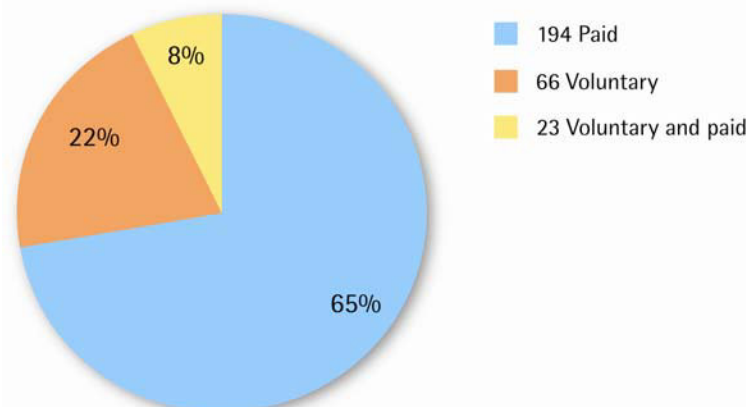
Figure 19: More than 20h per week, specified



4.2 Work conditions and esteem of lactation consultancy

4.2.1 Voluntary or paid LC work

Figure 20: Voluntary or paid LC work in %



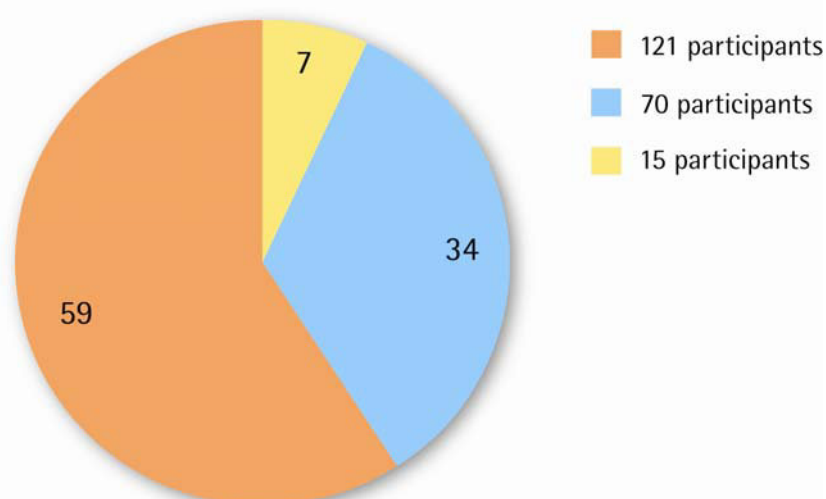
The ratio of paid to voluntary LC work was 254 paid LCs (84 %) : 47 voluntary LCs (16%) 66 participants (22%) responded they were working as voluntary lactation consultants. 194 lactation consultants (65%) responded they were paid for their LC work. This does not correspond to the ratio of volunteers and paid lactation consultants, since there are only 47 volunteers in the sample. So why did 66 participants claim to perform voluntary LC work? The solution was found in comments of several participants, who explained they were official employees in hospital, but the time-intensive LC work was not being paid, so they are practising lactation consultancy as non-paid overtime work like volunteers. This is how the additional response category „voluntary and paid“ was created with 23 responders (8%). If the question had been asked differently from the start, this category might have scored a higher response rate.

4.2.2 Payment estimation

Sample	Valid	Missing	Mean value	Higher than average	Adequate	Not sufficient
301	206	95	2,27	15 resp. = 7% = 5% of all resp.	121 resp. = 59% = 40% of all resp.	70 resp. = 34% = 23% of all resp.

The response rate of 15 participants (7%) with higher-than-average payment shows that there are very few career chances within the young field of lactation. This group mainly consists of combined professions, such as nurse or physician combined with public health, health policies or research tasks.

Figure 21: Payment estimation in %

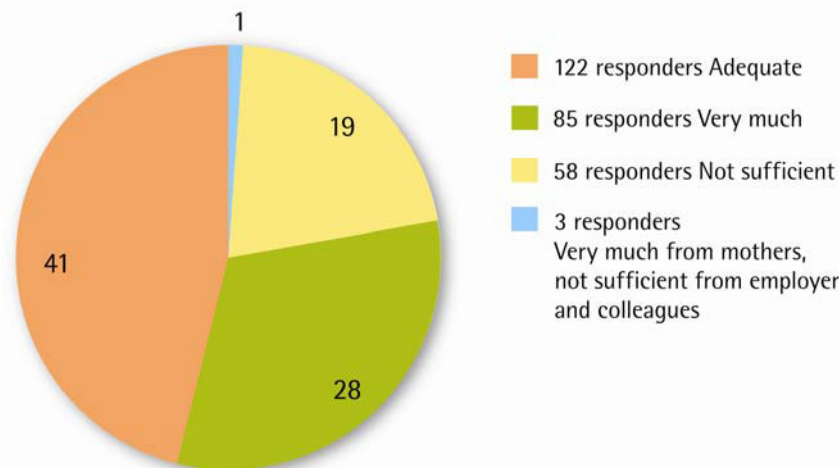


121 participants (59%) state in the quantitative question that they receive adequate payment. The results of the qualitative open question on the wish for esteem and in part IV on contentedness differ clearly from this statement. In the open question, there is a higher percentage of LCs complaining about payment conditions, indicating a trend towards negative statements in open questions, a finding corresponding to 2008 research on comments in open questions.³⁹² The negative comments will be quoted and discussed later on. In the following qualitative item on esteem 70 responders (34%) answer to be not sufficiently paid for LC work. The following qualitative question will give us a deeper insight in the payment estimation of LCs.

³⁹² Poncheri, Lindberg 2008

4.2.3 Esteem of LC work

Figure 22: Esteem of LC work in %



This question revealed to be difficult for participants to answer. Very high esteem scored unexpectedly high with 85 responders (28%) and 122 participants (41%) expressed they felt adequately estimated. Only 58 responders (19%) expressed they felt not sufficiently estimated.

The question should have differentiated between esteem of mothers and esteem of employers, colleagues or superiors. 3 responders said they felt very much estimated by mothers and not sufficient from colleagues (see additional category in the figure above). Possibly a majority of responders would have agreed to this statement, had it been suggested in the questionnaire. The opinions of the experts come out clearer in the next open question and in the responses of part IV on contentedness.

4.2.4 Open question: To feel more valued in my work I wish for the following:

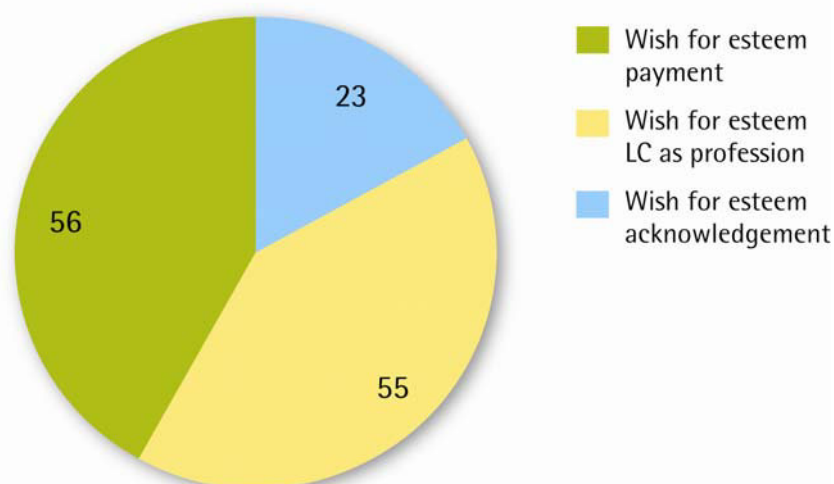
The open question on wish for esteem resulted in 3 answer groups of similar sizes. The largest group was represented by the wish for better payment with 42%. 41% of responders wished for acknowledgement of LC work as profession and 17% wished for esteem or acknowledgement in general. Total responses amounted to 134 with 167 missing values.

The fact that over one third of answers to the open question refers to payment with the highest score shows that there might be a greater problem than admitted in the first place in the quantitative question by responders.

The responses to this question revealed deviations between the quantitative and qualitative statements. While most responders stated to be adequately paid in the quantitative question (see figure 21), payment was the greatest issue in the qualitative question. The qualitative question has revealed the problem of LC payment and the lack of professionalism and acknowledgement.

The following figure shows an overview of response categories to the open question on esteem of LC work:

**Figure 23: Open question: To feel more valued in my work
I wish for the following**



Sub-categories of the wish for esteem:

Payment (56 responses = 42% of valid responses):

Table 16: Wish for better LC payment

Number of responses	Category	Percentage of valid responses	Percentage of all responses
25	Adequate or better payment	42 %	8 %
12	Paid time for exclusive LC work, e.g. in hospital	28 %	4 %
6	More paid time for LC work	16 %	2 %
5	Pension insurance for voluntary LC work	13 %	2 %
5	LC payment by health insurances to the full extent of work / reimbursement for clients	12 %	2 %
2	Employer should pay for LC's continued education	5 %	1 %
1	Clients should be willing to pay for LC	2 %	0,3 %

The responders pleading for better payment divide into two response groups, professional and voluntary LCs : Professional LCs in an in-hospital or private practice setting wish for adequate or better payment, paid time for exclusive LC work in hospital and payment for continued education, LC payment by health insurances to the full extent of work and reimbursement for clients. The volunteers wish for remuneration for their voluntary work, such as higher old-age pension or a place at the day-care for voluntary work. They also wish for more LLL members, donations and sales of LLL publications to strengthen the LLL Organization financially.

Acknowledgement of lactation consultancy as profession

(55 responses = 41 % of valid responses):

The wishes for the acknowledgement of LC as profession are versatile and aim at establishing LC as new, acknowledged profession and specialisation.

Table 17: Wish for esteem: LC to be acknowledged as profession

Number of responses	Category	Percentage of valid responses	Percentage of all responses
12	Recognition and interest of physicians and other hcp	21 %	4 %
10	Support, respect, openness, appreciation of the specialty LC	18 %	3 %
7	More recognition and tolerance from employer, supervisor, management and hospital administration	13 %	2 %
5	LC to be stand-alone profession and officially recognised	12 %	2 %
4	Better co-operation with other hcp, earlier referrals	7 %	1 %
3	More power for LCs in decision making, implementation, budget, time management	7 %	1 %
3	Recognition as midwife in the health care system	7 %	1 %
2	More opportunities to use LC skills and knowledge	5 %	1 %
2	Scientific acknowledgement	5 %	1 %
1	Lactation Clinic	2 %	0,3 %
1	More openness on maternity ward	2 %	0,3 %
1	More competence of health care providers in the field of lactation	2 %	0,3 %
1	More professional LCs in my environment	2 %	0,3 %
1	A firm position in the health care system	2 %	0,3 %
1	Adequate work conditions	2 %	0,3 %
1	More staff	2 %	0,3 %

Acknowledgement of lactation consultancy in general

(23 responses = 17 % of valid responses):

Table 18: Wish for esteem – acknowledgement

Number of responses	Category	Percentage of valid responses	Percentage of all responses
6	More PR for bf	11 %	2 %
4	Public support, bf-friendliness, bf to be valued in society	7 %	1 %
3	Positive feedback from mothers	7 %	1 %
3	Contented parents and children	7 %	1 %
2	More LLL members, donations or sales of LLL publications	5 %	0,3 %
1	Entitlement to a place at the day care for voluntary work	2 %	0,3 %
1	Support by my own family	2 %	0,3 %
1	Acceptance of LLL leaders as experts	2 %	0,3 %
1	More community support for bf	2 %	0,3 %
1	Support by policies	2 %	0,3 %

The wish for acknowledgement includes support and respect from the LC's own family, society, the community and by policies. Several LCs wish for contented parents and children, a positive feedback from mothers and acceptance of LLL leaders as experts.

Summary

The responses to the open questions reveal a lack of professionalism of the specialty LC in the first place. The main attributes of professionalism are adequate payment, acknowledgement and respect from or co-operation with other professions.

Moreover, the acknowledgement of the special LC competence should lead to a participation of LCs in decision-making in their work environment. New working opportunities such as a lactation clinic and an increase of the use of LC skills and knowledge are desirable. These characteristics of professionalism seem to be lacking at present within the new profession LC. Moreover, more competence of other health care providers in the field of lactation is lacking at present. Midwives and LCs claim a firm position in the health care system.

Volunteers also complain about a lack of acknowledgement of their work and competence and wish for specified benefits as a reward for their performances.

All LCs complain about a lack of PR for breastfeeding and a lack of support by communities and policies.

4.3 Part II Current situation as LC: Motivation item

Motivation as lactation consultant – evaluation proceeding

The first key question is answered in this item: „What motivates lactation consultants?“

An expected outcome is that LCs motives are mainly idealistic and career possibilities are rare. There have been 240 valid answers and 61 missing or invalid responses. In this item responders had to choose 3 motivations and rank them as follows: Most important for my personal motivation, second important for my personal motivation, third important for my personal motivation.

Evaluation: The responses have been recoded to the following values in the statistical program:

- 3 – Most important for personal motivation
- 2 – Second important for personal motivation
- 1 – Third important for personal motivation

This recoding was necessary because usually stronger agreement is connected with higher scores, thus making it easier to interpret the mean value.

The motivation item has been evaluated statistically in 4 ways:

1. The open question “other motivations” is listed in the first place, because it has been included in the quantitative evaluations
2. A ranking of nomination frequencies has been conducted as first quantitative evaluation
3. A weight ranking of the importance valued by responders was made, which becomes evident in the mean value, based on the above mentioned recoded values.
4. The combinations of motivations are listed according to frequencies
5. Cross tables with all possible combinations of influencing factors of experts groups have been conducted to detect possible significant response tendencies of responder groups (nationality, residence, continents, industrialisation state of country, age, profession, personal experience with bf, LC education, age of infants consulted, number of consultancies and different mothers consulted, voluntary or paid work).

The answers to the open question on other motivations for the LC work are listed below and are included in the above mentioned statistical evaluations.

Open question on other motivations to promote breastfeeding

Other motivation categories to promote breastfeeding are (11 responses, 290 missing values):

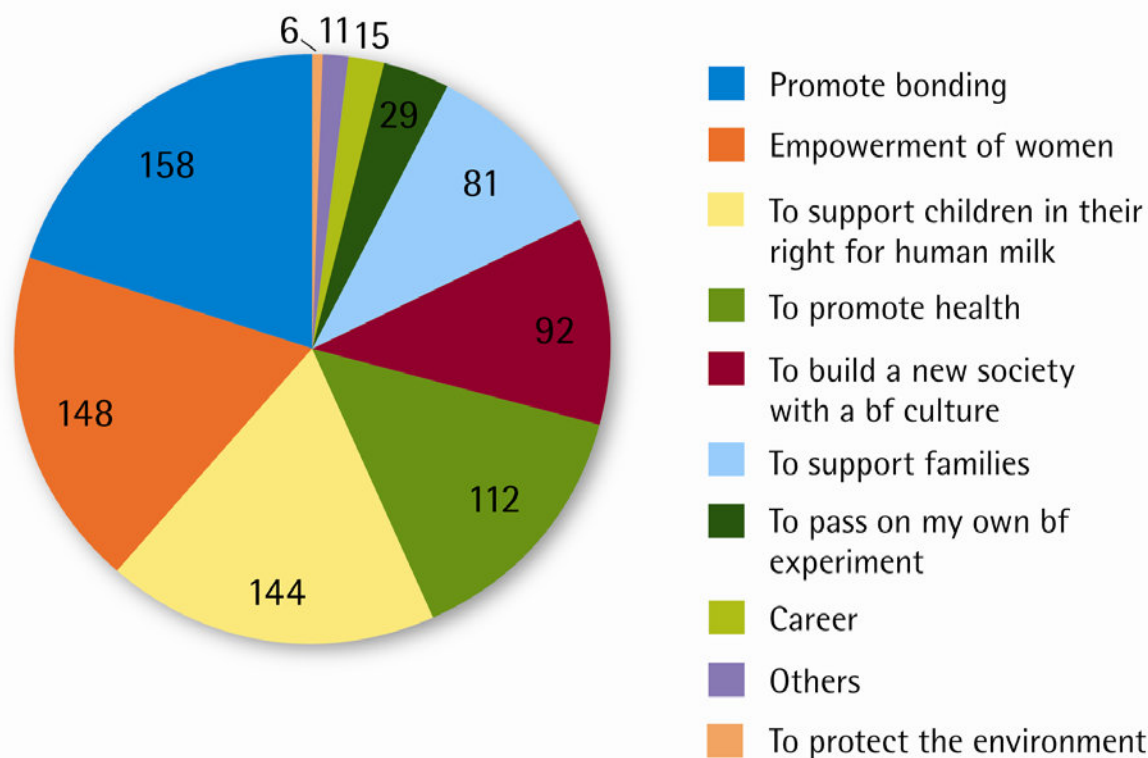
1. To promote bf as natural thing that requires to follow your instinct (2 responses)
2. To strengthen bonding in society and to improve social life (2 responses)
3. To promote human oral tactile imprinting (2 responses)
4. To provide mothers with up-to-date information to avoid unnecessary suffering (1 response)
5. To protect families from unscrupulous substitute producers (1 response)
6. To reduce costs (1 response)
7. Interesting and fascinating job (1 response)
8. The sense of community between leaders providing support and positive feedback (1 response)

The first key question „What motivates lactation consultants?“ is answered in the following ranking charts. To answer this key question, a ranking of nomination frequencies has been

conducted, a ranking of motivation importance based on the 3 categories and a ranking of combination frequencies is shown below.

Motivation ranking according to frequency of nomination

Figure 24: Frequencies of nominations



Since the Vienna congress with the highest ratio of responders (233) focussed on bonding, it was no surprise that the motivation „to promote bonding“ received the highest score in frequency of nomination. To empower women and support children ranked next, showing an equal motivation to support mothers and children. The general motivation „to promote health“ comes next in the ranking.

In spite of the disadvantageous placement as one of the last items on the list, „to build a new society with a bf culture“ comes next in the ranking. This choice of LCs should be highly acknowledged, because it is an overall goal in the sense of the Lancet quotation „it is the task of the health care providers to rebuild the bf culture“ (see preamble). This goal exceeds by far an ambition in the individual work environment to perform well as lactation consultant. LCs wish to contribute to rebuilding the bf culture, which can only be done on a societal and political level, as the example of Norway shows.

The next high score item is „to promote families“. As mentioned in the chapter „benefits of breastfeeding“ the whole family benefits from a good mother-infant relation and strong bonding. To pass on my own experience with breastfeeding comes next in ranking, emphasizing breastfeeding in its quality as woman's cultural asset.

Career might have reached a low score for two reasons: Firstly participants might have mainly altruistic motivations in their LC work or secondly there are only very few career chances in this young field yet. The development of lactation consulting, as described in the theoretical part of the study, explains this outcome: In the first place voluntary lactation consultants (LLL) started in the 1950s to support other women in the „womanly art of breastfeeding“. Only in 1985 the

additional qualification IBCLC has been implemented. Up to now, this additional education is not sufficiently integrated in the health care systems with regard to payment and working opportunities and has not yet been acknowledged as stand-alone profession (see proceeding chapter payment and esteem).

To protect the environment ranks low, since most responders are practitioners in lactation consulting. Motivations to support mother and child, bonding and health are more in the focus of a health care practitioner, while a politician, a researcher or a public health official might aspire towards the overall goal to protect the environment.

Ranking according to the importance of motivation (mean value)

Motivation	Others	Support children	Bonding	Empow. women	Prom. Health	Support families	Pass on own exp	Build bf culture	Protect environ.	Career
Mean value	2,6	2,31	2,11	2,06	2,03	1,85	1,72	1,58	1,5	1,4

The importance ranking shows a different outcome: The item „other motivations“ received the highest scores in the mean value ranking, while it scored lowest in the frequency of nominations. This could be expected, because responders were asked about their personal motivation in the open question. When a responder names a certain personal motivation, it is likely to rank first in importance for the responder and thus scores the highest mean value, while it has no chance to score high in frequency of nominations, because other responders don't know about it. On an overall level, this high score should not be over-rated, because only 11 responders mentioned their own personal motivations and only 10 responders evaluated their personal motivation according to the categories most important, second important and third important.

The next high score shows a very interesting outcome. Second ranking in mean value is “Support children in their right for optimal health status“. It goes without saying that caring for the next generation has always been a biological priority program of all living species. The high mean value confirms this motivation as priority in ranking. Since 144 responders ticked this item compared to only 10 responders in the „others“ category, the support of children has the highest importance weight to responders in the sample. Bonding comes next in importance ranking, which comes as no surprise, since bonding has been a main issue of the VELB congress in Vienna and currently represents a major field of interest for lactation consultants.

The next important item is the empowerment of women. As explained in the „benefits of breastfeeding“ chapter 2, mothers gain a unique role for their children by breastfeeding and start a good communication with their infants by breastfeeding on cue. By watching the baby's signs of hunger or other needs, they quickly become experts for baby's language, which provides mothers with competence in their new role. The pride of mothers having successfully breastfed their children also shows in comments in the expert questionnaire, when LCs proudly report having breastfed their own children for several years.

The promotion of health comes next in importance ranking, followed by the support of families and passing on the own experience with breastfeeding. In the importance ranking, building the breastfeeding culture in society is among the 3 lowest scoring items, which means that the experts on one hand mention this item frequently, as seen in the preceding nomination frequency ranking, but rank the motivation importance as lower. This is understandable, since the experts in their position as practitioners show a clear willingness to contribute to this goal, while the development has to be initiated on a political level. To protect the environment by supporting breastfeeding has a lower importance score for practitioners (2 responses) compared to politicians, researchers and public health officials (4 responses), as described before in the nomination frequency ranking. The lowest score was reached for „career“, probably due to a lack

of career opportunities and thus indicating rare career possibilities. This result is also confirmed by the open question, which also reveals idealistic goals instead of own interests of the experts. In the following table, the motivation combinations are listed according to frequencies:

Table 19: Motivation combinations according to frequency of nominations

Number	Motivation	Motivation	Motivation
26	Empowerment of women	Promote bonding	Support children in their right for optimal health status
25	Empowerment of women	Promote health	Promote bonding
18	Promote health	Promote bonding	Support children in their right for optimal health status
18	Empowerment of women	Support children in their right for optimal health status	Build a new society with a bf culture
14	Promote bonding	Support children in their right for optimal health status	Support families
14	Promote bonding	Support children in their right for optimal health status	Build a new society with a bf culture
10	Empowerment of women	Promote health	Support children in their right for optimal health status
10	Empowerment of women	Promote bonding	Build a new society with a bf culture
10	Promote health	Promote bonding	Build a new society with a bf culture
8	Promote health	Support children in their right for optimal health status	Build a new society with a bf culture
7	Empowerment of women	Promote bonding	Support families
7	Empowerment of women	Support children in their right for optimal health status	Support families
5	Empowerment of women	Promote health	Support families
5	Empowerment of women	Promote health	Build a new society with a bf culture
5	Promote health	Promote bonding	Support families
4	Empowerment of women	Promote health	Support families
4	Empowerment of women	Support children in their right for optimal health status	Pass on my own positive experience with bf

4	Empowerment of women	Support families	Build a new society with a bf culture
4	Promote health	Support children in their right for optimal health status	Support families
4	Promote bonding	Support families	Build a new society with a bf culture
4	Support children in their right for optimal health status	Support families	Build a new society with a bf culture
3	Empowerment of women	Promote bonding	Career
3	Promote bonding	Promote health	Career
3	Support children in their right for optimal health status	Pass on my own positive experience with bf	Build a new society with a bf culture
2	Empowerment of women	Promote health	Pass on my own positive experience with bf
2	Empowerment of women	Promote bonding	Pass on my own positive experience with bf
2	Empowerment of women	Support families	Pass on my own positive experience with bf
2	Empowerment of women	Support families	Protect the environment
2	Promote health	Support families	Build a new society with a bf culture
2	Promote bonding	Pass on my own positive experience with bf	Build a new society with a bf culture
2	Promote bonding	Support children in their right for optimal health status	Career
2	Support children in their right for optimal health status	Support families	Pass on my own positive experience with bf
1	Empowerment of women	Promote health	Support families
1	Empowerment of women	Promote health	Updated information to reduce suffering of women
1	Empowerment of women	Promote bonding	Support families
1	Empowerment of women	Promote bonding	Protect the environment
1	Empowerment of women	Support children in their right for optimal health status	Protect the environment
1	Empowerment of women	Support children in their right for optimal health status	Career

1	Empowerment of women	Support families	Career
1	Empowerment of women	Pass on my own positive experience with bf	Build a new society with a bf culture
1	Empowerment of women	Pass on my own positive experience with bf	Career
1	Promote health	Promote bonding	Pass on my own positive experience with bf
1	Promote health	Promote bonding	It is natural, follow your instinct
1	Promote health	Support children in their right for optimal health status	Pass on my own experience with a bf culture
1	Promote health	Support children in their right for optimal health status	Career
1	Promote health	Pass on my own positive experience with bf	Build a new society with a bf culture
1	Promote bonding	Support children in their right for optimal health status	Pass on my own positive experience with bf
1	Promote bonding	Support families	Strengthen bonding and improve social life
1	Promote bonding	Career	Build a new society with a bf culture
1	Promote bonding	Pass on my own positive experience with bf	Build a new society with a bf culture
1	Promote bonding	Pass on my own positive experience with bf	Improve social life by better bonding
1	Promote bonding	Support children in their right for optimal health status	Very interesting and fascinating job
1	Support children in their right for optimal health status	Support families	Protect the environment
1	Support children in their right for optimal health status	Build a new society with a bf culture	Protect families from unscrupulous substitute producers
1	Support families	Pass on my own experience with bf	Build a new society with a bf culture

A career motivation is only mentioned 6 times out of 240, showing clearly that career opportunities are rare. All other motivations are idealistic, including the motivations mentioned by participants in the open question, proving that LC motivations are mainly idealistic rather than in the LC's own interest. This result is in favour of the thesis, that the art of breastfeeding primarily is a cultural asset of women.

As last test of the motivation item, cross tables including Chi square, Phi, Cramer-V and Gamma have been conducted with all possible variables of part I of the expert questionnaire „information on yourself“ (nationality, residence, age, sex, profession,.....until voluntary or paid work on page 2 of the expert questionnaire). In all tests, no significant results have been detected, which means that the groups of responders answered independent of the mentioned factors.

Cross tables with the motivation item

No significant values in representative sample groups could be found in all possible cross tables, also due to the fact that many groups are too small to make a comparable sample size (e.g. 298 female – 3 male participants, nationalities with only 1-3 responders).

4.4 Part II Current situation as LC: Compliance and support item

Evaluation proceeding

The second key question is answered in this item: „How is the lactation consulting accepted, supported or put into practice by mothers and their environment?“

Responders could choose between the following possibilities, which have been recoded in the statistical program as follows:

Value 1	Rejected and not at all supported
Value 2	Rather not accepted and put into practice or supported
Value 3	Mostly accepted, put into practice or supported
Value 4	Very well accepted, put into practice or supported

This recoding was necessary because usually stronger agreement is connected with higher scores, thus making it easier to interpret the mean value.

This item has been evaluated statistically in four ways:

1. Discussion of the response distribution including a residence country ranking on the work environment's support
2. Discussion and presentation of a mean value ranking of compliance or support of lactation consulting in a bar diagram.
3. Results presentation of the variable „others“.
4. Cross tables with all possible combinations of influencing factors of experts groups are conducted to detect possible significant response tendencies of responder groups (nationality, residence, continents, industrialisation state of country, age, profession, personal experience with bf, LC education, age of infants consulted, number of consultancies and different mothers consulted, voluntary or paid work).

Discussion of the response distribution

LC is being accepted, put into practice or supported by (positive scores):

Compliance of mothers

I feel that my breastfeeding counselling is accepted, put into practice or supported by:
The mothers I am consulting

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted.	Mostly accepted.	Rather not accep	Rejected
301	290	11	3,75	0,5	224	63	0	3

The distribution shows that over 2 thirds of the mothers (74%) are estimated as very compliant with lactation consulting by the experts, while 21% of mothers consulted are estimated as mostly compliant by the experts. Only 3 experts feel their LC is rejected by mothers, representing only 1% of expert opinions. All in all, 95% of the experts estimate mothers to be very compliant or compliant, representing a very high score in compliance.

Compliance of fathers

I feel that my breastfeeding counselling is accepted, put into practice or supported by:
The fathers I am consulting

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted.	Mostly accepted.	Rather not accep	Rejected
301	276	25	3,25	0,59	88	173	12	3

Compared to the mothers, the fathers score lower in compliance, but are still rather compliant with a slight tendency towards very compliant, as the mean value exceeding 3 shows. The experts attest fathers a strong support of LC and breastfeeding mothers.

Support of relatives

I feel that my breastfeeding counselling is accepted, put into practice or supported by:
The relatives of the mothers I am consulting

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted	Mostly accepted.	Rather not accep	Rejected
301	252	49	2,84	0,72	36	151	53	12

Relatives show a clearly lower mean value compared to mothers and fathers. Relatives are still supportive with a tendency towards being not supportive, which might be explained by their background with low breastfeeding rates.

Support of health care providers

I feel that my breastfeeding counselling is accepted, put into practice or supported by:
The health care providers of the mothers I am consulting

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted	Mostly accepted	Rather not accep	Rejected
301	276	25	2,75	0,84	49	131	74	22

The support of hcp shows the lowest support score of all variables so far: Mothers, fathers and relatives. Even though the mean value of 2,75 attests a slight supportive attitude, the value is close to a non-supportive attitude, which starts at a value < 2,5. This result indicates deficits in the support of hcp and a lack of weight of this discipline in the health care system.

The qualitative questions provide a deeper insight into the difficulties LCs have to face in the cooperation with hcp without LC education (see open questions: „Wish for esteem“, „My current situation as LC“ and „What makes you discontented?“

LC is being accepted, put into practice or supported by (negative scores):

The following 3 variables score within the negative range, which means that they obstruct compliance and are non-supportive for lactation consulting. This result implies an international need for action regarding work environment, society and media towards bf promotion.

Support of work environment

I feel that my breastfeeding counselling is accepted, put into practice or supported by:
The work environment of the mothers I am consulting

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted.	Mostly accepted.	Rather not accep	Rejected
301	217	84	2,3	0,78	14	67	107	29

The mean value below 2,5 indicates a non-supportive attitude towards LC work. In the open questions responders from the USA, Switzerland and The Netherlands complain about too short maternity leave as non-supportive for bf according to the WHO recommendations. This might be one of the reasons why the work environment of bf mothers is not supportive for bf. There seems to be a global need for action to make work environments bf-friendly. In the following table the experts' estimation of the bf-friendliness of the mother's work environment is listed according to resident countries:

Residence country ranking of work environment's support

Evaluation of work environment's bf-friendliness according to residence country – mean value ranking in a table:

Table 20: Support of work environment for LC according to residence country - ranking

Residence country	Rejected/not at all supp.	Rather not acc. supp.	Mostly acc. supp.	Very well acc. supp.	Mean value
Norway	0	0	1	2	5,5
Sweden	0	0	1	2	5,5
Uganda	0	0	0	1	4
Croatia	0	0	0	1	4
Ethiopia	0	0	1	0	3
Finland	0	0	1	0	3
Canada	0	3	1	1	2,6
China	0	1	1	0	2,5
Korea	0	1	1	0	2,5
Lithuania	1	0	0	1	2,5
Luxembourg	0	2	2	0	2,5
Australia	1	7	7	0	2,4
Switzerland	1	10	6	2	2,4
Germany	9	35	21	3	2,3
Poland	0	2	1	0	2,3
USA	2	10	6	1	2,3
Netherlands	2	6	5	0	2,2
Austria	5	12	7	0	2,1
Belgium	1	3	1	0	2
France	0	2	0	0	2
Great Britain	0	2	0	0	2
Japan	0	1	0	0	2
New Zealand	1	0	1	0	2
Portugal	0	2	0	0	2
Singapore	0	1	0	0	2
Spain	1	1	1	0	2
UAE	0	1	0	0	2
Greece	1	1	0	0	1,5
Ireland	1	1	0	0	1,5
Israel	1	0	0	0	1
Hungary	1	0	0	0	1
Romania	1	0	0	0	1

Yellow: 5,5 – 2,6 = The work environment is rather supportive for LC

Orange: 2,5 = The work environment is supportive to the same extent as non-supportive

Blue: 2,4 – 1 = The work environment is rather non-supportive for LC

Support of society

I feel that my breastfeeding counselling is accepted, put into practice or supported by:

Society

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted.	Mostly accepted	Rather not accep	Rejected
301	262	39	2,45	0,75	19	101	121	21

The mean value shows a clearly negative score, indicating that society in most participating countries is not supportive of breastfeeding.

Support of the media

I feel that my breastfeeding counselling is accepted, put into practice or supported by:

The media.

