

# Online Parenting Support

Guiding parents towards empowerment  
through single session email consultation



**Christa Nieuwboer**

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**Table of Contents**

<b>Introduction</b> .....	9
<b>Chapter 1. Peer and professional parenting support on the Internet:</b>	
A systematic review. ....	19
<b>Chapter 2. Online programs as tools to improve parenting:</b>	
A meta-analytic review. ....	41
<b>Chapter 3. Practitioner response to parental need in email consultation: how do they match?</b>	
A content analysis. ....	63
<b>Chapter 4. Analyzing empowerment oriented email consultation for parents:</b>	
Development of the Guiding the Empowerment Process model .....	85
<b>Chapter 5. Single session email consultation for parents:</b>	
An evaluation of its effect on empowerment. ....	107
<b>Conclusions</b> .....	125
<b>Summary</b> .....	156
<b>Biographical note</b> (in English and Dutch) .....	158
<b>Dankwoord</b> (in Dutch) .....	160
<b>Overview of publications and presentations</b> .....	164
<b>List of organizations</b> (in Dutch) .....	167





# INTRODUCTION

**Online Parenting Support**

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The way we search for information, share support and consult professionals has radically changed over the last twenty years under the influence of web-based technologies. Not so long ago, the symbols <http://www> would have meant nothing to us. Referring to the well-known metaphor of the ‘industrial revolution’ it is said that we are currently experiencing the ‘Internet revolution’ (e.g., Baron, 2008, p. x; Kaufman, 2012) and, being in the process of it, nobody can really foresee its total impact on our individual lives and on society (Barak & Suler, 2008; Oravec, 2000). Parents are frequent users of online resources for information and make use of easy access to organizations (Plantin & Daneback, 2009). Following these developments, parenting support professionals are beginning to employ the many opportunities that Internet technology has to offer (Ritterband & Palermo, 2009).

### **The rise of the Internet**

Internet World Stats (2013) reports a penetration of Internet access by 34.3% of the worldwide population and 63.2% of the European population in June 2012; access ranged from 15.6% in Africa through 78.6% in North America to 92.9% in the Netherlands. According to the Pew Research Center (Zickuhr, 2013), as of May 2013, 85% of American adults ages 18 and older use the Internet. In the last few years, mobile devices like smartphones and tablet computers are gaining in popularity all over the world, intensifying the trend that information and support is available through web-based media.

The research for this dissertation is situated in the full flow of these rapid technological developments, which bring us not only new devices and easy access to resources, but which also urge the need for new skills, design guidelines and pose legal and ethical dilemmas for practitioners. In recent years, researchers in the broader domain of Internet interventions for mental health and counseling are trying to channel the way studies are designed, establishing guidelines for development (LaMendola &

Krysiak, 2008; Ritterband, Thorndike, Cox, Kovatchev, & Gonder-Frederick, 2009), research (Proudfoot et al., 2011), and ethics (e.g., Nijland, van Gemert-Pijnen, Boer, Steehouder, & Seydel, 2008). Useful and balanced overviews are available, like - for the Dutch context - Kennissynthese Online Preventie (Crutzen, Kohl, & de Vries, 2013) and Kennissynthese Preventie & eMental-health (Riper, Ballegooijen, Kooistra, de Wit, & Donker, 2013).

Although the potential of online resources for parents has been long acknowledged and some trends have been described (Long, 2004; Plantin & Daneback, 2009; Sarkadi & Bremberg, 2005), a systematic overview of web-based support and interventions explicitly for parents was lacking at the start of this dissertation project, whereas knowledge about effective design of web-based services and effective online communication could boost and guide innovations in this multi-disciplinary domain. With this dissertation we aim to contribute our part to this knowledge.

### **Online parenting support**

For parents, a wide array of online services is available. A rapid and cursory search on the Internet reveals that the English word ‘parenting’ is found in more than one billion websites and the Dutch synonym ‘opvoeden’ yields more than 800.000 hits (www.google.nl, January 2014). A popular website in the Netherlands is ouders.nl, provided by Ouders Online, with 300.000 unique visitors per month. Also, on the site opvoeden.nl parents can find validated information about all kinds of parenting issues, provided by Stichting Opvoeden, in which almost all 400 Dutch municipalities participate. Parenting websites include all kinds of information and services. The user can, for example, find suggestions for typical parenting questions, discuss issues with other parents or consult a counselor through chat.

Part of the Dutch online services is provided by parenting support organizations. Practitioners of several disciplines are involved in providing parental advice, such as psychologists, counselors, pediatricians, nurses, therapists, and social workers. They offer opportunities for reading information and communication with peers or with professionals through moderated discussion boards, (confidential) chat, and email consultation. More recently, microblogging, webcam-chat, training modules and apps to disclose all such features have been added. Thus, technological innovations challenge professionals in the field of parenting support to exploit the opportunities this era has to offer, providing new or adapted services and interventions to support parents.

A relatively small group of researchers is investigating this domain, aiming to develop and evaluate web-based programs to help parents with their sometimes challenging task of parenting, scrutinizing readily made claims about all kinds of benefits that are attributed to Internet interventions. Driven by the speed of technological innovations, both research opportunities and challenges are many. The Internet, with its active users and detailed profiles, offers endless amounts of data to be analyzed. However, although profile and user data are frequently analyzed for marketing purposes, the content of online communications like chat and emails between parents and professionals has not been analyzed systematically. As a consequence, we know little about the quality of these exchanges or about their effects.

Overviewing international studies, email consultation was the most common feature of online communication between parents and professionals, and this was confirmed by a survey amongst Dutch professional parenting support organizations (Nieuwboer, 2011). Mostly, single session email consultation is initiated by offering a button or a form on the organization website, through which parents can easily ask a question and then receive an answer through email.

However, our knowledge about this practice of online counseling for parents is limited: what are the topics for which parents use email consultation? What type

of questions do they submit to forms on an internet website? Also, the methods practitioners use to provide an online advice have not been analyzed and no previous studies on this subject were available at the onset of this dissertation study (2009). Furthermore, in addition to the lack of knowledge about the method of single session email consultation, we also know little about the assumptions and theoretical framework for this new means of communication.

## **Empowerment**

Empowerment is a central concept in professional parenting support which has been elaborated on in many studies, and substantial effort has been undertaken to pinpoint its value (see for instance the works of Dunst and Trivette, 1988-2009). Parenting support gradually seems to shift from a deficit-based paradigm to a philosophy which is focused on resilience and competence (e.g., Graves & Shelton, 2007). Recently, in the Netherlands, the debate on empowerment has revived because of a change in Dutch governmental policy, which emphasizes the need for participation of citizens in society, rather than providing a welfare state. This transition in policy requires professional methods to support families with a strong focus on family strengths. One may argue that, rooted in a tradition of some decades of empowerment oriented parenting support, this would be a process of little effort. However, since the adoption of empowerment principles is more than simply stating the importance of strengths in a brochure or on a website (Dunst, 2009), the adherence and application of an empowerment oriented help-giving style is a concern.

As the ‘founding father’ of empowerment theory, Paolo Freire (2005/1974) has pointed out that community participation starts with individual autonomy. He proposed that it is the duty of teachers to enable pupils to reflect on their actions, in order to make choices towards the goals they value, and take responsibility in their lives, thus leading to participation. Since this can be extended to all social ‘helping’ relationships,

in this view, practitioners should try to facilitate the ‘construction’ of knowledge, rather than provide the ‘reproduction’ of knowledge (Cattaneo & Chapman, 2010). From this perspective, asking a question is the perfect starting point for a thinking process, rather than a failure or a weakness (Claessen, 1998).

Although parents may not explicitly ask for guidance in a thinking process, it can be argued that they would benefit more if they would understand why a specific suggestion would help them to achieve their goals and would have a positive impact on their children, rather than if they were simply offered information on parenting or solutions to parenting problems. In terms of empowerment, the ambition of practitioners is not only to support parental capability to make informed choices, but also to enable the capacity for autonomous thinking about the way they raise their children.

Thus, at the core of this debate, a fundamental issue is at stake: how do practitioners fulfil their role as help-givers? Do they disseminate valuable knowledge and insights to parents, do they guide parents towards understanding, or do they, maybe, combine these two roles?

Email consultations offer a unique opportunity to investigate the role of the practitioner, because of its text-based character, and they can be analyzed in a detailed manner. The supportive process towards more empowerment is often described as a process of some duration, in which the quality of the relationship between parents and practitioners is an important factor (e.g., Dunst, Boyd, Trivette, & Hamby, 2002; Popp & Wilcox, 2012). In contrast, single session email consultations consist of short textual communication only and are restricted to one question and one reply. This raises the issue whether it is a feasible medium to reach such an important goal like empowerment, and therefore also issues about the concept of empowerment itself, its operationalization and the way it can be measured in both the parental situation (in this case: in question texts of email consultations and reactions to questionnaires) and practitioners’ actions (in this case: in response texts of email consultations).

An expanding body of scholarly literature indicates that parenting practitioners, experts in their field and trained to support parents, are increasingly conscious of their helping role on the Internet. It is necessary to explore this topic and find answers in order to contribute to scholarly literature and to advance this field.

### **Outline of the dissertation**

The central theme of this dissertation is online parenting support. The aim of this research project is to deepen our insights in the subject in general and also to find out whether single session email consultation can be used as a professional method to guide parents in the process towards more empowerment.

To do so, we first identified the current knowledge by systematically examining the previous scholarly literature in this field. Second, we aimed to understand the function and the role of single session email consultation, by analyzing its content and evaluating its effect on parents.

In this dissertation five studies are reported. Data for the first two studies were collected by reviewing existing literature, and data of the latter three studies were collected in twenty-two community-based and private agencies which provided online parenting support.\*

In the first two chapters we aimed to identify the factors for successful online parenting support, by systematically interpreting findings from extant scholarly literature. We aimed to answer the following questions: What are the characteristics of online parenting resources studied, and what are the outcomes of different types of evaluation studies for online parenting websites? Data were collected by reviewing 75 previous studies, published between 1998 and 2010. We used a coding system to describe resource and user characteristics, to assess methodological characteristics of their evaluations and to



interpret outcomes (*chapter 1*). A more specific research question was the focus of the second study, i.e. what evidence do experimental studies show for the effectiveness of such online programs in terms of parental competencies and children's development? We analyzed 12 studies which evaluated online parent training interventions and which reported the first claims of evidence for effectiveness. We used a combination of meta-analysis and qualitative analysis in order to identify the factors and design characteristics related to the reported promising effects (*chapter 2*).

Email consultation was the most common type of online communication between parents and parenting practitioners and found in a third of all previous studies (see chapter 1). However, an in-depth analysis of this medium of parent support communication was lacking.

In *chapter 3* we analyzed email questions and advices and hypothesized that the response of the professional should match the need of the parent. To assess this claim, we developed a coding system, based on three separate categories in the literature on the orientation of parenting professionals: i.e., expert oriented, parent oriented and context oriented attitudes towards help-giving.

In addition to the lack of knowledge about the method of single session email consultation, we also know little about the assumptions on help-giving practices (see Turnbull, Turbiville, & Turnbull, 2000) for this new means of communication. In *chapter 4* our research aimed to explore the feasibility to provide empowerment oriented support in single session email consultation. Based on previous literature on empowerment (e.g., Cattaneo & Chapman, 2010; Turnbull et al., 2000) we operationalized the concept of empowerment for email consultancy, resulting in the Guiding the Empowerment Process model. Based on a representative sample of email advices, this model was tested for consistency and concurrent validity with a model of social support, which is the predominant model for previous content analyses of online (mostly informal) support.

Finally, in *chapter 5*, we aimed to discover if parental empowerment improved after receiving an advice through email consultation, and also if the way practitioners succeeded in matching the need of the parent and using more empowerment oriented techniques influenced the outcome. In a randomized controlled design, we divided the group of parenting practitioners and trained one of the groups in order to recognize the need of the parents and use specific textual techniques in writing their advice. Parental empowerment was measured before and after receiving the email consultation.

In the *Conclusions*, we summarize findings and provide suggestions to advance both web-based services for parents and research in this rapidly developing field.

\* The same (parts of) datasets were used for different analyses in the studies reported in Chapter 1 & 2, and in Chapter 3, 4 & 5.



# CHAPTER 1

## **Peer and Professional Parenting Support on the Internet: A Systematic Review**

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## **Abstract**

The Internet offers many opportunities to provide parenting support. An overview of empirical studies in this domain is lacking, and little is known about the design of web-based parenting resources and their evaluations, raising questions about its position in the context of parenting intervention programs. This article is a systematic review of empirical studies ( $n = 75$ ), published between 1998 and 2010, that describe resources of peer and professional online support for parents. These studies generally report positive outcomes of online parenting support. A number of recent experimental studies evaluated effects, including randomized controlled trials and quasi-experimental designs (totaling 1,615 parents and 740 children). A relatively large proportion of the studies in our sample reported a content analysis of emails and posts (totaling 15,059 coded messages). The results of this review show that the Internet offers a variety of opportunities for sharing peer support and consulting professionals. The field of study reflects an emphasis on online resources for parents of preschool children, concerning health topics and providing professional support. A range of technologies to facilitate online communication is applied in evaluated websites, although the combination of multiple components in one resource is not very common. The first generation of online resources has already changed parenting and parenting support for a large group of parents and professionals. Suggestions for future development and research are discussed.

## **Introduction**

The Internet, with its many facets and features, offers parents all kinds of support: parents can gather information, share experiences, learn new skills, encourage each other, or request professional advice. Visitor numbers to parenting websites run as high as hundreds of thousands per month (Brent, 2009; O'Connor & Madge, 2004; Sarkadi &

Bremberg, 2005). Following and intensifying the trend that parents are users of online resources, parenting professionals have begun to exploit the opportunities afforded by online technology. Several disciplines are involved in providing parental support and advice, such as psychology, counseling, pediatrics, and nursing, all of which have undertaken initiatives to employ the Internet as a tool for their work (Ritterband & Palermo, 2009). These initiatives go by different names, for example computer mediated interventions, web-based therapy, e-health, online counseling, or cybertherapy. Several authors suggest that the Internet could be a tool for delivering parenting support in an accessible and beneficial way (Daneback & Plantin, 2008; Funderburk, Ware, Altshuler, & Chaffin, 2008; Plantin & Daneback, 2009; Scharer, 2005; Self-Brown & Whitaker, 2008).

Parenting support on the Internet is a relatively new domain, and our current knowledge of its design and outcomes is limited. In spite of its claimed potential, the position of online support for parents is yet marginal in relation to traditional parenting training and intervention programs. Although previous reports have described the role of social networking in regard to health related support needs (Eysenbach, Powell, Englesakis, Rizo, & Stern, 2004; Helgeson & Gottlieb, 2000) they do not show the specific characteristics of parenting services offered online, for example the types of online communication applied, the ratio between peer and professional support, and the opportunities for addressing a wide range of topics for a diversity of target groups. A systematic review of empirical studies on online parenting resources is currently lacking.

Web-based programs offer various types of online communication, for example chat, confidential chat, email consultation, emailing lists, discussion boards, and information pages. In “chat,” parents can exchange experiences and opinions, typing short alternating texts in small groups or pairs. A special form is “confidential chat,” whereby a professional (e.g., a counselor or a therapist) is available for support and

advice (Suler, 2004; 2008). There are healthcare/mental healthcare providers that offer email consultation services, such as “ask-a-nurse” or “helpline” (Sheese, Brown, & Graziano, 2004; Stofle & Chechele, 2004). Information on specific themes can be distributed among registered group members via emailing lists (McKenna, 2008; Madge & O’Connor, 2005). Parents who share a specific experience in childrearing can organize themselves into an online forum or discussion board, and can exchange messages in groups. Finally, information pages can be seen as a digital library, giving access to all kinds of facts, explanations, and suggestions (D’Alessandro, Kingsley, & Johnson-West, 2001; D’Alessandro & Dosa, 2001, D’Alessandro & Kingsley, 2002). Thus, social networking, static online information, and professional consultation are all provided in different resources. Information pages and emailing lists can be seen as interaction from “one to many,” group forums and group chat as interaction from “many to many,” and confidential chat and email consultations as “one to one” communication (Barak & Suler, 2008).

Web-based communication can be controlled by peers or professionals, or both. For instance, discussion boards typically offer peer support, while email consultations provide professional support. Chat and email are text-based methods of delivering advice and support. It is plausible that online methods require skills other than those required for face-to-face support in order to, for instance, build rapport, interpret, reflect, confront, and summarize (Goss & Anthony, 2009; Suler, 2000; Zelvin & Speyer, 2004). Further, trained professionals can help parents to use online resources by adapting an empowering attitude in designing and delivering online information and support (D’Alessandro & Dosa, 2001; O’Connor & Madge, 2004). Parenting support programs have been claimed to be more effective when they are provided by well-trained practitioners (Dunst et al, 2002; Nation et al., 2003). For now, we do not know to what extent professionals, like psychologists, are involved in providing online parenting programs and if they have been trained to do so.

One of the advantages of online dissemination of parenting programs is that many target groups can be reached. Use of the Internet has increased rapidly since it became widely available in 1995. Internet World Stats ([internetworldstats.com](http://internetworldstats.com)) reports a penetration of Internet access by 32.7% of the worldwide population in December 2011; access ranged from 13.5% in Africa through 78.6% in North America to 89.5% in the Netherlands, mounting each year.

Professionally designed parenting programs usually aim to reduce family stress, strengthen parents' advocacy, and improve parenting self-efficacy and parenting competences by delivering resources for mutual support, offering professional consultation, and providing parent training. Traditional face-to-face parenting support focuses on the first stages of parenting as a period of transition and support needs (Belsky & Rovine, 1984) and on early intervention (MacLeod & Nelson, 2000; Pinquart & Teubert, 2010). However, other developmental stages of children can be equally challenging to parents (Lock, 2011). It is commonly acknowledged (Balaji et al., 2007; Dix & Meunier, 2009; Teti, O'Connell, & Reiner, 1996). that parenting can be a challenging task, be it at certain stages of child development (e.g., transition to parenthood, infancy, adolescence) or in difficult circumstances (e.g., low income, social isolation, divorce, single parenting, illness, disabilities). We do not know yet, however, which parents are the target groups of current online support.

Interestingly, a number of both large and small scale applications of online parental support have been evaluated. This interesting line of study includes resources with a wide variety of types of online communication and providers. An overview of scholarly research on these programs is needed to assess the evidence base in this area, to verify suggested benefits, and to describe implications for future intervention design.



By reviewing studies on online parenting resources in detail, we aim to answer two main research questions:

*RQ1: What are the characteristics of online parenting resources? Which and how many types of online communication do they use? Do they offer peer and professional support? Which groups do they target on which topics?*

*RQ2: What are the outcomes of different types of evaluation studies for online parenting websites?*

## **Method**

### **Selection of studies**

To find full text empirical studies on web-based parenting services that were published before 2010, we conducted a multiple field search in the databases of the Social Science Citation Index, PsycINFO, and PubMed. The extensive search strategy included blocks of various root terms related to parenthood (parent, mother, father, child, famil\*, or pediater\*), parental support (counsel, coach, support, empower, advice, or train), and the online context Internet\*, online, mail, chat, computer, website). Studies were also subsequently located in other sources by searching for additional references in the obtained studies.