Sample	Valid	Missing	Mean value	Standard deviation	Very well accepted.	Mostly accepted.	Rather not accep	Rejected
301	235	66	2,24	0,79	14	65	119	37

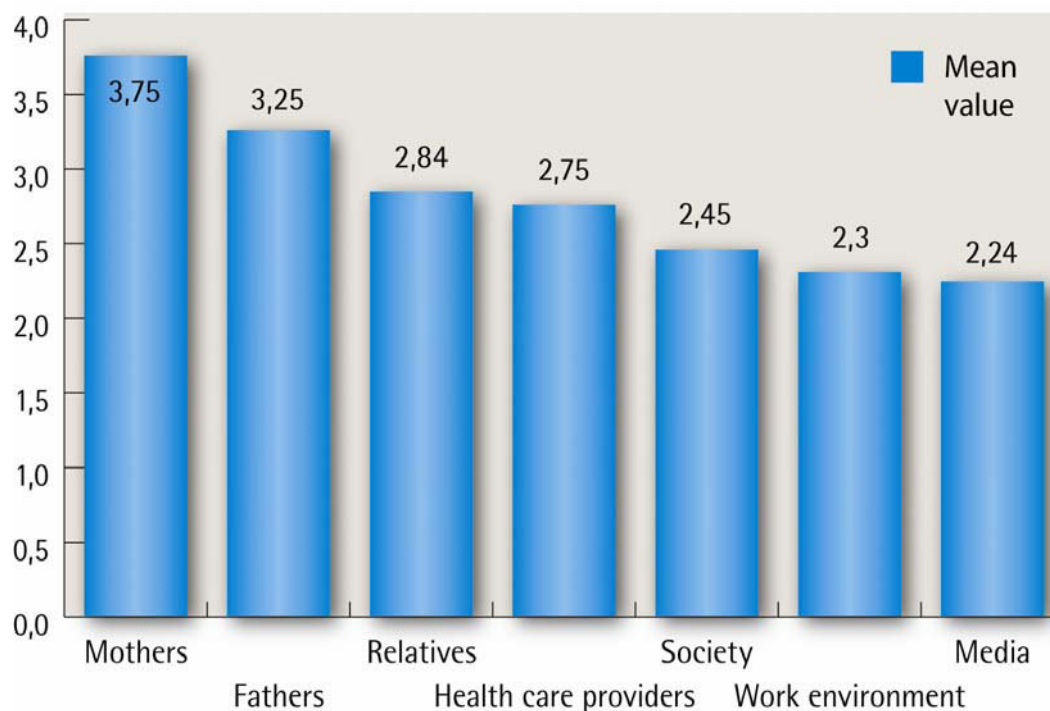
Media seem to be rather a threat than a support for breastfeeding, as elaborated by the responses to the qualitative questions later on.

Discussion of the mean value ranking of compliance or support of lactation consulting

Mothers show the highest score in compliance and acceptance of LC. The mean value shows a strong tendency toward „very well accepted and put into practice. There is a decrease in fathers' support evaluation, which tends more to the answer „mostly accepted, put into practice or supported“, representing a clear decrease of compliance compared to mothers, but still attesting fathers a good support of bf mothers.

Relatives show a clear decrease in support of LC work. The mean value 2,84 implies they are still supportive for breastfeeding with a tendency towards being rather not supportive. This might be explained by the fact that the elder generations made their experiences as parents in the decades of predominant bottle-feeding. Advice from people with a bottle-feeding background can hardly be supportive for breastfeeding practices.

Figure 25: Compliance or support of lactation consulting



Results show a clear decrease in support of LC work of fathers compared to mothers and of relatives compared to fathers. According to the experts' estimation, health care providers also show a low supportive value for lactation consulting. The mean value achieved by health care providers is even lower than the value for relatives and amounts to 2,75. This mean value scores near the average of 2,5 and thus gets very close to a negative score as being mostly non-supportive. The various complaints on health care providers in the open questions of the expert questionnaire emphasize this negative tendency as important outcome of this study.

Society, work environment and media all show negative scores as non-supportive for lactation consultancy, while society scores a mean value of 2,45 and falls slightly below the average. The work environment scores 2,3 and the media 2,24, indicating a poor support for lactation consulting.

Open question: Other influencing factors on compliance and support of lactation consulting with evaluation

In the following, other factors are listed and evaluated. The response rate includes 5 responses. Each answer refers to one responder:

1. My own family Value 3 = mostly accepted, put into practice or supported
2. Pecip groups or family educational institutions Value 4 = very well accepted.....
3. Politicians – Value 4 = very well accepted, put into practice or supported (in Norway)
4. Friends – Value 4 = very well accepted, put into practice of supported
5. Health insurances – Value 1 = Rejected and not at all supported

The mentioned own family, friends, Pecip groups or family educational institutions are valued supportive for the LC work. Politicians in Norway are very supportive for lactation consulting, but this seems to be a unique phenomenon in this Northern European country. An important remark of responders is that health insurances reject and do not at all support lactation consulting.

Cross tables with the compliance and support item

No significant values in representative sample groups could be found in all possible cross tables, also due to the fact that many groups are too small to make a comparable sample size (e.g. female – male participants, nationalities with 1-3 responders).

4.5 Part II - Current situation as LC: Statement item

The following values refer to the answers:

1 = I totally disagree with this statement

2 = I rather disagree with this statement

3 = I rather agree with this statement

4 = I totally disagree with this statement

This item has been evaluated statistically and with qualitative methods in four ways:

1. Discussion of the response distribution
2. Results presentation and discussion of the open question and presentation of response groups, identified with qualitative measures
3. Cross tables with all possible combinations of influencing factors of experts groups are conducted to detect possible significant response tendencies of responder groups (nationality, residence, continents, industrialisation state of country, age, profession, personal experience with bf, LC education, age of infants consulted, number of consultancies and different mothers consulted, voluntary or paid work).

Discussion of the response distribution of statements

The health care providers in my environment are supportive of bf in general

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	294	7	2,98	0,77	75	149	60	10

The mean value 2,98 scores within the range of agreement. However, the result is not too optimistic with only 75 participants confirming the support of health care providers without any doubt.

Health care providers are supportive of the WHO recommendation for breastfeeding

Expected result based on practical experience as LC: There is a clear decline of agreement compared to supporting bf in general

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	295	6	2,23	0,79	21	91	144	39

The mean value 2,32 lies within the range of disagreement. The fact that there is a decline of support of breastfeeding according to WHO recommendations compared to breastfeeding in

general by hcp indicates an international lack of knowledge, education and support of the WHO recommendation.

With my work as LC I can't make a difference

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	296	5	3,05	0,88	9	28	85	172

The question was asked reverse to the expected answer to make sure the experts are well aware of the questions. The experts showed their attentiveness and strongly rejected this statement. Again, the expected result is clearly confirmed with the mean value 1,57 within the range of disagreement and a tendency towards total disagreement. The belief to make a difference by LC work also represents a strong motivation on job and has been repeated several times in the qualitative responses later on.

It is the task of the health care providers to re-build the bf culture

Expected outcome based on practical experience as LC: An ambivalence of the experts towards this statement is expected, because they might feel left alone by policies and overburden with this task. On one hand they would like to take on this task, but on the other hand they feel left alone with it, causing an equation of answers with a mean value of about 2,5.

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	296	5	3,05	0,88	106	116	58	16

However, the expert's opinions differed from the expected results. The mean value scored 3,05 within the range of strong agreement. Participants show a high motivation and feel responsible to re-build the bf culture, which has to be highly appreciated in the current situation of non-supportive society, media and policies (e.g. work environment).

The NCBF in my country of residence is promoting bf successfully

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	282	19	2,53	0,88	37	111	98	36

The NCBF's foundation was initiated by the Innocenti Declaration in 1991. WHO and UNICEF goals were supposed to be implemented by 1995. No country excluding Norway is known to have reached this goal so far. The mean value amounts to 2,53 with a very slight tendency towards agreement. Responders show strong ambivalence by the mean value close to 2,5. Amongst the experts there have been members of NCBF with a possible bias on responses. However, on the whole, the existing NCBFs should be provided with power to be able to improve their performances. In the forthcoming qualitative question, the experts will define the main tasks of NCBF from their point of view.

BF promotion is a target of health policies in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	287	14	2,42	0,96	42	91	100	54

The mean value amounts to 2,42 within the range of disagreement. The result shows a balance between agreement and disagreement, revealing that internationally there is political effort to promote bf in nearly half of the sample, while the other half states no political effort in their country of residence.

The implementation of bf promotion policies is successful in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	277	24	2,03	0,76	8	61	140	68

The mean value amounts to 2,03 within the range of disagreement. Health policies on an international level seem to be predominantly passive regarding breastfeeding promotion.

Most mothers are open for the WHO recommendation for bf

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	289	12	2,48	0,77	26	111	129	23

Half of the mothers consulted are open to the WHO recommendation, while the other half is not. It seems that education of the population is necessary, since WHO recommendations are evidence-based.

Most mothers are open for weaning to be initiated by the child

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	268	33	2,48	0,8	29	94	122	23

Weaning to be initiated by the child is mostly pleaded for by LLL leaders, as mentioned in the theoretical part. In the first questions on the LC work, the counselling of mothers with toddlers show a clearly lower score amongst the experts than for all other ages.

Open question: Remarks on my current situation as LC

The item „remarks on my current situation as LC“ is an open question. There have been 41 responses, which have been partly translated from German into English and then categorised in response groups. The response groups show the following distribution:

7 remarks on success with LC work, 3 remarks on coping with the LC work situation as profession without acknowledgement or adequate payment, 5 opinions on the current situation, 26 responders describe difficulties and obstacles, dividing into problems with acknowledgement

(4), problems with compliance (5), problems in the co-operation with other hcp (8), political obstacles (9).

In the following the responses are listed, while each answer refers only to one responder:

First answer group: Success

1. Mothers are satisfied from my job
2. Some mothers that I consult in the hospital afterwards attend my bf support group
3. I see progress in acceptance of LCs and bf
4. I mostly see motivated mothers
5. I am a midwife and LC paid by the community
6. I will start this year as free-lance IBCLC
7. I am working with parents from many different cultures

Second answer group: Coping with the current situation as LC

8. I only make an adequate income because I lecture as well as seeing mothers and babies and avoid many problems with institutions by being in private practice.
9. Without my own practice my current situation is not satisfactory
10. My work is activism, changing policy etc.

Third answer group: Opinions

11. The formula scandal in China is the best PR for breastfeeding
12. The mothers in my LLL group are the only ones with a positive attitude towards bf, even the substitute scandal in China does not increase the bf rate!
13. The value of bf is estimated differently by hcp and general public
14. There is still much to do!
15. I would like to be more professional

Fourth answer group: Difficulties and obstacles

4.1 Acknowledgement

16. My LC work is often not considered important
17. I feel like I am swimming against a very strong current
18. Need official recognition
19. Difficult situation

4.2 Compliance

20. Women give up too easily instead of asking for help
21. Mothers lack a strong will to overcome problems with bf
22. Culture of low income or low educated teens has strong limiting effect, big obstacle is widespread ignorance of breast as feeding tool and how-tos in young people as well as their significant partner or relatives, bottles / formula are too familiar and decrease breast milk supply
23. 6 months exclusive bf is often misinterpreted: Many people think that a child has to be weaned completely after 6 months
24. Fear of negative impact on mothers who don't want to bf

4.3 Health care providers are not supportive

25. Hcp can often be influenced by own negative bf experience
26. Sometimes I am frustrated because other hcp (clinic staff or physicians with their own practice) are destroying my work out of ignorance

27. Hospitals in my environment promote bf, while physicians with their own practice and midwives don't
28. Physicians have a vested interest in continuing interventions in childbirth. They prefer to keep the power. Bf reduces this power, bf empowers the family
29. Fight in hospital against old practices, hcp fear the changes
30. Not enough staff or time
31. I am working in a maternity ward, where my additional qualification as IBCLC is not at all paid, regardless of the high quality of my bf consultancy
32. Bf over 6 months needs more support

4.4 Political obstacles

33. More support from the community and the city is needed
34. The city of Munich has been taken efforts to implement the EU blueprint for action on bf for 2 years now
35. The US society, culture and public policy is a“ bf wasteland“
36. The biggest issue for me is how to integrate this service into the National health care system
37. I don't see bf promotion, in media there is only the anti smoking campaign
38. The LC profession is not recognized in my country (Romania)
39. Health policies are non-supportive
40. The political situation is non-supportive
41. More support of bf in developing countries is needed. Support groups can make a big difference

Summary of remarks on the current situation as lactation consultant

7 experts share their success with us in the questionnaire. They mention motivated mothers, positive feedback, and compliance, being able to work as paid LC, progress and work with parents from different cultures.

3 experts try to cope with the difficulties to work as LC without official acknowledgement by financing their LC work with lectures, planning to open a practice and trying to change the policy as activist.

5 experts share their opinions on the formula scandal in China with us, another one states there is still a lot to do and that there are differences in evaluation of bf between hcp and the public, while one expert wishes to be more professional.

In the third answer group „difficulties and obstacles“ there are 4 experts stating a lack of acknowledgement, because their work is not considered important, one expert feels like swimming against a very strong current, one states the need for official recognition and one calls the situation difficult.

6 experts state difficulties with compliance due to mothers giving up too quickly and not looking for help, teenage mums, misinterpretation or lack of support of bf over 6 months, and one fears a negative impact on mothers in case of the decision not to bf.

7 experts see difficulties in the co-operation with hcp, who are non-supportive or ignorant, while physicians have conflicting interests regarding birth interventions. Old practices in hospitals are hard to overcome, LC knowledge is not being acknowledged in hospital and time and staff are lacking.

9 experts complain about the lack of political support on the community level e.g. in Munich or on the federal level in the USA, lack of recognition of the profession LC in Romania, lack of PR for bf, difficulties to integrate this service in the health care system and lack of bf support in developing countries.

Cross tables with the LC current situation item

No significant values in representative sample groups could be found in all possible cross tables, also due to the fact that many groups are too small to make a comparable sample size (e.g. female – male participants, nationalities with 1-3 responders).

4.6 Part III - Current situation as researcher

The following values refer to the answers:

- 1 = I totally disagree with this statement
- 2 = I rather disagree with this statement
- 3 = I rather agree with this statement
- 4 = I totally disagree with this statement

This item has been evaluated statistically and with qualitative methods in four ways:

1. Discussion of the response distribution
2. Open question: Remarks on my current situation as researcher
3. Open question: Research approaches to be followed up
4. Cross tables with all possible combinations of influencing factors of experts groups are conducted to detect possible significant response tendencies of responder groups (nationality, residence, continents, industrialisation state of country, age, profession, personal experience with bf, LC education, age of infants consulted, number of consultancies and different mothers consulted, voluntary or paid work).

Discussion of the response distribution research item

It is hard to obtain funds for research according to the Code

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	78	223	3,26	0,9	38	28	6	6

Only 12 of the 78 researchers state to have easy access to funds according to the code and free of commercial interest. The remaining 66 experts find it hard to obtain research funds in accordance with the code and free of commercial interest.

Breastfeeding and human milk are far from being totally explained by research

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	80	221	3,08	0,94	32	28	14	6

The majority of experts share this opinion.

The global research projects on bf lack of co-operation and networking

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	77	224	2,75	0,81	15	31	28	3

The majority of experts share this opinion. More networking and co-operation is needed.

NCBF promotes bf successfully in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	79	222	2,34	0,92	8	27	28	16

The mean value amounts to 2,34 within the range of disagreement. Researchers unlike LCs are clearly not satisfied with the performance of the NCBFs and by far more critical than practitioners. The existing NCBFs should understand the clear criticism from researchers and make an effort to improve their performances. In a later qualitative question, the experts will define the main tasks of NCBF from their point of view.

Bf promotion is a target of health policy in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	82	219	2,7	0,98	20	27	25	10

The majority of international researchers states that bf promotion is a target of health policy in their country of residence (47), while 35 state it is not. Even though there is a clear majority of agreeing responses, the number of disagreeing is also high.

The policy of bf promotion is being implemented successfully in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	82	219	2,18	0,82	3	27	34	18

The majority of international researchers state that health policies on the promotion of bf in their country of residence are not being implemented successfully. Policies to promote bf – if any - are not being implemented successfully according to the researchers' opinions.

We have sufficient research and promotion projects on bf in my country of residence

Sample	Valid	Missing	Mean value	Standard deviation	I totally agree	I rather agree	I rather disagree	I totally disagree
301	79	222	1,71	0,75	2	8	34	35

The majority of international researchers state that research on bf in their country of residence is not sufficient, thus pointing out an international deficit.

Open question: My current situation as researcher

The open question “my current situation as researcher” scored 10 valid responses and 291 missing values. There were 19 researchers in the sample and half of them made use of the open question to add a remark on their current situation as researcher on breastfeeding.

The responses could be categorised in 4 response groups with the following main subjects: Funding, contentedness, complaints and study titles. In the following, the response groups to the open question on the current situation of researchers on breastfeeding are shown in detail.

3 researchers emphasize that more funding is needed:

1 More funding and research is needed.

1 My research is self-funded. It would be great to get a grant, but breastfeeding is not valued economically and it would be difficult. Also the medical „establishment“ doesn't believe my topic is problematic.

1 No funds for bf research

One researcher is contented with the support she receives:

1 Good support for my research from the hospital that employs me

Two researchers complain about the situation:

1 More co-operation and mutual acknowledgement would be desirable

1 The policy is being put into practice, but too slowly

Two researchers share their current study titles with us:

1 „Origins of health“ cohort study, Lactogenesis II study (Singapore)

1 My research project title is: „Feeding patterns in Iranian neonates and infants in the first 2 years of life“

Only 1 out of 10 researchers expresses contentedness with her job situation, while 3 researchers complain about a lack of funding for breastfeeding research. 2 researchers complain about a lack of acknowledgement and policies being implemented too slowly.

Open question: Research approaches to be followed up

The responses to this open question have been categorised in the following steps:

1. Translation of German answers into English
2. Identification of similar answers
3. Categorisation

The total of 28 responses can roughly be merged into 4 categories:

- | | |
|--|-------------|
| I. The mother-baby dyad, compliance and motivation of mothers | 8 responses |
| II. Coherence of breastfeeding and lactation consulting with other factors | 4 responses |
| III. Medical topics | 8 responses |
| IV. Methods | 8 responses |

Total responses amount to 28 and are listed in detail in the following, according to the 4 identified categories:

I.Mother-baby-dyad

Table 21: Research approaches to be followed up: Mother-baby dyad – 8 responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
3	Mothers' decision to bf, motivation, compliance	11 %	1 %
2	Determinants of long-term bf over 8 months, increasing bf practices	7 %	1 %
1	Mother-baby dyad, bf and bonding	4 %	0,3 %
1	How to reach all women and decision makers	4 %	0,3 %
1	Monitoring of bf practices	4 %	0,3 %

Concerning the mother-baby dyad, researchers take a special interest in the determinants of bf or long-term bf, bf practices, bonding and monitoring of bf. Moreover, it is of special interest to find out how to reach women and decision makers.

II. Coherence of breastfeeding and lactation consulting with other factors

Table 22: Research approaches to be followed up: coherence of bf and other factors – 4 responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
1	Knowledge and attitude of hcp, mainly physicians	4 %	0,3 %
1	Effect of LC on the health of babies and mothers	4 %	0,3 %
1	Impact of substitute producers' PR	4 %	0,3 %
1	Economic benefits of bf	4 %	0,3 %

The research topics of the second category include bf and economics, the impact of substitute producers' PR, the knowledge of health care providers on bf and the effect of lactation consulting on the health of mothers and babies.

III. Medical topics

Table 23: Research approaches to be followed up: Medical topics – 8 responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
3	Human milk – Biochemistry, benefits of own species milk, immunology	11 %	1 %

1	Human milk – the coping process during Lactogenesis II	4 %	0,3 %
1	Adequate artificial teats	4 %	0,3 %
1	Sucking disorders after birth without anaesthesia	4 %	0,3 %
1	Health impact of bf on fertility, adiposity, diabetes	4 %	0,3 %
1	Bf and gender	4 %	0,3 %

In the medical topic category researchers ask for more studies on human milk, artificial teats, sucking disorders, bf and gender and the health impact of bf.

IV. Methods

Table 24: Research approaches to be followed up: Methods – 8 responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
2	Quantitative, qualitative and triangulation of methods	7 %	1 %
1	The accuracy of documentation in infant feeding	4 %	0,3 %
1	Bf statistics to be collected according to WHO definitions and standards	4 %	0,3 %
1	Methods: EBM	4 %	0,3 %
1	Methods: Find evidence to promote exclusive bf	4 %	0,3 %
1	RCT or cohort studies	4 %	0,3 %
1	Large prospective cohort studies on feeding methods: Exclusive bf, partial bf, Exclusive artificial feeding. Impact on allergy, arteriosclerosis, renal disease etc.	4 %	0,3 %

The 4th category suggests methods to be used for research on bf such as quantitative and qualitative, RCT or cohort studies. 2 researchers postulate evidence-based results and methods, while 2 experts claim accurate definitions according to WHO standards. One researcher suggests a study on the accuracy of documentation in infant feeding, indicating a lack of accuracy in the past with an impact on the studies' quality and validity of results.

Cross tables with the researcher's current situation item

No significant values in representative sample groups could be found in all possible cross tables, also due to the fact that many groups are too small to make a comparable sample size (e.g. female – male participants, nationalities with 1-3 responders).

4.7 Part IV - Questions for all responders: Contentedness

Contentedness or discontentedness item

This item has been evaluated statistically and with qualitative methods in 3 steps:

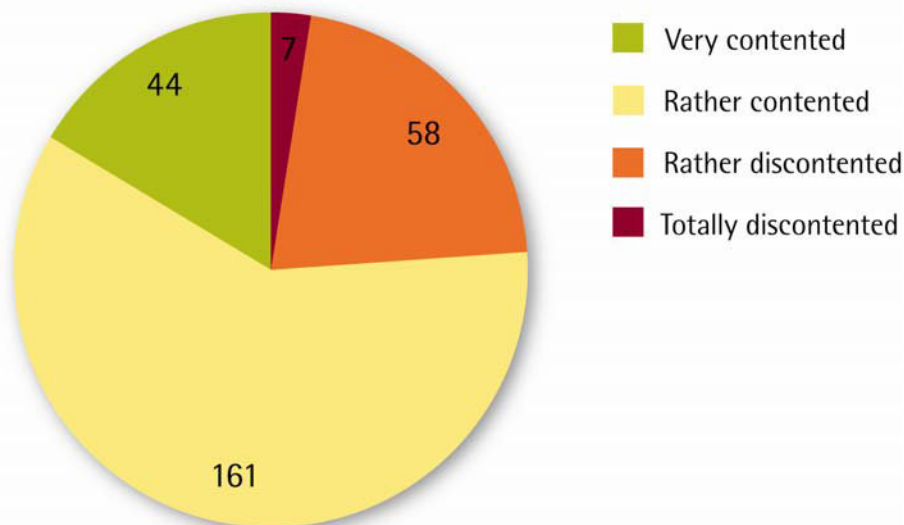
1. Comparison of quantitative and qualitative results of the contentedness item and discussion of results
2. Presentation and discussion of the results of the qualitative evaluation in answer groups

Comparison of quantitative and qualitative results

Table 25: Comparison of quantitative and qualitative results - contentedness

	Contented	Discontented
Quantitative	205	65
Qualitative	234	216

Figure 26: Contented – discontented



This question resulted in a difference between responses of the quantitative and the qualitative part. The answers to the quantitative question resulted in a clear majority of contentedness with 44 very contented responders and 161 contented responders, representing two thirds of the sample. Only 65 responders answered to be discontented, 58 were rather discontented and 7 were totally discontented. The responses to the open questions show nearly equal response rates of causes making the experts contented or discontented with 234 : 216. It seems that even though there are many reasons to be discontented, lactation consultants are in the majority contented. As questionnaires on contentedness have already shown, such apparently contradictory responses represent a standard response pattern of participants. Even contented participants seize the opportunity to complain about deficits, because the questionnaire might contribute to bringing about change.

Presentation of response groups to the qualitative questions on contentedness and discontentedness

The reasons to be contented or discontented are listed in answer groups below. The answer groups for contentedness are general reasons, progress of bf promotion, work conditions, BFHI and policies. Reasons to be discontented are global or societal, health policies, the health care system, hospitals, non-supportive health care providers (mainly physicians), lack of influence, support, pay and the situation of families:

Reasons to be contented

Table 26: Reasons to be contented – general: 116 responses = 39% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
25	Positive feedback from mothers: Appreciation, acknowledgement, respect, gratitude	22 %	8 %
20	Success with my LC and my accomplishments	17 %	7 %
13	The contents of my work as LC, which is meaningful, wonderful and diversified	11 %	4 %
12	Acceptance of and compliance with LC work by mothers and families	10 %	4 %
12	Content and happy families with securely bonded children	10 %	4 %
12	Supporting and empowering mothers and families	10 %	4 %
8	I make a difference for families	7 %	3 %
6	Work as LLL including support groups and telephone and e-mail consulting with supportive LLL network	5 %	2 %
5	Continued interest of mothers	4 %	2 %
2	Contact and interaction with mother-baby dyad	2 %	0,7 %
1	With my support mothers can bf their second child after not having been able to bf their first child! I have a high bf rate!	1 %	0,3 %

The main reasons to be contented in general are the positive feedback from mothers, success with LC work and the contents of LC work including the support and empowerment of families.

Table 27: Reasons to be contented – progress: 33 responses = 11% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
12	Steady progress, e.g. young families with a good start	36 %	4 %
4	Increase of bf rates: Initiation and duration	9 %	1 %
3	The trend towards bf increases, a positive development with growing acceptance and awareness of bf	9 %	1 %
3	Changes in culture towards a bf culture	9 %	1 %
3	Positive development in my LC work environment within the last 10 years, change of attitude of hcp colleagues	9 %	1 %
3	I can bring about change and have been able to change and initiate a lot of things with major progress in the last years, bf becomes more well-known because of LC	9 %	1 %
2	The progress made over the last 4 decades, e.g. Norway is on top	6 %	0,7 %
2	Promotion of bf leads to 80% bf rate, since continued effort leads to success	6 %	0,7 %
1	Increase of the bf rate compared to 30 years ago	3 %	0,3 %

This group of experts watches progress towards a bf culture, an increase of initiation or duration compared to decades ago.

Table 28: Reasons to be contented–work conditions: 60 responses = 20% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
19	Support and appreciation from colleagues and superiors, good co-operation with other hcp e.g. physicians	31 %	6 %
9	To educate colleagues, parents and students and make a difference for hcp	15 %	3 %
7	Autonomous, holistical and multicultural work, self-determined time management	12 %	2 %
6	My competence as LC, working in this specialty, good quality of work with increasing expertise and knowledge	10 %	2 %
6	Good payment for LC work	10 %	2 %

4	Being respected and recognised as LC professional	7 %	1 %
4	Continued training and education and increasing professionalism	7 %	1 %
2	Efficiency: We're reaching our goals and are able to help mothers within 24h	3 %	0,7 %
2	Mothers are enabled to make an informed choice	3 %	0,7 %
1	Sharing being psychologist and LC	2 %	0,3 %

This group of 60 LCs and other experts has experienced an improvement in their work conditions and a development towards professionalism: Better co-operation, acknowledgement, payment, education, expertise and efficiency enabling mothers to an informed decision

Table 29: Reasons to be contented–BFHI a. policies: 24 responses = 8% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
6	Working in a supportive baby-friendly hospital	25 %	2 %
4	Implementation of the 10 steps, in the process of becoming baby-friendly	17 %	1 %
3	Being able to promote bf	13 %	1 %
2	A state-wide policy has been developed in Australia	8 %	0,7 %
1	I am able to pass on information to others to become LC and activist	4 %	0,3 %
1	Contented with a health care centre for bf	4 %	0,3 %
1	Contented with the support of politicians	4 %	0,3 %
1	I was nominated to win a national bf award	4 %	0,3 %
1	Good support in my community	4 %	0,3 %
1	Our NCBF is having an effect - at last	4 %	0,3 %
1	We have a new NCBF in Finland, I am sure something will happen	4 %	0,3 %
1	Funding from government, societal awareness and acceptance	4 %	0,3 %
1	Contented with monitoring the code and working for the Lactation Consultants Association	4 %	0,3 %

This group of 24 experts is contented with their baby-friendly hospital, the process to implement the 10 steps or their NCBF. Other experts state support of communities and policies and the opportunity to contribute to the protection of bf by their task to monitor the code.

Reasons to be discontented

Table 30: Reasons to be discontented – globally, in society: 39 responses – 13% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
11	There is a slow and unsupported progress of a bf culture going back 2 steps after 1 step forward	28 %	4 %
8	Lack of public acceptance of bf, non-supportive society not recognising the importance of bf	21 %	3 %
6	Breast milk should be promoted globally as the perfect food with priority and included in environment and health policy and consumer protection	15 %	2 %
5	Misleading PR: Ads of bf substitutes are rampant on mass media	13 %	2 %
4	Lack of information, knowledge and exchange in society	10 %	1,3 %
3	Prejudices and ignorance	8 %	1 %
2	Negative image of bf in society	5 %	0,7 %

This group of 29 experts is discontented with the negative image of bf in society and the prevailing misleading PR of substitute producers. The importance of bf is not recognised in society, leading to a decline of bf rather than a progress.

Table 31: Reasons to be discontented – health policy, health care system and hospitals: 59 responses = 20% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
9	Lack of health policy to promote and support bf	15 %	3 %
9	Lack of support for bf from hospital management, administration, head physician and superiors	15 %	3 %
8	Lack of funds and sponsors for bf-supportive policies	14 %	3 %
7	Routines in hospitals obstruct exclusive bf	12 %	2 %
6	Lack of payment / reimbursement of health insurances for LC, lack of bf promotion by health insurances	10 %	2 %
6	Lack of co-operation with colleagues and between wards, standards should be	10 %	2 %

	implemented more correctly in an interdisciplinary hcp team		
4	BFHI fails because of lacking staff, lack of funds, lack of support by staff	7 %	1,3 %
2	Non-supportive structures in the health care system, not enough support from NCBF	3 %	0,7 %
2	Lack of acknowledgement and payment of LC profession in the health care system	3 %	0,7 %
2	LC should be integrated into the ward's daily work, more time for exclusive LC	3 %	0,7 %
2	No progress at maternity ward towards bf promotion	3 %	0,7 %
1	I would like to establish a bf clinic with funds to work 5-7 days a week for 10,000 births per year	2 %	0,3 %
1	Lack of integrated care after discharge from hospital	2 %	0,3 %

The 59 experts clearly show how the promotion of bf is currently failing at all levels of the health care system and at the political level: In hospital, after discharge of hospital (= lack of integrated care), non-supportive structures in the health care system, a lack of payment for LC work and non-supportive policies.

Table 32: Reasons to be discontented – hcp (mainly physician) support: 47 responses = 16% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
17	Eminent lack of support of and interdisciplinary co-operation with hcp	36 %	6 %
7	Ignorance and arrogance or averse attitude of hcp colleagues, mainly physicians	13 %	2 %
6	HCP - mainly physicians - do not appreciate and accept LC and do not recognise the importance of bf	13 %	2 %
6	Lack of interest, knowledge, education of hcp on bf, mainly physicians	13 %	2 %
5	Lack of support from hcp colleagues and superiors	11 %	2 %
3	Disrespect and disregard of hcp colleagues undermining LC work	6 %	1 %
2	Lack of support of exclusive bf by interdisciplinary team of hcp	4 %	0,7 %
1	Lack of bf support on neonatology	2 %	0,3 %

The 47 experts of this group complain about the lack of acknowledgement of LC work within the health care professions, resulting in the failure of co-operation with other hcp, mainly with physicians, e.g. on neonatology.

Table 33: Reasons to be discontented – Lack of influence, support, pay: 36 responses = 12% all responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
9	The need to help most of the women, reach more mothers, make more impact with successful outcome	25 %	3 %
9	Lack of support and appreciation, not being taken seriously as an expert, fighting alone	25 %	3 %
6	Lack of financial support, funds, payment to make a living as LC, financial security	17 %	2 %
4	Multiple tasks besides LC work, workload, exhaustion with little pay and appreciation	11 %	1,3 %
3	Lack of time to do LC work, lack of exclusive LC working time in hospital, difficulty to obtain practical experience with not much time available	8 %	1 %
3	Lack of co-operation with bf promoters in my area and low awareness level of LC possibilities	8 %	1 %
2	I have to pay all continued education by myself	6 %	0,7 %

Consequently the 36 experts in the above group complain about a lack of support or impact of their work. Moreover they suffer from a lack of time and pay for their LC work and are endangered of exhaustion.

Table 34: Reasons to be discontented – Situation of families: 35 responses = 12% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
17	Misinformation: Wrong or out-of-date information in the media and from hcp, conflicting advice based on myths, implying formula was as good as human milk, unnecessary supplementing	49 %	6 %
4	Not enough mothers / families can get LC or have to pay for it	11 %	1,3 %

3	Environment of mothers, hcp and society are not supportive and make parents insecure with bf	9 %	1 %
2	Too many interventions during childbirth, e.g. C sections	6 %	0,7 %
2	High rate of mothers weaning too early	6 %	0,7 %
2	Maternity leave is too short	6 %	0,7 %
1	The promotion of dummies and pacifiers by hcp	3 %	0,3 %
1	Lack of consumer protection	3 %	0,3 %
1	The disempowerment of women (not enabling them to bf)	3 %	0,3 %
1	Mothers separated from their infants	3 %	0,3 %
1	Bf mothers are not sufficiently supported by their own families	3 %	0,3 %

Regarding the situation of families, the experts mention mainly misinformation on many aspects of bf resulting in conflicting advice of hcp with a negative impact on bf. Moreover, interventions in childbirth and the separation of mother and child have a negative impact on bf. In addition to this, the environment of mothers often is rather making mothers insecure instead of being supportive. The too short maternity leave and lacking consumer protection represent two more factors disabling bf promotion.

Most of the arguments specified in the tables above will be taken on for further evaluation in the “Summary of results” chapter. In chapter 5 “summary of results” the responses to the open questions are evaluated with respect to the main topics defined by the experts.

4.8 Effective measures for the promotion of breastfeeding item including discussion of deviating opinions from a second question round by e-mail

Evaluation

In this item, eleven measures to promote breastfeeding have been evaluated by the experts according to importance with the following response categories:

- 1 = Not at all important
- 2 = Less important
- 3 = Important
- 4 = Very important

The effective measures item has been evaluated in four different ways:

1. The distribution of responses is discussed in the order of the mean value ranking
2. A second question round by e-mail has been conducted for the minority of deviating opinions. The responses to the second question round will be discussed
3. Cross tables with all possible combinations of influencing factors of experts groups have been conducted to detect possible significant response tendencies of responder groups (nationality, residence, continents, industrialisation state of country, age, profession,

personal experience with bf, LC education, age of infants consulted, number of consultancies and different mothers consulted, voluntary or paid work)

4. Responses to the open question “Other effective measures for the promotion of breastfeeding” are presented

1. Distribution of responses and 2. Discussion of deviating opinions

The majority of experts considered all 11 suggested measures very important or important in strong agreement, as the following diagrams show.