There were three inclusion criteria for this review. First, the primary components of the studied resource were delivered online. Second, the primary target group of these resources exists of parents who had children aged between - 9 months (pregnancy) and 21 years (adulthood). Finally, studied resources were actual sites on the Internet (some required registered login). Two original research reports, which were pre-published online in 2009, were included. We did not include descriptive articles on online information for parents. Editorials, commentaries, reviews, and conference papers were also excluded. After screening for duplicates, 485 studies were rejected because they did not meet the

criteria for the target group. We assessed 115 articles for eligibility. Of these, 40 studies were rejected because they were descriptive articles on online parenting information. After screening the studies with our inclusion and exclusion criteria, 75 research articles published between 1998 and 2010 comprised the final set of studies.

### *Coding*

We developed a coding scheme to describe resource and user characteristics of the web-based resources and to assess the methodological characteristics of their evaluations. Two independent coders (i.e., the first and the second author) coded each study.

Concerning resource characteristics, we coded types of online communication (i.e., email consultation, emailing list, confidential chat, group chat, group forum, information pages); facilitation of professional or peer support; combinations with offline services; and guidelines for professional conduct. Further, parent and child demographics and risk factors were coded (i.e., on the parent level: pregnancy, first time parenthood, single parenthood, minority, low income, low social support; on the child level: preterm, physical handicaps, mental health problems, illness, preventive health checks). Finally, we coded the following methodological aspects of the research design: type of research (experimental, content analysis, satisfaction); research period; sample size; theoretical framework; allocation and randomization; use of incentive; and types of tests and experimental results.

Intercoder reliability was estimated by determining Cohen's kappa in the case of nominal variables and the intraclass correlation (*ICC*, two-way random, absolute agreement) for continuous variables, using 0.70 as the cut-off score for inclusion. Reliability proved satisfactory to excellent for the majority of the coded variables, with  $\kappa$  ranging from 0.72 to 1, and *ICC* ranging from 0.81 to 1. In the case of divergent codes, final codes were established by discussion.

## Results

Since the Internet became available to a broad public in 1995, we expected that the first studies would have appeared shortly after that year. The first article in our sample was published in 1998. While a quarter of the research articles were published before 2005, the other studies were published more recently; a quarter were published in 2009 alone.

### *Types of online communication*

Table 1 provides an overview of resource characteristics for the included studies. The vast majority of the web-based resources in our sample offered one or two types of online communication. Information pages are a dominant feature (61.3%), followed by group forums (36%), and email consultations between professional and parent (32%). Emailing lists (13.3%) and chats with peers (13.3%) were less frequently reported; in one study, a confidential chat with a professional (1.3%) was examined.

Thus, our sample showed many different features of online communication. Further analysis revealed that 47 of the 75 studies examined web-based programs for parents featuring a single type of online communication (62.6%), while 28 examined resources with multiple components of online communication (37.3%). In the latter studies, 15 programs featured two components and 11 featured three components. There were two resources that offered a combination of four types of online communication. Seventeen programs (22.6%) used a two layered interaction model, mostly offering a combination of information pages (one to many) and either email consultation (one to one) or a group forum (many to many). Ten programs (13.3%) used a three layered interaction model, combining these three types of online communication.

The online parenting resources make use of a wide range of types of online communication. Use of multiple components and the facilitation of layered interactions in one online service are not common.

Table 1

## Characteristics of Online Support for Parents

First author	Year	Name of resource <sup>b</sup>	Resource characteristics		Parent characteristics			Child characteristics	
			Synchr.	Support	Pregnant	First	Low inc.	Phys. health	Ment. health
Ahmed	2007	Antenatal Screening Web Resource (AnSWeR)	A	Pr	+	-	-	+	-
Anand	2005	Email communication in pediatric care	A	Pr	-	-	-	+	-
Askins	2009	Problem-solving skills training <sup>a</sup>	A	Pr	-	-	-	+	-
Baggett	2009	Infant net <sup>d</sup>	A	Pr + P	-	-	+	-	-
Baum	2004	Internet Parent Support Groups	A	P	-	-	-	+	-
Beck	2005	Research on Birth Trauma	A	Pr	-	-	-	-	-
Bergman	2009	New Model of Well-Child Care	A	Pr	-	-	-	+	+
Bert	2008	Adventures in Parenting <sup>a</sup>	A	Pr	-	-	-	-	-
Borowitz	1998	Email consultations	A	Pr	-	-	-	+	-
Brent	2009	Health Physics Website	A	Pr	-	-	-	-	-
Britto	2009	MyCare Connection	A	Pr	+	-	-	+	-
Buzhardt	2006	Training modules	A	Pr	-	-	-	-	-
Campbell	2009	New Mothers Network	A	Pr + P	-	+	+	-	-
Capitulo	2004	Perinatal Loss Lisserv	A	P	-	-	-	-	-
Carpenier	2004	Parent-Adolescent Conflict Training PACT	A	Pr	-	-	-	-	+
Chan	2008	Happy Land	A + S	P	-	-	-	-	-
Christakis	2006	MyHealthyChild (Bright Futures) <sup>a</sup>	A	Pr	-	-	-	-	-
Christian	2005	Saafamilies.org	A	P	-	-	-	-	-
Cook	2003	Strategies for Preschool Interv. in Everyday Settings <sup>a</sup>	A	Pr	-	-	-	+	+
d'Alessandro	2004	Information Prescriptions	A	Pr	-	-	-	+	-
Deitz	2009	Youth Mental Health A Parent's Guide	A	Pr	-	-	-	-	+
Demaso	2006	Experience Journal, Depression	A	P	-	-	-	-	+
Downing	1999	Missouri Development. Disability Resource Center	A + S	Pr + P	-	-	-	+	-
Drenea	2005	Mothering Board	A	P	-	-	-	-	-
Dunham	1998	Staying Connected	A	P	-	-	+	-	-
Elera	2009	alt.dads.rights	S	P	-	-	-	-	-

Table 1, continued

Resource characteristics					Parent characteristics			Child characteristics		
First author	Year	Name of resource <sup>a</sup>	Synchr.	Support	Pregnant	First	Low inc.	Low supp.	Phys. health	Ment. health
Ewing	2009	The Web site	A	Pr + P	-	-	-	-	+	-
Feil	2008	Infant Net (Playing and Learning Strategies, PALS) <sup>a</sup>	A + S	Pr + P	+	+	+	+	-	-
Fletcher	2007	New Fathers Information Project	A	Pr	+	+	-	-	-	-
Gray	2000	Baby CareLink	A	Pr	-	-	-	-	-	-
Hall	2009	Online group	A	Pr + P	+	-	-	-	-	-
Han	2001	N-BLASTOMA; PED-ALL; PED-ONC	A	P	-	-	-	+	+	-
Herman	2005	Healthy Pregnancy Website	A	Pr + P	+	+	+	+	-	-
Huang	2007	Breastfeeding Education Program	A	Pr	+	-	-	-	-	-
Hudson	1999	Young Parents Project	A	Pr + P	+	+	-	+	-	-
Hudson	2003	New Fathers Network	A	Pr + P	-	+	-	-	-	-
Hudson	2008	New Mothers Network	A	Pr + P	-	+	+	+	-	-
Huws	2001	An International List serv	A	P	-	-	-	-	-	+
Kibar	2009	Email consultations with specialists	A	Pr	+	-	-	-	+	-
Kokkonen	2009	A Finish website	A	P	-	-	-	-	-	-
Kouri	2006	Net Clinic	A	P	+	-	-	-	-	-
Kuo	2009	Internet newborn-care education program	A + S	Pr + P	+	+	-	-	-	-
Leonard	2004	Retnet	A	P	-	-	-	+	-	+
Mackert	2009	Child Care Center Web Site	A	Pr	-	-	-	-	+	-
Madge	2002	Babyworld	A + S	Pr + P	-	-	-	-	-	-
Madge	2005	Babyworld	S	P	-	-	-	-	-	-
Magee	2009	Ucanpooptoo	A	Pr	-	-	-	-	+	-
Mankuta	2007	Internet consultations forum Hadassah Medical Org.	A	Pr + P	+	-	-	-	-	-
Mertensmeyer	2000	Parentlink <sup>a</sup>	A + S	Pr	-	-	-	-	-	-
Na	2008	Kidz Grow Online	A	Pr	-	-	-	-	-	-
Nelson	2003	Healthy Steps over Telemedicine	S	Pr	-	+	+	+	-	-
Nicholas	2004	Spina Bifida Father Group	A	P	-	-	-	-	+	-
Nyström	2006	Parental Support e-meeting portal (mothers)	S	Pr + P	-	-	-	+	-	-
Nyström	2008	Parental Support e-meeting portal (fathers)	S	P	-	-	-	+	-	-

Table 1, continued

Resource characteristics			Parent characteristics			Child characteristics				
First author	Year	Name of resource <sup>a</sup>	Synchr.	Support	Pregnant	First	Low inc.	Low supp.	Phys. health	Ment. health
O'Connor	2004	Babyworld	A + S	Pr + P	+	+	-	-	-	-
Ritterband	2005	Ucanpooptoo	A	Pr	-	-	-	-	+	-
Rosen	2007	pPEM, patient–physician email	A	Pr	-	-	-	-	+	-
Salonen	2008	Vauvankaa	A	Pr + P	-	-	-	-	-	-
Salovey	2009	Head Start Community Technology Centers	A	Pr	-	-	+	-	+	-
Sanders	2008	Triple P <sup>a</sup>	A	Pr	-	-	-	-	-	-
Sanghavi	2005	Bright Futures	A	Pr	-	-	+	-	-	-
Sarkadi	2005	FöräldraNätet	A	P	-	-	-	-	-	-
Scharer	2005	Internet Discussion Board	A	Pr + P	-	-	-	+	-	+
Scharer	2009	Web-based Social Support Group	S	Pr + P	-	-	-	+	-	+
Schinke	2009	Daughter–mother substance abuse program	A	Pr	-	-	-	-	-	-
Skea	2008	Mumsnet	S	P	-	-	-	-	-	-
Taylor	2008	Incredible Years Adapted <sup>a</sup>	A	Pr + P	-	-	-	-	-	+
Thomas	2007	Breastfeeding Support	A	Pr	-	-	-	-	-	-
Thompson	2007	Touchscreen Computer Kiosk	A	Pr	-	-	-	-	-	-
Thompson	2008	Parent–Teacher Email communication	A	Pr	-	-	-	-	-	-
Wade	2006	Family Problem-solving Group (FPS)	A + S	Pr	-	-	-	-	+	-
Wade	2009	I-InTERACT <sup>a</sup>	A + S	Pr	-	-	-	-	+	-
Wallace	2005	Vaccination Decision Aid	A	Pr	-	-	-	-	-	-
Wang	2006	VBAC program	A	Pr + P	+	-	-	-	-	-
Wilson	2003	Hepatitis B and You	A	Pr	+	-	-	-	-	-
Percentage			A 78.7% S 9.3% A+S 12%	Pr 49.3% P 22.7% Pr+P 28.0%	20%	13.3%	12%	17.3%	28%	13%

Note. Synchr. A / S = asynchronous / synchronous; Support. Pr / P = professional / peer. Pregnant = pregnant parent; First = first-time parent; Low inc. = low income; Low

supp. = low social support; Phys. health = physical handicap or illness; Ment. health = mental handicap

An “+” indicates that the criterion has been met. <sup>a</sup>Adaptation of or similar to a traditional parent training program

### *Professional involvement*

Professionals were often involved in online parenting programs. Exclusively peer orientated online programs made up nearly one quarter of our studies; combinations of peer support with professional help were also frequently observed. Nineteen resources could be qualified as parenting interventions, aimed at the improvement of parenting competence. A large array of professional backgrounds were represented in these programs: clinical psychologists, coaches, developmental specialists, genetic counselors, healthcare professionals, midwives, nurses, parent coaches, pediatricians, physicians, psychologists, researchers, social workers, teachers, or therapists. In 11 studies (14.7%), we found explicit references to guidelines for providing professional support, mostly related to the quality of information pages. We found no clear instructions for professionals on how to provide text-based professional support in confidential chat or email consultations. Thus, although professional involvement in these resources is high, directives for professional conduct were scarcely reported.

### *Target groups*

To clarify which topics and target groups were defined by the studies, we identified both parent characteristics (e.g., gender, specific themes) and child characteristics (e.g., age, health condition).

Many of the articles that specify parents' characteristics ( $n = 36$ ) are specifically devoted to services for pregnant parents or first time parents. A relatively large proportion of the web-based resources focused on parents with low social support (17.3%) or low income (12%). Parents' mean age, reported in 34 studies, was 32.3 years.

In addition to the characteristics of parents, we examined those of their children in order to describe the target group of the included online programs. Children's health was an important motive for designing online services to parents (54.3%). These were mostly offered in a pediatric hospital setting to the parents of children with physical

disabilities or illness (28%) such as spina bifida, traumatic brain injury, or cancer, or mental health issues (13%) such as autism or ADHD. Ten online services (13.3%) were offered in combination with preventive health checks.

Twenty-four percent of the studies did not report data on the children's ages, whereas 15 studies concerned resources for the parents of all children, regardless of their age. In the studies that did report the age of the children, the minimum and maximum ages ranged from - 9 months (i.e., pregnancy) to 21 years, with a median of 81.1 months (6.7 years). Parenting adolescent children (> 12 years) was central in only one resource (Carpenter, Frankel, Marina, Duan, & Smalley, 2004).

To sum up: most of the resources in our sample were targeted at specific groups of parents and/or children. Half of them concerned child health topics, and a large part of the resources was designed to support pregnant and first time parents. A number of websites aimed at parents with low income or low social support. The majority of the web-based programs were aimed at parents with preschool children.

### *Methodological characteristics of the studies*

The studies (see Table 2 for an overview) can be divided into two main categories: content analytic studies and experimental studies.

#### *Content analytic studies*

Two thirds of the content analytic studies coded postings on email lists, discussion boards, and group chat rooms, and thus focused on social networking among parents. Ten studies coded email consultations and information pages provided by professionals. In total 15,059 online texts were analyzed. The sample size of evaluated messages differed significantly among studies, varying from 22 to 6,142 analyzed messages. One third of these studies (30.4%) analyzed peer support combined with professional support,



Table 2

Methodological Characteristics of Research on Online Interventions and Support for Parents

First author	Year	Period	N-total	N <sub>exp</sub>	N <sub>con</sub>	Incentive	RA	Pretest	Posttest	Follow-up	Content	N-ca	Satisf.	Effect
Ahmed	2007	-	69	-	-	1	-	-	-	-	-	-	+	-
Anand	2005	42	55	54	-	1	-	-	-	-	+	81	+	-
Askins	2009	56	524	93	104	4	+	+	+	+	-	-	+	+
Baggett	2009	180	38	19	19	3	+	+	+	-	-	-	+	+
Baum	2004	-	114	-	-	1	-	+	+	-	-	-	+	-
Beck	2005	540	-	-	-	1	-	-	-	-	+	40	-	-
Bergman	2009	-	-	-	-	1	-	+	-	-	-	-	+	-
Bert	2008	-	89	40	49	2	+	+	+	-	-	-	+	+
Borowitz	1998	924	-	-	-	1	-	-	-	-	+	1239	-	-
Brent	2009	-	-	-	-	1	-	-	-	-	-	-	-	-
Britto	2009	-	16	-	-	2	-	-	-	-	-	-	+	-
Buzhardt	2006	14	27	17	-	2	-	+	+	-	-	-	+	+
Campbell	2009	180	12	-	-	4	-	-	-	-	+	72	-	-
Capitulo	2004	90	87	-	-	1	-	-	-	-	+	447	-	-
Carpenter	2004	42	6	-	-	1	-	-	-	-	-	-	+	-
Chan	2008	1095	-	-	-	1	-	-	-	-	+	-	-	-
Christakis	2006	630	887	448	439	2	+	+	+	-	-	-	-	+
Christian	2005	60	-	-	-	1	-	-	-	-	+	69	-	-
Cook	2003	-	21	18	-	2	-	-	-	-	-	-	+	-
d'Alessandro	2004	52	250	97	100	1	+	+	+	+	-	-	+	+
Deitz	2009	14	99	50	49	2	+	+	+	-	-	-	+	+
Demasio	2006	-	69	38	-	1	-	+	+	-	-	-	+	-
Downing	1999	-	-	-	-	1	-	-	-	-	-	-	-	-
Drentea	2005	547	629	180	-	1	-	-	-	-	+	-	-	-
Dunham	1998	180	42	-	-	3	-	+	+	-	+	1454	+	-
Erera	2009	90	-	-	-	1	-	-	-	-	+	450	-	-
Ewing	2009	-	51	-	-	3	-	-	-	-	-	-	+	-

Table 2, continued

First author	Year	Period	N-total	N <sub>exp</sub>	N <sub>con</sub>	Incentive	RA	Pretest	Posttest	Follow-up	Content	N-ca	Satisf.	Effect
Feil	2008	14	3	-	-	3	-	+	+	-	-	-	+	-
Fletcher	2007	-	253	105	-	3	-	-	-	-	-	-	+	-
Gray	2000	480	56	26	30	3	+	-	+	-	-	-	+	+
Hall	2009	-	40	-	-	1	-	-	-	-	+	292	-	-
Han	2001	-	73	-	-	1	-	-	+	-	-	-	+	-
Herman	2005	-	19	-	-	3	-	-	-	-	+	-	-	-
Huang	2007	120	130	60	60	1	-	+	+	+	-	-	-	+
Hudson	1999	365	9	-	-	3	-	-	-	-	+	512	+	-
Hudson	2003	42	34	14	20	1	-	+	+	-	-	-	+	+
Hudson	2008	-	-	-	-	2	-	-	-	-	-	-	-	-
Huws	2001	90	-	-	-	1	-	-	-	-	+	6142	-	-
Kibar	2009	1825	14	-	-	1	-	-	-	-	-	-	+	-
Kokkonen	2009	7	55	-	-	1	-	-	-	-	+	197	-	-
Kouri	2006	-	-	-	-	1	-	-	-	-	+	280	-	-
Kuo	2009	150	130	61	57	1	+	+	+	-	-	-	-	+
Leonard	2004	90	119	-	-	1	-	-	-	-	-	-	+	-
Mackert	2009	-	43	-	-	1	-	-	-	-	-	-	+	-
Madge	2002	42	155	-	-	1	-	-	+	-	-	-	+	-
Madge	2005	-	-	-	-	1	-	-	-	-	+	-	-	-
Magee	2009	730	91	39	43	1	-	+	+	-	-	-	+	-
Mankuta	2007	900	-	-	-	1	-	-	-	-	+	2000	-	-
Mertensmeyer	2000	-	-	-	-	1	-	-	-	-	-	-	-	-
Na	2008	180	821	145	273	1	+	+	+	-	-	-	-	+
Nelson	2003	-	38	-	-	1	-	+	+	-	-	-	+	-
Nicholas	2004	180	25	-	-	1	-	-	-	-	+	-	-	-
Nystrom	2006	300	5	4	-	3	-	-	-	-	-	-	+	-
Nystrom	2008	300	3	-	-	3	-	-	-	-	-	-	+	-
O'Connor	2004	42	155	-	-	1	-	-	-	-	-	-	+	-
Ritterband	2005	365	83	43	40	1	-	-	-	-	-	-	+	-

Table 2, continued

First author	Year	Period	N-total	N <sub>exp</sub>	N <sub>con</sub>	Incentive	RA	Pretest	Posttest	Follow-up	Content	N-ca	Satisf.	Effect
Rosen	2007	730	328	121	-	1	-	-	-	-	-	-	+	-
Salonen	2008	365	2600	776	612	1	-	+	-	-	-	-	-	-
Salovey	2009	-	190	120	70	4	-	+	+	+	-	-	+	+
Sanders	2008	42	454	210	222	1	+	+	+	+	-	-	+	+
Sanghavi	2005	120	101	49	52	1	-	+	+	-	-	-	-	+
Sarkadi	2005	7	2499	2221	-	1	-	-	+	-	-	-	-	-
Scharer	2005	120	7	-	-	3	-	-	-	-	+	137	-	-
Scharer	2009	-	11	7	4	1	+	-	-	-	+	22	-	-
Schinke	2009	712	591	252	339	2	+	+	+	+	-	-	-	+
Skea	2008	-	-	-	-	1	-	-	-	-	+	617	-	-
Taylor	2008	-	380	90	88	2	-	-	-	-	-	-	+	-
Thomas	2007	-	-	-	-	1	-	-	-	-	-	-	-	-
Thompson	2007	180	1846	-	-	1	-	-	-	-	-	-	+	-
Thompson	2008	180	341	-	-	1	-	-	-	-	+	1008	-	-
Wade	2006	-	87	20	20	3	+	+	+	+	-	-	+	+
Wade	2009	-	9	5	-	3	-	+	+	+	-	-	+	+
Wallace	2005	280	1277	158	-	1	-	-	-	-	-	-	+	-
Wang	2006	60	10	-	-	1	-	+	+	-	-	-	+	+
Wilson	2003	365	228	54	-	1	-	-	-	-	-	-	+	-
Percentage / mean	294	M: 278 Sd: 541	M: 174 Sd: 403	M: 128 Sd: 160	2: 12.0% 3: 17.3% 4: 4.0%	1: 66.7%	17.3%	34.6%	37.3%	10.6%	30.6%	836	56%	25.3%

*Note.* Year = year of publication; Period = research period (in days); N-total = total number of online contacts; N<sub>exp</sub> = sample size experimental group; N<sub>con</sub> = sample size control group; Incentive = use of incentive for participants, 1 = no ; 2 = yes, money; 3 = yes, technology ; 4 = yes, money and technology; RA = random assignment; Pretest =

pretest; Posttest = post-test; Follow-up = follow-up; Content = content analysis; N-ca = number of posts/messages/pages coded; Satisf. = satisfaction; Effect = measured

effects, + = yes. An “+” indicates that the criterion has been met.

whereby a professional functioned as a moderator of a peer group, or a professional consultation was offered in addition to peer support. Four studies concerned resources that were provided exclusively by professionals (17.3%). Two of these studies mentioned the training of practitioners in social support theory and its application in an online chat forum for mothers of mentally ill children (Scharer, Colon, Moneyham, Hussey, Tavakoli, & Shugart, 2009) and in email consultations by nurses (Campbell-Grossman, Hudson, Keating-Lefler, & Heusinkvelt, 2009).

Interactive forums and discussion boards often focus on a specific target group or parenting topic. There is a strong focus on children under the age of 12 (47.8%); pregnancy is also a frequent topic (13%) in this line of study.

Most authors were interested in emerging themes and topics that were frequently discussed online, like day-to-day challenges for mothers of young children (Campbell-Grossman et al., 2009; Dunham et al., 1998; Hudson, Elek, Westfall, Grabau, & Fleck, 1999). Researchers also analyzed these peer orientated services for parents in challenging circumstances, like parenting children with spina bifida, (Nicholas, McNeill, Montgomery, Stapleford, & McClure, 2004) autism (Huws, Jones, & Ingledew, 2001) and mental illness (Scharer, 2005; Scharer et al., 2009). They found that social networking was appreciated because it contributed actively in meaningful goals, for instance to be acknowledged, be empowered, adjust to changes, seek encouragement, seek a sense of belonging, or help others.

Almost half of the content analytic studies coded aspects, derived from theories on social support, providing a firm basis for the value of social networking in relation to parenting issues.

### *Experimental studies*

Nineteen studies (25.3% of all studies) evaluated effects of online parental support. Twelve of these studies (16%) evaluated online parent training interventions. These

evaluations show a wide variety in the effects studied and measures used, as well as in user characteristics and resource characteristics. The topics were highly diverse, including for example health and mental health, parenting skills, and parenting specific children groups with specific factors, such as adolescent substance use, newborn care, and social-emotional risks.

The parent and child characteristics of participants in the interventions that were evaluated, as well as the program features, differ slightly from those in the programs in the total sample of studies. First, the reported maximum age of children was 87.2 months (7.3 years) in 14 studies, which represents an even stronger emphasis on the parenting of young children. Further, professional support is a dominant characteristic of the evaluated programs (100% in experimental studies vs. 77.3% in all studies), which implies that programs that exclusively facilitate peer support have not been evaluated with experimental studies. However, three resources did offer peer support in adjunction to professional support. Thus, programs with professional support and a focus on relatively young children predominate in the experimental studies.

Although some other types of online communication - such as email consultations (31.6%), group chat (5.3%), or group forums (31.6%) - were a part of the evaluated interventions, information pages were a common feature of all of them (100% in experimental studies vs. 61.3% in all studies). Two programs offered additional face-to-face support, and one offered telephone support in addition to online features; another one offered television broadcasts (Sanders, Calam, Durand, Liversidge, & Carmont, 2008). We found several creative uses of online media for online parent training, such as an animated character on a handheld device that guides mothers through a problem solving strategy (Askins et al., 2007), videos demonstrating positive parenting behaviors (Bagget et al., 2010), web-based training sessions (Bert, Farris, & Borkowski, 2008), multimedia training modules (Deitz, Cook, Billings, & Hendrickson, 2009; Kuo, Chen, Lin, Lee, & Hsu, 2009) and interactive homework

sessions (Schinke, Fang, & Cole, 2009; Wade, Carey, & Wolfe, 2006).

Although the number of experimental studies is low and they are based on small samples, the results are promising. All reports expressed optimism about the feasibility, acceptance, and effectiveness of the online service, often based on positive satisfaction reports. In total, effects showed a medium effect size. It should, however, be noted that all effects were self-reported, mostly with the use of validated instruments.

## **Discussion**

Parenting has been changed by the Internet. Internet pioneers have developed web-based programs that provide high quality information to enhance parents' knowledge, easy access to peers with whom to share experiences, and professional consultation and training. Parents can now find a huge amount of information and support on the Internet that is accessible, anonymous, cost-effective, and convenient (Daneback & Plantin, 2008; Funderburk et al., 2008; Plantin & Daneback, 2009; Self-Brown & Whitaker, 2008). Only a small number of these Internet resources have been evaluated in a scientific study, and the studies we reviewed represent only a fraction of the huge number of online services that are available to parents on the Internet.

The studies in this review show that, apart from parenting, parenting support has also been changed by the opportunities the Internet has to offer. The studies reported on services with a broad range of types of online communication. These programs vary widely in goals, design, and reach in order to respond to the different needs of parents.

The content analytic studies showed a strong focus on online exchanges and peer support, whereas information pages and professional training and support were frequent themes in the experimental studies. Content analytic studies of online parenting resources provide a firm theoretical and empirical basis for the value of online social networking. Parents were, without exception, satisfied with the resources offered to

them. The experimental studies show some positive effects on parenting skills and child behavior. However, due to the small sample of experimental studies in this review, their wide variety, and their mixed outcomes, it is difficult to generalize conclusions to the many resources for parents on the World Wide Web.

This review shows a trend that scholarly interest in the subject of online resources for parents is growing. The application of asynchronous types of online communication, professional support, and young children's health topics are dominant characteristics of the studied resources. Specifically, such online resources may be designed by parenting practitioners to reach a large population and prevent problems with parenting.

We suggest several directions for future development for the innovation of traditional parenting programs and to enhance the quality of this field.

First, future developers may broaden the scope of online programs for parents. Research on online parenting resources currently places a heavy emphasis on mothers, pregnancy, and young children, while less attention is paid to fathers and later developmental phases of children. The current state of the field likely reflects professional parenting support in general (Belsky & Rovine, 1984; MacLeod & Nelson, 2000; Pinquart & Teubert, 2010). However, other developmental stages of children can be equally challenging to parents and, hence, developing online services for parents with older children seems an interesting and complementary domain to explore in the near future (Lock, 2011; Tarolla, Wagner, Rabinowitz, & Tubman, 2002). Some inspiring initiatives of online interventions for parents of older children and a variety in topics are described in this review.

Second, new technologies have recently become available for developers and parents. In this review, we found that information pages are currently a dominant format used in the programs. Combining types of online communication may enrich interventions, but the positive effects of layered interactions have not yet been

demonstrated. Multimedia innovations might offer new ways of supporting parents that differ from traditional programs. New types of online communication (e.g., videochat, microblogging, wiki, ping) have been introduced, and also new hardware has been developed (e.g., smartphones, digital tablets, personal digital assistants). These technological innovations may inspire practitioners and developers to offer additional highly interactive opportunities for parenting support in combination with social networking.

Further, this review reveals some limitations in the current knowledge base. First, scientific evaluation of professionally designed online parenting interventions for a wide range of target groups is essential, and more programs should be evaluated in future research to establish their effects. Although large effects are perhaps not to be expected in the field of parenting education in general (Pinquart & Teubert, 2010) this review shows some interesting examples of effective parenting support. Promising innovations are interactive technologies, which facilitate sharing experiences, demonstrating parenting behavior and guiding parents through training sessions.

Finally, we found that clear guidelines for professional skills or conduct were not included in the reports. However, parenting practitioners and healthcare providers are essential for disseminating information and providing support online in a proactive, professional, and ethical manner (D'Alessandro & Dosa, 2001). Professional training for the text-based support of parents should therefore be developed and encouraged, and should be included in evaluation reports.

To summarize, enhancements to this line of study could include, on the resource level, the application of multi-component and multi-layered types of online communication, the professionalization of online support, and the dissemination of resources to meet a wider range of parental needs. As a result, online resources may acquire a firm position in the domain of parent intervention programs in the near future. On the level of study



design, more online parenting interventions should be evaluated to substantiate claims about the efficiency and effectiveness of online support programs and raise their accountability.

Several authors have described online parenting and patient support as a service “in its infancy” (D’Alessandro, D’Alessandro, & Colbert, 2000; Madge & O’Connor, 2006; Mallen, Vogel, Rochlen, & Day, 2005; Ritterband & Palermo, 2009; Self-Brown & Whitaker, 2008). If one views these interventions as being part of the “first generation,” it is fair to say that research on these interventions is first generation research. With the rapid evolvement of Internet technologies, providing online services seems a given, rather than a choice, in future intervention design. This review shows some creative examples of online parenting programs after 15 years of scientific evaluation in this relatively new domain.

Both the inspiring results of many of the pioneering studies we reviewed and the high satisfaction rates suggest that there is much to be gained by exploiting the potential of the Internet to provide parents with the best possible support, in conjunction with a more thorough approach to program design, professional training, and evaluation. The studies from our review have shown that the first generation of online resources has changed parenting and parenting support for a large group of parents and professionals.

# CHAPTER 2

## **Online Programs as Tools to Improve Parenting: A meta-analytic review**

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## Abstract

*Background.* A number of parenting programs, aimed at improving parenting competencies, have recently been adapted or designed with the use of online technologies. Although web-based services have been claimed to hold promise for parent support, a meta-analytic review of online parenting interventions is lacking. *Method.* A systematic review was undertaken of studies ( $n = 19$ ), published between 2000 and 2010, that describe parenting programs of which the primary components were delivered online. Seven programs were adaptations of traditional, mostly evidence-based, parenting interventions, using the unique opportunities of internet technology. Twelve studies (with in total 54 outcomes,  $N_{tot}$  parents = 1,615 and  $N_{tot}$  children = 740) were included in a meta-analysis. *Results.* The meta-analysis showed a statistically significant medium effect across parents outcomes ( $ES = 0.67$ ;  $se = 0.25$ ) and child outcomes ( $ES = 0.42$ ;  $se = 0.15$ ). *Conclusions.* The results of this review show that web-based parenting programs with new technologies offer opportunities for sharing social support, consulting professionals and training parental competencies. The meta-analytic results show that guided and self-guided online interventions can make a significant positive contribution for parents and children. The relation with other meta-analyses in the domains of parent education and web-based interventions is discussed.

## Introduction

Several authors have suggested that the Internet has great potential for delivering parenting interventions in an accessible way (Daneback & Plantin, 2008; Funderburk, Ware, Altshuler, & Chaffin, 2008; Scharer, 2005). The use of the Internet has increased rapidly since it became widely available in 1995. Parenting professionals, involving multiple disciplines, such as pediatrics, counseling and nursing, have begun to exploit

the opportunities afforded by online technology and the Internet now offers a rapidly increasing number of resources for parents. The potential of online resources for parents is widely acknowledged (e.g., Long, 2004; Rothbaum, Martland, & Beswick Jannsen, 2008). A recent review shows that the first studies on this subject were published in 1998 and the evaluated internet services since then reflected an emphasis on parents of preschool children, mostly concerning health topics (Nieuwboer, Fukkink, & Hermanns, 2013a – chapter 1).

The Internet offers unique opportunities to design empowerment oriented resources for learning, modeling and support (Amichai-Hamburger, 2008). Whereas traditional parenting intervention programs are often targeted at specific minorities with certain risk factors (e.g., Shonkoff & Meisels, 2000), the Internet is the information and support resource of choice for large groups of parents. Visitor numbers to parenting websites run as high as hundreds of thousands per month (Brent, 2009; O'Connor & Madge, 2004; Sarkadi & Bremberg, 2005). The wish to upscale parenting programs and the phenomenon of mass media parenting interventions are not new (Laurendeau, Gagnon, Desjardins, Perreault, & Kischuk, 1991; Sanders & Montgomery, 2000; Schoenwald & Hoagwood, 2001; Self-Brown & Whitaker, 2008; Turner & Sanders, 2006). However, in comparison to traditional media like hardcopy newsletters and television broadcasts, the Internet enables new, highly interactive opportunities for communication between parents and professionals (Amichai-Hamburger, 2008; D'Alessandro & Dosa, 2001). Typically, information pages, email consultations and digital training modules represent types of online communication, in which professionals may disseminate current knowledge and offer tailored advice, whereas peer support is provided through group forums and discussion boards.

Web-based parenting programs may embrace a public health approach with the aim to support everyday parenting and inform and assist with frequently occurring

parenting questions, stimulating a responsive and positive attitude towards children (e.g., Eshel, Daelmans, de Mello, & Martines, 2006; Sanders, Bor, & Morawska, 2007; Sanders & Kirby, 2012). However, parents may also seek professional help in difficult circumstances, like social isolation, divorce, illness, or child disabilities (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992; Gurdin, Huber, & Cochran, 2005; Schwartz, Taylor, Drotar, Yeates, Wade, & Stancin, 2003). Furthermore, parenting can be a challenging task in certain stages of child development, e.g., transition to parenthood, infancy, adolescence (Belsky & Rovine, 1984; Glascoe & Dworkin, 1995).

The current fast-speed, broad-band Internet offers new interactive, multi-media experiences, which are currently used in different resources to increase parental competencies focusing on knowledge, attitudinal or behavioral aspects of parenting. Available programs include instructional and modeling animations and video to disseminate knowledge (see Ritterband, Thorndike, Cox, Kovatchev, & Gonder-Frederick, 2009). One of the attractive features of the Internet is the opportunity to receive and give social support anonymously. Discussion boards and group forums are web-based technologies which enable such interactions between peers, contributing to emotional well-being, confidence, and self-efficacy (e.g., Bellafore, Colón, & Rosenberg, 2004; Braithwaite & Waldron, 1999; McKenna, 2008). Finally, web-based training can be used as a technology that can structure step-by-step learning, tailored to individual progress (LaMendola & Kyrisk, 2008). Internet interventions can be designed to be self-guided or they may be guided, for instance by a start-off face-to-face session or email coaching. However, one of the motivations for internet interventions is to help a large number of individuals with a low amount of professional involvement (Ritterband et al., 2009). To summarize, the Internet offers different possibilities for parents with different needs. Large numbers of parents use the Internet to find information, support and concrete advice, supplementing and enhancing traditional forms of parenting services.

Meta-analytic reviews have reported positive effects of traditional (i.e., not web-based) parental support at parent and child level (see, for example, Fukkink, 2008; Kaminski, Valle, Filene, & Boyle, 2008; Lundahl, Risser, & Lovejoy, 2006; MacLeod & Nelson, 2000). Less is known about the effects of online programs for parents and a systematic review is currently lacking. In fact, several authors have described online parenting support as a service “in its infancy” and little is known of the effects of technology-driven services for parents and their families (D’Alessandro, D’Alessandro, & Colbert, 2000; Madge & O’Connor, 2006; Mallen, Vogel, Rochlen, & Day, 2005; Ritterband & Palermo, 2009; Self-Brown & Whitaker, 2008). Experimental evaluations of online resources for parents are relatively scarce (Plantin & Daneback, 2009; Weiss, Faughnan, Caspe, Wolos, Lopez, & Kreider, 2005; Zubrick, et al., 2005). However, interesting studies have recently been published which evaluated the effects of online resources on parenting competencies, including knowledge, attitudinal and behavioral aspects. In this line of study, also some traditional evidence-based programs (e.g., the Play and Learning Strategies Program, PALS, and the Positive Parenting Program, Triple P), were adapted for online dissemination, and have been evaluated. Also transfer effects of web-based parental support on the development of children have recently been investigated. In this review study, we aim to synthesize the experimental outcomes in the relatively new domain of web-based parenting resources for parental competencies and children’s development.

## Method

### Selection of studies

To find empirical studies on web-based parenting services we conducted a search in the databases of the Social Science Citation Index, PsycINFO, and PubMed. The extensive search strategy included blocks of various key words related to parenthood (parent\*,

mother\*, father\*, child\*, famil\* or pediater\*), parental support (counsel\*, coach\*, support\*, empower\*, advice or train\*), and the specific online context (internet\*, online, mail, chat, computer\*, website\*).

There were three inclusion criteria for this review. First, the primary components of the studied resource were delivered online; second, the primary target group of these resources exists of parents who had children aged between -9 months (pregnancy) and 21 years (adulthood). Finally, studied resources were aimed at improving parenting competencies. One original research report, which was pre-published online in 2009, was included. Editorials, commentaries, reviews, and conference papers were excluded.

After screening for duplicates and screening the studies with our eligibility criteria, 19 research articles published between 1998 and 2010 comprised the final set of studies. Seven studies described the development or application of online programs. Twelve out of 19 studies were experimental and were included in the meta-analysis.

## **Coding**

We developed a coding scheme to describe resource and user characteristics of the web-based resources and to assess the methodological characteristics of their evaluations. Two independent coders (i.e., the first and the second author) coded each study.

With respect to resource features we coded types of online communication (i.e., information pages, email consultation, group forum); facilitation of professional or peer support. Further, parent and child demographics and risk factors were coded on the basis of early intervention theory (see Shonkoff & Meisels, 2000), i.e., on the parent level: pregnancy, first time parenthood, single parenthood, low income; on the child level: physical handicaps, mental health problems, illness. Finally, we coded the following methodological aspects of the research design: type of research (experimental, descriptive); research period; sample size; allocation and randomization;

use of incentives; types of tests and experimental results.

Inter-coder reliability was evaluated by determining Cohen's kappa ( $\kappa$ ) in the case of nominal variables and by the intra-class correlation (*ICC*, two-way random, absolute agreement) for continuous variables, using .70 as the cut-off score for inclusion. Reliability proved satisfactory to excellent for the majority of the coded variables, with  $\kappa$  ranging from .77 to 1, and *ICC* ranging from .81 to 1. In the case of divergent codes, final codes were established by discussion.