Since the mean value expresses the importance, the results will be listed in the following detailed chapter according to the mean value ranking, starting with the most highly rated measure to the lowest rated measure as priority ranking of measures. The following 2 figures show the distribution of responses:

Mean value ranking and discussion of effective measures’ response distribution

Figure 27: Effective measures for the promotion of breastfeeding

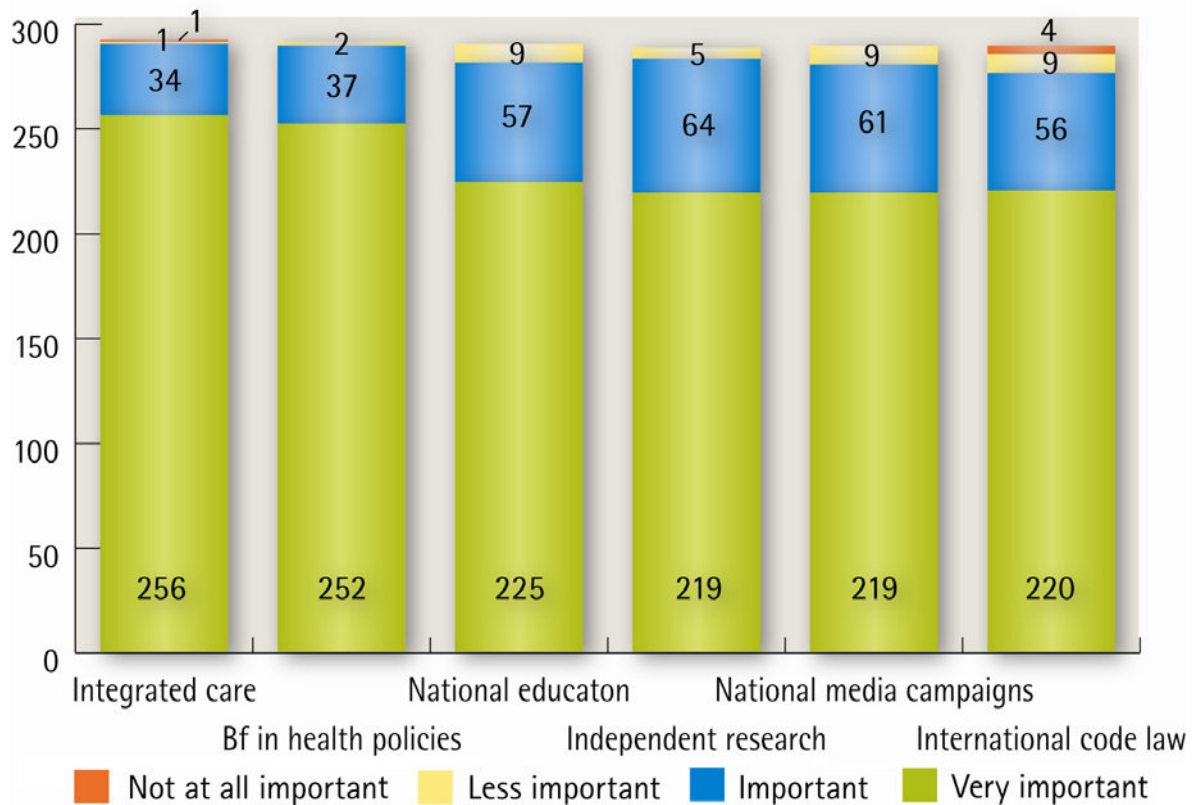
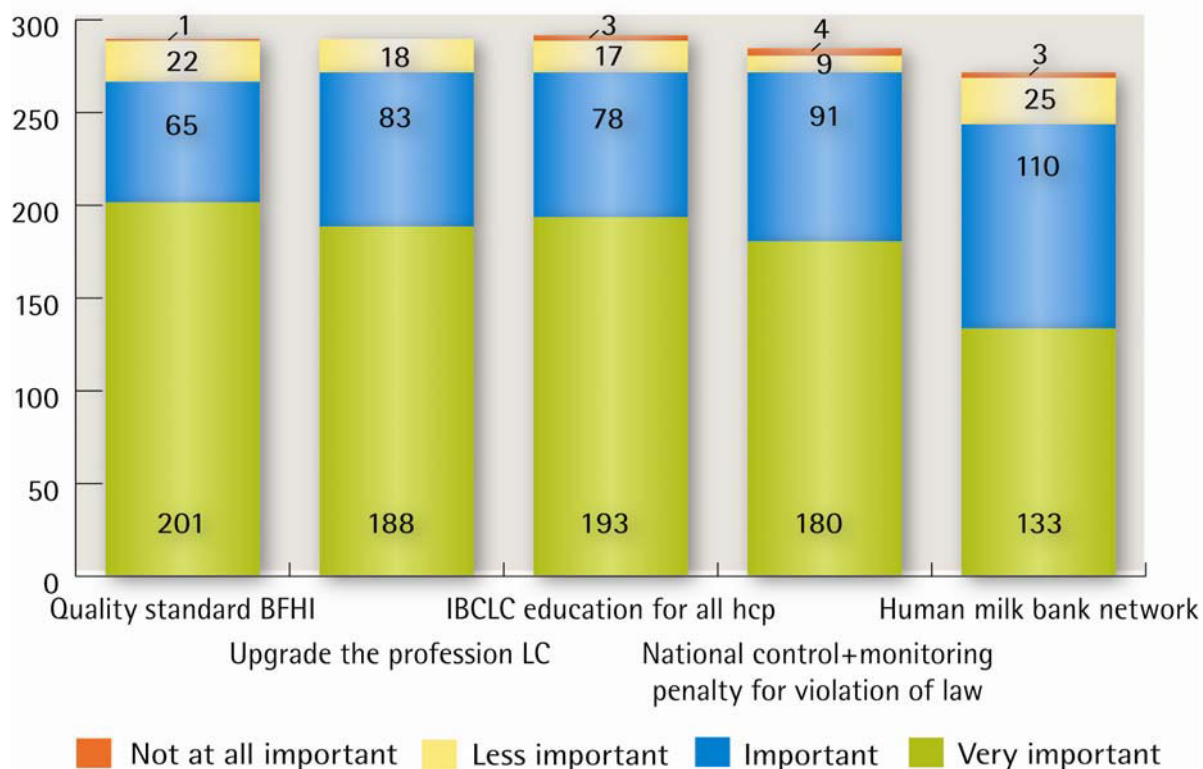


Figure 28: Effective measures for the promotion of breastfeeding



The results clearly show that the majority of experts categorise the 11 suggested measures “very important” or “important” within a range of 94 % to 80 % .

However, it was interesting to ask the few experts who had chosen „less important“ or „not at all important“, why they chose the deviating response categories, to find out why their answers deviated so clearly from the mainstream. This was possible because the experts had been asked in the questionnaire to leave their e-mail contact voluntarily. Hence a second question round was conducted to determine the reasons for the deviations.

In the following, the measures and deviating opinions will be discussed in the order of the priority ranking.

1. Rank: Mothers should profit from integrated care, that means enjoy continued support of breastfeeding throughout pregnancy, birth and post-partum care (e.g. mother support groups)

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	292	9	3,87	0,38	256	34	1	1

With regard to the mean value, integrated care is considered the most important measure for the promotion of bf by the experts. The majority of international experts state that integrated care is the measure with the highest priority. The mean value is 3,87 with a strong agreement to integrated care as very important measure and a very slight standard deviation of 0,38.

Only 2 responders rate this item as less or not at all important. Due to the missing e-mail addresses of the experts it was not possible to find out the reasons for the two deviating opinions.

2. Rank: Promotion of bf should be integrated in the national health policies

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	291	10	3,86	0,39	252	37	2	0

The majority of international experts state that the promotion of bf should be integrated in the national health policy as second important measure in the ranking. The mean value is 3,86 with a slight standard deviation of 0,63.

Only 2 responders rate this item as less important. Due to the missing e-mail addresses it was not possible to catch the reasons for the two deviating opinions.

3. Rank: National education should advise people on the risks of substitutes and benefits of bf

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	290	11	3,74	0,5	224	57	9	0

The majority of international experts state that national education advising people on the risks of substitutes and benefits of breastfeeding is a very important measure as third important in the ranking. The mean value is 3,74 with a slight standard deviation of 0,5, which stresses this convincing result.

Discussion of deviating opinions

1 of the 9 responders who considered this measure less important could be questioned per e-mail on the reasons for the deviating evaluation. The responder was German and argued as follows:

Germany 1 response „less important“

Generally this measure is considered as useful by the German responder. However, considering the other measures, this measure was rated minor important, because:

- Restricted resources (e.g. financial resources) should be spent firstly to promote the other measures mentioned, since they are more important for the promotion of breastfeeding.
- The target audience would notice, understand and internalise only fragments of the message, which means a waste of financial resources
- Without the well-founded support of health care providers, the message might be understood as moral sermon that can't be put into practice, which means that the education of health care providers is by far more important than the education of the public

4. Rank: Promotion of research independent of economic interests

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	288	13	3,74	0,5	219	64	5	0

It is remarkable that research independent of economic interest ranks as fourth important in the priority ranking. The majority of international experts state that the promotion of research free of economic interest is a very important measure. The mean value is 3,74 with a slight standard deviation of 0,5. The need for action in the research sector is explained in detail in the items “open questions for researchers”, „my remarks about my current situation as researcher“, What makes you discontented?“ and „Expectations towards public health sciences“. Only 2 responders rate this item as less important. Due to the missing e-mail addresses it was not possible to find out the reasons for the two deviating opinions.

5. Rank: National campaigns for bf should be started in the media

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	289	12	3,73	0,51	219	61	9	0

The majority of international experts state that national campaigns should be started in the media as very important measure ranking as 5th important measure with a mean value of 3,73

Discussion of deviating opinions

Only 9 responders rate this item as less important. One Canadian responder states the following reasons for her estimation:

Canada 1 response „less important“

- Promotional campaigns and social marketing are mostly not being done in a sensitive way
- Mother support groups with other bf mothers as role models are much more important than campaigns.

6. Rank: The international code for the marketing of substitutes should become legally binding as a law

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	289	12	3,7	0,6	220	56	9	4

The majority of international experts state that the code should become legally binding as a law as very important measure. The mean value is 3,7, ranking 6th important in the priority or mean value ranking.

Discussion of deviating opinions

Fortunately it was possible to obtain a lot of opinions on this item, which has led to a lively discussion. In the following there is a list of the arguments for the evaluation as less or not at all important:

Ireland 1 response “not at all important“

A responder from Ireland states she is against too many governmental regulations, even for harmful practices (e.g. alcohol) to prevent us from becoming a more and more regulated society

Austria 2 responses „less important“

A responder from Austria states that she answered this questionnaire from her personal point of view and that she would leave laws to the decision of the legislative power.

Another Austrian responder states that substitute providers would always find loopholes to avoid a restrictive law

USA 1 response “not at all important“

An American responder mentions the following reasons:

- Laws to restrict the marketing of substitutes are mostly needed in developing countries and are of major importance in this setting
- Bottles and teats, which also underlie the international code for the marketing of substitutes, are nowadays mostly used to combine modern work requirements with breastfeeding, since 80% of the mothers consulted by the responder go back to work within the first few months after birth. Therefore the advertisement should not be restricted.
- It is important to support mothers' self-esteem with positive impact on the well-being of the baby by avoiding devaluing the necessary devices teats and bottles, since most mothers don't have the chance to stay at home throughout the first year of life of their babies.

Another US American responder states the following (1 response „less important“):

- The agricultural lobby in the US is so strong that it will not be possible to pass a law on restricting substitute adverts
- The WIC tradition to provide poor families with free-of-charge formula in the US is hard to overcome in the US. The US government has been the largest infant formula purchaser in the world and thus has strengthened formula producers. When a government provides formula, people think that this must be a good and healthy practice. This tradition is not easy to overcome.
- Advertising has become a way of life. Restrictions of adverts might therefore be understood as cutting the freedom of opinion.

7. Rank: Certification BFH as quality standard

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	289	12	3,61	0,64	201	65	22	1

The majority of international experts state that BFH as quality standard is very important. The mean value is 3,61 with a strong agreement to BFH as very important measure with a slight standard deviation of 0,64, which stresses this convincing result.

Discussion of deviating opinions

22 responders evaluated BFH as hospital quality standard as less important, while 1 responder rated it not at all important. In the following are the reasons for several deviating evaluations, classified by countries of responders:

Germany 1 response „less important“

1 German responder valued the importance of all the measures with respect to her personal work environment. She and her team had been trying to change routines towards becoming baby-friendly for many years without success, which frustrated her and her team. She rates this measure less important for her hospital out of resignation.

One Romanian and one American responder complain about the misuse of the certification:

Romania 1 response „less important“

- The responder complains about a study on BFH conducted by NCBF in Romania with deficits in quality („they don't do their job fairly“). The validity of this study and its outcome is doubted by the Romanian participant.
- „The ministry of health proclaims that they support breastfeeding, but don't do much for that.“
- Misuse of the certification baby-friendly hospital: According to the responder, the certified BFH in Romania is not working according to WHO / UNICEF standards.

USA 1 response „less important“

- Misuse of the certification: The certified BFH in the environment of the US LC responder does no longer work according to baby-friendly standards, since the management has changed and dismissed all the certified LCs. In spite of this, the hospital has not yet lost the certification.
- Some employees who are being dictated new standards find ways to avoid them.

8. Rank: The profession LC should be upgraded in earnings and working possibilities

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	289	12	3,59	0,6	188	83	18	

The majority of international experts state that upgrading the profession LC in earnings and working possibilities is a very important measure. The mean value is 3,59 with a slight standard deviation of 0,6. However, the 8th rank for an upgrade in earnings of the own profession contributes to the impression of LCs mainly altruistic motivation on job.

Discussion of deviating opinions

One US LC of the minority of 18 responders evaluating this measure less important answered the following:

USA 1 response „less important“

- The young profession LC has not yet developed enough in education and professional standards to be upgraded in earnings
- However, reimbursements of LC by health insurances would be very useful

9. Rank: The IBCLC special knowledge and skills should be integrated in the education and become standard education of all health care providers who give advice to mothers

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	291	10	3,58	0,65	193	78	17	3

The majority of international experts state that IBCLC skills and knowledge should make part of the education of hcp giving advice to mothers and children as very important measure. The mean value is 3,58 with a strong agreement to BFH as very important measure with a slight standard deviation of 0,65, which stresses this convincing result.

Discussion of deviating opinions

4 responders of the minority evaluating this measure as less or not at all important have answered the further enquiry on reasons for this deviation. The responders were Canadian, US American and Italian:

Canada 1 response „not at all important“

- LC should not become a technical issue, because listening to mothers is more important than techniques

USA 2 responses „less important“

- This measure would decrease the working possibilities for LCs strongly
- Suggestion for an improved measure: Improved referral practice
- Basic knowledge for other hcp instead of IBCLC education

Italy 1 response „not at all important“

- There should be a distinction of basic breastfeeding knowledge which every hcp should have, best by the WHO/UNICEF 18h training course
- LCs should focus on sophisticated issues, while the regular health care providers should be able to provide baseline care for breastfeeding mothers

Two more participants from the USA and Italy pleaded for basic LC knowledge of all health care providers instead of IBCLC knowledge.

10. Rank: National control and monitoring of and penalty for violation of this law

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	284	17	3,57	0,63	180	91	9	4

The majority of international experts state that the code should be monitored and punished in case of violation as very important or important measure with a tendency towards very important. The mean value is 3,57 with an agreement to monitoring and penalty as very important or important measure with a slight standard deviation of 0,63.

Discussion of deviating opinions

13 participants consider this measure as less or not at all important. Two American responders state the following reasons for this minority opinion:

USA - 1 response „not at all important“

- Negative judgements are not helpful, because they might divide people into two parties.

1 response „less important“

- The US government can't even control illegal drugs. A control of the food industry is not feasible or practicable.
- Advert control would be regarded a waste of time and money by the US public, who is used to the positive substitute image created by the governmental WIC program. Thus this change of attitude of the government towards substitutes would represent an about-face change hard to understand by the public.

11. Rank: Development of a human milk bank network

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	271	30	3,38	0,7	133	110	25	3

The human milk bank measure scored more missing values than the other measures. On further enquiry, a professor who tested the questionnaire admitted not to be sufficiently informed on milk banking. The 30 missing values might indicate a lack of awareness amongst the experts of this topic and indicate a need for further education of the experts.

The majority of international experts state that the development of a human milk bank network is a very important or important measure. The mean value is 3,38 with a slight standard deviation of 0,7.

In the following, 2 diagrams show the priority ranking of measures to promote breastfeeding according to the mean value, as evaluated by the experts:

Figure 29: Mean value ranking

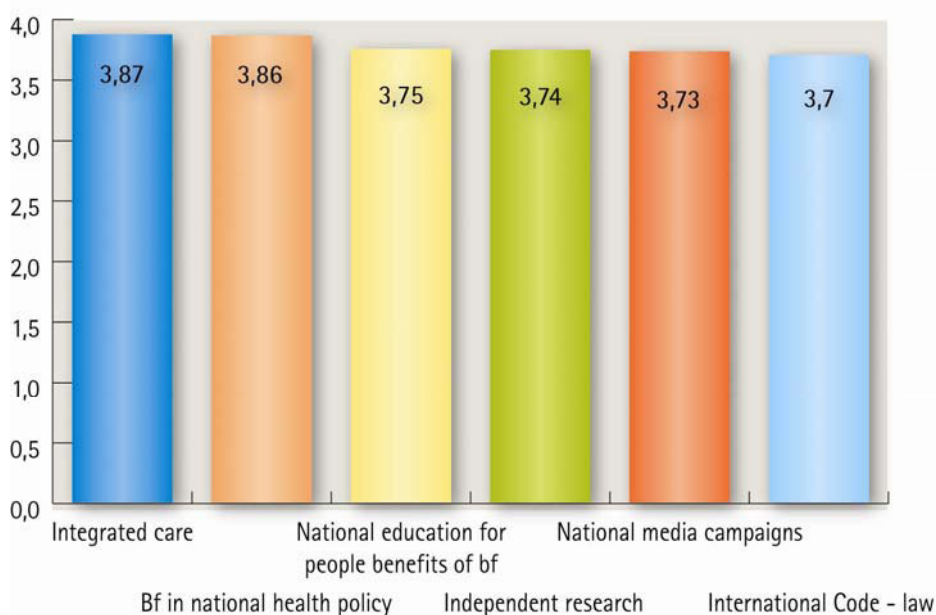
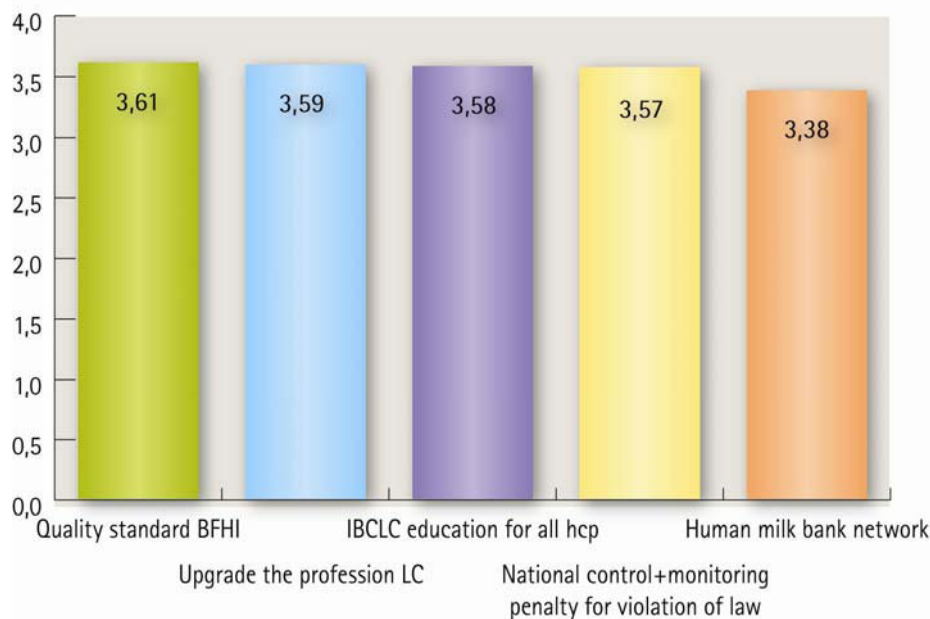


Figure 30: Mean value ranking



Results of the closed question „effective measures for the promotion of breastfeeding“

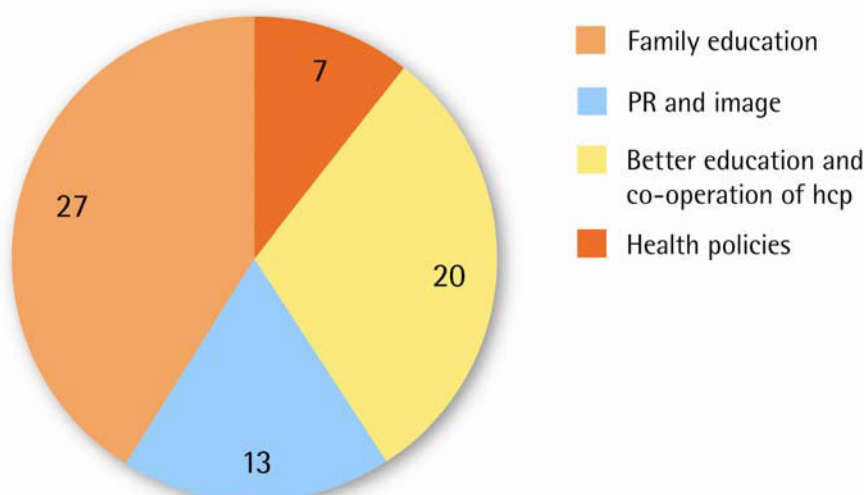
This item has a clear outcome concerning the importance of measures. Each of the 11 measures presented to the experts ranks in the range of very important to important (mean value 3,87 – 3,38). There seems to be an international need for action to implement the suggested measures. The discussion with deviating opinions provides a deeper insight in the possible obstacles of implementation. According to the experts with deviating opinions, some measure are only useful after the implementation of others. Therefore it might be useful to investigate beyond the importance priority of measures on the interdependence of measures. The experts' concerted opinions with homogeneous agreement throughout the suggested measures might be important for political argumentation, convincing and implementation of the measures. The concerted opinion of international experts might serve as back-up for political claims or petitions.

Other effective measures to promote bf: open question

66 responders = 22%

The open question on effective measures to promote bf shows the following range of answers: Family education, PR and image of bf, better education and co-operation of health care providers and health policies. These are in an overview:

Figure 31: Other effective measures to promote bf



The following tables and figures show the responses in the above mentioned response groups in detail:

Table 35: Other effective measures to promote breastfeeding for families and parents

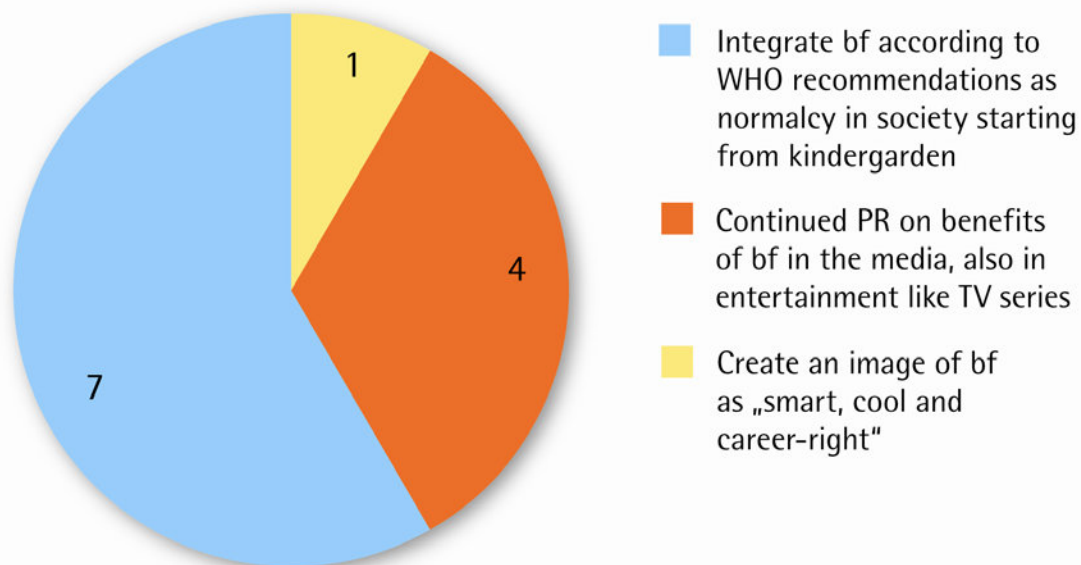
27 responses = 9% of all responders

Number of responses	Category	Percentage of valid responses	Percentage of all responses
13	School education on bf starting at kindergarten age and development of books with bf illustration	48 %	4 %
3	Financial incentives for bf, bonus paid by health insurances and confirmed by paediatrician at well-baby check, remuneration for donation of human milk	11 %	1 %
3	A longer period of maternal leave, improved parental leave	11 %	1 %
3	Promotion of mother support group organizations like LLL	11 %	1 %
2	Prenatal courses on bf including relatives (fathers, aunts, grand-parents)	7 %	0,7 %
2	Maternity units should be family-oriented and the lactational amenorrhea method should be included in family planning counselling	7 %	0,7 %
1	Network of counselling centres for mothers	4 %	0,3 %

Families should benefit from a network of counselling centers, more support groups, prenatal courses, improved parental leave, financial incentives for bf and education on the benefits of bf starting at kindergarten age.

Itemization of response groups

Figure 32: Other effective measures to promote bf: PR and image



12 responses = 4% of all responders

In the field of PR and image, the experts claim that bf should become the normalcy in society, that media should communicate the benefits of bf continuously and create an image of bf as smart, cool and career-right.

Table 36: Other effective measures - better education and co-operation of hcp

20 responses = 7% of all responses

Number of responses	Category	Percentage of valid responses	Percentage of all responses
9	LC education as standard for hcp with the focus on physicians, and additionally for social workers, psychologists and day-care nurses	45 %	3 %
6	Financial support of health insurances for bf promotion as preventive measure, Health insurances should pay LC, give discount for bf mothers and restrict interventions at birth	30 %	2 %
3	Networking of bf promotion unions like consulting centres, roundtable of hcp, better co-operation	15 %	1 %
2	Improvement of interdisciplinary co-operation e.g. co-operation of voluntary and professional LCs and of paediatricians and LCs	10 %	0,7 %

Hcp, social workers, day care nurses and psychologists should have a basic education on bf to improve the interdisciplinary co-operation. Health insurances should promote bf with financial support and incentives.

Table 37: Other effective measures – health policies: Legislation measures

7 responses = 2,3% of all responders

Number of responses	Category	Percentage of valid responses	Percentage of all responses
1	Tax formula: triple the price (criteria to waiver formula tax in special circumstances)– use the money for health promotion	14 %	0,3 %
1	Abolish financial incentives for substitutes (e.g. from WIC or other assistance programs) and educate mothers about bf and bonding	14 %	0,3 %
1	Political decisions: Those who benefit from the lack of bf should pay for the damage in the health care system	14 %	0,3 %
1	Better control of substitute marketing	14 %	0,3 %
1	Formula only given after 2 signatures: Nurse LC, physician LC, + on prescription	14 %	0,3 %
1	It should require 2 physicians or one physician and 2 midwives to sign off on interventions in childbirth	14 %	0,3 %
1	To prohibit the symbol „bottle“ in public places and replace it	14 %	0,3 %

Legislation and taxes should promote bf and discourage formula use and interventions in childbirth. Those who benefit from the lack of bf should pay for the damage in the health care system. The penalty fees and the taxes should be used to promote bf.

Summary of results of “other measures to promote bf”

The open questions of the “Other effective measures” category resulted in 4 response groups. The first group focuses on PR measures to improve the image of breastfeeding in society.

The second response group focuses on the improvement of health care providers’ education on breastfeeding, financial support of health insurances and better co-operation and networking. The third category focuses on education, on one hand of health care providers and other officials, and on the other hand of the public, starting at kindergarten age.

The fourth category refers to legislation and includes the following measures:

- Financial incentives for breastfeeding by raising the price of formula and abolishing formula-promoting incentives e.g. WIC, better control of substitutes’ marketing
- Liability and penalty regulations to pay for the damage in the health care systems caused by formula use
- Restriction of supplementing practices in hospital by prescription and signature regulations
- Restriction of child birth interventions by signature regulations

Thus, the effective measures suggested by the experts refer to law, liability and damage adjustment regulations, as well as control of interventions in childbirth and supplementing to prevent unnecessary practices with a negative impact on breastfeeding.

4.9 Part IV Open questions for all responders, future prospects and limitations

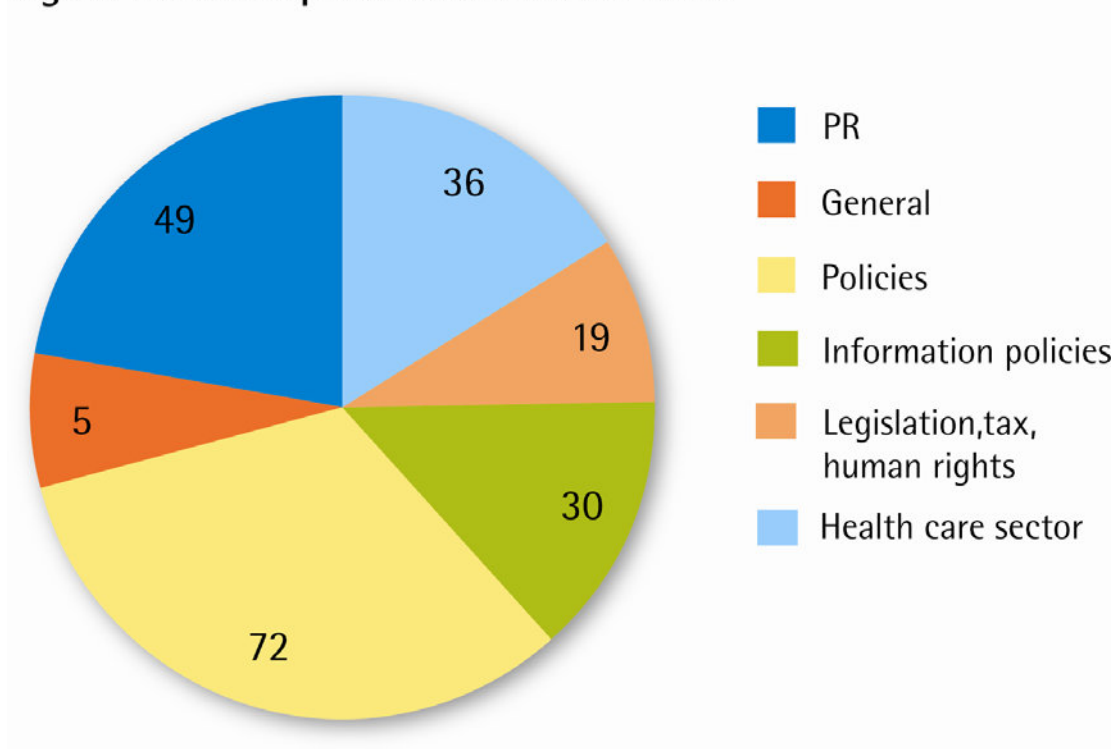
The open questions have been evaluated in the following ways:

1. Overview of response groups and discussion
2. Presentation of different responses in the response groups

4.9.1 Expectations towards the National Committee for Breastfeeding: Overview of response groups

All expectations towards NCBF 221 responders = 74% of all participants

Figure 33: All expectations towards NCBF



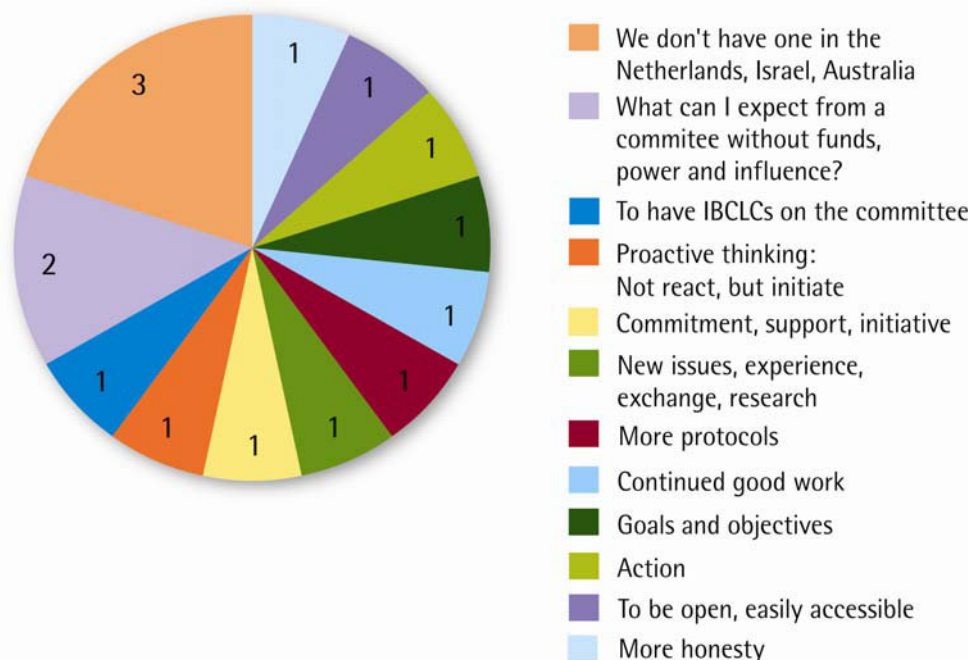
The majority of responders expect policies from the NCBF (72 responders = 33% / 24% of the sample). PR is the next ranking expectation with 49 responders = 22% / 16% of the sample. The integration of LC in the health care sector is next in ranking with 36 responders 16% / 12% of the sample. 30 responders require better information policies from NCBF 14% / 10% of the sample. 19 responders want NCBF to get involved in legislation, tax and human rights 9% / 6% of the sample. 15 responders have general expectations towards NCBF 7% / 5% of the sample.