## Analysis

Twelve of the studies in this review were included in the meta-analysis. Of these, two studies had a one-group pretest-posttest design, while ten studies were randomized controlled trials. Most of the studies identified in the search included multiple outcomes reflecting several aspects of parenting. This procedure yielded a database containing 35 effect sizes at the parent level, reported in 11 studies ( $N_{tot} = 1,615$ ). At the child level, the database was smaller, with 19 effect sizes, reported in 4 studies ( $N_{tot} = 740$ ).

Effect sizes were derived directly from reported means and standard deviations. Hedges'  $g$ , which corrects for bias resulting from small samples, was used as the effect size estimate (Hedges & Olkin, 1985). For inherently negative variables, effect sizes were recoded by changing the sign. The large scale approximation formula of Becker (1988; see also Morris, 2000) has been used to estimate the variance for effect sizes from within-designs. Correlation values for the pretest and posttest were not reported and conservative estimates of .5 were therefore used to estimate the variance of the effect sizes of these designs.

Effect sizes were subsequently integrated into an overall effect size according to a random effects model, using a multilevel approach. This model acknowledges the hierarchical nature of the data, with effect sizes (i.e., the lowest level) nested under treatments (i.e., the highest level). The multi-level approach also allows the explanation



of heterogeneous outcomes through moderator analysis (e.g., analyzing an association between effect size and type of design or type of outcome measure). The specification and testing of models was conducted with MLwiN, using restricted maximum-likelihood estimation (Bryk & Raudenbusch, 2002; Hox, 2010).

Using a medium effect size of 0.50 from the meta-analysis as a cut-off score, studies with positive outcomes are discussed in a brief narrative review. Following the descriptive framework of Proudfoot et al. (2011), we focus on type of support, interactivity and guidance, and theory of change as important internet intervention characteristics.

## **Results**

### **Characteristics of online parenting interventions**

All studied online parenting interventions were designed and guided by parenting professionals. Information pages were a common feature in all resources. Table 1 provides an overview of these findings and an identification code (ID) for each study, to which we refer in this section. In six programs (31.6%), email consultation was offered. One third of the programs offered peer support in the form of group chat or group forum.

Training modules, consisting of multiple sessions or lessons, were found in sixteen of the programs as the most prominent component. The evaluation studies showed creative usage of web-based technologies, such as an animated character on a hand-held device that guides mothers through a problem solving strategy (1), videos, pictures and animations demonstrating positive parenting behaviors (2; 4), multimedia training modules (7; 10), and interactive homework sessions (16; 18).

Table 1

*Characteristics of online interventions for parents*

ID	First author	Name of intervention <sup>a</sup>	Professional and peer support				Parent and child characteristics		
			Prof.	Info	Training	Email	Gr. forum	Char. parent	Topic
1	Askins et al. (2009)	Problem-solving skills training <sup>a</sup>	Pr	+	8 sessions	-	-	-	Cancer
2	Baggett et al. (2009)	Infant net <sup>a</sup>	Pr + P	+	10 sessions	-	+	Low income	-
3	Bert, Farris & Borkowski (2008)	Adventures in Parenting <sup>a</sup>	Pr	+	12 sessions	-	-	-	-
4	Buzhardt & Heitzman-Powell (2006)	Training modules	Pr	+	2 modules	-	-	-	-
5	Carpenter, Frankel, Marina, Duan, & Smalley (2004)	Parent-Adolescent Conflict Training PACT	Pr	+	2 modules	-	-	-	ADHD
6	Cook, Rule, & Mariger (2003)	Strategies for Preschool Interv. in Everyday Settings <sup>a</sup>	Pr	+	lessons	-	-	-	Disabilities
7	Deitz, Cook, Billings, & Hendrickson (2009)	Youth Mental Health, A Parent's Guide	Pr	+	4 modules	-	-	-	Mental health
8	Feil et al. (2008)	Infant Net (Playing and Learning Strategies, PALS) <sup>a</sup>	Pr + P	+	10 sessions	-	+	Pregnant, First time, Single, Low income	-

Table 1, continued

Name of intervention <sup>a</sup>			Professional and peer support				Parent and child characteristics			
ID	First author	Name of intervention <sup>a</sup>	Prof.	Info	Training	Email	Gr. forum	Char. parent	Age Child	Topic
9	Hudson, Campbell-Grossman, Fleck, Elek, & Shipman (2003)	New Fathers Network	Pr + P	+	-	+	+	First time	< 12	-
10	Kuo, Chen, Lin, Lee, & Hsu (2009)	Internet newborn-care education program	Pr + P	+	six weeks access	+	+	Pregnant, First time	Oth	-
11	Mackert, Kahlor, Tyler, & Gustafson (2009)	Child Care Center Web Site	Pr	+	-	-	-	-	All	Obesity
12	Mertensmeyer & Fine (2000)	Parentlink <sup>a</sup>	Pr	+	-	+	-	-	All	-
13	Na & Chia (2008)	Kidz Grow Online	Pr	+	3 months access	-	-	-	< 12	
14	Salonen, Kaunonen, Astedt-Kurki, Jarvenpaa, & Tarkka (2008)	Vauvankaa	Pr + P	+	-	+	+	-	< 12	
15	Sanders, Calam, Durand, Liversidge, & Carmont (2008)	Triple P <sup>a</sup>	Pr	+	10 weeks access	+	-	-	< 12	
16	Schinke, Fang, & Cole (2009)	Daughter-mother substance abuse program	Pr	+	9 sessions	-	-	-	Oth	
17	Taylor et al. (2008)	Incredible Years Adapted <sup>a</sup>	Pr + P	+	10 sessions	+	+	-	< 12	Behavior problems

Table 1, continued

Name of intervention <sup>a</sup>			Professional and peer support				Parent and child characteristics			
ID	First author	Name of intervention <sup>a</sup>	Prof.	Info	Training	Email	Gr. forum	Char.	Age Child	Topic
parent										
18	Wade, Carey, & Wolfe (2006)	Family Problem-solving Group (FPS)	Pr	+	14 sessions	-	-	-	Oth	Brain Injury
19	Wade, Oberjohn, Burkhardt, & Greenberg (2009)	I-InTERACT	Pr	+	10-15 sessions	-	-	-	< 12	Brain Injury
Total			Pr 68.4%	100%	n.a.	31.6%	31.6%	n.a.	AI= 21%	n.a.
			P 0%						<12= 52.6%	
			Pr+P 31.6%						>12= 5.3%	
									Oth= 21%	

*Note.* Prof. Pr / P = professional / peer; Info = information pages; Email = email consultation; Gr. forum = group forum / discussion board.  
An “+” indicates that the criterion has been met.  
<sup>a</sup>Adaptation of a traditional parenting program.

Four online parenting interventions specified parental characteristics to identify a certain target group. Three programs served pregnant / first time parents (ID Study = 8, 9, 10). One study explicitly focused on parents with low income and infants at risk of poor social-emotional development (2). Eight programs specified child characteristics by describing (mental) health issues (7; 11) or behavior problems (17), including children with cancer (1), ADHD (5) and disabilities (6; 18; 19). One intervention addressed drug abuse in young adolescent girls (16). Seven resources were online adaptations of traditional parenting programs.

These online programs show unique possibilities of technology-assisted intervention, like automated prompts to use parenting skills (ID Study = 1); logging or recording of home experiences (1; 2; 8); instruction by animated characters (1); remote coaching (1; 2; 8; 15); progress monitoring (2; 3; 8); video vignettes (2; 6; 8; 15; 17); online interaction with peers (2; 8; 17) and hyperlinks (6; 12). Typically, all interventions could be accessed from home.

This overview shows examples of online parenting programs, which have the potential to be directed at a large population, offering peer and professional support and making use of new technologies. They may be designed for specific target groups or topics, or for general parenting support and public health. Online interventions are particularly suitable for providing information and step-by-step training of skills. Finally, all reports expressed optimism about the feasibility, acceptance, and effectiveness of the online service, often based on positive satisfaction reports.

### **Characteristics of the research design**

Table 2 provides an overview of the research designs. Sample size varied from 19 to 482 ( $M=138$ ;  $sd=153$ ). Five studies (3; 4; 7; 10; 13) evaluated effects in the cognitive domain, focusing on an increase of knowledge related to parenting. Seven studies (1; 2;

7; 9; 10; 13; 15) measured different attitude outcomes, like postpartum depression (2), father's self-efficacy and parenting satisfaction (9), maternal confidence (10), perceived quality of time spent with children (13), parental anger and quality of the parent-child relationship (15), mostly measured with standardized and validated tests. Five studies evaluated the enhancement of parenting skills by external observation or by self-reported parental behavior, like mother-infant interactions (2); parent-adolescent communication (7); dysfunctional discipline styles in parents (15); mother-daughter communication on drugs (16) and parenting skills (19).

Of the 35 parent measures, 42.9% assessed attitudinal outcomes (e.g., self-confidence as a parent, quality of the relationship with child, and depression) while 34.3% measured behavior (e.g., problem solving and communication related to parenting, positive parenting) and 22.9% evaluated knowledge outcomes (e.g., knowledge of newborn care, child development or legal issues). Of the 19 child measures, 84.2% focused on behavior (e.g., use of alcohol, adherence to family rules, social competence) and 15.8% measured attitudinal outcomes (e.g., the intention to stop taking drugs or body esteem).

In two studies aspects of the parent-child interaction were observed and coded, in order to acquire reliable outcomes in respect to social-emotional development (2) and parenting skills (19), whereas in the other studies self-report measures were used. In all experimental studies but one (3) the program for evaluation was developed by or in close cooperation with the researchers. In two studies attrition rates were strikingly uneven, showing a third / two third difference in trial and control group (13, 16). Dropout rate was mostly predictable and reasonable, although there are two exceptions with a high failure to follow intent to treat of 49% (13) and 61.6% (15).

Table 2

*Characteristics of the research design*

ID	Study	Mechanism of change	Theory of change	Design	Control condition	Parent outcomes	Child outcomes	N
1	Askins et al. (2009)	individual problem-solving sessions and interaction with therapist	cognitive behavioral theory	RCT	traditional training	attitude		123
2	Baggett et al. (2009)	evidence based intervention, with elements of instruction, coaching, reflection, exercise	early intervention theory, promoting sensitive and responsive parenting behavior	RCT	resources program	behavior attitude	behavior	38
3	Bert, Farris & Borkowski (2008)	mental model of parenting	parent training theory	RCT	traditional program	knowledge (3x)		106
7	Deitz, Cook, Billings, & Hendrickson (2008)	multimedia rich, attractive and interactive	social cognitive theory	RCT	waiting list	knowledge behavior (4x) attitude (2x)		96
9	Hudson, Campbell-Grossman, Fleck, Elek, & Shipman (2003)	social (peer) support	transition theory and social support theory	RCT	no intervention	attitude (2x)		34
10	Kuo, Chen, Lin, Lee, & Hsu (2009)	provision of learner-centered education and social support	self-efficacy theory	RCT	no intervention	knowledge attitude		118
13	Na & Chia (2008)	interaction between parents and established information about child development	advantages of online learning, developmental knowledge base	RCT	waiting list	attitude (4x) knowledge (3x)		418

Table 2, continued

ID	Study	Mechanism of change	Theory of change	Design	Control condition	Parent outcomes	Child outcomes	N
15	Sanders, Calam, Durand, Liversidge, & Carmont (2008)	structured self-help and helpline	advantages of mass media	RCT	traditional program	behavior (2x) attitude (4x)	behavior	174
16	Schinke, Fang, & Cole (2009)	interactive activities in mother-daughter dyads	family interaction theory	RCT	no intervention	behavior (3x)	behavior (10x)	482
18	Wade, Carey, & Wolfe (2006)	family involved self-guided problem-solving	cognitive-behavioral theory	RCT	resources program		attitude (3x) behavior (4x)	40
19	Wade, Oberjohn, Burkhardt, & Greenberg (2009)	self-guided web sessions, including modeling content, exercises and coaching	parent-child interaction theory	PP	n.a.	behavior (2x)		9

*Note.* Design = PP: pretest-posttest within group; RCT = randomized controlled trial; x = number of outcome measures > 1; N = total sum of participants.

\*INCEP = Internet newborn-care education programme

\*\* Triple P = Positive Parenting Programme

\*\*\* I-InTERACT = Internet-based Interacting Together Everyday, Recovery After Childhood TBI



**Experimental effects**

*Parent outcomes*

The aggregated effect size (i.e., fixed effect in Table 3) for parent outcomes is 0.67 (*se*= 0.25), corresponding to a statistically significant, medium effect. The outcomes are heterogeneous (see random effect in Table 3). After statistically correcting for the design of some studies without a control group the overall effect size was smaller, i.e. 0.38 (*se*= 0.40), a small-to-medium effect. An exploratory analysis did not show significant differences between cognitive, attitudinal and behavioral outcome measures (*ES* = 0.71, 0.65 and 0.67, respectively).The effect sizes were also not related to the other coded methodological characteristics or to sample size.

Table 3

*Experimental effects of web-based resources for parents and children*

	Parents	Children
Fixed effect		
<i>ES (se)</i>	0.67 (0.25)*	0.42 (0.15)*
Random effect	0.69 (0.29)*	0.09 (0.07)

*Note.* An asterisk indicates statistically significant effects (*p* < .05).

*Child outcomes*

The aggregated and statistically significant (fixed) effect at child level is 0.42 (*se*= 0.15), close to a medium effect. The large majority of child outcomes were behavioral measures (*n*= 16), whereas only three measures pertained to attitudinal outcomes (*n*= 3). The variation in outcomes from different studies was not statistically significant (see Table 3).

## Qualitative analysis of effective interventions

With 75% of the studies conducted from 2008 onwards, parallel to developments in technology, the number of internet intervention research studies in this domain is rapidly growing. All interventions in this sample were developed by the researchers in order to assess the feasibility and effectiveness of a web-based parenting program.

Eight programs with relatively positive outcomes ( $ES > 0.50$ ) can be characterized as psycho-educational services, aiming to handle or prevent social-emotional problems in young children (Study ID= 2), mental health problems in youth (7), or adolescent substance use (16). Two programs helped new fathers and mothers with the transition in becoming a parent and taking care of a newborn baby (9; 10). One program focused on helping a specific group of parents to cope with children with traumatic brain injury (18; 19). Finally, one study evaluated an online training for foster parents (4). Thus, topics and target populations of the web-based programs for parents were diverse. The three programs with a broad public health orientation for everyday parenting (3; 13; 15) resulted only in small effects. Based on this sample, programs which helped parents addressing a specific issue seemed to be more successful than general programs for common parenting support.

Most web-based programs have been developed on the basis of social learning theory (Bandura, 1986) and positive outcomes were expected, regarding either parental self-efficacy and skills through modeling (e.g., using animated characters or video demonstrations) or child behavior and attitude through responsive and positive family interaction (e.g., using interactive assignments or exercises). The study by Baggett et al. (2010) aimed to evaluate an online adaptation of an evidence-based intervention, Play and Learning Strategies program (PALS), and showed medium outcomes. Parent-Child Interaction Therapy, which has been shown to be effective in face-to-face settings, was used to develop the web-based intervention I-InTERACT, of which Wade et al. (2009) reported large positive outcomes in their study. In another study, Wade, Carey

and Wolfe (2006) evaluated an online version of Family problem-solving therapy, with medium outcomes. Two other parenting programs which have been established as effective interventions by previous studies in regular settings, i.e. Problem Solving Skills Training (Askins et al., 2009) and Triple P (Sanders, Calam, Durand, Liversidge, & Carmont, 2008) showed only modest outcomes in the adapted web-based version. Apparently, finding mixed outcomes in this set of studies, face-to-face, evidence-based programs do not automatically lead to positive outcomes after adaptation for online dissemination.

Three of the websites also offered peer support by providing a discussion or bulletin board.

Apart from the oldest study (Study ID 9), published in 2003, all programs offered three or more types of multimedia channels, like video, animated characters, tests, and interactive exercises. In most studies, both synchronous and asynchronous types of communication were offered. However, these online characteristics were not related to outcomes.

The intensity of the services was diverse, with five interventions offering intensive sessions in a short period of time (e.g., weekly sessions) and three programs offering free access to a website for a period of time (e.g., two or three months). Also, most programs with sessions required an interval progress assessment with correct answers before proceeding to the next session. Higher levels of knowledge may be achieved using an online program with several intensive sessions and an interval progress assessment before proceeding to the next session. Four programs were fully self-guided, one program offered email consultation on demand, and three programs were intensively guided by a therapist or coach, reviewing each online session with parents through a videoconference or telephone call. Three web-based interventions started with a single face-to-face session. The programs which were fully self-guided showed higher outcomes with regard to parental knowledge, whereas the guided

programs produced higher outcomes with regard to parental attitude and behavior. The programs with higher attitudinal outcomes more often provided a combination of professional and peer support; behavioral change in parents was achieved by remote coaching with an earpiece. The studies show that different online and offline techniques and resources are successfully being used to inspire change in parental competencies.

## Discussion

The studies in this review evaluated web-based interventions for parents and families, including web-based adaptations of existing traditional interventions. The evaluated programs aimed to enhance parental competencies, offering support and training by using online technologies in different settings. Our meta-analysis provides evidence for the effectiveness of the Internet in supporting parents in their parenting role. Although the number of experimental studies is relatively low, including some small sample studies, these results are promising. In spite of the fact that family communication is a very complex set of knowledge, attitudes and behaviors, our study shows that participation in a short web-based intervention may lead to beneficial changes in both parents and children. Our findings do attest to the claim that online interventions may not only increase knowledge or improve attitudinal aspects, but may also enhance parenting skills. Interestingly, the studies from our review also show some positive effects at child level, although the effect is slightly smaller.

The web-based parenting programs, which have become available relatively recently, add to the diversity of parenting support and education practice. Parental education was traditionally disseminated through books, electronic media like the radio and television or other multi-media products (e.g., dvd or videotapes). The current fast-speed Internet now offers new and additional opportunities to empower a large group of parents in societies where the Internet is available and this study shows some inspiring examples and an increase of supportive programs using multiple multimedia channels.

Most of the programs in this analysis were aimed at a specific group of parents and (mental) health topic, supporting parents in challenging circumstances, and more research is needed to evaluate websites with a public health approach.

The outcomes from our meta-analysis of online resources for parents are consistent with other, related meta-analytic results. Favorable results of medium effect size have also been reported for traditional forms of parent training in different domains, including attitudinal outcomes (Barlow, Coren, & Stewart-Brown, 2002; MacLeod & Nelson, 2000; Pinquart & Teubert, 2010), parental knowledge (Kaminski, Valle, Filene, & Boyle, 2008) and parental behavior (Fukkink, 2008; Lundahl et al., 2006). Interestingly, our analysis shows that positive evaluations of face-to-face, evidence-based programs do not guarantee positive outcomes in a web-based adaptation.

The general finding of our meta-analysis is also in line with results of recent reviews of other related web-based interventions. Recent meta-analyses have shown that web-based interventions can help people with different health and life issues, varying from sexual health promotion to alcohol abuse, weight gain, debt, depression and chronic illness (Bailey et al., 2011; Cugelman, Thelwall, & Dawes, 2011; Maon, Edirippulige, Ware, & Batch, 2012; Riper, Straten van, Keuken, Smit, Schippers, & Cuijpers, 2009; Sorbi & Riper, 2009; Wantland, Portillo, Holzemer, Laughter, & McGhee, 2004). Our findings confirm that not only knowledge can be enhanced, but also attitudinal and behavioral aspects of parenting can be influenced by online programs. The Internet is, therefore, not only a source of information, but can also be an instrument for support and training. A preliminary conclusion on the basis of this small sample is that knowledge can be improved by self-guided web-based training programs, while changes in attitude and behavior may be incited through internet interventions, intensively guided by therapists or coaches.