4.9.2 Expectations towards NCBF: Itemization of response groups

General expectations towards NCBF:

15 responses total = 7% of valid responses = 5% of all participants

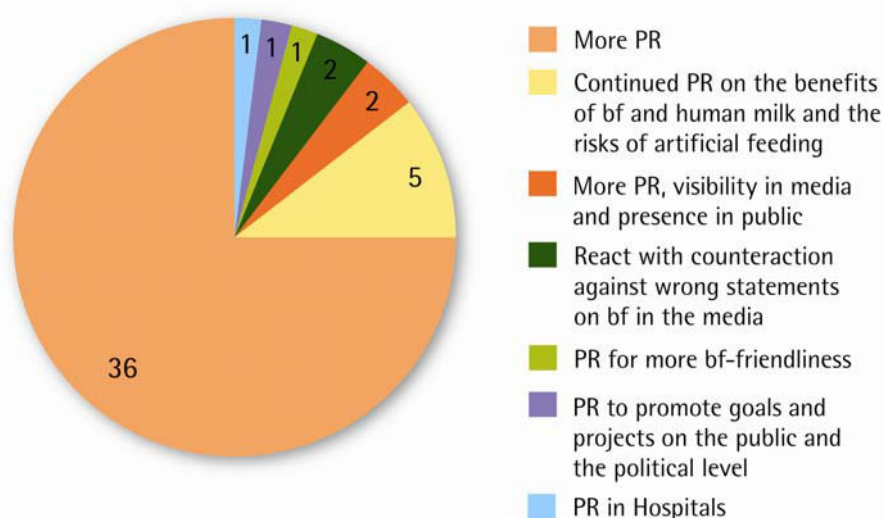
Figure 34: General expectations towards NCBF



Regarding general expectations, the experts of some countries state to have no NCBF founded yet in their countries of residence. 2 experts criticise the lack of influence, funds and power of the existing NCBFs. Other expectations are to have IBCLCs on the committee, initiative, exchange and research, more protocols, goals and objectives, to be easily accessible and more honesty.

Expectations towards NCBF – PR: 48 total responses = 22 % of valid responses = 16 % of all participants

Figure 35: Expectations towards NCBF: PR



48 experts expect continued PR from the NCBFs on the benefits of bf and the risks of substitutes and for more bf-friendliness, more presence in public, visibility in the media and to promote their goals and projects on the public and political level.

Table 38: Expectations towards NCBF: Health policies

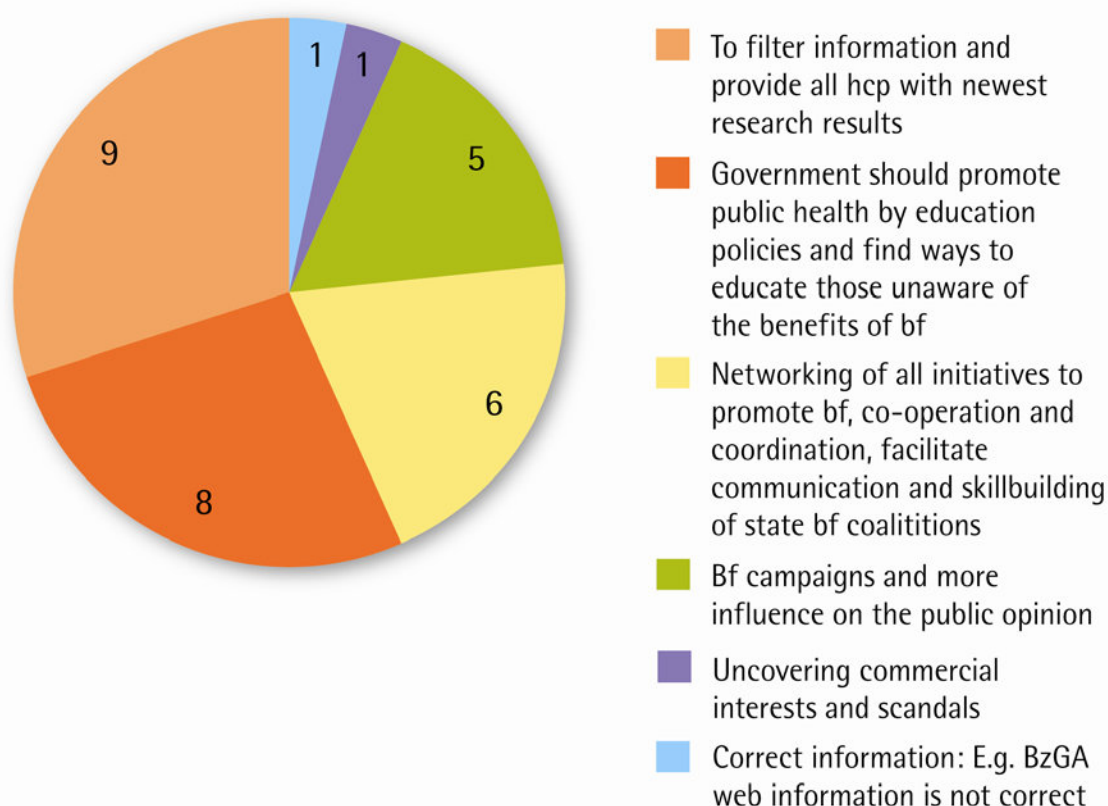
- 72 responses = 32 % of valid responses = 24% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all responses
29	An impact on health policies and the health care sector to promote bf	40 %	10 %
13	Set national policy, revise policies regularly, regular meetings	18 %	4 %
5	Implementation of policies with governmental support	7 %	2 %
3	Needs to be integrated into governmental bodies + financially supported by government	4 %	1 %
3	To implement bf as standard in all domains as the norm	4 %	1 %
3	Lobby work for bf	4 %	1 %
3	To take a firm stand for long-term bf with a clear position: Solids not before 7th month	4 %	1 %
2	More political weight, apply political pressure	3 %	0,7 %
2	Facilitate communication and skill-building of state bf coalitions	3 %	0,7 %
2	Strong world-wide position as negotiating party, put bf in a global perspective	3 %	0,7 %
2	Working towards changing the culture to bf	3 %	0,7 %
2	Support (also financially) for new mother support groups with easy access	3 %	0,7 %
1	Implementation in community services	1 %	0,3 %
1	Increase the bf rate	1 %	0,3 %
1	Presenting a united front for bf advocacy	1 %	0,3 %

Concerning health policies, the experts expect from the NCBFs advocacy and lobby work for bf on the community, the national and the international level, an impact on health policies to promote bf according to WHO recommendations, to facilitate communication and support mother support groups.

Expectations towards NCBF: Information policies 30 responses =14% of valid responses =10% of all participants

Figure 36: Expectations towards NCBF: Information policies



Information policies represents one of the major claims the experts have towards the NCBF including education policies (e.g. campaigns for bf)), to filter research and provide practitioners with the newest research results, to provide correct information and to uncover misinformation and scandals.

Table 39: Expectations towards NCBF: Legislation, tax, human rights

19 responses = 9% of valid responses = 6% of all participants

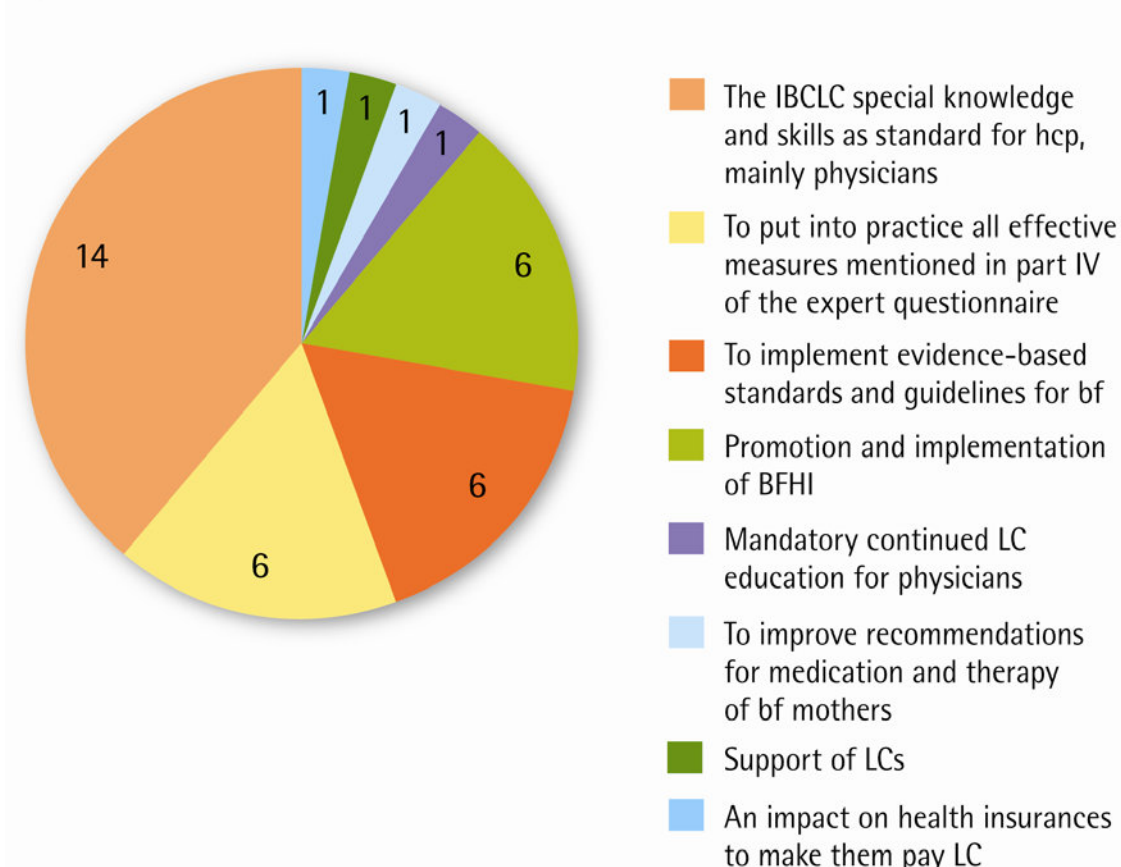
Number of responses	Category	Percentage of valid responses	Percentage of all responses
4	To implement and uphold the international code for the marketing of substitutes and prohibit PR for substitutes	21 %	1,3 %
3	Monitoring of the code	16 %	1 %
3	Enforcement of laws to promote, protect and support bf	16 %	1 %
3	A strong policy that is supported by appropriate legislation to give adequate maternity leave and bf breaks, advocacy for the rights of the bf mother and integrated bf policy	16 %	1 %

1	Freedom from commercial interests	5 %	0,3 %
1	Formula tax	5 %	0,3 %
1	Work for the policy: Those who benefit from the lack of bf should pay for the damage in the health care system	5 %	0,3 %
1	Same rights for mothers and babies in all countries	5 %	0,3 %
1	All children should enjoy the same bf promotion, strict control of implemented rules	5 %	0,3 %
1	Better compliance by means of incentives rather than law	5 %	0,3 %

The experts expect from the NCBF to implement the code by legislation and to monitor it. Moreover, further laws should promote and protect bf, e.g. formula tax or incentives, improved maternity leave and bf breaks. The experts plead for a global implementation of rights to protect mother and children.

Expectations towards NCBF: Health care sector - 36 responses = 12% of all participants

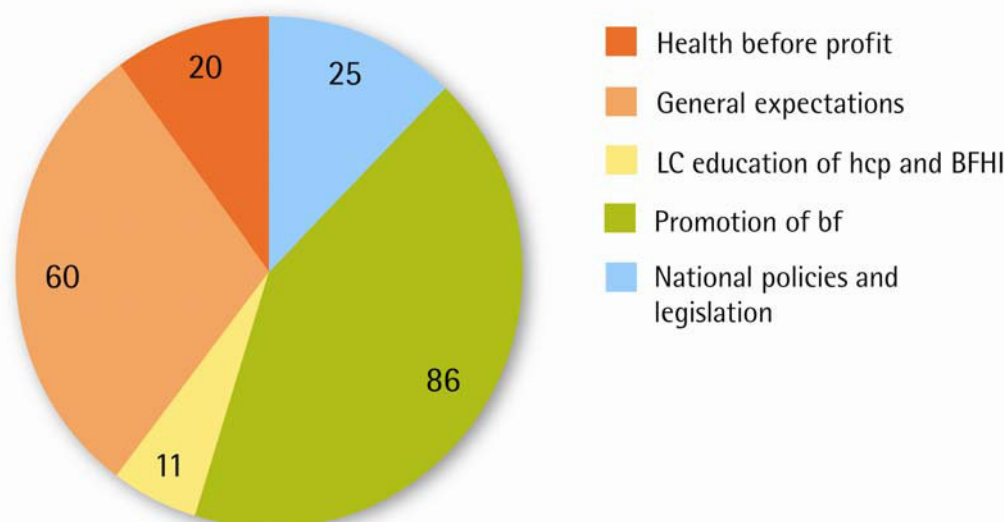
Figure 37: Expectations towards NCBF: Health care sector



4.9.3 Expectations towards Health Policies: Overview of response groups

All expectations towards health policies: 202 responders = 67% – ratio

Figure 38: All expectations towards health policies



The expectations towards health policies split into the following groups: 86 responders expect PR for bf from health policies, representing 43% of valid answers and 29% of the sample. 60 responders have general expectations towards health policies, representing 30% of the valid responses and 20% of the sample. 25 responders expect national policies and legislation, representing 12% of the valid responses and 8% of the sample. 20 responders expect a „health before profit“ attitude, representing 10% of the valid responses and 7% of the sample. 11 responders demand LC education of hcp and the promotion of BFH from health policies, representing 5% of the valid responses and 4% of the sample.

4.9.4 Expectations towards Health Policies: Itemization of response groups

Table 40: Expectations towards health policies – **health before profit**

20 responses = 7% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
2	Not to be corrupted by the substitute industry; to overcome or avoid pressure of formula industry at all levels	10 %	0,7 %
2	To legalize the code	10 %	0,7 %
1	Health before economics	5 %	0,3 %
1	Support of health and prevention instead of economic interests	5 %	0,3 %
1	Costs should not be the primary concern	5 %	0,3 %
1	To promote health in opposition to lobbyists	5 %	0,3 %

1	To abandon the economic interests of the pharmaceutical industry	5 %	0,3 %
1	To base its work on evidence rather than on economics and tradition	5 %	0,3 %
1	Health policies should support independent research	5 %	0,3 %
1	Family-centred policies instead of commercial interests	5 %	0,3 %
1	The child's well-being and benefit should be the target, not the own well-being and benefit	5 %	0,3 %
1	Health of children should become priority	5 %	0,3 %
1	To act for children and not for profit	5 %	0,3 %
1	To tell the truth about babies' nutrition, and that economic interests will no longer be the priority	5 %	0,3 %
1	Show substitutes as a risky food	5 %	0,3 %
1	To support bf by discouraging bottle feeding	5 %	0,3 %
1	Formula tax	5 %	0,3 %
1	Formula industry has to pay 20% for each sold product to health insurance, then health insurance in turn pays for bf promotion	5 %	0,3 %

Health policies should not be corrupted by the industry and act for health instead of profit. Health policies should be based on evidence rather than on economics or tradition and therefore promote bf and show substitutes as a risky food. Health policies should implement formula tax to be used for the promotion of bf.

Table 41: Expectations towards health policies: General

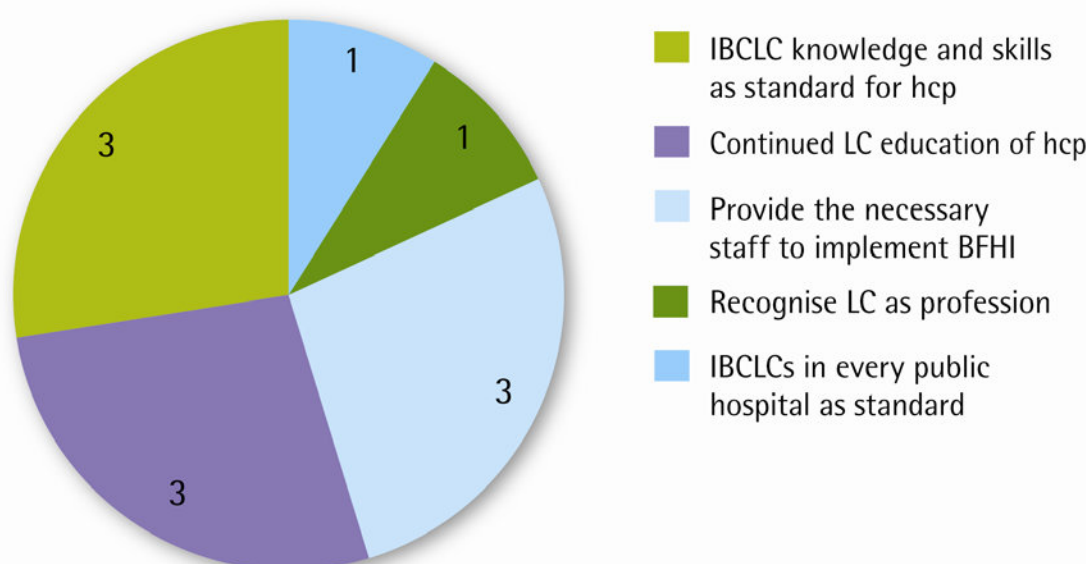
59 responses = 20 % of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
25	More PR, campaigns and education on the benefits of bf and risks of substitutes	42,00%	8,00%
6	Promotion for bf mothers to get LC support and better maternal leave	10,00%	2,00%
6	To promote bf with incentives, e.g. bonus payment for bf	10,00%	2,00%
5	Health insurances should pay LC costs	8,00%	1,70%
3	More appreciation for the health benefits	5,00%	1,00%

	of bf and the value of human milk		
3	To support mothers, babies, families, hcp	5,00%	1,00%
3	Policies based on the state of the art of research	5,00%	1,00%
1	Guidance	1,60%	0,30%
1	Social equality	1,60%	0,30%
1	More initiative for the health care system	1,60%	0,30%
1	To act according to logic and common sense	1,60%	0,30%
1	To take the subject bf seriously	1,60%	0,30%
1	More knowledge and understanding	1,60%	0,30%
1	To support the reproductive health continuum	1,60%	0,30%
1	To become bf-friendly	1,60%	0,30%

In general health policies should promote the benefits of bf and the risks of substitutes with campaigns, introduce incentives for bf, make health insurances pay LC costs, support the reproductive health continuum and become bf-friendly.

Figure 39: Expectations towards health policies: LC education of hcp and BFHI



11 responses / 4 % of all participants

Health policies should focus on the education of hcp in the lactation field, provide the necessary staff for the implementation of BFH including IBCLCs in every public hospital as standard and recognise LC as profession.

Table 42: Expectations towards health policies – promotion of bf

86 responses = 29% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
27	Promotion and protection of bf by policies	31 %	9 %
16	Acknowledge and implement bf promotion as primary and priority prevention and health promoting factor	19 %	5 %
14	Funds to implement basic bf policy	16 %	5 %
6	Policies to promote bf as the norm, towards a bf culture	7 %	2 %
5	National guidelines and standards	6 %	2 %
4	Implementation of existing programs for a bf promotion policy including the recommendations of NCBF	5 %	1 %
4	Implement WHO and UNICEF standards and adhere to the code	5 %	1 %
3	Implement all effective measure of the expert questionnaire, part IV	4 %	1 %
3	To pick bf out as a central theme and point out the far ranging consequences	4 %	1 %
2	Implementation of bf promotion measures by promoting the co-operation of hcp: Physicians and LCs	2 %	0,7 %
2	More investment in prevention and research	2 %	0,7 %

According to the experts, bf should be promoted and supported by policies as primary prevention and health promoting factor according to the WHO and UNICEF measures and NCBF recommendations e.g. by the implementation of national guidelines and standards. Bf should be picked out as a central theme with more investments in prevention and research.

Table 43: Expectations towards health policies–national policies and legislation

25 responses = 8% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
7	International code to become binding as a law, national control and monitoring of and penalty for violation of this law	28 %	2 %
3	To set clear detailed policy on bf with productivity and a follow-up of policies to validate them	12 %	1 %
3	Enforcement of laws to promote, protect and support bf as the norm	12 %	1 %

2	Baby Friendly Community Initiative (New Zealand): Actively promote + inform + monitor and fully support bf at all levels: School, health, community	8 %	0,7 %
2	Integrate LC into the National health care system	8 %	0,7 %
2	Clear support of international recommendations, control of industry	8 %	0,7 %
2	Start health policies at birth, don't wait for school age	8 %	0,7 %
1	In Australia changes have been implemented by individual states, but it requires a complete national policy	4 %	0,3 %
1	Clear standards and efficiency like in North European countries	4 %	0,3 %
1	Co-operation with NCBF	4 %	0,3 %
1	Physicians with knowledge on bf should be consultants on health policy	4 %	0,3 %

The International Code should become binding as a law with national control and monitoring of and penalty for violation of this law. Moreover, the baby-friendly community initiative should be implemented, the profession LC should be integrated in the national health care systems, there should be a co-operation with NCBF and physicians with knowledge of bf should advise governments on health policies.

4.9.5 Expectations towards Health Sciences: Overview of response groups

All expectations towards health sciences: 139 responses = 46 % of all participants

Figure 40: All expectations towards health sciences



53 responders expect more research with better quality representing 38% of responders and 18% of the sample. 31 responders expect PR of results, communication, information, education and

co-operation with 22% of responders and 18% of the sample. 23 responders (17% / 8% all) want researchers to stay independent of substitute producers and adhere to the code. 19 responders (14% / 6% all) want practice-oriented research. 13 responders (9% / 4% all) want researchers to have a better knowledge of bf, adapt their definitions according to WHO definitions and to consider bf the norm.

4.9.6 Expectations towards Health Sciences – Itemization of response groups

Table 44: Expectations towards health sciences: More research, better quality

53 responses = 18 % of all participants

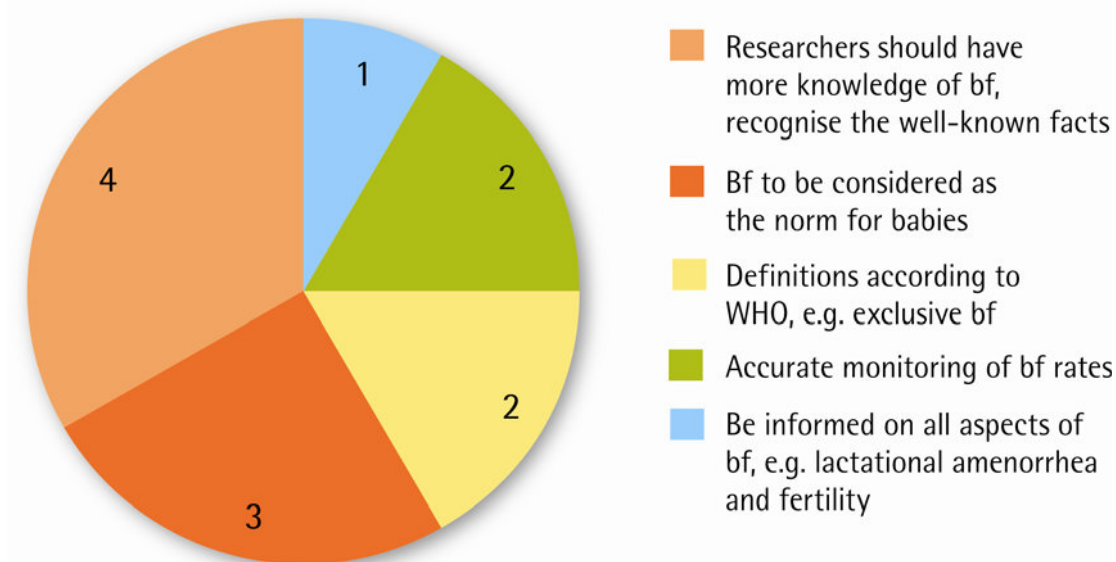
Number of responses	Category	Percentage of valid responses	Percentage of all participants
9	Evidence based research, hard data, broad studies	17 %	3 %
7	More research on bf, new insights, more interest	13 %	2 %
6	Research to find more evidence on the benefits of bf, also the socio-economic benefits	11 %	2 %
5	Valuing the health benefits of human milk as natural nutrition	9 %	2 %
3	To carry out serious studies to support bf with good evidence and methodologically sound studies	6 %	1 %
3	Focus on the promotion of bf as one of the most important prevention measures	6 %	1 %
3	Research on bf that includes both mother and baby	6 %	1 %
2	Promoting health benefits of bf + risks associated with use of alien milks + juices	6 %	1 %
2	Relationship between type of birth and duration of bf or long-term bf over 8 months	6 %	1 %
2	Up-to-date research results on bf promotion	6 %	1 %
1	More interdisciplinary research	2 %	0,3 %
1	Set priorities for essential research	2 %	0,3 %
1	Improved quality of studies, research on 6 months exclusive bf, more ethics in child research	2 %	0,3 %
1	To provide excellence in research and education on breast milk, feeding and outcomes	2 %	0,3 %
1	Better post partum care, better education	2 %	0,3 %

1	Scientific and factual answers to remaining questions	2 %	0,3 %
1	Endorsement of bf as a science	2 %	0,3 %
1	Bf and gender	2 %	0,3 %
1	Mainstream the role of bf in every aspect of public health where it is relevant	2 %	0,3 %
1	More research and expertise on the effectiveness of bf interventions	2 %	0,3 %
1	Public health sciences should research into culturally appropriate fields to suit the needs of regions and countries	2 %	0,3 %

The main claims of the experts are to intensify research on bf and at the same time improve the quality of research with more ethics in child research.

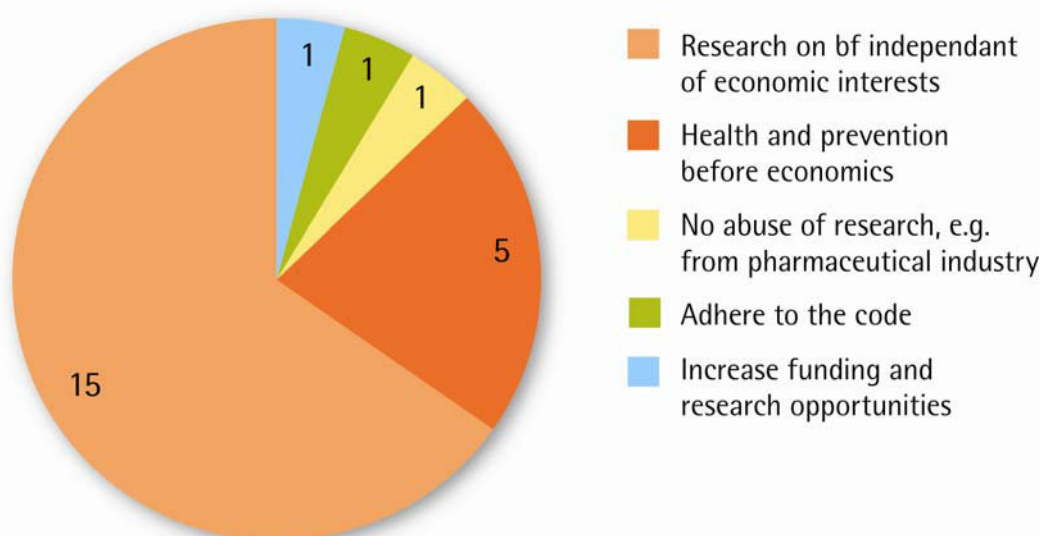
Expectations towards health sciences: Better knowledge of bf, definitions according to WHO standards, bf as the norm: 13 responses = 4,3% of all participants

Figure 41: Expectations towards health sciences: Better knowledge of bf, definitions according to WHO standards, bf as the norm



Researchers should be informed of all aspects of bf, recognise the well-known facts and consider bf as the norm for babies. The definitions of bf should be according to WHO standards, while bf rates should be monitored accurately.

Figure 42: Expectations towards health sciences: Independence of substitute producers, adherence to the code



23 responses = 8 % of all participants

Research should be independent of economic interests, e.g. the pharmaceutical industry, adhere to the code and set health before profit. Funding and research opportunities should be improved.

Table 45: Expectations towards health sciences: Practice-oriented research

19 responders = 6 % of all participants

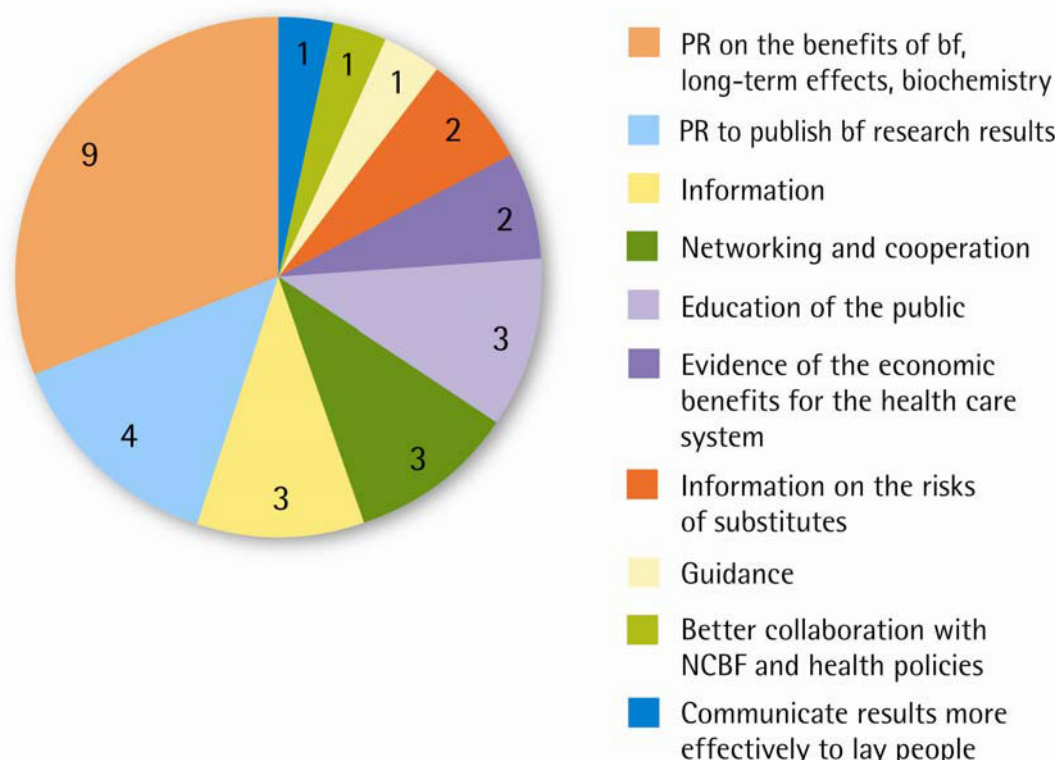
Number of responses	Category	Percentage of valid responses	Percentage of all participants
3	Implement research results into every-day practice	16 %	1 %
2	To translate research results into clear and understandable recommendations for practitioners	11 %	0,7 %
2	Public health sciences should include bf education at all levels, e.g. nutrition students and physicians, show them that LCs are valuable	11 %	0,7 %
2	Research on ways to support / encourage families to bf for infant health	11 %	0,7 %
2	To publish the hard data as basis for political action in health policies and support for the NCBF	5 %	0,3 %
1	Practice-oriented research	5 %	0,3 %
1	Research to back hcp	5 %	0,3 %

1	Evidence is needed to convince physicians	5 %	0,3 %
1	To promote the publication of bf research results for hcp	5 %	0,3 %
1	Intensive co-operation of science and practice	5 %	0,3 %
1	More studies together with LCs	5 %	0,3 %
1	Local statistics of bf	5 %	0,3 %
1	Data to encourage bf nationally	2 %	0,3 %

Research should be practice-oriented to back hcp and appropriate for every-day practice, while research results should be translated into understandable recommendations for practitioners. An intensive co-operation of science and practice is desirable.

Expectations towards health sciences: PR of results, communication, information, education, co-operation 31 / 10%

Figure 43: Expectations towards health sciences: PR of results, communication, information, education, cooperation



Health sciences should focus on the communication of their results on the public and political level for better networking and co-operation with NCBF and health policies. Moreover, health sciences should publish evidence of the economic benefits of bf promotion within the health care system.

4.9.4 Future prospects

The questions on future prospects have been evaluated statistically and with qualitative measures in the following ways:

1. Presentation of distribution and discussion
2. Overview of response groups to open questions and discussion

Distribution of quantitative questions on future prospects

Bf will be re-established over the next 2 decades slowly but inexorably

Sample	Valid	Missing	Mean value	Standard deviation	In all probability	Rather probable	Rather improbable	Very improbable
301	288	13	2,91	0,75	61	147	72	8

The majority of experts think that bf will probably or in all probability be re-established over the next 2 decades. 208 responders from 288 (=72%) think this is rather probable or in all probability and agree to the statement.

This result is remarkable, because LCs seem to take on the task of re-building the bf culture actively, since they confirmed in part II - question 4 of the current situation statements that it is the task of the hcp to re-build the bf culture. LCs seem to be willing to take on an active role in the process in the sense of the Lancet quotation (see preamble).

The climate change will bring about awareness of nature's superiority and will make people come back to bf as part of nature

Sample	Valid	Missing	Mean value	Standard deviation	In all probability	Rather probable	Rather improbable	Very improbable
301	291	10	2,53	0,77	29	117	124	21

The experts show strong ambivalence by the mean value of 2,53 with nearly equal distribution of agreement and disagreement.

The result also seems to imply that half of the experts don't believe in a strong impact of the climate change on people's lives,

In all industrial societies substitute producers will keep their market share

Sample	Valid	Missing	Mean value	Standard deviation	In all probability	Rather probable	Rather improbable	Very improbable
301	288	13	2,93	0,75	64	149	67	8

The experts think that substitute producers will keep their market share in the next 15-20 years.

This estimation seems to be a contradiction to an earlier statement. If breastfeeding will be re-established in the next 15-20 years, how can substitute producers keep their market share in the same period of time? A possible explanation might be, that the initiation of bf might increase (over 90%), while the duration of bf might decrease (weaning after 6 months).

We will be obliged to come back to bf in the next 20 years because of economical problems

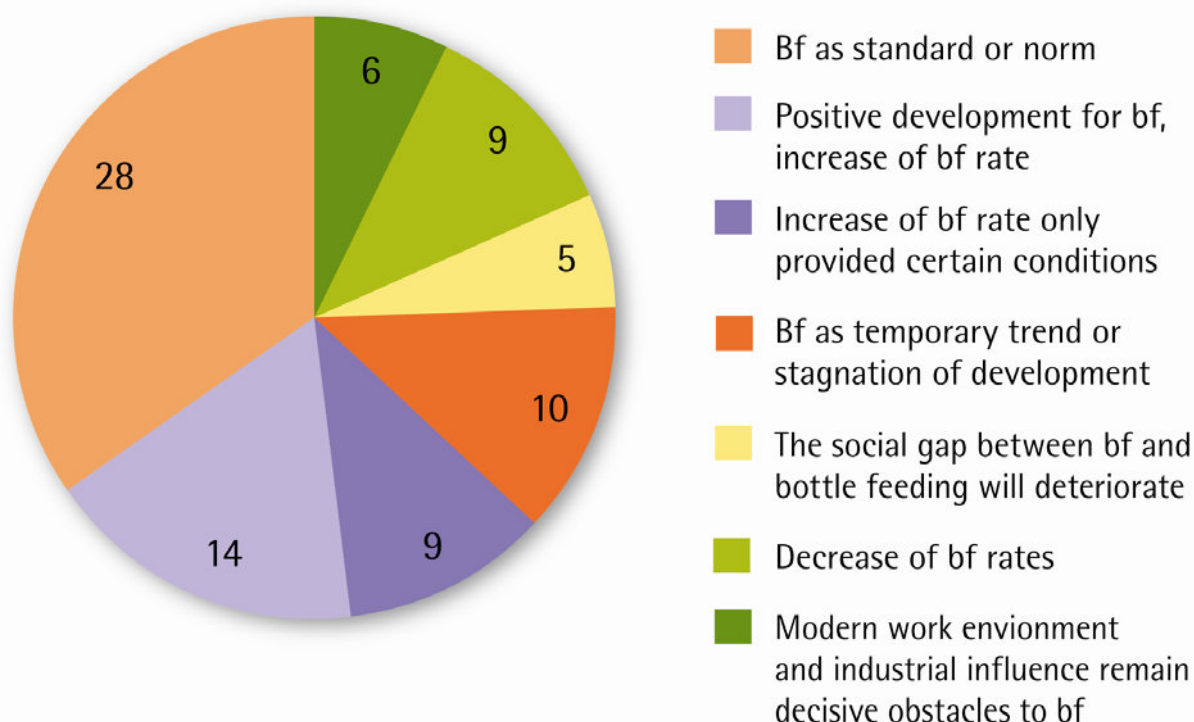
Sample	Valid	Missing	Mean value	Standard deviation	In all probability	Rather probable	Rather improbable	Very improbable
301	285	16	2,36	0,78	23	88	143	31

The experts show ambivalence with the mean value of 2,36. The result shows that the experts' opinions are divided with regard to an influence of economies on breastfeeding,

4.9.5 Other future prospects presentation and discussion - overview

Other future prospects: 81 responders = 27% of all participants

Figure 44: Other future prospects

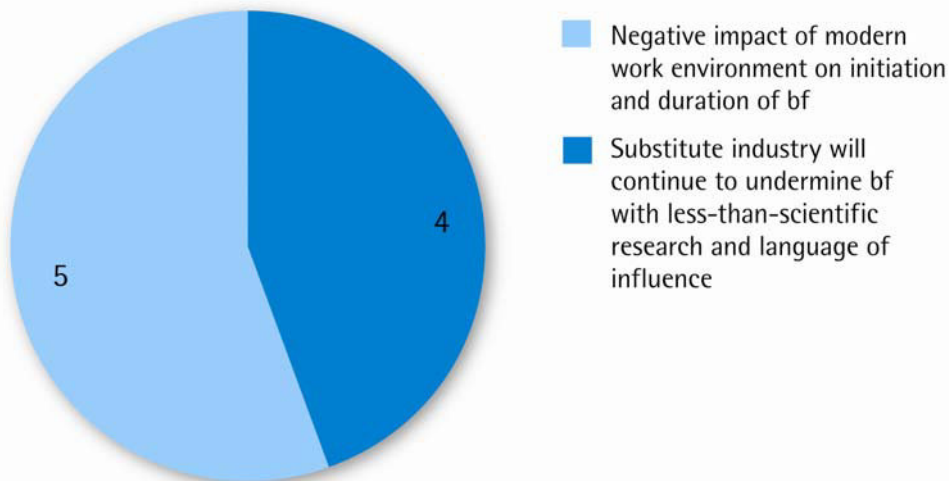


28 responders (35% / 9% all) foresee a positive development of bf in the future and an increase of the bf rate. 14 responders (17% / 5% all) predict an increase of the bf rate only if certain conditions are provided. 10 (12% / 3% all) responders predict that the social gap between bf and bottle feeding mothers and their families will deteriorate. 9 responders (11% / 3% all) think that bf will only be a temporary trend or that the development will stagnate. 9 responders (11% / 3% all) think that the modern work environment stays a decisive obstacle to bf. 6 responders (7% / 2% all) say that bf will become standard or the norm within the next 15-20 years. 5 responders (6% / 2%) foresee a decrease of bf in the next 15-20 years.

4.9.6 Other future prospects presentation and discussion: Itemization of response groups

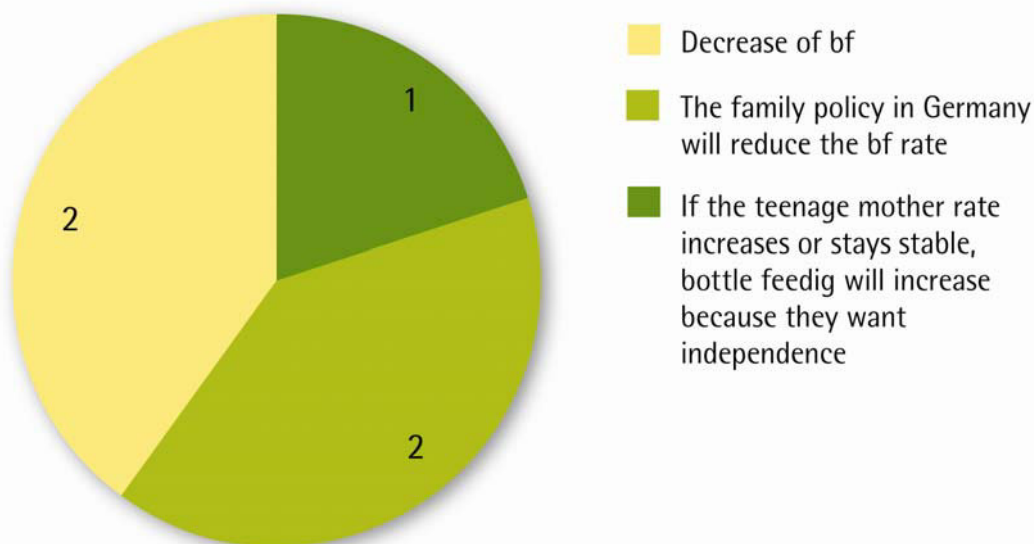
Modern work environment and industrial influence remain decisive obstacles to bf: 9 responses = 3% of all participants

Figure 45: Modern work environment and industrial influence



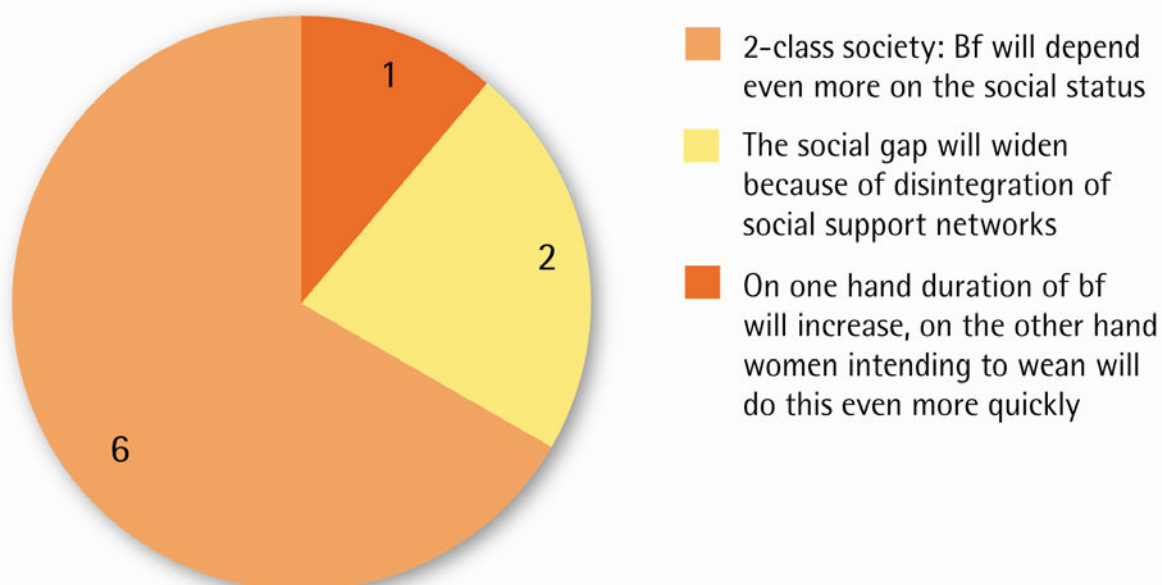
9 experts worry that the bf initiation and duration rates might decrease in the next 15-20 years because of the modern work environment or because of the influence of the substitute industry.

Figure 46: Decrease of the breastfeeding rate



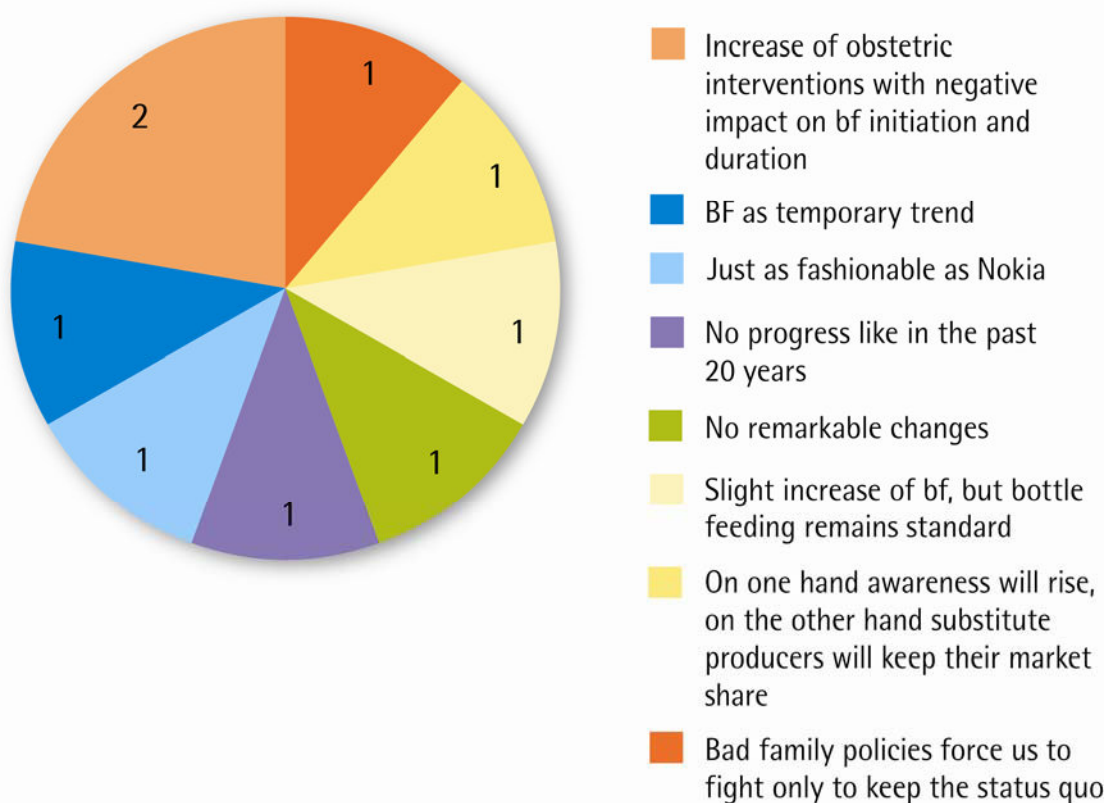
5 experts worry about a decrease of the bf rate because of the family policy in Germany or the high teenage mother rate, who prefer to be independent instead of bf.

Figure 47: The social gap between bf and bottle feeding mothers will deteriorate



9 experts fear a deterioration of the social gap between bf and bottle-feeding mothers (3 % of all participants).

Figure 48: Bf as temporary trend or stagnation of development



9 experts (3 % of all participants) estimate a stagnation of the development within the next 15-20 years, while bf remains a temporary trend, possibly due to an increase of birth interventions or bad family policies.

Table 46: Increase of the bf rate only provided certain conditions

14 responses = 5% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
2	A lot of work, little success, slow progress	14 %	0,7 %
1	Slight increase of bf rate	7 %	0,3 %
1	Slow increase of bf initiation, but not of duration	7 %	0,3 %
1	The fear of harmful additives in substitutes as well as the health benefits of bf lead to a slow increase in bf rate	7 %	0,3 %
1	Rather slowly developing awareness of benefits of bf	7 %	0,3 %
1	Bf will increase only if people gain inner strength and take steps to implement bf	7 %	0,3 %
1	The development of all protagonists is too slow	7 %	0,3 %
1	Depends on our work and overcoming cultural obstacles to bf, and on mass media representation of the bonding theory	7 %	0,3 %
1	Slow progress continues, teaching resistant hcp in hospitals will remain	7 %	0,3 %
1	The inflation will force people to save money and come back to bf	7 %	0,3 %
1	Without laws like a right to mother's milk the development will continue to be very slow	7 %	0,3 %
1	Progress is only possible with broad campaigns and large investments	7 %	0,3 %
1	No progress if professional Organizations and politicians don't wake up	7 %	0,3 %

14 experts predict a slow progress provided certain preconditions , e.g. broad campaigns and investments, legislation and the support of the mass media.

Table 47: Positive development for bf, increase of bf rate

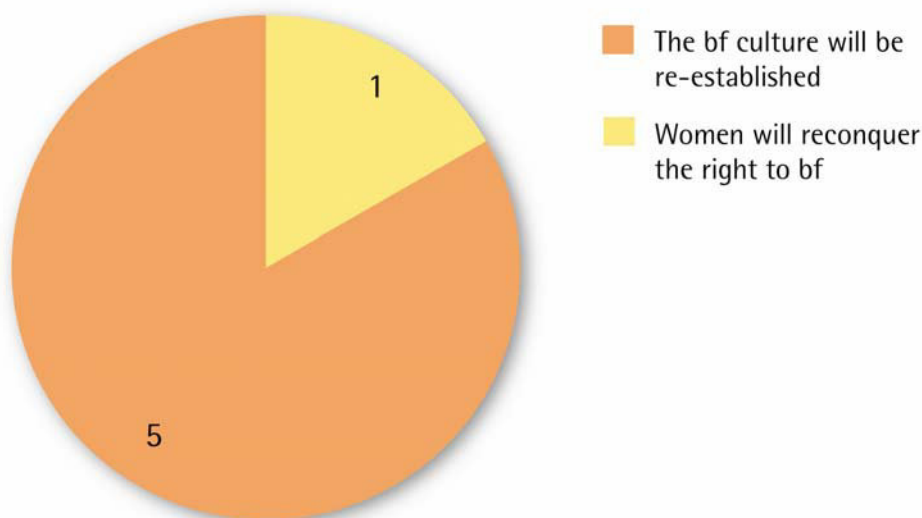
28 responses = 9% of all participants

Number of responses	Category	Percentage of valid responses	Percentage of all participants
9	Increase of bf practice and knowledge, more initiation and duration	32 %	3 %
4	Increasing bf rates because of more awareness of health benefits by the public and physicians	14 %	1 %
3	Trend of bf towards the norm because role models exist, mothers become independent in their opinion and human milk will be the only milk for human babies	10 %	1 %
3	Bf will gain significance and value as best and healthiest choice for both mother and baby	10 %	1 %
2	Increase of bf because of diligent LC work, better information and rising awareness	7 %	0,7 %
2	More bf will lead to healthier people, also emotionally, and life will improve	7 %	0,7 %
2	6 months bf will become normal, but bf toddlers will remain behind the scenes	7 %	0,7 %
1	Increase of bf because of very supportive Australian government	4 %	0,3 %
1	More children breastfed exclusively for 6 months, number of breastfed children up to 2 years of age will double	4 %	0,3 %
1	Bf for the first 6 months of life will be at 75% of the market share	4 %	0,3 %

28 experts predict a positive development in the next 15-20 years with an increase of exclusive bf for 6 months and a trend of bf towards the norm because of rising awareness of the benefits of bf.

Breastfeeding as standard or norm: 6 responses = 2% of all participants

Figure 49: Bf as standard or norm



6 experts predict the re-establishment of the bf culture within the next 15-20 years, because women will re-conquer the right to breastfeed.

4.9.7 Limitations: Quantitative evaluations in general

Quantitative evaluations in general could only be done on a limited scale within the sample. On one hand this was due to the response groups' disproportional sizes, e.g. 3 responders versus 298 responders (sex). On the other hand the limited evaluation possibilities were due to consistent homogeneous responses of all possible response groups. Cross tables resulted in high significance only when Norwegians were compared to other residence countries (4 Norwegian residents compared to 297 other countries), which is not relevant in the sense of statistics because of disproportional response group sizes.

A general observation of quantitative findings is that cross tables (except the comparison of other residence countries to Norway) did not result in significant values, which means that the experts' opinions are highly homogenous with regards to the topics in question. A great consensus of the experts on the main issues presented has become evident, which provides the experts with political weight on an international level.

4.9.8 Methods criticism: Questionnaire items

Even though a test phase of the questionnaire has been conducted, the evaluation of the sample of 301 responders showed that 5 questions could have been optimized in the following way:

1. Part I When asking responders about their own breastfeeding experience, they should also have been given the opportunity to state if they have children at all. This statement would have possibly led to an even more surprising result concerning the high percentage of the experts' own breastfeeding experience.
2. Part II The quantitative question on payment only provided 2 choices: Paid or voluntary lactation consulting, mainly to distinguish the volunteer LLL and AFS LCs from professional lactation consultants, e.g. in a hospital setting or working as free-lance LC.

Commentaries of responders indicated that many professional LCs including physicians in a hospital setting are not being paid to the full extent of work and have to work overtime to accomplish the time-consuming lactation consulting, which has not been integrated in the health care systems as of today. It would have been interesting to know from the professional LCs how much time they think is being done unpaid per week or per day in an open question and to offer a third category of the quantitative question “voluntary and paid”.

3. Part II The quantitative question on feeling valued for the LC work provided 3 choices: Very much, adequate or not sufficient. It would have been optimal to distinguish between estimation of the work environment and of mothers, because a polarity of answers could be observed between these 2 possibilities.
4. Part II Current situation, quantitative question: *In my work as breastfeeding consultant I have resigned myself to the fact that I can't make a difference.* This statement item provided 4 answer categories: I totally agree, I rather agree, I rather disagree, I totally disagree. The question was asked in expectation of strong denial (totally disagree) to make sure that responders were well aware of the questions. Even though this worked out fine and responders proved to be aware and awake, it was a pity to ask this question of all questions in reverse expectation, since strong disagreement with a negative statement does not imply agreement with the opposite statement. This question in fact was too important to be used as a wake-up question, because it would have been desirable to find out the effectiveness LCs experience in their work, given the difficult preconditions LCs are facing today. Therefore it would have been better to offer the positive statement *With my work as breastfeeding consultant I do make a difference.*
5. Part III open question: *Which research approaches should be followed up?* This appeared to be a question for researchers in the first place. However, after having evaluated the questions it became clear that the question should have included all responders in part IV. Research approaches from 301 responders could have been collected right from the basis of practitioners. It is a real pity that this chance was missed out. Some LCs took the chance to answer this question for researchers, even though this was not required, and thus were leading the way to make it better next time.

5. Summary of results, conclusions and policy recommendations

While the preceding results chapter has followed the results of the questionnaire in the order of the questionnaire items, the results summary chapter summarises results of closed and open questions throughout the questionnaire by the main topics, which are:

1. Sample description
2. Quantitative evaluation in general
3. Payment of LC work
4. Esteem and acknowledgement of lactation consulting
5. Lactation consultants' work situation:
6. Motivation on job as LC
7. Compliance with or support of LC work
8. Health care providers and breastfeeding or lactation consulting
9. LC as stand-alone profession in the health care system
10. Breastfeeding and research
11. Breastfeeding and health policy

5.1 Summarised sample description

The international LCs from all continents in the world included in the sample are mainly resident in strong industrialised countries, predominantly in Germany (35,5%). The nationalities differ only slightly from the residence countries with 10 migrants.

94% (283 out of 301) of responders come from strong industrialised countries, 5,3% (16 out of 301) from industrialising countries and only 0,7% (2 out of 301) participants are resident in developing countries, which means that the sample is representative for strong industrialised countries and cannot be statistically compared to less industrialised or developing countries.

The ages of the experts show a wide range from 78 years of age to 25 years of age at the 2008 conference. The distribution is symmetric with a peak in the middle at the birth year 1963/1964 within the range of the active work life. Only 3 male participants have returned the questionnaire, which might lead to the conclusion that LC work is a female domain like midwifery.

Participants mainly recruited from the health care sector, headed by nurses including midwives with 68% (199 participants) and followed by physicians with 14% (44 participants). Public health professionals came up to 12% (39 participants), researchers made up 6% (19 participants) and health policy makers amounted to 3% (8 participants). Other professions mainly recruited from LLL leaders with 9% (38 responders).

The personal experience with bf of the experts was surprisingly high, since it is only a requirement for the 44 LLL leaders (16%) to have own bf experience of at least one year per child, but not for LCs in the health care sector representing the majority of responders with 84%. 86,5% of the participants have personal experience with bf, which might lead to the conclusion that bf still represents a cultural asset of women being passed on from experienced women to new mothers, even in industrialised countries.

The main LC qualification was IBCLC (227=76%), followed by LLL (64=22%), health care providers with no additional LC qualification (24=8%), AFS (6=2%), 3 responders =1% have been educated by the Australian breastfeeding Association, 2 responders =0,7% are qualified as breastfeeding mothers and 1 responder =0,3% has been educated in a 40 hour course of WHO and UNICEF. 9% (=29) of the qualifications were combined with another qualification within the possible answers (e.g. IBCLC and LLL or IBCLC and AFS).

The accreditations as LC peak between 2000 and 2007, showing a recent high increase of this new qualification. If this trend continues or even intensifies, the LC qualification might boost within the health care sector in the future.

LCs' consultancy refers mostly to prenatal LC (73%), newborns to 6 weeks (81%) and to the first year of life (79%). There is a slight decrease to LC at birth as the domain of midwives (65%), and toddlers, whose bf rates are low in industrialised countries (52%).

The number of mothers consulted per month and weekly hours spent on LC shows a wide range, on one hand due to the difference between voluntary and professional LC work, but on the other hand showing a great variety of work definitions within the health care system from exclusive LC work to LC work as marginal part of the health care job. The heterogeneous outcome indicates at a lack of standardisation within the young profession LC.

5.2 Payment – summary of all results and conclusions

Background summary

In most industrialised countries LC is not acknowledged as stand-alone profession and the payment for lactation consulting is not at all or hardly included in the health care system (see chapter 2.9 „Comparison USA, Germany, The Netherlands and Norway“). Therefore qualified LC work currently is often being done unpaid (see questions „payment“, „wish for esteem“, „remarks on my current situation as LC“ and „discontentedness“).

Results of the quantitative question on payment

The quantitative question on adequacy of payment shows considerably more missing values than expected. The volunteer LLL and AFS leaders only make up 44 of 301 responders. However, there are 95 missing values ($95 - 44 = 51$) The unexpected missing values amount to 51, representing one sixth of the sample. The extraordinary high rate of missing values indicates difficulties to answer this question, since the closed questions in general show low average rates of missing values (3-5%).

The quantitative question on payment adequacy results in 59% of responders feeling adequately paid (40 % of all participants), 34% feeling not sufficiently paid (23% of all participants) and 7% feeling paid higher than average (5% of all participants). The majority of higher-than average paid LCs (10 responders of 15) is not only working as LC but also as physician or has official functions in public health, research or policies, which explains the higher-than-average payment. Only 5 nurses including midwives state to be paid higher-than average, representing a minority of 1,6% within the sample.

59% in this closed question state to be adequately paid. This majority of LCs stating to be adequately paid differs clearly from the open questions results, which is only confirmed by the 34% of responders who state to be not sufficiently paid. This group consists mainly of nurses including midwives with 87% (physicians 8% and others 5%) .

Mismatch between closed and open questions on payment

However, the discrepancy between the closed and open questions on contentedness shows a normal response behaviour pattern: Research on contentedness has shown that responders tend to make use of the opportunity to complain in open questions, because they feel they might bring about change with their critical answers, while on the other hand their feeling of being contented does not depend on the mentioned deficits. This explains the different outcomes in quantitative and qualitative questions. In the following we will take a closer look at the qualitative outcomes on payment.

Difficulties to distinguish voluntary and paid work

As already pointed out in the results presentation chapter, a clear distinction between voluntary and paid LC work was not possible, because a lot of LC work seems to be done without payment of the health care systems by volunteers and professional LCs, as the following remarks show:

Examples of answers to the open question on payment from different countries: Germany, USA, Canada and Norway

Germany

A German gynaecologist reported the following problem: „Since lactation consulting is highly time-consuming, I have to work unpaid overtime after regular shifts and thus do not get paid for my LC work.“

USA

„I only make an adequate income because I lecture as well as seeing mothers and babies and avoid many problems with institutions by being in private practice.“

Canada

On further enquiry per e-mail, the Canadian dental hygienist explained to be a community nurse being paid for dental hygiene, but not officially for lactation consulting:

„I would like to be paid the same wage as other LCs in our region rather than being paid a dental hygienist wage for the time I work as LC.“

Norway

Even in Norway, a lot of LC work is being done by the voluntary mother support group „Ammehjelp“, and not only by health care providers. However, a much better co-operation between volunteers and hcp can be assumed, since health care providers in Norway have a one-year education on LC and a better support of bf in general than in other participating countries (see chapter Norway).

The open question „wish for esteem“ resulted in 3 answer groups of similar sizes, of which the largest group was the wish for better payment with 42%, while 37% wished for acknowledgement of LC as profession and 22% for acknowledgement in general. The acknowledgement of LC as profession also includes an adequate payment, since adequate payment represents an attribute of a profession. Consequently the wish for better payment represents a major issue for the experts within the question „wish for esteem“.

In the following item „motivation as LC“, a career motivation was only mentioned 15 times out of 240 valid answers, amounting only to 6% in frequency of nomination. Moreover, career is only mentioned once as second important for personal motivation and 14 times as third important for personal motivation, ranking lowest in importance of all suggested items.

On one hand this shows clearly that career opportunities including good payment opportunities are rare. This outcome is confirmed by the quantitative question on payment estimation, with only 5 nurses (1,6% of the sample) with a higher-than-average payment. On the other hand altruistic motivations are predominant. Possibly this outcome might contribute to the impression of lactation consulting as women's cultural asset, since it is mostly being done out of motivations other than payment. The open question on discontentedness resulted in 12 responses (6% of 216 valid answers / 4% of all participants) referring to payment:

6 responses: Lack of financial support, funds, payment to make a living as LC, financial security (2,7% of valid answers on discontentedness / 2% of all participants)

4 responses: Multiple tasks besides LC work, workload, exhaustion with little pay and appreciation (1,8% of valid answers on discontentedness / 1,3% of all participants)

2 responses: I have to pay all continued education by myself (0,9% of valid answers on discontentedness / 0,7% of all participants)

Concerning the contentedness of the experts, payment does not seem to be the decisive factor. Only 12 of 216 valid responses to the open question on discontentedness refer directly to payment and show only marginal importance for the contentedness of the experts.

In addition to the payment chapter, research funding will be discussed later on in the chapter „research“.

Conclusions of the payment topic

Is there a contradiction between voluntary and paid LC work?

The high proportion of LC voluntary work (e.g. in Norway) might be explained by the assumption of bf as a cultural asset of women, which mothers wish to pass on to other mothers after having experienced bf in a positive way (see motivation item). As the example of Norway shows, voluntary and paid work might be combined in concerted action. On one hand experienced mothers pass on bf skills and knowledge in mother support groups on a voluntary basis, and on the other hand professional LCs receive an adequate payment for their specialised work in the health care system.

Lactation consultants have specialised in a new field, which is currently in the process of increasing professionalism. As of today, the profession is lacking of support, funds and standardised payment on an international level. A payment upgrade, a strong position in the health care system and acknowledgement as stand-alone profession is urgently needed to further develop and spread this young profession and facilitate re-building the bf culture.

Summary: Lactation consulting should be integrated into the health care systems as stand-alone profession to be acknowledged, valued and paid to cover the full cost.

5.3 Acknowledgement and esteem of LC work – summary of all results and conclusions

The responses to the quantitative question on esteem of LC work show that there is a great difference in estimation of mothers and estimation of colleagues or superiors. According to the experts, the estimation of mothers is high, while the estimation of colleagues and superiors is low. The qualitative question on esteem results in the following wish for esteem with 49 responders: The wishes for the acknowledgement of LC as profession are versatile and aim at establishing LC as new and acknowledged profession and specialisation. Moreover, 22 general wishes for esteem are named by the experts including more PR, scientific acknowledgement, bf-friendliness in society and better support by communities and policies. The remarks on „My current situation as LC“ include one acknowledgement category with the following 4 responses:

1. My LC work is often not considered important
2. I feel like I am swimming against a very strong current
3. Need official recognition
4. Difficult situation

In the open question on discontentedness acknowledgement is not picked out as central theme.

Conclusions of the acknowledgement and esteem topic

As young specialty, lactation consulting still lacks of acknowledgement and esteem in the health care system as well as in communities, society, sciences and politics. The esteem of mothers is rated high and seems to represent a source of motivation for the struggles LCs have to face on their way to professional acknowledgement. The authorization of LCs in the domain of infant feeding seems indispensable to overcome the problem of lacking acknowledgement within health services.

Summary: Lactation consultants should be authorized in the field of lactation to take independent decisions on infant feeding and instruct and educate colleagues.

5.4 Motivation of LCs on job and work situation – summary of all results and conclusions

The motivation named most frequently was to promote bonding, which corresponds to the current mainstream research. Second in frequency ranking was the empowerment of women and third the support of children with a nearly equal motivation to support women and children. These items also rank high in the importance ranking of motivations and represent the most frequently named combination of motivations.

Conclusions of the motivation topic

The expected result is confirmed: Motivations are mainly altruistic and career possibilities are rare. It appears necessary to implement more work opportunities for LCs, because an increase of professionalism is indispensable for further development of this young specialty. Progress of lactation consulting in the health care system can not only be based on high motivation, which might lead to exhaustion without professional back-up, as the following examples indicate:

Responses to the open question „What makes you discontented?“

9 responses (25% / 3% of all responders):

Lack of support and appreciation, not being taken seriously as an expert, fighting alone

4 responses (11% / 1,3% of all responders):

Multiple tasks besides LC work, workload, exhaustion with little pay and appreciation

One LC commented proudly in the open question item “comments on your current situation as LC” that she had been nominated to receive an award in the field of lactation. This measure could be highly motivating and moreover appears to be applicative to strengthen the solidarity of women as precondition for the concerted promotion of breastfeeding. Honoring and valuing LC work should also include voluntary LCs. Moreover voluntary LCs might also be rewarded by privileges and benefits to avoid taking their dedicated work for granted.

Summary: Career opportunities in the field of lactation are currently rare and should therefore be developed. Lactation consultants should work out the base for optimized payment opportunities by thorough documentation of different activities including expenditure of time, and report it to their professional organization for applications to the health ministry. Another motivating measure to further strengthen women’s solidarity would be to grant awards to lactation consultants for special merits and to provide benefits for voluntary LCs.

5.4.2 Compliance and support of LC work – summary of all results and conclusions

Mothers, fathers, relatives and health care providers are supportive or compliant towards LC. While mothers reach a very high score as very compliant, fathers are compliant and relatives and health care providers tend towards being not supportive for lactation consulting. The impact of health care providers uneducated in breastfeeding on lactation consultancy will be summarised in the next chapter.

Society, the work environment and the media are evaluated as not supportive for LC work. As responses to the open questions show, these 3 influencing factors might be even obstacles to breastfeeding:

Society

11 responses (4%)

There is a slow and unsupported progress of a bf culture going back 2 steps after 1 step forward

8 responses (3%)

Lack of public acceptance of bf, non-supportive society not recognising the importance of bf

4 responses (1%)

Lack of information, knowledge and exchange in society

4 responses (1%) Wish for public support, bf-friendliness, bf to be valued in society

3 responses (1%)

Environment of mothers, hcp and society are not supportive and make parents insecure with bf

3 responses (1%) Prejudices and ignorance

2 responses (0,7%) Negative image of bf in society

Work environment

5 responses (2%) Modern work environment remains a decisive obstacle to bf

5 responses (2 %) Maternity leave is too short (e.g. 3 months in the Netherlands, in Switzerland and in the USA), employers should provide facilities to pump milk

Media

17 responses (6%) Misinformation: Wrong or out-of-date information in media and from hcp, conflicting advice based on myths, implying formula was as good as human milk, unnecessary supplementing

5 responses (2%) Misleading PR: Ads of bf substitutes are rampant on mass media

4 responses (1%) Industrial influence remains a decisive obstacle to bf

1 (0,3%) I don't see bf promotion, in media there is only the anti smoking campaign

Conclusions of the compliance and support topic

Mothers are very compliant with LC. On one hand this result shows that mothers are willing to put into practice the LCs recommendations. On the other hand this outcome also reveals deficits in the support of breastfeeding mothers, since statistics (see chapter breastfeeding statistics) show that mothers are not very successful in initiation and duration of breastfeeding, even though they are willing to and very compliant. This outcome indicates that mothers might not find the support they need to successfully breastfeed. The result also gives evidence of the vulnerability of the early mother-child relationship. LCs know that to confirm a mother in her new competence contributes to successful breastfeeding and strengthens the mother-child relationship, while on the other hand conflicting advice of hcp and a non-supportive environment of the mother can have a strongly negative impact on the establishment of breastfeeding and bonding.