### *Limitations*

The number of studies in this new domain is relatively small, and further research is needed to establish a firm knowledge base. The small database from our review did not allow a moderator analysis of the variation in effect sizes. An exploratory analysis did not show significant relationships with the coded methodological characteristics of the studies, but the statistical power of this analysis is limited.

Given the small sample, the quality of study design was not taken into account in our meta-analysis, and instead, every study's effect sizes were accorded equal weight. However, it should be noted that there are some distinct characteristics or flaws in most of these studies, which may be avoided in future research. In all but one of these studies the evaluated program was developed by the researchers, which may enter a biased judgment in analysis. Furthermore, some studies showed a high failure to follow intent to treat, and most studies were based on a small sample size. Furthermore, attrition rates were rather uneven in a number of studies. The most common used measures relied on self-report by parents, which may be a source of bias. Our analysis shows some useful examples of observation scales to detect changes in child or parent behavior, which indicates that studies in this field do not need to be limited to self-report measures only. With the availability of webcam technology, tapes of parent-child interaction can be easily obtained. The analysis of observed interactions could strengthen the quality of study design and lead to better insight in the effectiveness of interventions. These methodological issues limit the results of this meta-analysis and future evaluation design should take these issues into account.

A different limitation pertains to the individual experimental studies. The reviewed studies focused exclusively on a particular web-based intervention and it is, therefore, not always clear whether parents used this resource as a 'stand-alone' intervention or complemented the web-based tool with other services. Finally, the findings of our review are related to interventions that were evaluated in scientific

studies, and the outcomes of this review cannot be generalized to the many resources for parents that can be found on the Internet.

Acknowledging the limitations of our study, this meta-analysis shows the first promising results in the new and developing field of online parenting support.

# CHAPTER 3

## **Practitioner response to parental need in email consultation: how do they match?**

### **A content analysis**

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## Abstract

*Background.* Single session email consultations in web-based parenting support may be used for a variety of reasons. Parents may be looking for information on developmental needs of children, for suggestions to improve their parenting skills, or for referrals to helpful resources. The way the practitioner meets the needs of parents, choosing a short-term and text-based approach, has not been analyzed up till now. *Objective.* To determine if and how practitioner response in single session email consultation matches the need of parents. *Method.* A content analysis of single session email consultations (129 questions; 5,997 response sentences) was conducted. Three perspectives on the parent-practitioner communication were distinguished to assess the match between parenting questions and consultations, i.e., the expert oriented, parent oriented and context oriented perspective. *Results.* The parent oriented type is the dominant paradigm in requesting and providing email consultations, with which the other types may be combined. Most consultations showed a mixed perspective with the use of a limited amount of techniques within each perspective. Correlations between the practitioner's approach and parental expectancies were weak. *Conclusions.* Professionals have a broad approach to email consultation, offering advice of different perspectives, rather than restricting the advice in order to match a prevalent parental need. All proposed textual techniques were observed in email consultations, providing evidence of their feasibility. Since practice of email consultations is relatively new, practitioners may benefit from the proposed systematic approach to writing email consultations, identifying parental need and permitting the use of professional techniques.

**Keywords:** parent-practitioner communication; internet; parenting support; email consultation.

## Introduction

In recent years, professional systems of parenting support in European countries have developed rapidly (e.g., Bernacchi, 2007; Bradshaw, 2012; Molinuevo, 2012). ‘Good parenting’ is increasingly perceived as a way of not only improving individual wellbeing, but also stimulating citizen participation in society and preventing psycho-social problems and public cost (Hermanns, 2012). Also, current efforts in developing the Dutch youth care system are aimed to reduce the high and often unnecessary claim of families on specialists like psychologists, psychiatrists and physicians, and strengthen easily accessible and low intensity support for everyday parenting questions (Bot, Roos, Sadiraj, Keuzenkamp, van den Broek, & Kleijnen, 2013; Hermanns, 2009; RMO, 2012). Fitting this context, single session email consultation is a service which is frequently offered to support parents (Nieuwboer, Fukkink, & Hermanns, 2013a – chapter 1). However, since this online service typically consists of only one question and one reply, and therefore lacks interaction and direct feedback, the risk of a mismatch between parental need and professional response seems to be high.

### Review of the Literature on Email Consultation

Single session email consultation is a service in which parents can submit a parenting question through an online web-form or an email address of a professional community-based or private parenting support agency; consequently, they will receive a response via email within 5 days.

Unique features of email consultation include its accessibility, anonymity and efficiency. Contrary to telephone or face-to-face exchanges, the advice offered by email is asynchronous, which has advantages for both parent and practitioner (Suler, 2000). Questions may be sent at any convenient time, the parent may read the advice multiple times, options described can be explored one-by-one and in detail. Advantages for the

practitioner include ‘thinking time’ (Suler, 2008), the opportunity to provide tailored information (Nyström & Ohrling, 2006; 2008) and the possibility to refer to a number of other online resources through hyperlinks (Anand, Feldman, Geller, Bisbee, & Bauchner, 2005).

Typically, parents take the initiative to consult a professional online, but little is known about their needs and the topics they address. Some previous content analyses of email consultations suggested that parents, in their questions to parenting practitioners, express the need for expert advice (Anand et al., 2005; Borowitz & Wyatt, 1998; Herman, Mock, Blackwell, & Hulsey, 2005; Hudson, Elek, Westfall, Grabau, & Fleck, 1999). However, after the analysis of email consultations, Campbell-Grossman, Hudson, Keating-Lefler and Heusinkvelt (2009) stated that mothers may use email consultations with nurses to seek support for being a new mother. Mertensmeyer and Fine (2000) stressed the contextual functions of an email service to parents, providing access to resources and ‘supportive dialogue’. Thus, perceptions of the function of email consultations seem to vary; it may be an appropriate way to ask for expert advice, or to get suggestions how to improve parenting skills, or it may be an instrument to find resources for support. Since the diversity of needs of parents in email consultations has not been systematically investigated in previous studies, it is hard to say whether practitioners can match those needs.

Studies report on changes in the *availability* of practitioner-parent communication through internet technology in the last decades (e.g., Anand et al., 2005; Borowitz & Wyatt, 1998; Campbell-Grossman et al., 2009), providing better access and distance support. However, little is known about the *methods* practitioners may use to write email consultations. Rochlen, Zack and Speyer (2004) stated that the overall professional experience to use text-based technology is low. Several studies report that counselors experience difficulties in providing emotional support and conveying empathy in

text-based communication (Bambling, King, Reid, & Wegner, 2008; Danby, Butler, & Emmison, 2009; Mallen, Vogel, Rochlen, & Day 2005; Oravec, 2000). In reports of evaluations of web-based support programs for parents professional guidelines to provide text-based support and the description of specific writing techniques were lacking (Nieuwboer et al., 2013a – chapter 1). Also, the *content* of email consultations, including both the parenting question and the practitioner's advice, was not investigated before. As a consequence, the practice and methods of single session email consultation remain unclear.

A recent survey about online parenting support in the Netherlands showed that 64.3% of the providing organizations agreed that matching the need of the parent should be a leading principle in email consultations (Nieuwboer, 2011). The internet is a consumer oriented environment, in which it is important that the communication of a professional matches the need of the parent (D'Alessandro & Dosa, 2001; Suler, 2000). This is in line with extant scholarly literature on parenting support programs. In a review of studies on family-based services, Hoagwood (2005) found that family choice and preference are perceived as increasingly important in service delivery. Furthermore, Edwards and Gillies (2004), overviewing research and theory on online mental health resources for adolescents, stressed that, instead of providing all-round supportive help, a match with parental need, based on parental perceptions on the issue of who to turn to with different kinds of questions, is more important. Also, Dempsey and Keen (2008), based on an extensive literature review, revealed that a match between parental need and service delivery processes leads to more satisfaction, which improves parent outcomes directly (e.g., self-efficacy) and indirectly (e.g., coping with stress, empowerment). However, evaluation studies which distinguish specific types of parenting questions and types of practitioner's advices are lacking, which makes it hard to determine whether there is a match between parental need and professional response.

## Theoretical Framework

For the purpose of content analysis of single session email consultations, and in order to identify a match between types of questions and types of advice, we developed a classification system, based on scholarly literature on parenting support.

The parent-practitioner relationship has been described in both previous and recent research literature on parenting support (e.g., Rodrigo, Almeida, Spiel, & Koops, 2012; Shepard & Rose, 1995; Turnbull, Turbiville, & Turnbull, 2000). Capturing this broad field, three perspectives on parent-practitioner communication can be distinguished: the focus is on expert knowledge and solutions (see D'Alessandro, D'Alessandro, & Colbert, 2000), on family competence and strengths (e.g., Dunst, Boyd, Trivette, & Hamby, 2002; Dunst, Trivette, & Hamby, 2007), or on contextual resources (see Bronfenbrenner, 1979; Turnbull et al., 2000).

The first perspective implies that knowledge and solutions must be provided by experts. In this perspective, the expert defines the problem, and provides directives on how to handle a difficult situation (for examples of empirical studies, see Barbour, 2005; D'Alessandro et al., 2000; Dornan & Oermann, 2006; Sim et al., 2007). Thus, the *expert oriented perspective* places a strong emphasis on professional diagnosis and intervention. Email consultations may contain sentences in which the practitioner defines or diagnoses the problem, stresses the need for professional intervention, and directs the parent what to do.

Parental strengths are the core of the second perspective, meaning that parents are involved in decision-making and problem-solving. The professional is one of the resources, contributing to these tasks, respecting and mobilizing competencies within the family (e.g., Nyström, & Ohrling, 2008; Schinke, Fang, & Cole, 2009). This *parent oriented perspective* has three major assumptions (see Turnbull et al., 2000), including the centrality of the family, family choices as the basis of decision making and family strengths and capabilities. Email consultations may, for example, contain sentences in

which several family perspectives are described (parental intentions, developmental needs of children), family strengths are emphasized (giving compliments, stimulating decision making), and capabilities are strengthened (encouraging the use of certain knowledge or skills, providing a variety of handling options).

In the third perspective, a parenting practitioner will contextualize the needs of parents in an ecological approach to find resources and solutions in their social environment, informal as well as professional, in the neighborhood as well as in society (e.g., Mertensmeyer, & Fine, 2000). Thus, the *context oriented perspective* includes access to resources, participation and changing community ecology as the key assumptions (based on Turnbull et al., 2000). An email consultation may contain sentences in which the parenting practitioner stresses partnership and dialogue in finding solutions, shows opportunities for all family members to participate in problem-solving, or refers to resources.

As a consequence of these different perspectives, parental need and practitioner's response can be a match, but they can also be a mismatch (see Table 1). Previous literature suggests that a match will lead to better outcomes (e.g., Edward and Gillies, 2004; Dempsey and Keen, 2008).

### **Goal of the Study**

The objective of this study is to determine if and how professional response in single session email consultation matches the need of parents. Email exchanges between parents and professionals were collected and analyzed using a newly developed coding system, based on a theoretically grounded categorization of three perspectives on parental need and practitioner response.

## Method

### Participants and Sample

**Practitioners.** In 2011, Dutch organizations which offered free-of-charge single session email consultations to parents were contacted. Working in thirteen community-based practices and nine private practices, forty-five parenting practitioners throughout the Netherlands showed interest in participation in the study. Individual professionals gave their consent by completing an online questionnaire with questions about their previous experience in providing email consultations and their profession, resulting in a 89% participation rate (40 practitioners). Parenting practitioners were also asked to report any previous contact with the parent and the length of writing time per advice. Amongst the professionals who agreed to participate, different disciplines were represented, like developmental psychologists (42.6%), nurses (15.5%), psychotherapists (11.6%), social workers (10.1%), coach/counselors (4.7%), pediatricians (0.8%) and other (14.7%). Their experience with writing email consultations varied: 31% had no experience at all, 22.5% had written 1-5 consultations prior to the research, 14.7% had written 6-10 consultations, and 5.4% had written 10-25 consultations. A quarter of the practitioners had more experience (26.4%,  $\geq 26$  email consultations).

**Parents.** During the research period, March 1 to June 1, 2012 participating professionals offered single session email consultation to parents as part of their regular services. Parents were enabled to choose freely any participating professional and discuss any topic within the area of parenting. Two hundred and eight parents submitted a parenting question. Practitioners were not aware if a parent participated in the study or not, and all questions were answered within 2-5 days. Parents received information about the research project and an online consent form hyperlink through email. Because of Dutch law on research participation, parents had to confirm that they were 18 years of age or older.

**Emails.** We requested the parenting practitioner to send both question and advice for content analysis, but of consenting parents only. After data collection all elements with which parents, families or practitioners could be identified (e.g., email addresses, letter heads/logo's, names of family members, people involved, referrals to local organizations) were removed from the records. Also, layout was converted to a basic format, so that no question or advice could be traced back to specific persons. Descriptive data on the parenting questions were collected, using an index of five topics, following a classification for parenting questions of Dutch community-based agencies (ROTS): parental competencies and four areas of child development (emotional, physical, social, cognitive development). Each question was labeled with one main topic. If provided, the child's age was noted.

Forty practitioners provided email advices to 208 parents in total. Of these parents, 135 agreed to participate (65%) and, subsequently, 129 email communications (both question and advice), written by 40 practitioners, were retrieved for content analysis (mean: 2.84 per practitioner, min.-max.: 1-8; in total 5,997 response sentences).

**Ethical considerations on recruitment.** In the Netherlands it is allowed to provide non-medical and informative email consultation, as long as certain privacy measures are taken. By signing the research consent form which contained information on these rules, participating practitioners took full responsibility for the acquisition of parenting questions, for the provision of single session email consultations as part of their service to parents, and also for storing and archiving data in a responsible manner (see Mallen, Vogel, & Rochlen, 2005, for ethical considerations). This study adheres to the legal requirements of the Netherlands and all data are available in Dutch and accounted for (first author). The research procedure was approved by the Ethical Committee of the Faculty of Social and Behavioural Sciences, University of Amsterdam (reg.nr. 2013-EXT-2811).



## **Coding Design**

We followed recommendations of Titscher, Meyer, Wodak and Vetter (2000) on text analysis, to first define a system of categories, with clear operational, explicit, mutually exclusive and complete codes. On the basis of the theoretical framework (see Introduction), we took the chapter of Turnbull et al. (2000) on the evolution of family-professional partnerships as a starting point to develop the coding system. We marked every sentence which was typical for each of the three perspectives on parent-practitioner communication (categories), resulting in 21 codes to analyze advices (See Table 3). Because of the concrete nature of the codes, indicating what the practitioner actually does in his writing, we will refer to these as (textual) techniques.

The 3 categories and underlying 21 codes are, as Titscher et al. (2000) prescribe, derived from the research question and suitable to analyze texts on a sentence level. In two coder-training sessions the three researchers (see below) tested the coding system by using textual material which was similar to the sample in this study (other email consultations) to clarify interpretations and define the exclusiveness of all codes.

Subsequently, we identified corresponding indicators for the type of parental need. Parents may ask for an expert opinion or solution; they may convey a need for options and suggestions on how to resolve the situation themselves; or they may express the need for support and guidance towards suitable resources.

Thus, the same three categories were used to determine the type of question and the type of advice. All questions and advices were randomly assigned to the three coders, i.e. two Master students and the first author. A stepwise pattern ensured that a researcher never coded a paired question and advice.

## Measures

The coding system consisted of three categories; the *expert oriented perspective*, for which we will use the abbreviation (E) for the questions and (e) for the advices; the *parent oriented perspective*, which we will refer to as (P) for the questions and (p) for the replies; and the *context oriented perspective*, referred to by (C) for the questions and (c) for the responses.

For the questions, multiple needs may be communicated in one email and at different levels of intensity. As a consequence, parental need was coded by using a scale from 0-5 (0 = not expressed, 3 = explicitly expressed, 5 = strongly expressed) for each type of need. Subsequently, parental need was characterized as prevalent with 3 as the cut-off score. It was possible that in one question multiple prevalent needs could be conveyed, for instance P+C or even E+P+C (see Table 1).

Inter-coder reliability was estimated by determining Cohen's kappa for a random sample of 20% of the parenting questions. Reliability proved satisfactory to excellent for all types ( $\kappa$  for type E = .74; type P = 1; type C = .83;  $\kappa$  mean for all types = .86). In the case of divergent codes, final codes were established by discussion.

For the advices, the expert oriented perspective was characterized by 3 codes, and both the parent and the context oriented perspective were characterized by 9 codes, resulting in a refined coding system of 21 variables (See Table 2). Using the coding system, each email advice was first analysed at sentence level, providing descriptive data on the frequency of codes (or: techniques). Of all sentences 51.1% were assigned a code (3,068 sentences), which means that in these sentences one of the 21 techniques was observed. The other sentences contained information which was conditional, like greetings, information on opening hours, offers of other services which were not related to the question, structuring elements, and meta-communication.

Table 1

*Examples of match and mismatch between parental need and professional response*

<i>Expert oriented perspective</i>
A father asks “My five-year old child sleeps only six hours per night, should I worry about that?” and an expert oriented practitioner may respond with an indication of hours suitable for that sleeping at that age, for example “I advise you to visit your GP, because a child of that age should sleep approximately for eleven or twelve hours every night”.
<i>Parent oriented perspective</i>
Parents may ask: “My child has difficulties falling asleep and climbs out of bed numerous times every evening. How can I help my child go to sleep?” and a practitioner could reply: “It’s great that you both want to help your child and there are several options for bedtime rituals you may consider, depending on your preference and possibilities:...”.
<i>Context oriented perspective</i>
A parent may submit a question like: “My child is going through a difficult sleeping phase and as a single mum, I’m very tired and my work is suffering. Do you have any suggestions to help me and my child getting through this?” The practitioner may involve the teacher of the child to make sure there is not a stimulant overload for the child during the day, and the mum’s boss to negotiate some kind of temporary shift in tasks.
<i>Mismatch</i>
If the context oriented mother in the example receives an expert oriented response, (in this case, “your child should sleep twelve hours per night”) she will not feel supported. Another example of a mismatch is the parent oriented couple reading a context oriented advice (for example “I invite you to our office to talk about it”). Finally, if the expert oriented father in the example receives a parent oriented reply (in this case, all kinds of options for bedtime rituals) he will not be aware of the urgent advice to visit his GP.

On the level of the total score for each of the three types of orientation (thus correcting for large differences in the number of sentences per advice) inter-coder reliability was estimated by determining the intra-class correlation (*ICC*, two-way random, absolute agreement) of a sample of 20% of the email advices. Reliability proved satisfactory to excellent for all variables (*ICC* for type (e) = 1; type (p) = .70; type (c) = .87; *ICC* mean for all types = .86).

Subsequently, an email advice was categorized as a prevalent type if more than half of the techniques of the perspective were found, as to create robust categories

with clear-cut examples; in the expert oriented category, the application of only one technique would not be distinctive enough, so we took two techniques as the threshold; in the parent and context oriented categories, the application of only one or two out of nine techniques would show a weak distinctiveness of the perspective, whereas five or more techniques would show a high prevalence of the category. Similar to a question, an advice could also show more than one prevalent type of orientation.

Consequently, prevalent types of questions and prevalent types of advices were used as a measure for analysis.