Fathers are mostly compliant and supportive, which attests fathers a solid support of their bf partners. Fathers' compliance is not as good as mothers' compliance, possibly since fathers are not primarily involved like mothers, because as a matter of fact they are not breastfeeding.

Relatives' compliance or support has been evaluated with a certain ambivalence by the experts. This could be expected, because a bottle-feeding background of relatives can be assumed, leading to non-supportive advice with regard to breastfeeding, which represents a well-known fact amongst practitioners.

The role of health care providers has not been evaluated as clearly supportive towards breastfeeding as well by the experts. It will be analysed in the following chapter "Health care providers and breastfeeding".

Society represents an obstacle to breastfeeding because of prejudices and ignorance, making parents insecure with breastfeeding and keeping a negative image of breastfeeding.

The modern work environment remains a decisive obstacle to breastfeeding, e.g. with too short maternity leave as one contributing factor.

The media remain an obstacle to bf with misleading adverts pretending that substitutes and bottles were as good as human milk and breastfeeding.

Summary: Society should be educated by campaigns creating an image of breastfeeding as "smart, cool and career-right". The baby-friendly community initiative should spread, while breastfeeding in public should be encouraged. Fathers and relatives should be included in educational programs about breastfeeding and should be invited to mother support groups for breastfeeding. Health care providers should all have a basic education on breastfeeding and be informed about WHO/UNICEF programs, recommendations, goals and tools to promote breastfeeding. They should acknowledge the expertise of lactation consultants and seek their advice in the field of infant feeding to intensify their co-operation, e.g. with early referrals. Working mothers' right to breastfeed should be protected by law following the example of Norway with 10-12 months maternity leave or following the example of Germany with 12 months parental leave plus breastfeeding breaks, while work places should be equipped with facilities for pumping in privacy and baby-friendly nurseries. Employers should be convinced of the health benefits of breastfeeding resulting in less sick leaves for ill children of their employees. Media should be controlled in the sense of the International Code, while TV broadcasts like daily soaps should give an example of breastfeeding as the norm for infant feeding to reach disadvantaged families.

5.5 Health services and breastfeeding support - summary of all results and conclusions

Health care providers and breastfeeding or lactation consulting

The attitude of health care providers towards breastfeeding and LC has been assessed with 2 quantitative questions in part II and 3 statements in part IV, which are:

Quantitative questions in part II – my current situation as LC

1. I feel that my LC is accepted, put into practice or supported in the mother's environment by the health personnel that take care of the mothers I am consulting.
2. The health care professionals in my environment are supportive of bf in general

3. The health care professionals in my environment are supportive of 6 months exclusive bf and afterwards continued bf for 2 years and more with adequate supplements (WHO recommendation)

1. Item: The support of health care providers in the compliance / support item shows the lowest support score of all variables in the range of agreement (mothers, fathers, relatives and health care providers). This result indicates deficits in the education of health care providers and attests health care providers only a weak support of breastfeeding.

2. Item: Concerning the following question on general support of breastfeeding by health care providers, the mean value 2,98 scores within the range of agreement and attests health care providers to be rather supportive of breastfeeding. This result shows that even though hcp are rather supportive towards bf, there is no special effort in the health care systems of the participating countries to promote breastfeeding.

3. Item: As expected, there is a clear decrease of breastfeeding support according to WHO recommendations by health care providers compared to bf support in general. It seems that the WHO recommendations and objectives, as defined in the program „Health 21“, are neither well-known nor established in the international health care systems involved in this study.

Qualitative questions

The open qualitative questions do not refer explicitly to the attitude of health care providers, as becomes clear from the following list of open questions out of parts II, III and IV:

1. To feel more valued in my work, I wish for the following
2. My remarks about my current situation as LC
3. My remarks about my current situation as researcher
4. What makes you discontented?

All these open questions do not implicate health care providers directly. However, there have been many complaints about a lack of acknowledgement of LC by other health care providers as answers to these open questions with regard to a lack of basic knowledge on breastfeeding and co-operation, which revealed that health care providers' attitudes represent one of the main problem areas LCs have to face in their special work as decisive obstacles to the promotion of breastfeeding.

The following 4 main response groups will be discussed:

1. Lack of acknowledgement and respect from other health care providers
2. Lack of basic education on breastfeeding and lactation consulting of other health care providers
3. Difficulties in co-operation with other health care providers and late referrals
4. Conflicting interests of physicians that might prevent them from promoting bf

In the following, responses to the qualitative questions are listed to depict the mentioned 4 problem areas.

Lack of acknowledgement from other health care providers

- Lack of recognition and interest of physicians and other health care providers
- Lack of support, respect, openness, appreciation of specialty LC
- Lack of recognition and tolerance from employer, supervisor, management and hospital administration

- Lack of power for LCs in decision making, implementation, budget, time management
- Lack of openness on maternity ward
- Ignorance and arrogance or averse attitude of health care providers colleagues, mainly physicians
- Health care providers - mainly physicians - do not appreciate and accept LC and do not recognise the importance of breastfeeding
- Lack of support from health care providers colleagues and superiors
- Disrespect and disregard of health care providers colleagues undermining LC work
- Lack of support of exclusive bf by interdisciplinary team of health care providers
- Lack of bf support on neonatology
- Lack of support and appreciation, not being taken seriously as an expert, fighting alone
- Health care providers and society are not supportive and make parents insecure with breastfeeding

The above complaints of LCs clearly indicate the current lack of acknowledgement of lactation consulting as profession. To make an impact in the health care system, the profession LC has to be furnished with the attributes of professionalism and authority to implement LC standards in their work environment.

Lack of basic education of health care providers on bf and LC

- Lack of competence of health care providers
- “Sometimes I am frustrated because other health care providers (clinic staff or physicians with their own practice) are destroying my work out of ignorance”
- Health care providers can often be influenced by own negative breastfeeding experience
- Lack of interest, knowledge, education of health care providers on breastfeeding, mainly physicians
- LC education should become standard for health care providers with the focus on physicians, and additionally for social workers, psychologists and day-care nurses

One important outcome of this study is the lack of basic education of hcp on bf in general. Moreover, WHO programs and recommendations seem to be unknown amongst health care providers in the countries of all continents included in this sample.

A basic knowledge on bf is indispensable to be able to treat the mother-baby dyad in the health care system adequately.

Lack of co-operation between LCs and other health care providers

- Lack of co-operation with other health care providers, earlier referrals are needed
- “Hospitals in my environment promote bf, while physicians with their own practice and midwives don't”
- Fight in hospital against old practices, health care providers fear the changes
- Lack of support for bf from hospital management, administration, head physician and superiors
- Routines in hospitals obstruct exclusive bf
- Lack of co-operation with colleagues and between wards, standards should be implemented more correctly in an interdisciplinary health care providers' team
- BFH fails because of lacking staff, lack of funds, lack of support by staff
- No progress at maternity ward towards bf promotion
- Lack of integrated care after discharge from hospital
- Eminent lack of support of bf and poor interdisciplinary co-operation with health care providers

- “Lack of co-operation with bf promoters in my area and low awareness level of LC possibilities”
- “More co-operation and mutual acknowledgement would be desirable” (a researcher's remark on his current situation)
- Networking of bf promotion unions like consulting centres, roundtable of health care providers, better co- operation
- Improvement of interdisciplinary co-operation e.g. co-operation of voluntary and professional LCs and of paediatricians and LCs

LCs complain that the co-operation with other hcp is very difficult. Sometimes the LC work is being destroyed by other hcp out of ignorance. Without a basic education of general hcp on bf and lactation or the authorisation of LCs to implement bf promotion, the co-operation of LCs with other hcp is bound to fail. This study has revealed a serious deficit of co-operation towards bf promotion in the health care systems of all the countries included. If bf promotion fails in most health care systems, how can mothers be expected to successfully breastfeed and how can the WHO and UNICEF goal to re-establish bf as the norm world-wide be reached?

Conflicting interests of physicians

- “Physicians have a vested interest in continuing interventions in childbirth. They prefer to keep the power. Bf reduces this power, bf empowers the family”
- Too many interventions during childbirth, e.g. C sections
- The promotion of dummies and pacifiers by health care providers (not in compliance with the International code and the Ten steps to successful bf by WHO / UNICEF)

The experts have picked out a “hot potato” topic with the conflicting interests of physicians and other hcp. Studies have shown that interventions during childbirth have a negative impact on bf, since the natural processes (e.g. necessary hormonal changes) might be delayed, thus causing e.g. a delay of the milk coming in. On the other hand, interventions in childbirths are economically rewarded in most health care systems, and moreover justify the participation of physicians at childbirth. This might lead to conflicting interests of physicians with a negative impact on bf.

Another problem the experts indicate is the promotion of dummies and pacifiers by hcp, which is not recommended by WHO and UNICEF in the ten steps to successful breastfeeding. In this case, hospital or post-partum routines are not in favour of bf. Moreover, the International Code is disregarded by hcp in this case. Such routines in the health care system disregarding the Code or the ten steps to successful breastfeeding rather have a negative impact on bf than promote it.

In part IV of the expert questionnaire „questions for all responders“, 3 measures referring to the health care sector have been suggested in closed questions:

1. Certification as baby-friendly hospital as quality standard
2. The IBCLC specialty knowledge and skills should be integrated in the education and become standard qualification for all health care providers
3. Mothers should profit from integrated care, that means enjoy continued support of bf throughout pregnancy, birth and post-partum (e.g. from paediatricians, gynaecologists, in hospital and in mother support groups)

While integrated care for lactation consulting ranked first in importance of the effective measures, BFH as standard was rated 7th important and IBCLC knowledge for all health care providers ranked only 9th important out of 11 suggested measures.

This means that the co-operation and concerted action of all health care providers including volunteers to provide integrated care is considered the most important measure for the promotion of breastfeeding.

Conclusions of the topic Health care providers and lactation consulting

The following 5 main problem areas have been detected concerning the co-operation of lactation experts with other health care providers:

1. Lack of acknowledgement and respect of LC from other health care providers
2. Lack of basic education on breastfeeding and lactation consulting of other health care providers
3. Difficulties in co-operation with other health care providers
4. Lack of integrated care to promote bf
5. Conflicting interests of physicians that might prevent them from promoting bf

As concluded in the previous chapter, the experts consider the co-operation and concerted action of all health care providers **the most important measure** for the promotion of breastfeeding.

The status quo of the health care systems in the sample seems to be not in favour of bf promotion, because the above mentioned deficits prevail.

5.5.2 Acknowledgement of LC as stand-alone profession - summary of all results and conclusions

Acknowledgement of LC as stand-alone profession was picked out as central theme with all the attributes of professionalism:

- Official acknowledgement of the specialty LC, scientific acknowledgement
- A firm position of the profession lactation consultant in the health care system
- Better co-operation with other health care providers, e.g. earlier referrals
- Adequate work conditions and adequate payment, including for continued education
- Influence and impact of LCs e.g. in decision making, budget, time management
- More opportunities to use LC skills and knowledge, e.g. breastfeeding clinic
- Networking of professional LCs

Example: The LC profession is not recognized in my country (Romania)

Conclusions of acknowledgement of LC as stand-alone profession

The detected problem area seems to be a substantial obstacle to the promotion of bf. Other health care providers are lacking of basic education on bf and LC, which results in an ignorant and non-supportive attitude and a lack of co-operation with LCs. In this stage of struggling for a position in the health care system without completed professionalism, the influence of LC's professional perspective cannot make an impact in the health care system towards bf promotion.

Summary: A basic education of all health care providers on breastfeeding including WHO programs and recommendations is indispensable to establish integrated care. IBCLC skills and knowledge should be integrated in the basic education of all health staff directly caring for pregnant or birthing mothers or mothers in child-bed and during lactation. A firm position of lactation consultants in the health care system should be established, while LCs should be provided with authority for infant feeding with the opportunity of free-lance work and standard fees for work in a hospital or practice setting. Standards for the co-operation with LCs and referral indications should be introduced. Birth should be back in the hands of midwives – as the successful role model of Norway shows, to avoid unnecessary birth interventions with a negative impact on the initiation of breastfeeding.

5.6 Breastfeeding and research – summary of all results and conclusions

The topic was assessed in the questionnaire by inquiring the perspective of researchers in part IV, by several closed questions in parts II, III, IV and the open questions „My remarks about my current situation as researcher“, „Which research approaches should be followed up?“ and „What do you expect from public health sciences?“.

The researcher's perspective

The closed questions resulted in the following statements of researchers:

- Bf and human milk are far from being totally explained by research
- The global research projects on bf lack of co-operation and networking
- NCBF does not promote bf successfully in my country of residence
- We don't have sufficient research and promotion projects on bf in my country of residence

In the open question on the current situation of researchers, one researcher complains about a lack of co-operation and respect, while another researcher complains about a too slow progress in implementing bf promotion policies.

The practitioners' perspective

The open question „What do you expect from health sciences?“ for all responders resulted in the following demands:

- Practice-oriented research
- PR of results
- Communication
- Information
- Education
- Co-operation

Researchers and practitioner's point of view regarding research on breastfeeding

The greatest issue of the topic „bf and research“ turned out to be the lack of compliance with the International Code and the lack of funding of research free of commercial interest, combined with a wide-spread ignorance and lack of knowledge of researchers on breastfeeding. This topic has been picked as a central theme by the experts, as the following summary of results show:

Closed quantitative questions on research and fund-raising

The statement in part III for researchers „It is hard to obtain funds for research in compliance with the code“ was strongly agreed to by the experts with 66 agreements versus 12 disagreements to this statement.

This evaluation was also confirmed by the closed question on „effective measures for the promotion of bf“ in part IV for all responders. In the ranking of „effective measures for the promotion of bf“ research independent of economic interests ranks in the 4th place with a very high priority out of 11 measures.

Open qualitative questions

In the open question „my current situation as researcher“ 6 researchers complain about a lack of funds for bf research, while one of the researchers states to do self-funded research (like this dissertation).

With regard to breastfeeding research, the experts complain about the following shortcomings:

- Wrong and heterogeneous bf definitions
- Ignorance of evidence
- Method errors
- A lack of basic knowledge of researchers about bf
- A lack of ethics in child research
- Researchers considering artificial feeding as the norm instead of breastfeeding
- Conflicting commercial interests.

In the following a selection of the essential responses is listed:

„That they listen to scientific evidence and act accordingly“

„To base research on evidence rather than on economics and tradition“

„ To carry out serious studies to support bf with good evidence and methodologically sound studies“

„Improved quality of studies and more ethics in child research“

Conclusions of the research topic

The main problem research is currently facing in connection with breastfeeding is the adherence to the International Code and fund-raising free of commercial interest, as the consistent opinion of researchers reveals. How can research remain objective and truthful, if it depends on commercial sponsors with conflicting interests? The field of research in the industrialised age seems to be in danger of being exploited by the industry, as the example of the tobacco industry has already shown³⁹³.

The vulnerable field of breastfeeding urgently needs consumer protection to control research and cut down the interests of the substitute industry lobbyists for the sake of public health. The experts demand a „health before profit“ policy, which begins with sound research with objective results in the sense of salutogenesis and health promotion instead of commercial interests.

High quality definitions and quality control of research are needed to disable research manipulation by the industry in connection with misleading information to the public with possible harmful effects on public health.

Summary: Convince governments to protect and promote objective research on infant feeding against lobbyists by providing research funds independent of the industry. High quality standards of research on infant feeding should be established, while manipulated research should be detected and banned as unethical. The International Code should be applied not only to the marketing of substitutes, but also to research in order to prevent misleading studies and prevent the scientific consideration and publication of their outcomes.

³⁹³

Scientists against scientific manipulation: <http://www.raucherbewegung.eu/wissenschaftler-gegen-wissenschaftliche-manipulation.html>

5.7 Effective measures for the promotion of breastfeeding – summary of all results and conclusions

The importance ranking, the distribution of responses and the minority of deviating opinions have been discussed in the results chapter. In summary of quantitative and qualitative evaluations, the most important measure to promote breastfeeding currently is the co-operation of all health care providers. This result is based on the following findings:

- The experts have picked out “Health care providers and breastfeeding” as one of the main topics in qualitative responses. Improved education of health care providers and a firm position of lactation consulting in the health care system are indispensable to achieve progress in the promotion of breastfeeding.
- The importance ranking of effective measures to promote breastfeeding has set “Integrated care” as first priority goal in the experts’ ranking. Integrated care is based on cooperation, a consensus and concerted action of health care providers.

The results of both quantitative and qualitative evaluations indicate that health care providers’ concerted action to promote breastfeeding is the fundamental measure of all priority measures. The second important measure in importance ranking is represented by health policies, which are indispensable for progress of breastfeeding promotion. National education ranks next, revealing the deficits of societal knowledge on the benefits of breastfeeding and risks of substitutes. The fourth important measure is research free of commercial interests. This topic has been discussed as important outcome in the previous chapter. As already emphasised in the results chapter, all 11 measures suggested for the promotion of breastfeeding are priority measures in the experts’ opinions. The great accordance of all experts, independent of the expert groups, provides the issue with political weight on an international level.

Summary: Implement the measures suggested in the questionnaire with priority and according to the following importance ranking:

1. Mothers should profit from integrated care, that means enjoy continued support of breastfeeding throughout pregnancy, birth and post partum (e.g. by their physicians and in breastfeeding support groups)
2. Promotion of breastfeeding should be integrated in the national health policy
3. National education should advise people on the health risks of substitutes and the benefits of breastfeeding
4. Promotion of research independent of economic interests
5. National campaigns for breastfeeding should be started in the media
6. The International Code for the marketing of substitutes should become legally binding as a law
7. Certification of BFH as quality standard
8. The profession “lactation consultant” should be upgraded in earnings and working possibilities
9. The IBCLC specialty knowledge and skills should be integrated in the education and become standard qualification for all health care providers who give advice to mothers (gynaecologists, obstetricians, paediatricians, nurses, midwives...)
10. National control and monitoring of and penalty for violations of this law (implementation of the International Code for the marketing of substitutes)
11. Development of a human milk bank network

5.8 Health policy and breastfeeding – summary of all results and conclusions

Health policy turned out to be the second fundamental issue in the questionnaire. 3 closed questions and one open question refer directly to health policy. In addition to this, responders made use of most other open questions for statements on health policy.

Health policy has been directly assessed by the following items of the questionnaire: Part II Current situation of LCs (2 statements), part III Current situation of researchers (2 statements), part IV „Effective measures for the promotion of bf“ and open question: „What do you expect from health policies?“

As a matter of fact, all the previously discussed topics do have a political dimension. Moreover, the policy topic occurred in responses to the following open questions: „To feel more valued in my work I wish for the following“, „Remarks on my current situation as LC or researcher“, „What makes you discontented?“, „Other effective measures“, „What do you expect from NCBF?“, „What do you expect from the public health sciences?“.

In the first place, the closed questions' results are summarised:

In the following, LCs' and researchers' answers are combined. The results exceed the sample size of 301, because some participants have combined qualifications or combined professions.

LCs' and researchers' responses

Bf promotion is a target of health policies in my country of residence

Valid	I totally agree	I rather agree	I rather disagree	I totally disagree
369	62	118	125	64

A tendency towards disagreement can be stated with 9 more values in the range of disagreement. The result shows a balance between agreement and disagreement, revealing that on an international level there is political effort to promote bf in nearly half of the sample, while the other half states no political effort in their countries of residence.

LCs' and researchers' responses

The policy of bf promotion is being implemented successfully in my country of residence

Valid	I totally agree	I rather agree	I rather disagree	I totally disagree
359	11	88	174	86

The majority of international LCs and researchers disagree with this statement. Policies to promote bf – if any - are not being implemented successfully according to the LC's and researchers' opinions. In the following, a ranking table of agreement or disagreement tendencies with regard to residence countries is shown, based on LCs and researchers combined:

The promotion of bf is a target of health policies in my country of residence – LCs and researchers (frequencies of nomination evaluation)

Table 48: The promotion of bf is a target of health policies in my country of residence
– frequency of nomination

Country	Agreement	Disagreement	Result
Switzerland	25	7	Agreement
USA	18	9	Agreement
Netherlands	13	5	Agreement
Canada	7	2	Agreement
Norway	6	0	Agreement
Italy	6	3	Agreement
Portugal	4	0	Agreement
New Zealand	3	0	Agreement
Spain	3	0	Agreement
Sweden	3	2	Agreement
China	3	2	Agreement
Croatia	2	0	Agreement
Ireland	2	0	Agreement
Great Britain	2	1	Agreement
Lithuania	2	1	Agreement
Korea	2	2	Ambivalence
Poland	2	2	Ambivalence
Luxembourg	2	2	Ambivalence
Greece	1	1	Ambivalence
Uganda	0	1	Disagreement
UAE	0	1	Disagreement
Japan	0	1	Disagreement
France	0	1	Disagreement
Bosnia-Herz.	0	1	Disagreement
Romania	1	2	Disagreement
Ethiopia	0	2	Disagreement
Israel	0	2	Disagreement
Singapore	0	2	Disagreement
Belgium	3	6	Disagreement
Australia	2	21	Disagreement
Austria	15	36	Disagreement
Germany	32	92	Disagreement

Table 49: The policy is being put into practice successfully – LCs and researchers
- frequency of nomination evaluation

Country	Agreement	Disagreement	Result
Switzerland	21	9	Agreement
Norway	5	0	Agreement
New Zealand	3	0	Agreement
Sweden	3	1	Agreement
Croatia	2	0	Agreement
Spain	2	1	Agreement
China	2	1	Agreement
Portugal	3	1	Agreement
Poland	2	2	Ambivalence
Bosnia-Herz.	0	1	Disagreement
Ethiopia	0	1	Disagreement
France	0	1	Disagreement
Hungary	0	1	Disagreement
Japan	0	1	Disagreement
UAE	0	1	Disagreement
Greece	0	2	Disagreement
Israel	0	2	Disagreement
Singapore	0	2	Disagreement
Uganda	0	2	Disagreement
Luxembourg	1	3	Disagreement
Finland	0	3	Disagreement
Great Britain	0	3	Disagreement
Korea	0	3	Disagreement
Lithuania	0	3	Disagreement
Romania	0	3	Disagreement
Ireland	0	4	Disagreement
Belgium	4	5	Disagreement
Canada	4	5	Disagreement
Italy	2	7	Disagreement
Netherlands	7	13	Disagreement
Australia	10	13	Disagreement
USA	2	25	Disagreement
Austria	13	37	Disagreement
Germany	12	106	Disagreement

Results of the experts' evaluation of health policy in their residence countries

According to the experts, the following European, Asian and United States countries have a bf promotion policy with successful implementation:

Norway, Sweden, Switzerland, Croatia, Spain, Portugal, China and New Zealand

The following European, United States and Canadian countries do have bf promotion policies, but did not succeed in their implementation so far:

Ireland, Great Britain, The Netherlands, Lithuania, Italy, USA, Canada.

The experts of the following European and Asian countries score a result of ambivalence to the question whether their country of residence promotes breastfeeding by health policies:

Poland, Luxembourg, Greece and Korea

Poland as European country scores an ambivalent result to the question whether this policy was implemented successfully, while the experts from Luxembourg, Greece and Korea state that the policy is not implemented successfully in their country of residence.

26 out of 35 residence countries' experts state predominantly that health policy on bf promotion is not being implemented successfully in their country of residence:

Europe:

Finland, Ireland, Great Britain, The Netherlands, Belgium, Luxembourg, Romania, Lithuania, Bosnia-Herzegovina, Hungary, Austria, France, Germany, Italy, Greece

USA and Canada

Australia

Africa

Ethiopia, Uganda

Asia

UAE, Israel, Singapore, Japan, Korea

Summary: Korea, Poland, Luxembourg, Greece, Uganda, UAE, Japan, France, Bosnia-Herzegovina, Romania, Ethiopia, Israel, Singapore, Belgium, Australia, Austria and Germany should integrate health policies for the promotion and protection of breastfeeding into their health policy programs.

Poland, Bosnia-Herzegovina, Ethiopia, France, Hungary, Japan, UAE, Greece, Israel, Singapore, Uganda, Luxembourg, Finland, Great Britain, Korea, Romania, Ireland, Belgium, Canada, Italy, Netherlands, Australia, USA, Austria and Germany should implement policies for the protection and promotion of breastfeeding more effectively.

Effective measures for the promotion of bf: Bf promotion should be integrated in national health policy

Sample	Valid	Missing	Mean value	Standard deviation	Very important	Important	Less important	Not at all important
301	291	10	3,86	0,39	252	37	2	0

The majority of international experts state that the promotion of bf should be integrated in the national health policy as **second important measure** in the ranking out of 11 suggested measures. Most other measures suggested might also be categorised as political measures (see chapter Effective measures for the promotion of breastfeeding). The international experts strongly agree to the priority importance of each suggested measure in great accordance. This result also implies that the measures WHO and UNICEF had intended to implement by 1995 have not yet been implemented on an international level so far. With regard to health policy, the experts share the concerted opinion, that health policy to promote bf is urgently needed. This outcome shows both in the closed quantitative questions and in numerous remarks on health policy in the open questions (see previous results chapters). The main issues the experts have highlighted in the open questions on health policy are the following as direct quotations from the experts:

Implementation of the profession LC in the health care system

Increase of professionalism of LC work within the health care system (e.g. better payment and acknowledgement)

A firm position of the LC profession in the health care system to make an impact, have influence and power

Basic education on breastfeeding and lactation consulting for all health care providers to set quality standards for lactation consulting and improve the co-operation with LCs

Re-structuring the health care systems by developing LC working possibilities paid by health insurances as preventive and health-promoting measures (e.g. well-baby clinics)

Implementation of BFH as quality standard (following the successful examples of Norway and Sweden)

Cut down interventions at childbirth by control of health insurances

Provide midwives instead of physicians with the authority to direct childbirths, while physicians are only involved on the decision of midwives (following the successful example of Norway).

Implement integrated care for mothers from pregnancy to birth and post-partum (e.g. by co-operation of volunteers and professional LCs)

Networking of LCs

Implementation of LC quality standards in the health care system to provide competence and quality and prevent misleading information and incompetent consultations

Implementation of WHO / UNICEF standards (e.g. weight charts, definitions)

Prioritising the promotion of bf

Lobby work for bf

Acknowledgement of the importance of bf to prioritise its promotion nationally and globally

Define the promotion of bf as new priority goal to be achieved in concerted action of all health care providers and politicians at all levels (community, city, country, federal policy, international policy)

Implementation of effective measures for the promotion of bf

Implement a framework to support bf and bf mothers and families (e.g. longer maternity leave, pumping devices and pumping breaks at work places)

Implement the baby-friendly community initiative (like in New Zealand and Canada)

Campaigns for bf to educate people on its benefits and risks of substitutes

PR: Create a positive image of bf in public

Development of a human milk bank network

Promote research independent of economic interests

Legislation

Legislation to support bf mothers (e.g. improved maternal leave regulations)

Legislation to protect bf from commercial interests according to the international code

Control and penalty

Monitoring and prosecuting of code violations

Uncovering commercial interests and scandals

Detecting manipulated research in the sense of commercial interests and prevent publication

The substitute industry should pay for the health damage caused by substitutes, these funds should be used for bf promotion

Conclusions of the health policy topic

The summarised health policies listed above give proof of the great effort needed to re-establish the breastfeeding culture. However, the successful example of Norway and Sweden lead the way and provide evidence of the practicability of the measures' implementation in an industrialised country.

Summary: Networking of LCs, lobby work for bf, acknowledgement of the importance of bf to prioritise its promotion nationally and globally. Define the promotion of bf as new priority goal to be achieved in concerted action of all health care providers and politicians at all levels (community, city, country, federal policy, international policy), Implement a framework to support bf and bf mothers and families (e.g. longer maternity leave, pumping devices and facilities and pumping breaks at work places)
 Implement the baby-friendly community initiative (like in New Zealand and Canada), Legislation to support bf mothers (e.g. improved maternal leave regulations), Monitoring and prosecuting of code violations, Uncovering commercial interests and scandals. Detecting manipulated research in the sense of commercial interests and prevent publication. The substitute industry should be made liable and pay for the health damage caused by substitutes, these funds should be used for bf promotion.

5.9 Policy recommendations

This chapter summarizes the policy recommendations derived from this study including the theoretical chapter and the experts' opinions. While Table 50 in chapter 5.9.1 provides a detailed overview of policy recommendations, chapter 5.9.2 summarizes and merges these recommendations into ten main recommendations with following explanation. This structure is meant to support practitioners in health policies, research and lactation consulting practice to pick out the main recommendations quickly and to be enabled to have a close look at recommendations and details relevant for their specific field of action.

5.9.1 Policy recommendations in detail

Table 50: Detailed and summarized policy recommendations derived from results, conclusions and theory

Priority measures	Complementary measures	Additional measures
1. Implement integrated care of all health services to support breastfeeding competently throughout all stages of lactation (pregnancy, birth, childbed and for several years after hospital discharge according to the WHO recommendation)	Convince health insurances of the sustainable benefits of breastfeeding including cost relief to take on a key role in re-building the breastfeeding culture by taking all necessary measures for integrated care: Adequate pay for and official acknowledgement of lactation consulting, incentives for	Communicate the WHO/UNICEF recommendation to <i>breastfeed for 6 months exclusively and continue breastfeeding with adequate supplements until 2 years and beyond</i> and relevant health goals (e.g. Health 21, Global Strategy for Infant and Young

	breastfeeding, health plans and services, referral indications, breastfeeding clinics and/or counselling centers, networks and roundtables together with volunteers to enable the concerted action of all health care providers and lay supporters	Child Feeding, WHO growth charts) to parents, health insurances, health services and politicians to be included into national health goals with a follow-up of implementation.
2.Integrate the promotion and protection of breastfeeding as priority into health policy based on the sustainable benefits of breastfeeding including societal benefits, cost relief and environment protection at all political levels (community, city, country, federal policy, international policy)	Implement health policies for the promotion and protection of breastfeeding effectively by follow-up evaluations and start lobby work for breastfeeding	Implement legislation for adequate maternity of parental leave and enable the combination of breastfeeding with work in the sense of feminism: Maternity or parental leave for 10-12 months with adequate pay and breastfeeding breaks
3.Implement education of society on the benefits of breastfeeding and health risks of substitutes	Include fathers, relatives, social workers and employers in breastfeeding education, which should already start at kindergarten age, and address disadvantaged families with adequate education and support	Create a health promoting modern work environment by providing facilities for pumping in privacy and baby-friendly nurseries at work places
4.Promote research independent of commercial interests of the substitute industry and raise funds in compliance with the Code	Apply and implement the International Code within research and set priorities towards practice-orientation with clear and understandable recommendations for everyday practice, considering the interdisciplinarity of the topic	Quality control of research to avoid incompetent, manipulated or unethical research to ban false outcomes from scientific consideration and publication. Research should be based on considering breastfeeding as the norm for infant feeding.
5.Start national campaigns on the benefits of breastfeeding in the media to establish it as the norm of infant feeding	Address the low-income target group through the media in compliance with the Code by showing breastfeeding as the norm of infant feeding and by displaying the benefits in the respective media (e.g. in TV broadcasts such as daily soaps)	Authorize midwives to direct births autonomously and prevent unnecessary birth interventions
6.Integrate the International Code for the marketing of substitutes into national law	Examine the effectiveness of this law based on the Code by follow-up evaluations.	Uncover scandals and the negative impact of commercial interests on infant feeding
7.Implement the baby-friendly quality standard in all obstetric institutions and provide sufficient educated	Implement the baby-friendly community standards and make public places baby-friendly by encouraging	Policies based on up-to-date scientific evidence to overcome and avoid pressure and corruption of the

staff	breastfeeding and replacing the symbol bottle (e.g. at airports) by a breastfeeding symbol	substitute industry in the sense of salutogenesis, prevention and health resource promotion by promoting breastfeeding and the reproductive health continuum as priorities
8.Upgrade the profession Lactation Consultant and develop career opportunities	Develop the profession lactation consultant as stand-alone profession provided with adequate pay and authority for infant feeding to instruct and educate colleagues. Re-structure health services to integrate lactation consulting in the sense of integrated care and also include volunteers	Prioritize breastfeeding within health policies in the sense of health before profit towards a human-focussed health policy
9.The IBCLC skills and knowledge should be integrated as standard in the education of health care providers directly involved in the care of the mother-baby dyad (gynaecologists, obstetricians, paediatricians, midwives and nurses on delivery and maternity ward)	Implement a basic education of all health care providers in lactation (e.g. WHO 40h course) to enable integrated care throughout all stages of lactation starting pre-partum and continuing for several years post partum (including e.g. dentists, surgeons, all health services)	Establish NCBF in all countries based on WHO/UNICEF recommendations and programs and provide it with funds, staff and political weight to take on a key role in re-building the breastfeeding culture. NCBF should make an impact by active and adequate policy-setting with follow-up revision and meetings to implement all measures mentioned in this table including lobby work, initiation of adequate legislation and protection of human rights
National control, monitoring and penalty for Code violations of the implemented law	The substitute industry should be made liable and pay for the health damage caused by substitutes, these funds and formula taxes should be used for breastfeeding promotion.	NCBF should take on a key role in information policy to publish correct information, to educate the public by continued PR on the benefits of bf and risks of artificial infant feeding, to rectify and counteract against misleading information, to provide practitioners with relevant and filtered research results and protocols, and promote goals and projects; and include, co-ordinate and link all protagonists as easily accessible central contact institution with a strong world-wide position as negotiating party to put

		breastfeeding promotion in a global perspective
Develop a human milk bank network	Educate health services on the benefits and treatment applications of human milk	<i>Create an image of breastfeeding as “smart, cool and career-right”</i> (Gro Nylander)

5.9.2 Summary of five priority policy recommendations with explanations

Five priority policy recommendations to promote breastfeeding

1. Implement integrated care within health services to enable mothers to breastfeed in the first place

Details:

Integrated care for mothers comprises the practice of the WHO/UNICEF “Ten steps to successful breastfeeding” including pre-natal classes and education, competent support at all stages of lactation and in all health service settings by health care providers, continued support throughout lactation by well-baby clinics, in private practice and in mother support groups. Integrated care of health services to enable mothers to breastfeed requires the education of all health care providers in the field of lactation, the implementation of the quality standard BFH for all obstetric institutions and the integration of lactation consulting into health services.