## Results

### The Characteristics of Email Consultations with Parents

Issues concerning parental competence appeared a dominant theme in the parenting questions, including issues like punishment, rules, and arguments (40.6%). Most other questions were related to aspects of child development. Typical themes in questions about emotional development were tantrums, insolence, temperament, and claiming-behavior (21.1%). Examples of themes in questions about physical development were sleeping and nutrition (18.8%). Most questions on social development involved bullying (12.5%). The other questions concerned the cognitive development of children and several other issues (7%). The age of children concerned varied from 0 to 21 years (mean 8.2 years,  $sd = 5.1$ , 18% missing values).

Parenting practitioners reported that no previous contact or relationship between parent and practitioner had been established. Average time spent on writing an email advice was 31-60 minutes; twelve advices were written in less than 15 minutes, eleven consultations took more than 90 minutes. Email advices varied widely in length from 3 through 81 sentences (mean 23.8,  $sd = 16.4$  sentences).

The analysis of length of questions and replies in word count also showed large

differences (Questions: min-max 9-1,227, mean 232,  $sd = 206$  words; Advices: min-max 115-1993, mean 698,  $sd = 344$  words). On total average, advices were more than three times longer than questions (90,075 vs. 27,583 words, respectively).

### **Types of Parental Need in Questions**

An email with a parenting question was categorized as belonging to a specific type of parent-practitioner communication if a need was prevalent (see Method and Table 1). Half of the questions showed a sole dominance of the parent oriented perspective, showing a need for suggestions, options and the strengthening of family skills and knowledge. Only a minor part of the questions was exclusively expert oriented, whereas an exclusive need for a focus on the context was also weak. However, parents expressed a combination of needs in most emails. Analysis of the emails with these combined needs showed that almost all parenting questions contained the need for a parent oriented approach. Both the need for an expert oriented approach and the need for a context oriented approach were found in almost a fifth of all parenting questions, combined with the parent focused approach. The combination of an expert- and a context oriented approach was seldom reported. In a small part of the questions, the parent expressed a prevalent need for all perspectives.

### **Types of Professional Response in Advices**

Descriptive analysis showed that every one of the 21 codes was observed in email advices, but there were vast differences in frequency, as shown in Table 2. The total maximum amount of techniques in one advice was 15 (out of 21).

Frequencies of techniques belonging to the expert oriented category of the parent-practitioner communication were relatively low; practitioners did not often define the problem, stress the need for professional intervention or direct the parent what to do.

Practitioners often chose the use of several techniques which belong to the parent

oriented type of parent-practitioner communication. Through acknowledging parent's intentions and describing the needs of all involved, the practitioner aimed to mobilize family members' competence. Through offering a variety of options to the parent and encouraging the use of knowledge or skills, parental competency was strengthened. However, decision making was not frequently encouraged. Rephrasing the main question was found in almost all email consultations.

The techniques which belong to the context orientation showed a wide variety in frequencies. It was relatively common to refer to family members who were already mentioned by the parent as participants in the situation. However, the opportunity to involve other family members, friends or parents from befriended school children was not often recommended. In almost two third of the email consultations we found a referral to helpful resources like websites or organizations. Relating the parenting question to the broader level of society (laws, rights) was scarcely found and practitioners rarely discussed laws, policies, rights or obligations in their advice. Finally, although many practitioners offered their assistance, explicitly stressing partnership and dialogue was less frequently observed.

Table 2

*Prevalence of types of communication in parental need and in professional advice*

Type of parent-practitioner communication	Parental need	Professional advice
E/e. expert oriented	3.1%	.8%
P/p. parent oriented	51.2%	31%
C/c. context oriented	2.3%	.8%
- no prevalent type	0%	44.2%
- combination of E+P / e+p	20.9%	3.9%
- combination of P+C / p+c	19.4%	18.6%
- combination of E+C / e+c	.8%	0%
- combination of E+P+C / e+p+c	2.3%	.8%

An email advice was categorized in a specific prevalent type of parent-practitioner communication if more than half of the techniques of the type were found (see Table 2). Analysis showed that 44.2% of the sample could not be categorized into one of the three types. In these advices, a few techniques of every type of communication were found and no distinctive approach to the relationship with the parent was chosen. In almost a third of the advices the support of parental strengths was the dominant type; in almost a fifth the practitioner combined this approach with the context orientation. Finally, in only a very small amount of responses, expert intervention was the leading orientation in help giving.

In conclusion, parenting questions often showed a combination of dominant needs (multiple types are strongly expressed), whereas email advices often consisted of a combination of non-prevalent approaches (a few techniques of every type).

### **The Match between Parental Need and Professional Response**

The association between types of questions (Expert, Parent, Context) and the type of advice (expert, parent, context) was tested using the contingency coefficient measure for nominal codes. Analysis showed that there were no significant associations ( $CC$  for E-e = .06,  $p = .45$ ;  $CC$  for P-p = .12,  $p = .14$ ; and  $CC$  for C-c = .01,  $p = .89$ ). Furthermore, the questions which conveyed a single type (i.e., no combinations of questions), which might incite a straightforward response of the same type by the practitioner, also showed a poor association with the types of advice ( $CC$  for  $E_{\text{single}}$ -e = .04,  $p = .62$ ;  $CC$  for  $P_{\text{single}}$ -p = .09,  $p = .26$ ; and  $CC$  for  $C_{\text{single}}$ -c = .07,  $p = .37$ ).

Subsequently, in order to verify if single particular techniques were associated with type of parental need, associations were tested between types of questions (E, P, C) and the occurrence of 21 techniques (e1-3; p1-9; c1-9, see Table 3) using the contingency coefficient measure for nominal codes. Results showed statistically

Table 3

*Frequencies and occurrence of 21 techniques in practitioner-to-parent emails (n=129)*

Practitioner's techniques in three different orientations on the parent-practitioner communication	Frequency	Occurrence in % of emails
Type e: Expert oriented		
e-1 define/diagnose the problem	22	11.6
e-2 stress the need for professional intervention	16	10
e-3 direct the parent what to do	11	6.2
Type p: Parent oriented		
p-1 repeat parent's perspective	31	19.4
p-2 describe needs (of several family members)	233	58.9
p-3 acknowledge emotions	95	46.5
p-4 repeat the main question	203	93
p-5 encourage decision making	15	8.5
p-6 compliment on parent's intentions	112	58.1
p-7 build on parent's or family's strengths and opportunities	45	24
p-8 identify and encourage the use of knowledge or skills	643	88.4
p-9 provide a variety of options the parent can choose to act on	993	76
Type c: Context oriented		
c-1 stress partnership and dialogue in finding solutions	85	48
c-2 identify and refer to resources in the informal network	23	17
c-3 identify and refer to resources in the professional context	193	62
c-4 repeat parent's or family's goals and needs	56	21.7
c-5 show opportunities for all family members to participate in problem-solving	97	42.6
c-6 invite to participate in any further helping process	103	71.3
c-7 identify opportunities within multiple levels	65	41
c-8 discuss laws, policies, rights, obligations	2	1.5
c-9 encourage to mobilize the informal network	25	13.2

significant, but still modest associations for Question Type E-Technique p-8  $CC = .21$ ,  $p = .01$  and for Question Type C-Technique p-1  $CC = .19$ ,  $p = .02$ . All expert oriented responses were associated with context oriented questions (for Question Type C- Technique e1  $CC = .26$ ,  $p = .00$ ; Question Type C- Technique e2  $CC = .28$ ,  $p = .00$ ; Question Type C- Technique e3  $CC = .17$ ,  $p = .04$ ).



Thus, although associations between type of questions and separate techniques were generally weak, a link was found between context oriented questions and expert oriented responses.

## **Discussion**

In single session email consultations parenting practitioners offer support to parents with questions concerning child development and parental functioning with the use of textual communication only. Limited in both time and means, the parenting practitioner is challenged to choose a suitable approach to communicate with the parent. Email consultations offer the unique opportunity to evaluate the characteristics and interactions between parents and practitioners in great detail through content analysis.

The literature reports several examples where specific target groups were reached through email consultation, such as single, minority or teenage mothers (Campbell-Grossman et al., 2009; Herman et al., 2005; Hudson et al., 1999) or specific topics were treated, such as pregnancy (Kouri, Turunen, Tossavainen, & Saarikoski, 2006), children with cancer (Ewing, Long, Rotondi, Howe, Bill, & Marsland, 2009) or perinatal grief (Capitulo, 2004). In contrast, our study included all parents with all parenting questions, showing that parents in primary or preventative care may use email consultations for a wide variety of topics. Questions were mostly related to parental competencies, emotional and physical development of relatively young children. Given its accessibility and convenience, email consultations can be the medium of choice to consult a professional about everyday parenting questions. Most questions conveyed a combination of needs for different kinds of support: professional diagnosis and intervention (expert oriented needs), suggestions to enhance family strengths and capabilities (parent oriented needs) and access to helpful resources (context oriented needs).

Advices mostly contained parent oriented content, sometimes combined with context oriented suggestions, whereas expert oriented support was found to be rare. The practitioners' email advices consisted of a few techniques of every type and in almost half of the consultations no prevalent approach was found. Internal consistency of the types proved to be poor, indicating that practitioners favored a limited amount of techniques within a specific orientation. Nonetheless, though varying in frequencies, all techniques were represented. Findings in our study confirm that it was feasible for all techniques and all three perspectives on the parent-practitioner relationship (i.e., expert, parent and context oriented) to be implemented in single session email consultation.

Our analysis also suggests that the match between type of parental need and type of advice was weak, indicating a low agreement between the perspective of the parent and the practitioner's response in our sample. Instead, practitioners seemed to make the choice to offer a broad perspective on the parenting question.

Previous claims of the literature that a matching parent-practitioner communication is the most desirable one (e.g., Edwards & Gillies, 2004; Dempsey & Keen, 2008; Hoagwood, 2005) were not made in the context of brief online textual communication like email consultation. Instead it can be argued that offering a broad approach in this particular context may be useful; in doing so, misinterpretations of the parental expectation, which is only conveyed through a short text, may be avoided. Also, a parenting practitioner may choose to offer a different perspective on the parenting question than the parent explicitly asked for, in order to open up new opportunities in solving the issue.

On the one hand, this content analysis suggests that matching the need of the parent, especially when it is dominant, requires additional professional consideration, so that a well-informed choice to use either a certain perspective or a broad approach can be made. On the other hand, this study, which only described and analyzed the texts

of parenting questions and email advices as they are, should be supplemented with research to empirically investigate the value of the matching hypothesis in this context. Different from the present study, the aim of such research should be to establish if a match would really be helpful and useful.

Interestingly, exclusive expert oriented advice was seldom requested by parents or provided by practitioners, although this kind of advice seems regularly to have been provided in combination with other responses to parents with context oriented needs. The expert type of email consultation is debatable, because of the fact that, despite differences, it bears a close resemblance to medical online consultation, which may be regarded as illegal or unethical in the absence of a patient-client relationship (for Dutch guidelines, see KNMG, 2014).

In fact, email consultation in itself is not beyond controversy, since the security of email systems is low, there is no way to verify the sender of an email, and email is transferred through multiple server channels before it reaches the correspondent, leaving confidentiality at risk (e.g., Rosen & Kwoh, 2007; Thomas & Shaikh, 2007). However, informed consent is often enough to proceed with providing email consultations (see Method). Practitioners must fully understand and comply to the rules, laws and codes of ethics they are bound to, which are frequently changed and updated because of new insights and new technologies and which may differ between and within countries (for instance, HIPAA rules for the USA; Wet Bescherming Persoonsgegevens for the Netherlands).

Online counseling for parents is a relatively new discipline (e.g., Ritterband & Palermo, 2009) and evaluation tools are needed. Rochlen et al. (2004) found that practitioners seem to lack the knowledge and experience to handle email consultations in a systematic and methodological manner. Actually, several authors have stressed the

fact that it is vital to master the process of online communication, in order to employ email consultations as a means for professional support (Childress, 1999; Mallen et al., 2005; Stofle & Chechele, 2004). This study is one of the first to contribute to the understanding of communication dynamics in this context.

In this study, three types of the parent-practitioner communication have been distinguished, with satisfactory reliability, providing an analytical framework for the study of email consultations in parental support. This categorization is theoretically linked to concepts in the parenting support paradigm and enables a refined analysis of (textual) communication. Our findings suggest that, in addition to the current broad approach, practitioners may employ a greater variety of techniques than currently applied.

### **Limitations**

It should be noted that a content analysis of email consultations, using a coding system which breaks up the text and categorizes each sentence, may to some degree violate the intended meaning of the text and the way a reader interprets the advice. Also, many nuances in tone and warmth of the communication are lost in this approach to content analysis. Thus, conclusions of this article do not reflect the overall intentions or appreciations of email consultations, but are restricted to the specified measures.

For instance, the questions and email advices in this sample varied extremely in length, which was partly compensated in correlation analysis by ignoring the frequencies of techniques employed, and taking the occurrence of techniques as a starting point. For statistical analysis purposes this seemed a necessary decision; however this decision alienates the analysis from the way a parent may perceive an advice with, for example, multiple compliments or many options.

Furthermore, the coding of types of questions and types of advices, which was the basis of correlation analysis, differs; in parenting questions the expression of need was coded with 3 variables, and a scale of 1-5 for weaker or stronger expressions, whereas professional consultations were coded with 21 variables, adding up to 3 categories. Although both procedures yielded adequate inter-coder reliability, a difference in fine-tuning must be acknowledged and this may partly explain the fact that so many professional responses, being more rigorously investigated, did not show a prevalent approach, subsequently leading to weak associations with parental need. A closer look at the cut-off score for prevalence is warranted.

Finally, the sample of email consultations was the result of self-selection of both practitioners and parents and therefore, findings may not be fully representative.

Despite its shortcomings, finding a weak correlation between question and response types in common practice, this first study in its kind shows that email consultation offers opportunities for parenting support. In theory, a diversity of email consultation techniques may enable a responsive and professional approach. This study may help the parenting practitioners to improve their understanding of the online communication processes and their skills in text-based consultation.

# CHAPTER 4

**Analyzing empowerment oriented  
email consultation for parents:**

**Development of the Guiding the Empowerment Process model**

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*Jo M.A. Hermanns*

This chapter is conditionally accepted.

## Abstract

*Background.* Online consultation is increasingly offered by parenting practitioners, but it is not clear if it is feasible to provide empowerment oriented support in single session email consultation. *Method.* Based on empowerment theory, we developed the Guiding the Empowerment Process model (GEP model), which describes techniques to guide the parent towards more empowerment. By content analysis of email advices ( $N=129$ ; 5,997 sentences in total), we investigated the feasibility of the newly developed model (inter-observer agreement, internal consistency and factor structure) and its validity. Concurrent validity was evaluated by comparing coding results, using the GEP model and a Social Support model, that partially intersects with empowerment. *Results.* Results showed good inter-observer reliability and internal consistency of the GEP model. The results provided evidence for its concurrent validity by a significant correlation of the coding results from the GEP model with the Social Support model, although it was also distinctive. All described techniques which practitioners may employ to guide the parental process towards empowerment were observed in the sample. Also, guidance was provided in all components of the empowerment process, including community involvement. *Conclusion.* Feasibility of the GEP model for content analysis of email consultation in parental support from a theoretical empowerment perspective has been demonstrated.

*Keywords:* parent-practitioner relationship; online counseling; internet; empowerment; email consultation.

## Introduction

Extant literature has claimed that the Internet can be a tool for delivering parenting support in an accessible and beneficial way (Daneback & Plantin, 2008; Funderburk, Ware, Altshuler, & Chaffin, 2008; Plantin & Daneback, 2009; Ritterband & Palermo, 2009; Self-Brown & Whitaker, 2008). Internet World Stats (2013) reports a penetration of internet access by 34.3% of the worldwide population and 63.2% of the European population in June 2012. Single session email consultation is increasingly employed as an instrument by private and community-based organizations to provide parenting support and counseling. A recent review suggests that email consultation is offered in a third of all online parenting support programs (Nieuwboer, Fukkink, & Hermanns 2013a – chapter 1). Parenting practitioners are generally trained to employ empowerment oriented methods in their work. However, it is not known if and how an orientation on empowerment can be applied in single session email consultation, which is a very brief kind of interaction between a parent and a practitioner, characterized by only one question and one reply. In this study we investigate the reliability and validity of the newly developed Guiding the Empowerment Process model (GEP model) which aims to analyze the level of empowerment oriented guidance in email consultation.

The concept of empowerment has been adopted by most family support programs as one of the key concepts since the 1980s (e.g., Akey, Marquis, & Ross, 2000; Andrews & McMillan, 2013; Cochran, 1992; Dempsey & Dunst, 2004; Dunst, Trivette, & Deal, 1988; Fordham, Gibson, & Bowes, 2012; Koren, DeChillo, & Friesen, 1992; Shepard & Rose, 1995). The need for an empowerment-oriented attitude in parenting practitioners has been well documented (e.g., Dunst, 2009; Dunst, Boyd, Trivette, & Hamby, 2002; Dunst, Trivette, & Hamby, 2007; Teti, O'Connell, & Reiner, 1996). Representatives of this paradigm suggest that improvement of family functioning is found in the



development of personal and family strengths and competencies and access to helpful resources, rather than in expert steering or modification of behavior, emotions and/or cognitions (e.g., Cochran, 1992; MacLeod & Nelson, 2000; Turnbull, Turbiville, & Turnbull, 2000).

In counseling relationships empowerment can be perceived as a process both from the client's perspective, i.e. from a certain degree of powerlessness towards more influence (e.g. Cattaneo & Chapman, 2010), as from the practitioner's perspective, i.e. guiding the client in an empowering way (e.g., Dunst et al., 2002). Several empirical studies suggest that supportive help-giving practices are a significant predictor of parent empowerment (Dempsey & Dunst, 2004; Dempsey, Foreman, Sharma, Khanna, & Arora, 2001), despite demographic differences between families. Empowerment oriented support consists of both relational practices (e.g., active listening, empathy, respect, responsiveness) and participatory practices (e.g., support decision making, provide access to resources) (Dunst et al., 2002; Dunst, Trivette, & Hamby, 1996). It involves a high degree of non-judgmental, non-directive, warm and respectful communication (e.g., Byrne, Rodrigo, & Martín, 2012). Furthermore, an empowerment oriented approach has been claimed to involve a strong focus on family strengths and even changes in the family context (for an example see August, Realmuto, Winters, & Hektner, 2001). Single session email consultation is a very brief interaction in which the parent submits a question through a web-form or email address on a website, and the practitioner responds through email only once. Therefore, in single session email consultations, in which the number of turns in professional-client interaction is limited, it is a challenging task to communicate in an empowerment oriented way.