2. Enable health services to implement integrated care for breastfeeding support

Details:

The implementation of integrated care for breastfeeding support in the health care system requires that all health care providers be educated in the field of lactation. They should be taught up-to-date skills and knowledge on an evidence-based level. All health care providers including dentists, surgeons etc. should be educated on the basics, e.g. by the ABM course: “What every physician needs to know about breastfeeding” or the WHO 40h course. All health care providers directly involved in pre- peri- or postnatal care for the mother-baby dyad should be educated at the IBCLC level. This education should be integrated into the primary and continuing education of health care providers. Presently all health care providers should undergo supplementary education to reach the described standard towards an overall education on breastfeeding support to enable health care providers to practice integrated care and co-operation and provide competent advice. Educate health services on the benefits and treatment applications of human milk by milk banking. Educate all health services about the WHO recommendation for breastfeeding, WHO/UNICEF programs, goals and objectives, WHO global standard weight charts for breastfed children³⁹⁴ and the possibility and benefits of self-determined weaning by the child³⁹⁵.

3. Prioritize breastfeeding promotion within health policies

Details:

Implement policies and programs based on WHO/UNICEF recommendations and relevant health goals (e.g. Health 21, Global Strategy for Infant and Young Child Feeding) into national health policies with a follow-up of implementation. Implement the use of WHO definitions and tools such as WHO growth charts as standard for health services. Define and implement policies to

³⁹⁴ <http://www.who.int/childgrowth/standards/en/>

³⁹⁵ Benton 1999

protect and promote breastfeeding, including the implementation of the Code into legislation to monitor and prevent Code violations at all levels within health services, research and the media. Uncover scandals and the negative impact of commercial interests on infant feeding by providing funds for independent and objective research including quality and ethics control. Make the substitute industry liable and pay for the health damage caused by substitutes. These funds and formula taxes should be used for breastfeeding promotion. Use the media for breastfeeding campaigns to create an image of breastfeeding as smart and career-right. Implement education of society on the benefits of breastfeeding and health risks of substitutes. Include fathers, relatives, social workers and employers in breastfeeding education, which should already start in kindergarten, and address disadvantaged families with effective education and support. Use the media to show breastfeeding as the norm for infant feeding. Enable the commitment to family and career in the sense of feminism by implementing adequate maternal and parental leave, breastfeeding breaks with pumping facilities in privacy and baby-friendly nurseries at the work place. Implement a paradigm shift towards prevention and health promotion based on the sustainable benefits of breastfeeding, including societal benefits, cost relief and environmental protection at all political levels: community, city, country, federal policy, international policy. Protect human rights of infants by enabling and empowering mothers to breastfeed. Develop the profession of lactation consultant as stand-alone profession with adequate pay and authority to instruct and educate colleagues on infant feeding. Re-structure health services to integrate lactation consultancy in the sense of integrated care. Set new quality standards according to lactation consultant associations and the baby-friendly concept, which should become standard for obstetric institutions, nurseries and communities. Prioritize breastfeeding within health policies in the sense of health before profit and consumer protection towards a human-focussed health policy.

4. NCBF should take a key role in re-building the breastfeeding culture

Details:

Establish a **National Committee for Breastfeeding** in all countries to act based on WHO/UNICEF recommendations and programs. Provide NCBF with funds, staff and political weight to take on a key role in re-building the breastfeeding culture. NCBF should make an impact by active and adequate policy-setting with follow-up revision, including meetings to implement all measures mentioned in the preceding table, especially lobby work, initiation of adequate legislation and protection of human rights. NCBF should take on a key role in information policy and should publish correct information, educate the public by continued PR on the benefits of bf and risks of artificial infant feeding. NCBF should rectify and counteract misleading information, provide practitioners with relevant and filtered research results and protocols, and promote goals and projects. In its work the NCBF should include, co-ordinate and link all protagonists as easily accessible central contact institution with a strong world-wide position as negotiating party to put breastfeeding promotion in a global perspective

5. Health insurances should take a key role in re-building the breastfeeding culture

Explanation:

Based on the sustainable benefits of breastfeeding including cost relief, health insurances should take on a key role in re-building the breastfeeding culture by taking all necessary measures to foster integrated care for breastfeeding support: adequate pay for and official acknowledgement of lactation consulting, incentives for breastfeeding, health plans and services for breastfeeding support, referral indications, breastfeeding clinics and/or counselling centers, networks and roundtables with volunteers to enable the concerted action of all health care providers and lay supporters. Health insurances should reward prevention and health promotion rather than pathology to steer health care systems towards sustainable cost relief by “thinking upstream”.

6. Discussion

The promotion of breastfeeding is a manifold field, which includes a variety of political, societal, medical, psychological and environmental aspects. In the following discussion chapter, the outcome of this study will be discussed compared to the state of the art.

6.1.1 Integrating lactation consulting into the health care system

Three recent LC intervention studies have provided clear evidence that pre-natal and post-natal IBCLC consulting does make a great difference for breastfeeding mothers with regard to initiation and duration of breastfeeding, decrease of morbidity (e.g. engorgement) and moreover with respect to mothers' contentedness during lactation. The study of Lawlor-Smith, McIntyre and Bruce resulted in a significantly higher breastfeeding rate at the age of 6 months postpartum and significantly less engorgement of mothers. Mothers rated contentedness with the LC service at 99% supportive or very supportive.³⁹⁶ This result is in accordance with the experts' statement in closed and open questions that their work does actually make a difference for mothers and families.

The quasi-experimental study of Vari et al.³⁹⁷ in 2000, the randomized control study of Bonuck et al.³⁹⁸ in 2006 and the retrospective chart review of Lukac et al.³⁹⁹ resulted in significantly higher rates of exclusive breastfeeding duration due to pre- and post partum intervention by IBCLC's lactation consulting.

As already explained in the theoretical chapter, the ten steps to successful breastfeeding of WHO and UNICEF are evidence-based measures resulting in successful initiation of bf and increase of bf duration. Even the accomplishment of only 75% of the ten steps result in significantly higher exclusive breastfeeding rates and prolonged breastfeeding. The implementation of the ten steps to successful bf require at least a basic knowledge of breastfeeding and lactation consulting and might best be implemented by health care providers specified in lactation. Therefore IBCLCs have a key role in re-establishing the breastfeeding culture, since they are able to consult mothers, implement and control quality standards like BFH and teach health care staff in this discipline. A political commitment to promote breastfeeding in the sense of the WHO / UNICEF health goals therefore requires the up-grade of lactation consultants in the health care system.

The results of this study have clearly shown that the specialty LC is currently not being paid adequately and is lacking professional acknowledgement. This became obvious in the outcomes of different items: The closed questions on paid or voluntary work, where payment could not be clearly separated from voluntary work, since professional LCs also tend to work voluntarily to combine lactation consulting with their paid work, as e.g. a German gynaecologist complained about. The payment dilemma showed even more clearly in the open questions, where the wish for adequate payment scored the major sized category defined by the experts to feel more valued in their work. Further it showed in the open question "my current situation as LC" with a group of responders stating they have to finance the time they work as LC by giving extra courses or working as a dental hygienist or community nurse. The payment dilemma also came out clearly in the responses to the open question "What makes you discontented". One of the main response groups complained about the lacking pay, acknowledgement, and support. The great variety of working hours per week or mothers consulted per month also indicates a lack of standards within this young profession.

³⁹⁶ Lawlor-Smith, McIntyre et al. 1997

³⁹⁷ Vari, Camburn et al. 2000

³⁹⁸ Bonuck KA, Freeman K, Trombley M 2006

³⁹⁹ Lukac M, Riley JK, Humphrey AD 2006

The motivation item resulted in only 6 responders in a sample of 301 participants stating a career motivation in their LC work, which indicates that career opportunities are rare.

The US American Organization USCLA 2007/2008 study has given proof of the current situation of LCs in the USA with the following outcome: The specialisation as LC might even mean a downgrade of earnings in the current US health care system by losing the status as senior professional. There is a lack of standardisation of fees for LC work indicating a lack of professionalism.

The German Professional Organization for LCs “Berufsverband Deutscher Laktationsberaterinnen” is currently also planning a petition to the German health ministry. These steps of both the USCLA and the German Organization are vital for the development of this young profession to finally be acknowledged with a firm position in the health care system.

6.1.2 Defining the role of LCs in the health care system

As the evidence-based “ten steps to successful breastfeeding” by WHO and UNICEF indicate, the early post partum period is decisive for the establishment of breastfeeding. During this unique time frame starting with birth and including the first weeks with the child, the LC's knowledge and skills are mostly needed and indispensable. The key role of the LC in the health care system to re-establish the breastfeeding culture is based on this early intervention, during which a professional lactation consultancy might have the greatest effect compared to all other possible interventions, e.g. breastfeeding preparation class during pregnancy or LC in a problem-solving role later-on.

It is beyond all questions that breastfeeding preparation class does make a difference, as studies have given evidence of⁴⁰⁰, and that trouble-shooting in case of problems is important⁴⁰¹. Both of these measures contribute to the promotion of breastfeeding and should not be neglected and should definitely make part of LCs tasks in the health care system. However, the position of LCs in the health care system that yields the greatest effect in the sense of breastfeeding promotion would be to take on a key role as consultant during the time period directly after birth throughout the colostrum phase until the milk comes in at day 3-5 days post partum, plus the first six weeks to 3 months representing a time period, which in many cultures is known as child-bed. This period of time is unique, because neither the first steps of the mother-child relation nor mothers' physiological processes can be repeated. During this time frame, the establishment of breastfeeding is in a decisive phase, which applies mainly to the establishment of the milk supply for the whole lactation period and to bonding⁴⁰². Inadequate or lacking consulting during this vulnerable period of time⁴⁰³ might lead to an insufficient milk supply, sore nipples, which are known as the main reason for early weaning⁴⁰⁴ or bonding disturbances, all of which are hard to correct later-on. A review of 10 years literature from 1999-2000 provides evidence for this coherence by the statement of mothers that weaning within the first 6 months post partum is mainly due to perceived difficulties with breastfeeding rather than due to maternal choice⁴⁰⁵.

To assign a qualified LC during this period of time would be most effective in combination with the implementation of BFH quality standards. As the experts have stated, an environment of uneducated health care providers has a strongly negative impact on the outcome of lactation

⁴⁰⁰ Kistin, Benton et al 1990

⁴⁰¹ Dunn 2009

⁴⁰² Klaus, 2000

⁴⁰³ Arora S, McJunkin 2000; Fein, Roe 1998

⁴⁰⁴ Kersting, Dulong 2002

⁴⁰⁵ Dennis 2006

consulting. The LC's work might be destroyed “out of ignorance” by colleagues, as the experts have stated. The baby-friendly evidence-based quality standards are appropriate to prevent this shortcoming, which the experts have described.

Further the profession LC has to be provided with authority with regard to infant feeding to be enabled to perform the profession without being undermined by other hcp. LCs need the full support from superiors and the authority to take decisions on infant feeding and instruct and educate their colleagues within their special field with administrative backing⁴⁰⁶.

Following the mentality of our current health care systems that mainly reward pathology, e.g. mastitis treatment is being paid by health insurances, while LC counselling, which might prevent mastitis amongst other difficulties, is only marginally paid, if at all. LCs are often described in their role as problem solvers in the scientific literature, as if this were their main task. As long as LCs are being denied the key role as first and early post-partum principle lactation consultants provided with authority in their special field, their main task is reduced to trouble-shooting. Moreover, this would mean in the long run that the initiation of breastfeeding remains bound to fail in the majority of cases, as it is the status quo today. However, the role of LCs in the health care system can not be defined in a pathological perspective. The most effective way of preventing sore nipples and resulting mastitis is skilled and knowledgeable support with positioning and latch-on starting within the first hour after birth⁴⁰⁷. About 90% of breastfeeding problems might be prevented by correct latch-on and positioning techniques, while the first latch-on after birth is decisive for physiological suckling and breastfeeding success⁴⁰⁸. The most qualified and eligible health care provider to perform this support is a certified lactation consultant. This outcome stresses the role of lactation consultants as preventive and health promoting.

The essential role of LCs in the health care system is focussed on prevention and health promotion. LCs accompany the mother-baby dyad during a unique time period to establish breastfeeding in an optimal way, to enjoy and understand each other and to bond to each other. LC support and encouragement might best be described as devoted care “*in a holistic approach*”, as one of the experts described it. In this context it is essential that mothers are being taught adequate latch-on and positioning techniques to avoid difficulties, and thus have the chance to experience breastfeeding and the relation to their infants in a positive way right from the start, in the sense of salutogenesis. Babies learn that mothers' reactions are reliable by being breastfed on cue, which brings about manifold positive effects on building coping strategies, as described in the theoretical chapter. Mothers learn their role in an optimally short time period with professional, knowledgeable and skilled support and thus benefit from the confidence they gain in the shortest time period possible. The positive experience of the mother-child relation right from the start should represent a high value in society worth being protected.

LCs play a key role in building a sound society, protecting the environment and lowering costs within the health care system and in the economy (see figure 1: Sustainable benefits of breastfeeding pyramid). The upgrade of the profession to be further spread and developed should be an imperative for all health care systems in the sense of sustainability, since breastfeeding promotion has become a priority goal of health promotion on a global scale.

⁴⁰⁶ Stokamer 1990

⁴⁰⁷ Centuori, Burmaz et al. 1999

⁴⁰⁸ Brandt-Schenk 2008

6.1.3 Qualification of health care providers' education in the field of lactation

The experts of the questionnaire have picked the lack of education of hcp in the field of lactation out as a central theme. As one item has revealed, even the global public health WHO recommendation for bf duration is not known amongst health care providers.

Health care providers' lack of basic education on bf consequently has a significant impact on the practical sector: According to the experts of the questionnaire, there are physicians, superiors, managers and administrative employees non-supportive of LC or even undermining the LC work with adverse attitudes. This behaviour results in making parents insecure with bf. In spite of their evidence-based work, LCs feel like not being taken serious as experts.

Several studies have indicated that not only the information on infant feeding provided by health services, but moreover the attitudes of health care providers towards breastfeeding might be a decisive factor for mothers' decisions on the infant feeding practice⁴⁰⁹. How can health care providers' attitudes be supportive for breastfeeding as long as a basic knowledge of breastfeeding and its benefits are lacking?

The experts complain about an eminent lack of interdisciplinary co-operation with other health care providers. Moreover, the current hospital routines obstruct exclusive breastfeeding, according to the experts' opinions.

This situation given, it is crucial to provide LCs with adequate authority in the health care system⁴¹⁰. LCs should be given the key role in their domain within health services and be authorised to give instructions to all other health care providers including physicians with regard to infant feeding.

A small group of experts reports progress towards bf-friendliness and support of their LC work in their personal work environment. This seems to be currently more of an exemption, as the figures of the questionnaire indicate (see results chapters). However, these examples show – just like the progress in Norway and Sweden – that it is possible to make a change.

6.1.4 “Baby-friendly” as new quality standard

The baby-friendly hospital as quality standard has only been implemented in Norway and Sweden so far. All other participating countries only managed to marginally implement the new quality standard, which is essential for successful breastfeeding and includes integrated care. This deficit indicates that currently health services fail at all levels of lactation to support breastfeeding, since they do not follow the 10 steps to successful breastfeeding including the integrated care concept. On the other hand the standard certification of hospitals in Sweden and Norway has led to high breastfeeding rates, which indicates that the quality standard “baby-friendly” represents a key measure to re-build the breastfeeding culture. The integrated care included in the baby-friendly concept might be the reason for its effectiveness.

Several countries have developed additional programs to support baby-friendliness, such as the baby-friendly community in Canada and New Zealand. The US American Department of Health and Human Services has included and prioritized breastfeeding promotion in the “Healthy people” initiative.⁴¹¹ However, the implementation of the Healthy people initiative has not met the defined goals up-to-date.⁴¹²

⁴⁰⁹ Lawrence 1982 ; Losch, Dungy et al. 1995; Lieu Wikler et al. 1998

⁴¹⁰ Technical Working Group A Report 1990

⁴¹¹ Satcher 2001; Gartner et al 2005

⁴¹² Thurman, Jackson Allen 2008

6.2 Natural birth as health- and breastfeeding-promoting factor

The protection and promotion of breastfeeding not only is a question of better qualification of hcp in the field of lactation, but involves far-reaching changes of our health care systems, especially in the field of obstetrics⁴¹³.

Already in 1985 the WHO has recommended a natural birth⁴¹⁴, which means to avoid birth interventions like permanent electronic control, routines of water breaking, episiotomy or medical labour initiation. The rate of caesarean sections over 10-15 % can not be justified according to the mentioned WHO paper “Technology of birth”.

Since the WHO paper in 1985, many scientists world-wide have given evidence for the importance of a natural birth to avoid unnecessary harm for both mother and child⁴¹⁵. To name a few of these international scientists, there is Michel Odent, a French obstetrician and founder of the primal health research centre in London, UK. Based on his research and practical experience as obstetrician he pleads for privacy and natural processes without unnecessary interventions at birth. His research approaches in the field of maternal and child health are oriented towards salutogenesis. He has contributed substantially to the understanding of the coherence of natural birth and breastfeeding.⁴¹⁶ He stated that a natural birth favours breastfeeding, while birth interventions rather have a negative impact on breastfeeding. His findings are confirmed by a recent study: A 2002 study has shown that lactation consulting in a home setting facilitates breastfeeding better than in a hospital setting.⁴¹⁷

Furthermore Odent compared birth statistics of different countries world-wide and came to the conclusion that nations like the Netherlands, Sweden and Great Britain, where the number of midwives exceeds by far the number of obstetric physicians and births are predominantly in the hands of midwives as well-established profession in the health care system, have less morbidity, mortality or birth interventions in their birth statistics than the following countries with a greater number of obstetric physicians than midwives: USA, Canada, Brazil and Italy. The conflicting interests of physicians have been stated by the experts and discussed in the previous result chapter.

In Germany, Professor Beate Schücking and her research team have contributed to this subject by their research on reasons for birth interventions and their attitude against the association of birth with pathology⁴¹⁸, which she shares with all researchers mentioned in this context. In 2008 she has approached the topic of a midwife-led birth⁴¹⁹, which follows the successful role model of Norway. The outcome of this study shows that midwife-led births do not restrict the frame of action of physicians. It can be assumed that they would represent an improvement of health services in the sense of salutogenesis. Sayn-Wittgenstein indicates in her 2007 paper “Rethinking maternity care” that natural birth supported by midwives is health-promoting. Thus not only breastfeeding should be classified as health-promoting factor in the sense of salutogenesis, but natural birth as well.⁴²⁰

This might be one of the reasons why the successful model of Norway has given the main responsibility for births back into the hands of midwives and has adapted the health care system

⁴¹³ Forster, McLachlan 2007

⁴¹⁴ WHO Regional Office for Europe: *Joint Interregional Conference on Appropriate Technology for Birth*. Fortaleza, Brazil, 22 - 26 April 1985

⁴¹⁵ Hellmers, Schücking 2007

⁴¹⁶ Odent 2008

⁴¹⁷ McKeever, Stevens et al. 2002

⁴¹⁸ Schücking, Schwarz 2001

⁴¹⁹ Hellmers, Schücking 2008

⁴²⁰ Sayn-Wittgenstein 2007

accordingly. As the experts have stated, physicians have a “vested interest in interventions at childbirth” as explained before in the results chapter, with a negative impact on natural birth and breastfeeding.

If we understand Norway as a role model with births mainly in the hands of midwives, the health care systems should adapt accordingly by undergoing a change of paradigm towards restriction of interventions in favour of natural proceedings. With respect to natural birth, the Netherlands might serve as a role model, too, with a rate of 30% home births⁴²¹, 30% births in birth centres and only 40% in hospitals.

As studies have clearly shown, birth interventions have a negative impact on both initiation and duration of breastfeeding⁴²². However, the current trend leads towards an increase of high technology at birth, such as reproductive medical care, a rise of birth interventions and caesarean sections on request. A recent study of Schücking doubts that cesarian sections are originally requested by mothers or rather a psychiatric intervention comprising major surgery⁴²³. As de Jong⁴²⁴ states in her study on birth interventions, caesareans are mainly in the financial interest of the hospitals, because surgery is by far more rewarded in the health care systems than natural birth. The more technology is used in obstetrics, the more physiological processes like natural birth and breastfeeding are endangered⁴²⁵.

A possible measure that might lead to less medical birth interventions might be the introduction of Doulas as permanent birth support.⁴²⁶ Doulas are mothers with a special training to accompany a mother during birth. Their main task is to be near the mother throughout childbirth and communicate with her. The presence of a doula has such a positive effect on the confidence of mothers, that medical interventions are reduced significantly.⁴²⁷

6.3 Breastfeeding and socio-economic status: Will the gap deteriorate in the future?

In 2008 the researchers Rückert and Mielck⁴²⁸ have found social inequalities in the practice of breastfeeding, which correlates with a higher societal level and higher education. The experts of this questionnaire have observed this social inequality in their practical work as well and have expressed their worries for the future about a deteriorating gap and even more social inequality between breastfeeding and bottle-feeding mothers. As will be explained in the next chapter on informed or shared decision-making, the lower educated population represents the main target of misleading PR, which contributes to the observed and scientifically evident social gap. The evaluation study of the “Healthy people 2010 “ goals in the USA has also stated a social gap with regard to breastfeeding:

*Analysis indicate that only children of college graduates meet the targets of breastfeeding at initiation, 6 months and 12 months....Results indicate a low prevalence of breastfeeding among children of single mothers, less educated mothers, participants in the Women, Children and Infants program.*⁴²⁹

⁴²¹ De Jonge et al. 2009

⁴²² Kroeger 2004

⁴²³ Schücking 2004

⁴²⁴ De Jong P: 1997

⁴²⁵ Odent 2007

⁴²⁶ Klaus, Kennell et al. 2003

⁴²⁷ Scott, Berkowitz et al. 1999

⁴²⁸ Rückert, Mielck 2008

⁴²⁹ Forste, Hoffmann 2008

If differences between social classes even deteriorated in the future, possibly also including an increase of teenage mothers, as one of the experts has added, the worries of the experts might become reality and breastfeeding with all its health benefits for both mothers and children will remain the privilege of the higher educated or wealthier part of society.

To abolish this gap, the standard certification of hospitals as baby-friendly might be an effective measure, since everyone – independent of the social class – would benefit from the successful initiation of breastfeeding and would be given the opportunity to make an informed choice on infant feeding, based on competent support, objective information and personal experience. Further interventions to abolish this gap have been listed in the theoretical part: The implementation and monitoring of the Code, specific intervention programs or PR and education. The next two chapters discuss if informed decision on infant feeding is possible today with the media as questionable source of information contributing to the social gap.

6.3.1 Is shared or informed decision making on infant feeding possible today?

Some experts of this questionnaire plead for “more honesty”, to “tell the truth about baby nutrition” or “show substitutes as a risky food”.

By informing the public about the benefits of bf, it can not be concealed that on the other hand this means that substitutes are a risky food, as the recent fatal substitute scandal in China has reminded us of⁴³⁰. In the sense of an informed or shared decision, parents have the right to be informed and educated about risks of feeding choices.

To provide evidence-based and correct information on the nutrition of babies makes part of the quality standards of baby-friendly hospitals, but not of the health care systems' standards in general. Enabling informed decision-making is included in the ten steps to successful breastfeeding: To inform parents during pregnancy on infant nutrition and breastfeeding practice, to give adequate and competent advice in hospital and after discharge by providing post-partum care, e.g. mother support groups. Thus, enabling parents to an informed or shared decision makes part of the integrated care of the baby-friendly concept.

Without the high quality standard of the baby-friendly hospital, correct information about infant nutrition is only an opportunity but not an imperative in the health care system. It seems that personal opinions of health care providers are mostly communicated to parents instead of evidence-based information, while hcp's negative experience with breastfeeding might have a negative impact on their advice, as one of the experts emphasized. Neither in research nor in the health care sector breastfeeding is currently considered the norm for infant nutrition, as the experts have complained about. This attitude is communicated to parents also in a non-verbal way, e.g. by name badges on babies' cribs in hospital with eye-catching substitute adverts.

This lack of quality standards for information and education for this decisive health promoting factor “infant nutrition” leads to many personal opinions being communicated to parents. Mothers in breastfeeding support groups mostly complain about a lack of support and information: “Everyone is telling me something different about breastfeeding”. All these different opinions communicated by health care providers and others make it very hard for young mothers to find objective information. Manipulated research, as discussed in the previous chapter, might contribute even more to this confusion and to concealing the truth in the favour of commercial interest.

⁴³⁰ Guan, Fan et al. 2009

In this situation of missing objective information based on quality standards, adverts in the omnipresent media might easily influence the parents' decision on infant nutrition. In Germany one of the substitute companies even provides a 24 hour-a-day counselling hotline, a practice, which is clearly forbidden by the Code.

Thus the evidence-based knowledge of LCs remains ineffective on the whole. Objective information is sacrificed to the lack of education of hcp in combination with misleading PR or manipulated research. In general, informed or shared decision making of parents seems to be nearly impossible in the current situation. It takes great efforts of parents to filter the available information, which is easier for educated parents than for uneducated parents and thus contributes to the social health gap.

6.3.2 Impact of the media on infant feeding practice

The experts have pointed out several times that the media remain an obstacle to breastfeeding. In the item of compliance and support the media were evaluated as having a negative impact on breastfeeding, e.g. “adverts of substitutes are rampant on mass media”. This is not surprising, since most countries excluding Norway have not implemented the International Code effectively into national law as basic measure for the protection of breastfeeding.

Moreover, the image of breastfeeding in public has suffered by misleading PR, manipulated research and health care providers not valuing breastfeeding, but pretending it was equal to substitutes. With a negative image in public, the societal support of breastfeeding is poor, as the experts have stated in the compliance and support item of the questionnaire.

The substitute industry has found many ways to harm the image of breastfeeding in public mainly using television to reach the majority of people, e.g. by “objective reports” with hidden PR for substitutes on the “advantages” of bottle feeding e.g. drinking alcohol. Moreover there is product placement in daily soaps⁴³¹ or in reality shows about pregnancy and birth, or sponsored “reports” showing long-term breastfeeding in a negative way⁴³². The German political magazine “Focus” has unmasked the trend to use TV “reports” for hidden advertisement. A TV report is often understood as objective and serious journalism by the public and therefore represents the ideal forum for product placement and a whole script demonstrating the “advantages” of the product. Without a critical view on such a “report” this way of marketing might be very effective.

The substitute producers' choice of TV broadcasts contributes to the social gap between breastfeeding and bottle feeding mothers, because the chosen TV programs aim at reaching the target group of the lower educated population. To cite an example, in Germany there has been a “report” on pregnancy and birth with the name “Schnulleralarm”⁴³³, which means “pacifier alarm”. The title of the show represents a Code violation in itself, since having a baby does not automatically imply pacifier use, which is not recommended by the ten steps to successful breastfeeding. Regarding the contents of the reality show, only bottle-feeding mothers were shown, thus pretending to represent the norm of infant feeding. A 2000 UK study has come to similar conclusions for British newspapers and TV broadcasts⁴³⁴:

“Bottle feeding was shown more often than breast feeding and was presented as less problematic. Bottle feeding was associated with “ordinary” families whereas breast feeding was associated with middle class or celebrity women. The health risks of formula milk and the health

⁴³¹ German TV broadcast SAT1, series: Verliebt in Berlin 2005

⁴³² German TV broadcast RTL (Radio Television Luxembourg) program: RTL extra 08.08.2005

⁴³³ Seibt 2006; German TV broadcast RTL (Radio Television Luxembourg) program: Schnulleralarm 2006

⁴³⁴ Henderson, Kitinger et al. 2000

*benefits of breast feeding were rarely mentioned. **Conclusions:** The media rarely present positive information on breast feeding, even though this feeding practice is associated with the most health benefits. Health professionals and policy makers should be aware of patterns in media coverage and the cultural background within which women make decisions about infant feeding.”*

A 2005 US study has recommended educational campaigns targeted at the lower educated population to counteract the marketing strategies of the substitute industry⁴³⁵. Further research of communication scientists would be desirable to unmask the manipulative marketing strategies of substitute producers and to monitor Code violations.

The experts of the questionnaire emphasise the key role of PR in the current situation, since the media nowadays play a decisive role in creating opinions throughout all levels of society. According to the experts, positive PR for breastfeeding should be communicated by the NCBF and by health policies, while research should contribute objective information. The experts plead in several closed and open questions for more campaigns, education and PR for breastfeeding. In Norway, it has been part of re-establishing the bf culture to create an image of breastfeeding as smart, cool and career-right, as one Norwegian responder stated in an open question. In the Netherlands, a radio advert of a health insurance has triggered a positive development towards the reimbursement of lactation consulting by many health insurances. These examples show that PR represents an effective instrument in re-building the breastfeeding culture, as the experts have emphasized.

6.4 Research on breastfeeding: Conflicting interests

As deplored by the experts, different definitions of bf⁴³⁶ have been a clear deficit in research quality in the past. Professor Miriam Labbok has already indicated this shortcoming of research quality in 1990 with her article on differing definitions of breastfeeding⁴³⁷.

Moreover the experts complain about a lack of funding of research on breastfeeding. In many fields of research it goes without saying that the respective industry finances research, since the industry has an interest in progress of technology (e.g. automotive industry). Generally there are no conflicting interests between the industry and research.

In the field of breastfeeding, the situation is completely different. The industry is selling a substitute for human milk and therefore is a competitor to breastfeeding and threatened by a loss of market shares, if research communicated to the public the truth about baby food. Outcomes of research paid by the industry would hardly communicate to the public the minor quality and health risks substitutes bring about.

Correct definitions in research, as demanded by the experts of this study, are an indispensable attribute of sound studies. Incorrect definitions or other quality deficits result in false outcome and misleading information of science and the public. Since bf has the potential to spoil a lot of commercial interests (pharmaceutics industry, turnover in the health care sector, diet industry...), this is a very serious issue.

The „profit before health“ attitude has already led to unserious research in the past, which has been paid by the industry with results in their own interest (e.g. tobacco companies minimising the risks of smoking in public based on „scientific outcome“). Control of research is a serious

⁴³⁵ Khoury, Moazzem et al. 2005

⁴³⁶ Heinig 2001

⁴³⁷ Labbok, Krasovec 1990

issue, since the publication of manipulated research outcomes with harmful impact on public health might be considered a crime.

In this respect a research approach might be useful to identify studies in the field of lactation with deficits in methods, definitions or expert knowledge in order to prevent further publication or scientific consideration of the misleading studies. Quality control of studies in the field of conflicting interests of the industry might lead to more ethics in research, because manipulation would become more difficult.

Therefore the experts claim that research should comply with the Code to be objective. However, 85 % of the experts consider it hard to obtain funds for research according to the Code. This might mean that besides the industry there are not many opportunities to receive research funds. If the funds for research are in the hands of the industry with the interest to sell substitutes, while researchers do not get funds for objective research on breastfeeding, it is highly probable that the truth about infant feeding is being suppressed and denied, as the experts have stated.

6.5 Evaluation of the NCBF performances

Not all countries included in the study have already founded their NCBF: The Netherlands, Israel and Australia. The existing NCBFs only received a very slight agreement concerning successful promotion of breastfeeding from the experts, while researchers disagreed to a successful performance of their NCBF. Obviously the experts have significantly higher expectations towards their NCBF including a range of tasks exceeding the currently performed functions. The main expectation groups are: PR, an impact on policies and in the health care sector, information policies and legislation, tax and human rights. Probably this “failure” of NCBFs to meet the experts' expectations is due to a lack of political weight, funds and influence, as one of the experts stated in the open question of this item. It remains a question of political commitment to provide the NCBFs with more power enabling them to fulfil the manifold tasks expected by the experts. Norway might partly serve as role model with the breastfeeding centre, which covers a majority of the defined expectations.

6.6 Policies to promote breastfeeding include manifold political fields

With regard to policies the following sectors besides the health policy sector are concerned:

- Public education on the benefits of natural birth and breastfeeding
- Maternal leave should be adapted and prolonged
- The work environment should become baby- and breastfeeding-friendly
- Consumer protection for mother and child
- Protection of the environment towards sustainability

Policies are urgently needed to change the negative impact of the media on breastfeeding. The Code has to be implemented and monitored according to WHO and the experts as national task. Backed by a breastfeeding promotion policy, the media might be used for breastfeeding education and promotion and contribute to an informed or shared decision-making.

Moreover, the experts view the modern work environment as remaining decisive obstacle to breastfeeding. As table 19 indicates, most countries involved in this study do not have a sufficient maternal leave and adequate legislation in favour of breastfeeding (e.g. USA and Switzerland). Norway's successful system should serve as a role model with 10-12 months maternity leave as essential precondition to breastfeed with continued percental wage payment during maternity leave. With an average of 1-2 children per mother in industrialised countries today, mothers would retreat on average from their workplaces for 1-2 years of their lives. With

a life expectation of nearly 80 years for women in industrialised countries today, this should not represent an obstacle to their careers. Enabling mothers to breastfeed also represents a feministic approach⁴³⁸ to optimally combine motherhood with work. Mothers should feel supported during lactation by modern society⁴³⁹, which should value breastfeeding for its manifold benefits.