The supportive process towards more empowerment is often described as a process of some duration, in which the quality of the relationship between parents and practitioners

is an important factor (e.g., Dunst et al., 2002; Popp & Wilcox, 2012). Although several authors have drawn up lists of characteristics of empowerment-oriented professional behavior (Baumann, Kolko, Collins, & Herschell, 2006; St-Cyr Tribble et al., 2008; Verzaal, 2002) and other researchers have measured the professional orientation using questionnaires, like the Helpgiving Practices Scale (Trivette & Dunst, 2005), the Therapy Process Code (Harwood & Eyberg, 2004) and the Therapy Procedures Checklist (Weersing, Weisz, & Donenberg, 2002), these lists and questionnaires all require a face-to-face relationship between clients and practitioners over a period of time and are therefore not directly applicable in the assessment of single session email consultations. In contrast, single session email consultations consist of short textual communication only and are restricted to one question and one reply. Several studies report that counselors find it difficult to provide emotional support and to convey empathy in text-based communication (Bambling, King, Reid, & Wegner, 2008; Danby, Butler, & Emmison, 2009; Mallen, Vogel, Rochlen, & Day, 2005; Oravec, 2000). Indeed, Chardon, Bagraith, and King (2011) found that single session email consultations showed a low level of counseling depth, compared to established face-to-face counseling models. Several authors suggest that the quality of online counseling depends on the way the practitioner understands the helping process and on the competence to use the medium in a skillful manner (Barak, Boniel-Nissim, & Suler, 2008; Bagraith, Chardon, & King, 2010; Childress, 1999; Harris, Danby, Butler, & Emmison, 2012; Stofle and Chechele, 2004). Thus, practitioners who provide single session email consultation may deliver more effective support if they are able to use text-based skills and techniques to support the process towards empowerment. However, a comprehensive model of text-based techniques which indicates the level of empowerment-oriented guidance in email advice is not yet available.

## Theoretical Framework

We developed the Guiding the Empowerment Process model (GEP model), intended to assess the empowering level of email advice, on the basis of both the Empowerment Process model (Cattaneo & Chapman, 2010) and the tradition of empowerment-oriented parenting programs, described by Turnbull et al. (2000). Both sources summarize and integrate a vast amount of literature on empowerment in help-giving practices.

Drawing on the scholarship of different perspectives and disciplines, the Empowerment Process model was constructed as an overarching model with implications for both research and practice. Cattaneo and Chapman (2010) described the process of empowerment as a process of four components: *goal-setting*, *action-taking* and *reflecting*, within the *social context*, leading to more influence, particularly in social relations. It is a comprehensive and recent model, combining psychological and community aspects of empowerment, and theoretically based on empowerment literature. Furthermore, it is a model which describes the process towards an increase in empowerment in a concrete manner, suitable for research and practice.

Turnbull et al. (2000) described the development of orientations in family support practice over the last few decades, with a strong focus on assumptions about the orientation on empowerment as ‘best practice’. These assumptions are directed at the centrality of the family, family choices as the basis of decision making, family strengths and capabilities as the focus of intervention, access to resources, participation, and changing community ecology.

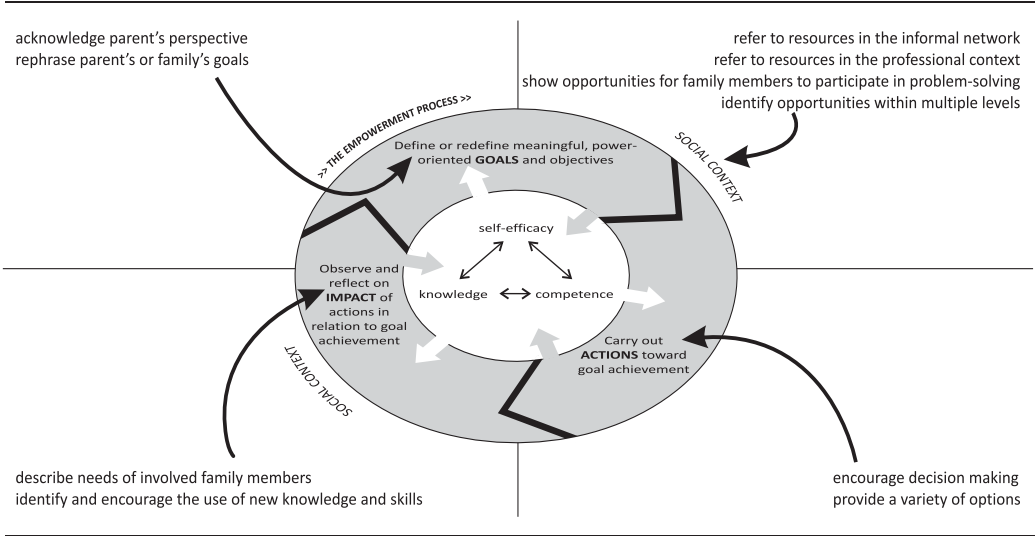
We transferred all assumptions about the family-professional partnership to web-based textual techniques in parenting support. For instance, a practitioner may focus on the centrality of the family by describing the needs of all family members; she or he may stimulate participation by showing opportunities for all family members to participate in problem-solving; and she or he may attribute to change in community ecology by identifying opportunities within multiple levels in the family context. This resulted in

the description of concrete techniques which can be used in textual interactions with parents.

Integrating the theoretical model of Cattaneo and Chapman (2010) and the description of ‘best practice’ of Turnbull et al. (2000), both on client and professional empowerment, we propose an analytical model which describes ten techniques a parenting practitioner may use to guide a parent in all components of the empowerment process: the Guiding the Empowerment Process model (see Figure 1).

Figure 1

Guiding the Empowerment Process Model



After Cattaneo and Chapman 2010, with permission

With regard to *goal-setting* (component 1), the practitioner may rephrase the parent’s or family’s goals (e.g., stressing more general goals like health instead of eating green beans) and acknowledge the parent’s perspective (e.g., describing a mother’s wish for more peace and quiet in the family). Related to *action-taking* (component 2), he may provide a variety of options (e.g., reading a story, singing a song or playing some relaxing music can all be helpful in getting a child to sleep) and encourage decision-

making related to the described goals (e.g., stimulating some form of communication with an ex-partner). Concerning reflection on *impact* (component 3), he may explore the needs of involved family members (e.g., a boy of fourteen needs some space to choose his own friends) and identify and encourage the use of (new) knowledge or skills (e.g., mirroring a child's behavior may calm him down). Finally, in order to *mobilize the social context* (component 4), the practitioner may show opportunities for all family members to participate in problem-solving (e.g., young children can come up with some useful rules about sharing toys), refer to resources in the informal network (e.g., maybe family members or neighbors can share some second-hand children's clothes), refer to resources in the professional context (e.g., a teacher can provide some insight in how to encourage a shy child) and identify opportunities on multiple community levels (e.g., parents and teachers can arrange for a local alderman to explain anti-drugs policy at the school).

These ten techniques are all related to the parental process towards empowerment. The practitioner will highlight specific elements, depending on the parenting question at hand. These ten techniques are applicable in email advice, they can be implemented in text-based counseling, do not depend on face-to-face contact, and are closely linked to the parental process towards empowerment. Thus, the Guiding the Empowerment Process model (GEP model) provides the practitioner with a tool to respond to the parenting question in a systematic and empowering manner.

A related concept which has been used to analyze online communication is social support, which bears resemblance to empowerment oriented behavior. Help-giving practices are often described in terms of formal social support, of which empowerment is a goal (e.g., Fordham et al., 2012; Rodrigo, Martín, Máiquiz, & Rodriguez, 2007). Similar to an empowerment oriented approach, social support involves attention to strengths and helpful resources. Social support has been a topic of study in several

studies on online programs for parents (Nieuwboer, Fukkink, & Hermanns, 2013a – chapter 1). Social support in an online setting has also been investigated in previous studies in other domains, like health support groups (Braithwaite, Waldron, & Finn, 1999; Coulson, Buchanan, & Aubeeleck, 2007), web-based mentoring for young people with special needs (Shpigelman, Weiss, & Reiter, 2009) and an adolescent peer support chat service (Fukkink, 2010; Fukkink, 2012). All these studies have used a coding system, derived from the Social Support Behavior Code (Cutrona & Suhr, 1992), adapted by Braithwaite et al. (1999) for online contexts. The Social Support model is the dominant model currently available for analyzing online communication, involving information support, tangible support, esteem support, emotional support, and network support.

We hypothesize that the GEP model is in part conceptually related to the Social Support model (as in Braithwaite et al., 1999, see Figure 2). It is to be expected that the guidance of a parent to define goals is associated with esteem support. For instance, by complimenting a parent on his intentions to prepare healthy meals for his family and confirm its importance, a parent may be more determined to hold on to preparing healthy meals as a goal in family functioning. The guidance to choose actions is likely to be associated with information and emotional support: information support may inform the parent about which actions to choose from, whereas emotional support may encourage the parent to do so. For instance, rules for computer gaming may be agreed upon by all family members involved and encouragement may enable the parent to monitor these rules in an authoritative way. Guiding a parent to reflect on impact may be associated with information support as well. A parent can reflect on the way his shouting has caused his child to disobey even more, and a practitioner may teach him about more positive ways to communicate about rules in the family household. Finally, guidance towards resources in the context is expected to be related with information support and network

support, since they involve referral and suggesting helpful resources in the context. A parent suffering sleepless nights may be supported by a neighbor or a relative, cooking a meal, so that the parent can sleep for a few hours. Parents in a divorce procedure may be guided towards a special program to help children cope with divorce.

### **Goal of this study**

In this study we investigate the reliability of the newly developed Guiding the Empowerment Process model, which aims to determine the level of empowerment oriented guidance in single session email consultation. We also aim to assess its concurrent validity by comparing it to the Social Support model.

## **Method**

### **Sample**

**Practitioners.** In 2011, we contacted Dutch organizations providing single session email consultations on parenting, free-of-charge. Forty-five parenting practitioners, working in community-based and private practices throughout the Netherlands, all educated on a bachelor or master level, showed interest in the study. Participating professionals gave their consent by completing an online questionnaire with questions about their previous experience in providing email consultations and their profession, resulting in a 89% participation rate (40 practitioners).

**Parents.** During the research period, March 1 to June 1, 2012, participating professionals offered single session email consultation to parents as part of their regular services. Parents were enabled to choose freely any participating professional and discuss any topic within the area of parenting. Two hundred and eight parents submitted a parenting question. Practitioners were not aware if a parent participated in the study or not and all questions were answered within 2-5 days. Immediately after submitting their question,

parents received information about the research project and a consent form through email. As an incentive to participate in the study, parents were informed that four tickets to a renowned Dutch family theme park were to be allotted to one participant after the research period.

**Emails.** Forty practitioners provided email advices to 208 parents in total. After selecting the parents who agreed to participate and after a minimum of five days, allowing the advice to be delivered to the parent, we requested the parenting practitioner to send both question and advice for content analysis. After screening for admissibility (parental consent; availability of both question and advice) 129 email advices (62%), written by 40 professionals, were coded for analysis (mean: 2.84, min.-max. 1-8; in total 5,997 response sentences).

**Ethical issues.** In the Netherlands non-medical and informative email consultation is allowed, and by signing the research consent form which contained information on these rules, participating practitioners took full responsibility for the acquisition of parenting questions, for the provision of single session email consultations as part of their service to parents, and also for storing and archiving data in a responsible manner (see Mallen, Vogel, & Rochlen, 2005, for ethical considerations). Also, parents participated in this research by agreeing to an ‘informed consent’ form. The study adheres to the legal requirements of the study country and all data are available in Dutch and accounted for (first author). The research procedure was approved by the Ethical Committee of the Faculty of Social and Behavioural Sciences, University of Amsterdam (reg.nr. 2013-EXT-2811).



## Measures

*Content analysis: coding system on the basis of the GEP model.* The GEP model comprises ten techniques describing parenting supporting behaviors of professionals and can be used as a coding system to assess the amount and types of empowerment-oriented techniques in email advices. Of all sentences (5,997 in total) 39.1% were assigned a code (2,349 sentences), which means that in these sentences a GEP technique was observed. We determined a score for each advice, based on event sampling: if a technique was observed (either once or more), we assigned one point; we followed this procedure because the length of the emails showed significant variation which seriously affects the raw frequencies of the various techniques. Scores range, theoretically, from 0 to a maximum score of 10. Inter-coder reliability (see Procedure) for the GEP score was estimated by determining the intra-class correlation (*ICC*, two-way random, absolute agreement) on a random sample of 20% of the email advices. Reliability between three trained coders proved to be good with *ICC* ranging from .81 to .88 (mean = .84). In the case of divergent codes, final codes were established by discussion.

*Content analysis: coding system on the basis of the Social Support model.* Given the extensive body of evidence of the value of social support in an online context and its conceptual kinship with empowerment, the Social Support model (Braithwaite et al., 1999) was chosen to assess concurrent validity of the GEP model. This classification of social support distinguishes between 22 techniques and can be used as a coding system to establish the amount and types of social support in email advices. Of all sentences (5,997 in total) 45.4% were assigned a code (2,723 sentences), which means that in these sentences a Social Support technique was observed. If a technique was present at least one time in the email, we assigned a score of 1. Thus, the Social Support scores ranged, theoretically, from 0 to 22. In this model, the techniques are classified in

five categories, i.e. information support, tangible assistance, esteem support, network support, and emotional support. Inter-coder reliability (see Procedure) was estimated by determining the intra-class correlation (*ICC*, two-way random, absolute agreement) on a random sample of 20% of the email advices. Reliability proved good to excellent, with *ICC* ranging from .85 to .97 (mean .91). When necessary, final codes were agreed upon after discussion.

## **Procedure**

In their handbook on the methodology of text analysis, Titscher, Meyer, Wodak and Vetter (2000) have pointed out that the central tool for any content analysis is its system of categories. Categories are operational definitions of variables; they should be explicit, mutually exclusive and complete. We followed the authors' recommendations to develop a clear coding system, suitable to analyze the texts on a sentence level, and also to illustrate every category with a textual example. Furthermore, in two coder-training sessions we tested the coding systems by using textual material which was similar to the sample in this study (other email consultations) to clarify interpretations and define the exclusiveness of all categories. This procedure results in a qualitative semantic content analysis, combined with a quantitative frequency analysis, in which the amount of categories is counted, respecting total text-integrity (as opposed to paraphrasing or reducing text). All advices were randomly assigned to the three coders, i.e. two Master students and the first author, using only one coding system (i.e. GEP or Social Support) per advice to avoid contamination. As a consequence, each advice was independently coded twice. Following these procedures we aimed for the research methodology to be stable, replicable and precise.

## Results

### Email consultation and parental empowerment

In almost all email advices (97%) one or more techniques of the GEP model were applied (see Table 1). All distinguished techniques were observed, although there were differences in frequencies. On the low end, *Encouraging decision making* was observed 15 times in total, in 8.5% of the texts. On the high end, *Providing a variety of options the parent can choose to act on* was observed 993 times in total, in three quarters of the advices. Most advices included *Identification and encouragement of the use of knowledge or skills* (643 times in total, 88.4%). In almost half of the email advices, 5 or more techniques of the GEP model were applied (44.9%). Despite the variety of techniques within categories, all four components of the Guiding the Empowerment Process model were represented in our sample. Practitioners guided parents with regard to action taking, reflecting on impact and mobilizing the social context in most of the email advices (77.9%, 92.6% and 84.6%, respectively). Goal setting was incorporated in only 36 percent of the texts and seemed a less consistent part of the model in our sample. A quarter of the email advices comprised all four components of the GEP model.

In four email advices none of the GEP model techniques were observed. Three of these were characterized by promoting dialogue, with the practitioner asking questions about the parenting situation and not providing any kind of advice (*"Before I can help you, I would like to know..."*). The other text was directive, describing one solution for the question at hand without further comments (*"You should make a weekly planner for your family"*). The content of the majority of the email responses can be characterized as supportive advice, which guided parents in multiple components of the process towards more empowerment.

Table 1

## The Guiding the Empowerment Process model

	Frequency	Occurrence in % of emails
<i>Component 1: Goal setting</i>		
- repeat parent's perspective	31	19.4
- repeat parent's or family's goals and needs	56	21.7
<i>Component 2: Action taking</i>		
- provide a variety of options the parent can choose to act on	993	76
- encourage decision making	15	8.5
<i>Component 3: Reflection on impact</i>		
- describe needs (of several family members)	233	58.9
- identify and encourage the use of knowledge or skills	643	88.4
<i>Component 4: Mobilizing the social context</i>		
- show opportunities for all family members to participate in problem-solving	97	42.6
- identify and refer to resources in the informal network	23	17
- identify and refer to resources in the professional context	193	62
- identify opportunities within multiple levels	65	41

**Internal structure of the GEP model**

A principal component analysis for categorical data (CATPCA) of the GEP model showed two dimensions (see Table 2). The first dimension, which explained 24 percent of the variance, showed the highest positive loadings for eight out of ten GEP variables. This dominant dimension can be interpreted as a family empowerment factor, involving techniques to mobilize family strengths. The second dimension, explaining 16 percent, was related to two remaining techniques, i.e. *identify and refer to resources in the professional context* (factor loading: .74) and *identify opportunities within multiple levels* (factor loading: .61). This smaller dimension can be interpreted as a separate factor with a focus on external resources. Following this CATPCA solution, overall Cronbach's alpha is .83 (with values of .65 and .41 for the empowerment dimension and resources dimension, respectively). All item-total correlations were positive with a mean value of .30 ( $sd = .10$ ).

Table 2

Principal component analysis for categorical data of the GEP model

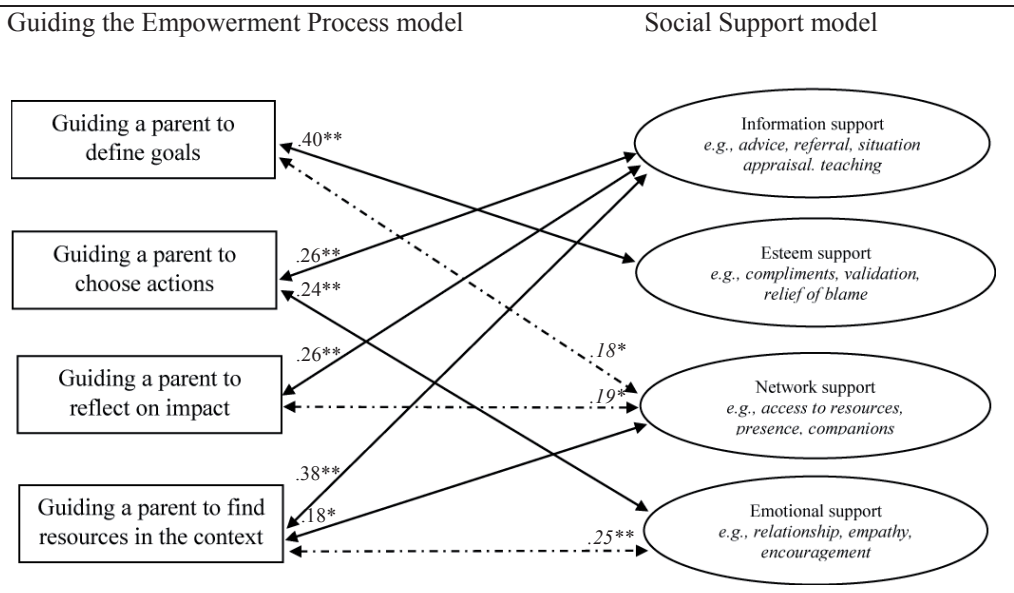
	Family empowerment factor	Resources factor
Variance explained	.24	.16
Variables (factor loadings)		
Repeat parent's perspective	.49	
Repeat parent's or family's goals and needs	.58	
Encourage decision making	.28	
Provide a variety of options the parent can choose to act on	.50	
Describe needs (of several family members)	.63	
Identify and encourage the use of knowledge or skills	.58	
Identify and refer to resources in the professional context		.73
Show opportunities for all family members to participate in problem-solving	.52	
Identify and refer to resources in the informal network	.39	
Identify opportunities within multiple levels		.61

### Concurrent validity

The total score of the GEP model showed a significant relationship with the total score of the Social Support model ( $r = .55, p < .001$ ). Also, each of the four GEP components Goal setting, Action taking, Reflection in impact, and Mobilizing the social context were correlated with the aggregated score of the Social Support model ( $r = .63, .54, .54$ , and  $.79$ , respectively;  $p$  values all  $< 0.01$ ). The total score of the GEP model showed a statistically significant relation with each subcategory of the classification of social support, i.e. Information support, Esteem support, Network support and Emotional Support ( $r = .42, .31, .24$ , and  $.30$ , respectively, with  $p$  values  $< 0.01$ ). Only the Tangible Support category, as distinguished by Braithwaite et al. (1999), was not significantly correlated with the score of the GEP model. This can be explained by the fact that this category was not frequently observed in our study, which is a common finding in online contexts (Fukkink, 2010; Braithwaite et al., 1999).