The 2003 study of Galtry concludes that both socio-cultural support and labour market/health and early childhood policy are important if high rates of both breastfeeding and women's employment are to be achieved in industrialised countries⁴⁴⁰.

6.6.1 Re-building the breastfeeding culture based on very good compliance of mothers and lactation consulting

The international experts have stated a very good compliance of mothers with lactation consulting, based on their clinical experience as physicians, nurses, midwives, voluntary lactation consultants or other experts in the lactation field. This represents an optimal precondition for re-building the breastfeeding culture on an international level. Instead of pretending that the mothers' decision on the infant feeding practice was a decision based on free will, public health responsables should admit that in the first place mothers have to be enabled and supported to breastfeed⁴⁴¹. As the example of Norway and Sweden show, the programs of WHO and UNICEF described in the theoretical part are most effective to re-build the breastfeeding culture, but are hardly being implemented on an international level up-to-date. Once the preconditions are implemented and mothers are being encouraged and supported by health services consentaneously, it seems to be no longer a question for mothers to decide for or against breastfeeding, since they are being enabled and empowered to breastfeed in the first place⁴⁴².

The experts' opinions of this study indicate that low bf rates might be mainly due to a poor support of the health services, a deficit of competence of health care providers and a failure of bf support and promotion. In mothers' perception the failure of health services to support them to successfully breastfeed might be perceived as their own disability to breastfeed, which is frustrating and makes mothers resign and give in trying, since they have no chance to find the support they need from mostly uneducated health care providers.

Compared to mothers and other protagonists or potential supporters of breastfeeding, health care providers were rated as only slightly supportive towards breastfeeding by the experts. However, it surely takes more than being only slightly supportive towards breastfeeding to re-build the breastfeeding culture. Re-building the breastfeeding culture is a challenging task for health care providers and takes education in the first place, followed by re-structuring health services, the implementation of quality standards in lactation consulting (such as BFH) and to overcome routines by developing organizations like hospital wards, maternity services and private practices.

The outcome of this study states that mothers are highly compliant with lactation consulting. Moreover in the majority of countries involved in this study initiation rates of bf are high. It seems that mothers are ready for a change. Moreover, LCs in spite of their weak position with a lack of pay, acknowledgement and influence are willing to contribute to re-building the bf culture, since they consider it the task of health care providers according to the Lancet quotation (see introduction).

⁴³⁸ Labbok, Smith et al. 2008

⁴³⁹ Raj 1998

⁴⁴⁰ Galtry 2003

⁴⁴¹ Seibt 2006

⁴⁴² Renfrew, Ross et al. 1998

WHO recommendations on the duration of breastfeeding or programs to promote breastfeeding are not even known amongst health care providers or simply disregarded, according to the experts' opinions. This might - amongst other reasons - be due to the fact that a basic education on breastfeeding and lactation consulting for all health care providers is lacking. Breastfeeding of toddlers, as recommended in the WHO recommendation for breastfeeding is marginal in industrialised countries, as the statistics have shown. Weaning to be initiated by the child is mostly pleaded for by LLL leaders, as mentioned in the theoretical part. However, practitioners seem to be not aware of this possibility, so how can mothers be?

Since lactation consulting is not valued in the health care systems as profession, education on breastfeeding does not attract the interest of hcp in this discipline. The whole situation leads to the impression that one deficit is causing another in interdependence. So from which point can we start to change the vicious circle?

6.6.2 Priorities of measures

The experts have prioritised the measures suggested in the items of the questionnaire to promote breastfeeding, and have amended more measures. According to their opinions the most important measure to re-build the breastfeeding culture is integrated care. If mothers receive adequate lactation consulting only at one stage of lactation, the success might easily be “destroyed by other hcp out of ignorance”, as one of the experts has described. As the ten steps to successful breastfeeding indicate on an evidence-based level, integrated care is essential to promote bf successfully by bf promotion starting at pregnancy in practice and hospital, at the delivery and maternity wards and after discharge from hospital in mother-support groups, breastfeeding support clinics and in gynaecologist and paediatric practices.

Resulting from the lack of education of most health care providers combined with a lack of acknowledgement of the profession LC, it seems that integrated care in the field of lactation is currently bound to fail. The experts complain about a lack of co-operation and about colleagues undermining their work and making parents insecure. Regarding the effective measures for the promotion of bf, integrated care has scored the highest mean value, emphasising the great meaning of the co-operation of hcp in this field towards a successful promotion of bf.

However, regarding the WHO recommendation to breastfeed over two years, integrated care has to be defined even wider, thus being extended to the whole health care system. Within two and a half year of breastfeeding, which represents the world average of bf duration, or an even longer period of breastfeeding, all health services become involved, since mothers or children might undergo all kinds of medical treatment during the breastfeeding period, e.g. dental treatment, surgery, medical treatment for infectious diseases etc. Thus it is indispensable for all health care providers to have a basic education on breastfeeding to be able to treat or consult the mother-baby dyad with competence during lactation, considering the special medication needed, the avoidance of mother-child separation or other aspects important during lactation, such as the knowledge that weaning in case of any medical treatment in the majority of cases is unnecessary and even harmful for both mother and child. The experts have suggested the 40 hours WHO course as basic education for all health care providers. It should be examined whether this course is really sufficient to gain competence, e.g. with respect to medication. A paradigm shift towards breastfeeding promotion will also result in the challenge to educate all health care providers in the field of lactation. In Norway, the breastfeeding centre supports health care providers with regard to treatment during lactation.

According to the experts, integrated care should be defined beyond the health care sector and should also include related professions such as day care nurses, social workers, psychologists

and teachers, as the experts suggested in the open question “other effective measures for the promotion of breastfeeding”. The co-operation in the sense of breastfeeding promotion should become a priority throughout society to encourage mothers and protect the early mother-child relation.

The second important measure emphasised by the experts is to integrate breastfeeding promotion into health policies. The necessity to protect and promote bf by policies on an international level was strongly recommended by the experts involved in this study. Most experts stated not even to have policies on bf promotion in their countries of residence. If any, they were not implemented successfully, indicating a lack of political commitment to the promotion of breastfeeding.

WHO and UNICEF programs dated in the 1980s have only been implemented marginally up-to-date, as the experts and several studies confirmed. Results indicate that health care providers are not even informed about the recommendations. Further measures based on the WHO / UNICEF programs, e.g. the European Blueprint for action have started developments, which still need a lot of protection and promotion by health policies to make a real impact on the societal and health care sector level. According to the results of this study, it seems that without the support of health policies the WHO / UNICEF programs will not overcome the phase of initiation, which has been started already in the 1980s.

In Norway, politicians have plaid a decisive role in the re-establishment of bf promotion, which one Norwegian participant has emphasised in her remarks on her current situation.

One of the main questions arising from this study is whether the decision for women to breastfeed basically is their own decision or in the first place the failure of the health care system to support mothers willing to breastfeed. Regarding the high initiation rates of bf in the majority of countries involved, the low number of baby-friendly hospitals and the poor state of education of hcp in the field of lactation it seems much more probable that the systems fails in supporting mothers willing to breastfeed at all stages of lactation: pre-natal (see chapter “Is an informed decision on infant feeding possible today, post-natal and after discharge of the obstetric institution). Further research is needed on this topic.

6.6.3 Necessary paradigm shift in the health care systems towards health promotion

The implementation of breastfeeding promotion comes with a paradigm shift towards prevention and health promotion, which might save the health care systems and the whole economy substantial costs and bring about an improvement of life quality, as described in the theoretical chapter “salutogenesis and breastfeeding”. The role of the new profession lactation consultant has been clearly defined as health promoting and preventive (see previous chapter 6.1.1)

The paradigm shift towards health promotion is one of the main claims of the New Public Health. However, it was not possible to implement this shift in the last decades, as it was not possible to re-establish the breastfeeding culture, except in Norway, followed by Sweden.

6.6.4 Breastfeeding contributing to the protection of the environment

Modern civilisation has reached a critical point: It is no longer a question of lifestyle to protect the environment, but a question of survival. Every aspect of modern life is concerned and has to be newly defined with new priorities in the sense of mitigation.

To promote breastfeeding as a natural resource contributes to the goal of sustainability. It moreover relieves the environment from a lot of unnecessary waste of resources that comes with bottle feeding like the complex production of milk powder from another species' milk not suitable for humans, the fabrication of bottles, teats, pacifiers and packaging, industrial processing, storage and transport, heating and cooling, unnecessary use of raw materials and production of waste, unnecessary curing of avoidable diseases, e.g. allergies and cardiovascular diseases as the consequence of obesity.

The obstacles to breastfeeding as described by mothers in most studies would be preventable by following the WHO/UNICEF recommendations such as the 10 steps to successful breastfeeding. The examples of Norway and Sweden demonstrate that the consistent implementation of the measures for the promotion and protection of breastfeeding actually have the effect of removing such obstacles and re-establishing the breastfeeding culture.

Knowledgeable and skilled lactation consulting, the 10 steps to successful breastfeeding and mother support groups to overcome difficulties are most suitable to prevent pathology and the failure to establish breastfeeding. The example of Norway and Sweden indicate that any discussions about moral, guilt or other thinkable “disadvantages” of breastfeeding become unnecessary when mothers are being practically enabled to breastfeed. To be enabled to breastfeed makes part of feminism and therefore represents the future of modern women in a salutogenetic sense to benefit from all disposable resources of health and well-being.

Breastfeeding is our biological predisposition as mammals and is connected with manifold and complex benefits, as explicated in the theoretical chapter, for both mother and child. The fact that breastfeeding has been replaced by formula in the last decades and that our children in the majority survive the minor quality of substitutes and unnatural and not physiological suckling does not make it a sensible alternative. In the past we have simply ignored the disadvantages and risks of artificial infant feeding in the name of scientific progress, and have accepted the loss of life quality, morbidity and mortality that comes with it. Moreover, artificial infant feeding represents a luxury that we cannot expect to be able to afford endlessly. Facing global economic and climate crises, science, policies and the public health sector have a great responsibility to act and re-build the breastfeeding culture to protect our offspring.

7. Final chapter

7.1 Summary

The expected results have been confirmed by the experts: Acknowledgement, payment and support of lactation consultancy are still lacking. The increase of professionalism of lactation consultants has been identified as decisive precondition for the further development of breastfeeding promotion.

The effective measures for the promotion of breastfeeding based on WHO / UNICEF programs, recommendations, quality standards and definitions all remain priority measures with overdue implementation. Most of the measures listed in the expert questionnaire were supposed to be implemented by 1995 supported by the National Committees for Breastfeeding, which have been founded as a result of the Innocenti Declaration. The National Committees' performances are not satisfactory so far according to the international experts' opinions, since they are not yet provided with sufficient funds, staff and political weight. Research on lactation needs high quality standards and control to avoid the predominance of commercial interests instead of health promotion. On an international level, health policies are urgently needed for consumer protection and the integration of lactation consultants' work in the health care system, as well as quality

standards on lactation, e.g. the baby friendly hospital certification and a basic education of health care providers on lactation.

7.2 Outlook

The explorative study has indicated a need for political action in the first place. There is no lack of evidence to promote breastfeeding, but predominant commercial interests, which should be eliminated by consumer protection in the sense of „health before profit“. The health care systems need to switch from routines in favour of predominant artificial feeding in the past decades to quality standards for lactation consulting, which currently are neglected both in education and practice.

The study gives evidence of a very good compliance of mothers and high initiation rates of breastfeeding. The health care systems of mainly industrialised countries involved in this study seem to fail at every stage of lactation to support the vulnerable process of establishing breastfeeding successfully to make use of an irreplaceable health resource. Presently voluntary and professional lactation consultants are being left alone with this task by the health care systems, by policies, research and the media.

The Academy of Breastfeeding Medicine recently described the promotion of breastfeeding as „protecting a natural resource“. To promote breastfeeding represents prevention and health promotion and makes part of the paradigm shift towards sustainability as overall goal to save our planet. Facing both an economical and climate global crisis with poverty detected in the theoretical chapter as high risk factor for artificially fed infants, it seems irresponsible of politicians not to promote and protect breastfeeding and take all necessary measures in a holistic approach to re-build the breastfeeding culture.

The example of Norway and Sweden demonstrate that it is possible to re-structure the health care system of an industrialised country towards successful breastfeeding promotion in concerted action of volunteers, professional lactation consultants and politicians. There is a growing number of lactation consultants as knowledgeable and skilled supporters of breastfeeding on an international level. Moreover, the international support towards the protection and promotion of breastfeeding is growing by the paradigm shift of the WIC program in the USA, the European and US blueprints for action, the baby-friendly community programs in New Zealand and Canada and the continued presence of breastfeeding promotion programs on the agenda of WHO and UNICEF. If this trend will continue in the future – as the experts have predicted – a global re-building of the breastfeeding culture is possible.

Today modern societies should in the first place enable mothers to breastfeed to make use of presently uninvested health resources and find solutions to successfully combine work and motherhood with by far more flexible models than we have today. To build healthy environments for the mother-baby dyad in modern society represents a task in the sense of feminism and New Public Health (the Ottawa charta) towards health promotion and salutogenesis.

8. References and annex

8.1 References

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Questionnaire for experts for all conference participants

Experten-Fragebogen für alle Konferenz-Teilnehmer

If you could not return the questionnaire at the congress, please send asap to:
Falls Sie den Fragebogen nicht während des Kongresses abgeben konnten, bitte senden Sie ihn an:

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Your opinion counts – Ihre Meinung ist gefragt

Dear conference participant, **Your expert opinion counts.** This questionnaire is designed to learn more about the situation of breastfeeding and possible trends. The data will be evaluated for a dissertation in public health. The questionnaire is strictly confidential and adheres to regulations of data privacy. It is guaranteed that the data are evaluated with no relation to the name of the participant. Thank you for spending about 15 minutes to fill in this questionnaire completely and support breastfeeding research!

Liebe(r) KonferenzteilnehmerIn, **Ihre Meinung als ExpertIn ist hier gefragt.** Der vorliegende Fragebogen soll sowohl die Situation des Stillens in Ihrem Umfeld als auch mögliche Trends herausfinden. Die erhobenen Daten werden für eine Promotion im Fach Gesundheitswissenschaften ausgewertet. Die Befragung ist anonym, d.h. die Antworten werden getrennt vom Namen ausgewertet. Forschungsarbeit unterliegt den Regelungen der Datenschutzgesetzgebung. Es ist absolut sicher-gestellt, dass Ihre Angaben nicht mit Ihrer Person in Verbindung gebracht werden. Danke für Ihre Bereitschaft, diesen Fragebogen in durchschnittlich 15 Minuten vollständig auszufüllen und die Stillforschung zu unterstützen!

PART I - Information on yourself / TEIL I - Information zur Person

Nationality / Nationalität _____ Country of residence / Wohnsitz (Land) _____

Year of birth / Geburtsjahr _____ male / männlich female / weiblich

Profession / Beruf

Physician (please specify the field) / Arzt (bitte Fachgebiet angeben): _____

Nurse (please specify the field) / Pflegekraft (bitte Fachgebiet angeben): _____ Midwife / Hebamme

Researcher (please specify the field) / Forscher (bitte Fachgebiet angeben): _____

Professional in the Public Health field (please specify the domain):
Auf dem Gebiet der Gesundheitswissenschaften tätig (bitte Fachgebiet angeben): _____

Professional in Health policy (please specify the field):
Auf dem Gebiet der Gesundheitspolitik tätig (bitte Fachgebiet angeben): _____

Others (Please specify) / Andere (bitte angeben): _____

Personal experience with breastfeeding (please place an x) / Eigene Still Erfahrung (bitte ankreuzen)

more than 1 year (per child) / über 1 Jahr (pro Kind) less than 1 year per child / weniger als 1 Jahr pro Kind none / keine

PART II - Questions for all lactation consultants including physicians, health care professionals, LLL leaders, others. All other respondents, please turn to PART III !!!

TEIL II - Fragen für alle Stillberater inklusive Ärzte, Gesundheitspersonal, LLL-Beraterinnen, Andere Alle anderen TeilnehmerInnen, bitte gehen Sie zu Teil III !!!

Qualification as lactation consultant (please place an x) / Qualifikation als Stillberater (bitte ankreuzen)

LLL IBCLC AFS health care professional / Gesundheitspersonal
 Others (please specify) / Andere (bitte angeben) _____ Year of accreditation / Jahr der Erst-Qualifizierung _____

My lactation consulting refers to mothers with children at the age of / Meine Stillberatung bezieht sich auf Mütter mit Kindern im Alter von:

Pregnancy / Schwangerschaft Birth / Geburt New-Born until 6 weeks post partum / Neugeborene bis 6 Wochen nach der Geburt
 First year of life / 1. Lebensjahr Toddlers starting with the 1st birthday = 2nd year of life / Kleinkinder ab 1. Geburtstag = 2. Lebensjahr

In one month, on average, I counsel on breastfeeding / In einem Monat berate ich im Durchschnitt zum Stillen:

1-10 different mothers / 1-10 verschiedene Mütter 11-20 21-50 more than 50 / über 50

In one week, the average number of hours I spend on breastfeeding counseling is / In einer Woche berate ich im Durchschnitt zum Stillen in Stunden

1 hour / 1 Stunde 2-5 h / 2-5 Stunden 6-20 h / 6-20 Stunden more than 20 h, specifically / über 20 Stunden, nämlich: _____ hours / Stunden

My work is voluntary / Meine Arbeit ist ehrenamtlich

I get paid for my lactation consulting / Ich werde für die Stillberatung bezahlt:

higher-than-average / überdurchschnittlich adequate / angemessen not sufficient / nicht genügend

I feel valued for my voluntary or paid work / Für meine ehrenamtliche oder bezahlte Arbeit fühle ich mich folgendermaßen anerkannt:

very much / sehr stark adequate / angemessen not sufficient / nicht genügend

To feel more valued in my work I wish for the following / Als Anerkennung meiner Arbeit wünsche ich mir: _____

Your motivation as a lactation consultant (please only place 3 crosses!) / Ihre Motivation als Stillberater (bitte nur 3 Kreuze!):

These are all major important reasons for breastfeeding counseling. Please pick the 3 most important for your personal motivation and give them the following ranking: 1. most important for my personal motivation 2. second important for my personal motivation 3. third important for my personal motivation

All dies sind wichtige Gründe für die Stillberatung. Bitte wählen Sie die 3 aus, die Sie am meisten in Ihrer Arbeit als StillberaterIn motivieren mit folgender Rangfolge: 1. Wichtigster persönlicher Motivationsfaktor 2. Zweitwichtigster persönlicher Motivationsfaktor 3. Drittwichtigster persönlicher Motivationsfaktor

Empowerment of women / Stärkung der Frauen

1 2 3

To promote health / Um Gesundheit zu fördern

1 2 3

To promote bonding / Um Bindungen zu fördern

1 2 3

To support children in their right for human milk and the optimal health status

Um Kindern zu ihrem Recht auf Muttermilch und dem bestmöglichen Gesundheitsstatus zu verhelfen

1 2 3

To support families / Familien zu unterstützen

1 2 3

To pass on my own positive experience with breastfeeding / Meine eigene gute Erfahrung mit Stillen weitergeben

1 2 3

To protect the environment / Um die Umwelt zu schützen

1 2 3

Career / berufliche Perspektiven

1 2 3

To build a new society with a breastfeeding culture / Eine neue Gesellschaft mit Stillkultur aufbauen

1 2 3

Others (please specify) / Andere (bitte angeben): _____

1 2 3

CURRENT SITUATION / GEGENWÄRTIGE SITUATION

Your situation as a lactation consultant, please place an x / Ihre Situation als Stillberater, bitte ankreuzen

1. Very well accepted and put into practice or supported / Sehr gut akzeptiert und umgesetzt bzw. unterstützt
2. Mostly accepted and put into practice or supported / Überwiegend akzeptiert und nicht in allen Punkten umgesetzt bzw. unterstützt
3. Rather not accepted and put into practice or supported / Eher nicht akzeptiert und umgesetzt bzw. unterstützt
4. Rejected and not at all supported / Ganz abgelehnt bzw. überhaupt nicht unterstützt

I feel that my breastfeeding counseling is accepted, put into practice or supported in the mother's environment by:

Ich erfahre Akzeptanz und Umsetzung bzw. Unterstützung meiner Stillberatung im Umfeld der Mutter von:

The mothers I am consulting / den Müttern, die ich berate

1 2 3 4

The respective fathers / den dazugehörigen Vätern

1 2 3 4

Relatives of the mother I am consulting / Verwandte der Mütter, die ich berate

1 2 3 4

Health personnel that takes care of the mother I am consulting / Gesundheitspersonal, das die Mutter betreut, die ich berate

1 2 3 4

The work environment of the mother I am consulting / Die Arbeitssituation der Mutter

1 2 3 4

Society (e.g. breastfeeding in a public place, opinions of others) / Gesellschaft (z.B. Stillen in der Öffentlichkeit, die Meinung Anderer)

1 2 3 4

Media / Medien

1 2 3 4

Others (please specify) / Andere (bitte angeben): _____

1 2 3 4

1. I totally agree with this statement / Stimme voll und ganz dieser Aussage zu

2. I rather agree / Stimme eher zu

Please place an x / Bitte ankreuzen

3. I rather do not agree / Stimme eher nicht zu

4. I totally disagree / Stimme überhaupt nicht zu

The health care professionals in my environment are supportive of breastfeeding in general

Das Gesundheitspersonal im Umfeld meiner Stillberatung unterstützt grundsätzlich das Stillen

1 2 3 4

The health care professionals in my environment are supportive of 6 months exclusive breastfeeding and afterwards continued breastfeeding for 2 years and more with adequate supplements (WHO recommendation)

Das Gesundheitspersonal im Umfeld meiner Stillberatung unterstützt das ausschließliche Stillen im ersten halben Jahr und danach mit geeigneter Beikost weiter zu stillen bis zu 2 Jahren und darüber hinaus (WHO-Empfehlung)

1 2 3 4

In my work as a breastfeeding consultant I have resigned myself to the fact that the obstacles are too great for me to make a difference, because I am left alone with my knowledge on breastfeeding / Ich habe in meiner Arbeit als StillberaterIn resigniert – ich kann einfach gar nichts bewirken, da ich allein auf weiter Flur mit meinem Wissen über das Stillen stehe

1 2 3 4

It is the task of the health care professionals to re-build the breastfeeding culture

Es ist die Aufgabe des Gesundheitspersonals, die Stillkultur wieder aufzubauen

1 2 3 4



- The National Committee for breastfeeding in my country of residence is promoting breastfeeding successfully*
Die Nationale Stillkommission meines Landes bringt die Stillförderung erfolgreich voran 1 2 3 4
- The promotion of breastfeeding is a target of health policy in my country / Stillförderung ist Ziel der Gesundheitspolitik meines Landes* 1 2 3 4
- This policy is being put into practice successfully / Diese politischen Ziele zur Förderung des Stillens werden erfolgreich in die Praxis umgesetzt* 1 2 3 4
- Most mothers I give advice to are open for the WHO recommendation to breastfeed over 1 year*
Die meisten Mütter, die ich berate, sind offen für die WHO-Empfehlung zum Langzeitstillen über 1 Jahr 1 2 3 4
- Most mothers I give advice to are open for weaning to be initiated by the child*
Die meisten Mütter, die ich berate, sind offen für das vom Kind initiierte Abstillen 1 2 3 4
- My remarks about my current situation as a breastfeeding consultant (I would like to add)*
Anmerkungen zu meiner derzeitigen Situation als Stillberater (Was ich noch ergänzen möchte): _____

PART III - Questions for researchers, public health experts or public health policy makers
All other respondents, please turn to PART IV !!!

TEIL III - Fragen für Stillforscher, Gesundheitswissenschaftler, Akteure der Gesundheitspolitik
Alle anderen TeilnehmerInnen, bitte gehen Sie zu Teil IV !!!

Your current situation – please place an x / Ihre aktuelle Situation – bitte ankreuzen

1. I totally agree with this statement / Stimme voll und ganz dieser Aussage zu
3. I rather do not agree / Stimme eher nicht zu
2. I rather agree / Stimme eher zu
4. I totally disagree / Stimme überhaupt nicht zu

It is hard to obtain research funds for breastfeeding issues according to the International Codex for the marketing of substitutes and free of economical interests or funds for projects to promote breastfeeding

Es ist schwierig, Forschungsmittel zu erhalten, die dem Internationalen Codex zur Vermarktung von Muttermilchersatzprodukten entsprechen und frei von wirtschaftlichen Interessen sind bzw. Gelder für Projekte zur Förderung des Stillens zu bekommen

1 2 3 4

Breastfeeding and human milk are far from being completely explained by research
Stillen und Muttermilch sind weit davon entfernt, erschöpfend erforscht zu sein

1 2 3 4

The global research and projects on breastfeeding are currently lacking international co-operation and networking

Der weltweiten Stillforschung und den Stillförderungsprojekten fehlen derzeit vor allem internationale Zusammenarbeit und Vernetzung

1 2 3 4

The National Committee for breastfeeding in my country of residence is promoting breastfeeding successfully

Die Nationale Stillkommission meines Landes bringt die Stillförderung mit Erfolg voran

1 2 3 4

The promotion of breastfeeding is a target of health policy in my country / Stillförderung ist Ziel der Gesundheitspolitik meines Landes

This policy is being put into practice successfully / Diese politischen Ziele zur Förderung des Stillens werden erfolgreich in die Praxis umgesetzt

1 2 3 4

In my country we have sufficient research and promotion projects on breastfeeding

In meinem Land gibt es genug Forschungs- und Förderungsprojekte zum Stillen

1 2 3 4

My remarks about my current situation as a researcher on breastfeeding, public health expert or health policy maker (I would like to add)

Anmerkungen zu meiner derzeitigen Situation als Stillforscher, Gesundheitswissenschaftler oder Akteur der Gesundheitspolitik (Was ich noch ergänzen möchte): _____

Open question for researchers / offene Frage für Forscher:

Which research approaches should be followed up? / Welche Forschungsansätze halten Sie für besonders sinnvoll?

PART IV - Questions for all responders / TEIL IV - Fragen für alle TeilnehmerInnen

With my current situation as a lactation consultant / researcher on breastfeeding / public health expert / responsible for health policy maker I feel:

Mit meiner aktuellen Situation als Stillberater / Stillforscher / Gesundheitswissenschaftler / Gesundheitspolitiker bin ich:

- very contented / sehr zufrieden rather contented / eher zufrieden rather not contented / eher unzufrieden totally discontented / total unzufrieden

What makes you contented? / Womit sind Sie zufrieden? _____

What makes you discontented? / Womit sind Sie unzufrieden? _____

Effective Measures for the Promotion of Breastfeeding / Effektive Maßnahmen zur Verbesserung der Stillförderung

Please judge the importance of the following measures to promote breastfeeding in your country

Bitte beurteilen Sie die Wichtigkeit der folgenden Maßnahmen, um die Stillförderung in Ihrem Land voranzubringen

1. Very important / Sehr wichtig 2. Important / Wichtig 3. Less important / Eher nicht wichtig 4. Not at all important / Überhaupt nicht wichtig

Certification as baby-friendly hospital as quality standard / Die Zertifizierung „babyfreundlich“ sollte Qualitätsstandard aller Krankenhäuser werden 1 2 3 4

The IBCLC speciality knowledge and skills should be integrated in the education and become standard qualification for all health care professionals who give advice to mothers (gynaecologists, obstetricians, paediatricians, nurses, midwives ...)

Das IBCLC-Fachwissen und die Praxis sollte Teil der Ausbildung und Standard-Qualifikation des gesamten Gesundheitspersonal werden, das Mütter berät (Gynäkologen, Kinderärzte, Pflegepersonal, Hebammen ...)

1 2 3 4

Mothers should profit from integrated care, that means enjoy continued support of breastfeeding throughout pregnancy, birth and post-partum (e.g. by their paediatrician and in breastfeeding groups)

Mütter sollten in den Genuss der integrierten Versorgung kommen und von der Schwangerschaft über die Geburt und Wochenbettzeit sowie nach der Krankenhausentlassung von allen Akteuren kompetent zum Stillen betreut werden (z.B. in einer Stillgruppe, vom Kinderarzt)

1 2 3 4



- The international codex for the marketing of human milk substitutes should become legally binding as a law*
Übernahme des Internationalen Kodex zur Vermarktung von Muttermilchersatzprodukten in die Gesetzgebung als bindendes Gesetz 1 2 3 4
- National control and monitoring of and penalty for violations of this law*
Nationale Kontrolle / Monitoring und Ahndung der Verletzungen dieses Gesetzes 1 2 3 4
- Promotion of breastfeeding should be integrated in the national health policy*
Die Stillförderung sollte auf nationaler Ebene politisches Gesundheitsziel werden 1 2 3 4
- National campaigns for breastfeeding should be started in the media*
Nationale Kampagnen zur Stillförderung sollten in den Medien eingesetzt werden 1 2 3 4
- Promotion of research independent of economic interests / Förderung einer von wirtschaftlichen Interessen unabhängigen Forschung* 1 2 3 4
- National education should advise people on the health risks of substitutes and the benefits of breastfeeding*
Nationale Aufklärungskampagnen sollten die gesundheitlichen Risiken künstlicher Ernährung und die Vorteile des Stillens der Bevölkerung näherbringen 1 2 3 4
- The profession „Lactation consultant“ should be up-graded in earnings and working possibilities*
Aufwertung des Berufs als StillberaterIn mit verbesserten Verdienst- und Arbeitsmöglichkeiten 1 2 3 4
- Development of a human milk bank network / Ausbau der Milchbanken zu einem Netzwerk* 1 2 3 4
- Other effective measures / next steps to promote breastfeeding (I would like to add):*
Andere Vorschläge effektiver Maßnahmen / nächste Schritte zur Stillförderung (Was ich dazu noch ergänzen möchte):

Open questions / offene Fragen

1. *What do you expect from the National Committee for Breastfeeding? / Was erwarten Sie von der Nationalen Stillkommission?*

2. *What do you expect from health policies? / Was erwarten Sie von der Gesundheitspolitik?*

3. *What do you expect from the public health sciences? / Was erwarten Sie vom Gesundheitswissenschaftssektor?*

PART V – FORECAST and FUTURE PROSPECTS / TEIL V – PROGNOSE und AUSBLICK

In this item, you will find different scenarios that might develop in the coming 2 decades.

Sie finden untenstehend verschiedene Szenarios, die sich in den kommenden 2 Jahrzehnten abzeichnen könnten.

1. *In all probability / Sehr wahrscheinlich* 2. *Rather probable / Eher wahrscheinlich*
3. *Rather improbable / Eher unwahrscheinlich* 4. *Very improbable / Sehr unwahrscheinlich*

Breastfeeding will be re-established over the next 2 decades in my country of residence. The development is slow, but inexorable and constant.
Das Stillen wird in den nächsten 2 Jahrzehnten in meinem Land wieder etabliert. Diese Entwicklung ist langsam, aber konstant und unaufhaltsam. 1 2 3 4

The climate change will enhance the awareness of nature's superiority, make people appreciate breastfeeding as part of nature and come back to it. / Der Klimawandel bringt den Menschen die Überlegenheit der Natur wieder ins Bewußtsein. Er wird zu einem Sinneswandel führen, so dass sich die Menschen auf das Stillen besinnen und es wieder schätzen und praktizieren. 1 2 3 4

In all industrial societies (excluding Norway) substitute producers will keep their market share on the same high level as today for the next 2 decades. / In allen Industriegesellschaften (außer Norwegen) werden die MuttermilchersatzproduktHersteller in den nächsten beiden Jahrzehnten ihren hohen Marktanteil halten. 1 2 3 4

Facing the global economic problems with restricted resources we will not be able to afford the luxury of bottle feeding and all the damage it causes in the near future and will be obliged to come back to breastfeeding in the coming 20 years. / Angesichts der aktuellen globalen Probleme auf wirtschaftlicher Ebene mit begrenzten Ressourcen können wir uns den Luxus der Flaschenfütterung mit all seinen Folgeschäden nicht mehr lange leisten und werden gezwungen sein, innerhalb von spätestens 2 Jahrzehnten zum Stillen zurückzukehren. 1 2 3 4

Please share your personal view of the development of breastfeeding in the next 15-20 years with us:

Bitte lassen Sie uns an Ihrer persönlichen Einschätzung der Entwicklung des Stillens in den nächsten 15-20 Jahren teilhaben:

If you like, you can give us your personal data (voluntarily) / Wenn Sie möchten, könnten Sie Ihre persönlichen Daten angeben (freiwillige Zusatz-Angabe):

Last name / Nachname _____ First name(s) / Vorname(n) _____

address / Adresse _____ e-mail address / e-mail-Adresse _____

Please return the form to the table of ideas or reception desk and put it in the box for answer sheets.

Bitte das ausgefüllte Formular am Ideentisch oder an der Rezeption in die dafür vorgesehene Kiste einwerfen.

Thank you very much for your time and taking part in this study! / Herzlichen Dank für Ihre Teilnahme an der Studie!

Copyright ® of the Expert questionnaire: Stefanie Rosin, In den Gänsgräben 10a, 68542 Heddesheim – GERMANY, Phone: +49-(0)6203/92575-5, Fax: -4



Declaration in lieu of oath in German language

Eidesstattliche Erklärung

Hiermit erkläre ich, dass ich die vorliegende Dissertation selbständig verfasst und keine anderen als die angegebenen Hilfsmittel benutzt habe.

Die Dissertation ist bisher keiner anderen Fakultät vorgelegt worden.

Ich erkläre, dass ich bisher kein Promotionsverfahren erfolglos beendet habe und dass keine Aberkennung eines bereits erworbenen Doktorgrades vorliegt.

A handwritten signature in black ink, appearing to read 'Stefanie Rosin'. The signature is written in a cursive style with a large, prominent 'R'.

Heddesheim, 31.07.2010

Stefanie Rosin