Figure 2

Profile of associations between the GEP model and the Social Support model



Note. Extended arrows represent expected correlations. Dotted arrows represent unexpected correlations. \*\* significant at the 0.01 level (2-tailed); \* significant at the 0.05 level (2 tailed).

Finally, expected associations between related components of the two models were largely confirmed (see Figure 2), showing small to moderate correlations. Three unexpected associations were found, although they were weak. As expected, the guidance of a parent to define goals is associated with esteem support (e.g., complimenting on intentions), guidance to choose actions is related to information and emotional support (e.g., providing options, encouragement), guiding a parent to reflect on impact is associated with information support (e.g., offering new knowledge), and guidance towards resources in the context is related with information support and network support (e.g., suggesting to involve relatives). The unexpected correlations showed that guidance regarding goals and impact can be associated with network support (e.g., involving meaningful others), and guidance regarding context can be associated with

emotional support (e.g., encouraging to be of further assistance). Overall, the two coding models, with their different theoretical backgrounds, showed empirical congruence and were distinctive at the same time, as expected. Whereas the Social Support model captures typical *types* of support, the GEP model seems to outline the *process* of support.

## **Discussion**

This study describes the development and validation of a model for practice, which operationalizes professional text-based techniques in order to guide the parent's process towards empowerment. The literature on online counseling stresses the need for theoretical underpinning (e.g., Bagraith et al., 2010; Chardon et al., 2011) and this study is one of the first attempts to relate this relatively new daily practice to a key concept in parenting support. The Guiding the Empowerment Process model is grounded in both the empowerment model of Cattaneo and Chapman (2010) which describes the main components that foster client empowerment, and in a description of assumptions on practitioner's orientation towards empowerment (Turnbull et al., 2000).

Empowerment in itself is not a clear cut concept. As many authors have pointed out, the concept has evolved in different disciplines and over periods of time (for recent critical reflections, see for instance: Anderson & Funnell, 2010; Holmström & Röing, 2010; Woodall, Warwick-Booth, & Cross, 2012). It is a concern that, although the notion of empowerment is a common belief statement in family support programs, the adoption of empowerment principles in practice is not always operationalized. The application of such a help-giving style needs time, commitment, and understanding, as well as indicators for implementation (Dunst, 2009). With our present study we contributed to practice by providing a model which describes specific professional techniques, enabling practitioners to deepen their understanding of empowerment and to apply an empowerment oriented help-giving style in online consultation.

The reliability of the GEP model was good, and the meaningful pattern of associations with the Social Support model supports its validity. The GEP model enables the description of online communication from the theoretical empowerment perspective. All distinguished textual techniques were observed in the advices and all four components of the empowerment process were addressed, which indicates that the GEP model is a feasible method to determine an empowerment oriented help-giving style in email consultations.

An analytic model like the GEP model we proposed in this paper, intrinsically drives the interpretation of communication between parents and practitioners to a more abstract level. The application of the proposed techniques may be difficult in cases where parenting questions are very short and information about the parenting situation is limited: a third of the parenting questions in our sample counted 100 words or less. Also, not every parenting question requires the extensive response involving all components of the empowerment process. Instead, a practitioner may have good reasons to focus on a specific component. Furthermore, other features of empathic and potentially helpful communication have not been included in the GEP model. A text with all the GEP elements in it, but without a warm introduction or goodbye would probably be conceived as unsympathetic. The GEP model should therefore be used as a tool to enhance, not replace, professional communication and assess its orientation on the guidance towards more empowerment, rather than be used as a simple checklist.

The association of the GEP model with the Social Support model found in this study also provides empirical support for its distinctiveness. Related to the concept of empowerment, social support is an important notion in the domain of counseling and parenting support since the 1980s (e.g., Cohen & Wills, 1985; Holahan & Moos, 1982). Social support is often described as a classification of help-giving practices and although experimental studies are lacking, the benefits have been mentioned in



several studies on online communication with parents (e.g., Campbell-Grossman, Hudson, Keating-Lefler, & Heusinkvelt, 2009; Hudson, Elek, Westfall, Grabau, & Fleck, 1999; Hudson, Campbell-Grossman, Keating-Lefler, & Cline, 2008; Scharer, Colon, Moneyham, Hussey, Tavakoli, & Shugart, 2009). The Social Support model is a descriptive and fine-grained classification system focusing on different types of support that are offered. The GEP model is a specifically power-oriented model, aimed at an improvement in self-efficacy, competence and knowledge of parents (see also Cattaneo & Chapman, 2010). Specifically with regard to information and resources in the family context the two models were meaningfully related, as expected. Whereas both models can be used to analyze online communication, the Social Support model describes several types of support, while the GEP model is more closely linked to the paradigm of empowerment, guiding distinguishable components of the process towards more empowerment in a systematic way and identifying the dynamics between a parent and a parenting practitioner.

### **Limitations**

It must be noted that the sample of email consultations was the result of self-selection of both practitioners and parents: both groups of participants enrolled on a voluntary basis, valuing the opportunity of email consultation. Representativeness of these groups for all parenting practitioners and all parents is not assured and therefore, findings cannot be generalized. Concurrent validity of the GEP model has been determined by using the Social Support model. To our knowledge, and confirmed by Braithwaite, the latter model itself has not been tested for construct validity. Finally, empirical evidence for the GEP model in terms of effectiveness at parent level has not been provided. The claim that parental empowerment is enhanced by guiding the empowerment process in this manner requires further investigation.

The GEP model, which provides a brief description of only ten techniques a parenting practitioner can integrate in his empowerment oriented work, offers the opportunity to assess interactions between parents and parenting practitioners. It shows that a practitioner may guide a parents towards more influence, actively addressing both individual and contextual aspects of empowerment. While this study was limited to single session email consultation, the model may be used for multiple session online counseling, but could also be useful to evaluate the empowerment oriented level of face-to-face sessions. It seems worthwhile, therefore, to include the Guiding the Empowerment Process model in future training and evaluation in parenting programs.



# CHAPTER 5

## **Single session email consultation for parents: An evaluation of its effect on empowerment**

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This chapter is conditionally accepted.

## Abstract

This study evaluated the effect of single session email consultation on empowerment of parents. Parental empowerment was measured ( $n=96$ ) through a pre- and post-intervention questionnaire based on the Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992). Practitioners in a control group ( $N = 19$ ) received no intervention; practitioners in an experimental group ( $N = 21$ ) were trained to match the need of the parent and they learned to use empowerment oriented techniques. Parents showed a significant increase in the subscale of self-confidence (Cohen's  $d = 0.33$ ). Study findings lend support to the feasibility of single session email consultation as a brief intervention to improve self-confidence of parents. A training for practitioners did not influence the outcomes.

**Keywords:** email consultation; parenting support; empowerment; experiment; rct

## Introduction

Email consultation is increasingly employed as an instrument to provide counselling (Nieuwboer, Fukkink, & Hermanns, 2013a – Chapter 1; Rochlen, Beretvas, & Zack, 2004) and over the last few years, this service has become widely available to parents in the Netherlands (Nieuwboer, 2011).

One of the goals of parenting support is to strengthen parental empowerment, meaning that a parent experiences an increase in influence, rather than helplessness (e.g., Cattaneo & Chapman, 2010). Empowered parents feel confident, are able to make well-informed choices and can find supportive resources (e.g., August, Realmuto, Winters, & Hektner, 2001). Further, parents who are empowered are capable of influencing their

children's behaviour in a positive way (e.g., Graves & Shelton, 2007; MacLeod & Nelson, 2000), they experience less stress (e.g., Dempsey & Keen, 2008; Thompson, Lobb, Elling, Herman, Jurkiewicz, & Hulleza, 1997) and report higher levels of well-being (e.g., Van Riper, 1999). Parenting support interventions which are aimed at the development of personal and family strengths and competencies and access to helpful resources may support the process towards more empowerment (e.g., Cochran, 1992; Dempsey & Dunst, 2004; MacLeod & Nelson, 2000; Turnbull, Turbiville, & Turnbull, 2000). However, it is not clear whether email consultation can contribute to this goal. The effect of single session email consultation on parental empowerment has not been evaluated.

Contrary to single session email consultation, a supportive partnership between parents and practitioners is mostly described as a relationship of some duration (see for instance, Baumann, Kolko, Collins, & Herschell, 2006; Harwood & Eyberg, 2004; Trivette & Dunst, 2005). In single session email consultation, with a sequence of only one question and one response, the relationship between parent and practitioner is brief and restricted to textual communication only. It is sometimes used as a way to persuade clients to shift to telephone counselling (Harris, Danby, Butler, & Emmison, 2012), to engage in a series of email exchanges (Stofle & Chechele, 2004) or to supplement face-to-face contact (Cornwall, Moore, & Plant, 2008; Harvey et al., 2008).

However, it can also be used to provide counselling and advice (e.g., Bambling, King, Reid, & Wegner, 2008; Chardon, Bagraith, & King, 2011). A parent may access email consultation through an online form on a website, expecting an advice through the same medium. For practitioners, the amount of information about the family situation the parent offers is mostly limited and there may be no response to further in-depth inquiries. Opposed to therapeutic email consultation or a face to face conversation, and based on a possibly very short parenting question, the first response through email may be the only opportunity to communicate with the parent (Zelvin & Speyer, 2004).

### **Training for online counselling**

Many disciplines are involved in providing parenting support, like developmental psychologists, nurses, psychotherapists, social workers, coaches/counsellors, and paediatricians (Daneback & Plantin, 2008; Nieuwboer et al., 2013a – chapter 1; Ritterband & Palermo, 2009). However, practitioners' experience in online counselling is generally low. As a rule, practitioners receive no specific training for online counselling at all, and depend on their professional education, in which online communication - being a relatively new discipline - is currently not integrated.

### **Matching the need of the parent**

Previous literature on traditional forms of parenting support suggests that a match between parental need and professional response will lead to better outcomes (e.g., Edward & Gillies, 2004; Hoagwood, 2005). Dempsey and Keen (2008), based on an extensive literature review, revealed that a match between parental need and service delivery processes leads to more satisfaction, which is, in turn, related to improved parent outcomes. However, some authors expressed concerns about the discrepancy between the intentions of parenting practitioners and the perception of parents about the help-giving orientation of family support (see, for instance, Fordham, Gibson, & Bowes, 2012; Raghavendra, Murchland, Bentley, Wake-Dyster, & Lyons, 2007; Van Riper, 1999) and this may be even more problematic in single session email consultation, being limited in time and means of communication (Bambling et al., 2008; Chardon et al., 2011).

### **A focused approach to empowerment**

In addition to matching the need of the parent, it is suggested that a more focused approach to achieve empowerment improvements in parents can contribute to its effectiveness (Dunst, Boyd, Trivette, & Hamby, 2002; Dunst, Trivette, & Hamby, 2007;

Teti, O’Connol, & Reiner, 1996). Cattaneo and Chapman (2010), in an attempt to clarify the concept and provide a cohesive model for research and practice purposes, described the process of empowerment as an iterative process with four components: *goal-setting*, *action-taking* and *reflecting on impact*, within the *social context*. A successful transition through the process components results in the experience of more influence, particularly in social relations (like families). This model combines both individual and social aspects of empowerment in families, consistent with an ecological approach (Bronfenbrenner, 1979), which describes the influence of micro-, meso-, exo-, and macro-systems on families.

Building on this literature, we developed the Guiding the Empowerment Process model (GEP model), which was validated in an online setting (chapter 4). The GEP model distinguishes between ten empowerment oriented techniques, facilitating clarification on each of the earlier mentioned four components of the Empowerment Process model, which can be applied in online communication.

Thus, based on extant literature, we expect that a training, in which the parenting practitioner learns how to interpret the type of question and respond to it accordingly, will lead to a better match and, hence, to more parental empowerment. Also, we expect that the use of specific empowerment oriented techniques in advices will lead to empowerment improvements.

The goal of this study is to evaluate the effect of single session email consultation on parental empowerment and to assess the added value of 1) a training for parenting practitioners, 2) a match between practitioner’s response and the need of the parent and 3) the use of empowerment oriented techniques.



## Method

### Participants

In 2011, Dutch organizations which offered single session email consultations on parenting were identified using Google Search, and also approached through social media. Organizations were eligible when they offered the service of single session email consultation to parents without commercial goals and free of charge. Working in thirteen community-based practices and nine private practices, forty-five parenting practitioners throughout the Netherlands, all educated on a bachelor or master level, showed interest in the study. After receiving additional information about the research procedures, forty professionals (89%) gave their final consent to participate by completing an online questionnaire with questions about their previous experience in providing email consultations (see Results) and their profession. Amongst the 40 professionals who agreed to participate, different disciplines were represented, like developmental psychologists (42.6%), nurses (15.5%), psychotherapists (11.6%), social workers (10.1%), coach/counsellors (4.7%), paediatricians (0.8%) and other professionals (14.7%). Their experience with writing email advices varied: 31% had no experience at all, 22.5% had written 1-5 advices prior to the research, 14.7% had written 6-10 advices, and 5.4% had written 10-25 advices. A quarter of the practitioners had more experience ( $\geq 26$  emails, 26.4%).

Two hundred and eight parents submitted a parenting question to the participating practitioners during the three month experiment. Of the parents, 135 completed the first questionnaire and consented to participation (65%). We retrieved 129 email communications (both question and advice) for content analysis (96% of all participants). Approximately three quarters of the participating parents completed the second questionnaire (N= 98, 72.5%). However, in two cases the text of either question or advice could not be retrieved. Thus, the sample included 96 complete datasets (71% of consenting parents, 98% of parents with complete data).

## **Recruitment**

During the research period, March 1 to June 1 2012, participating professionals offered single session email consultation to parents as part of their regular services. Additionally, we launched a website which provided direct hyperlinks to all participating professionals. Parents were enabled to choose any participating professional and submit any question concerning parenting. Directly after submitting their question, parents received an email via the parenting practitioner, containing information about the research project and its aims, a consent form and a hyperlink to an online questionnaire (pre-test, see Measures). Before the pre-test was started, participants had to confirm that they were 18 years of age or older. Parents consented to participate by completing the first questionnaire - and only parents who completed the pre-test received a hyperlink to the second online questionnaire (post-test, see Measures). As an incentive to participate in the study, parents were informed that four tickets to a renowned Dutch family theme park were to be allotted to one participant after the research period. All questions were answered within 2-5 days. After a minimum of five days, allowing the advice to be delivered to the parent, we requested the parenting practitioner to send us both question and advice for content analysis and evaluation purposes, but of consenting parents only.

The study adheres to the legal requirements of the study country and all data are available in Dutch and accounted for (first author). The research procedure was approved by the Ethical Committee of the Faculty of Social and Behavioural Sciences, University of Amsterdam (reg.nr. 2013-EXT-2811).

## **Experimental design**

In a controlled experimental design with a pre-test and post-test, participating practitioners were randomly assigned to the experimental or control group. Before the assignment, we decided to cluster participating practitioners into small groups when they were employed by the same organization, to prevent diffusion of treatment.

Education level and previous experience with email consultation were similar between groups. The experimental group ( $N_{\text{exp}} = 21$ ) received a training in email consultation, consisting of five online practice sessions, self-instruction on the basis of information, a discussion board for trainees, and one group chat session with the instructor (first author) to discuss training content. The control group ( $N_{\text{ctrl}} = 19$ ) received no training nor any other intervention.

*Training.* The aim of the training was to enable practitioners to recognise the need of the parent, and respond to this need with a matching type of answer. For this purpose, types of needs and answers were divided in two categories, i.e., a parent oriented and a context oriented type (based on chapter 3). The parent oriented type of questions and advices included a focus on parental intentions, strengths and solutions, whereas the context oriented type of questions and responses included referrals to helpful resources within the family, neighbourhood or society. A successful match would mean that a practitioner's response to a parent oriented question is also mainly parent oriented and that the response to a context oriented type of parenting question is also characterised by a context oriented content (see Measures).

The instructor (first author) provided individual feedback on email consultations with a maximum of two 30 minutes sessions per trainee. In total, practitioners needed 20-30 hours to complete the training program. We provided the trainees with a final test case parenting question, which was an anonymised real-life question, drawn from a parent support agency which was not involved in this research, and collected and scored the email advices before the research period with parents started. The score was determined by counting the number of techniques which were successfully applied (9 for each orientation, *min-max*: 0-18) and adding one criterion on correct language use and one criterion on matching the type of question, totalling 20 criteria, assigning 0 (not applied),  $\frac{1}{2}$  (applied to some extent) or 1 (convincingly applied) points for each

criterion, subsequently dividing the total score by a factor 2. The score was determined by one assessor. Results for the final test case parenting question showed, on a scale from 0-10, scores ranging from 5.75 to 9.25 (mean: 7.75).

After the training was completed, we identified one good example of every single technique in the emails of all trainees during the training sessions and in the final test case; we listed these ‘good practices’ in a one-time email reminder for the trained practitioners, halfway through the research period of three months.

*Masking.* Practitioners were not aware if a parent participated in the study or not and parents were not aware whether they received an advice from a trained or a non-trained professional. Furthermore, before content analysis, we removed all elements with which parents, families or practitioners could be identified (e.g., email addresses, letter heads/logo’s, names of family members, people involved, referrals to local organizations) from the records. Also, lay out was converted to a basic format, so that no question or advice could be traced back to specific persons. Further, all sets of questions and advices were randomly assigned to three members of the research team, i.e. two Master students and the first author. Parenting questions were analysed for topic and length. Email advices were all sentence coded by independent researchers.

## Measures

*Empowerment.* The Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992) was slightly adapted to the context of everyday parenting. Independent back-translation of the items was used to prevent misinterpretation of the original scale. Exploratory factor analysis resulted in three subscale factors for this study: Self-confidence as a parent ( $\alpha = .85$ ; e.g., “When problems arise with my child, I know how to handle them”), Confidence in network support ( $\alpha = .88$ ; e.g., “My friends and family are

supportive to me”), and Ability to obtain informational support ( $\alpha = .73$ ; e.g., “I am able to get information to help me better understand my child”), totalling 14 items. Responses are indicated on a five-point Likert scale ranging from ‘very untrue’ (1) to ‘very true’ (5), with higher scores representing more empowerment in positive items and less empowerment in negative items.

*Satisfaction.* Satisfaction with email consultation was measured using a five-point Likert scale with 1 representing “very unsatisfied” and 5 “very satisfied”.

*Content analysis of emails.* We developed an extensive coding system to analyse questions and advices; the questions were coded for topic and type, and the advices were coded for type and amount of empowerment oriented techniques. Following recommendations on text analysis of Titscher, Meyer, Wodak and Vetter (2000) we tested the coding systems by using textual material which was similar to the sample in this study (other email consultations) to clarify interpretations and define the exclusiveness of all codes.

*Questions.* We analysed all questions of the parents. Following categories from a Dutch registration system for parenting questions (‘ROTS’), we used an index of five topics namely, parental competence and four areas of child development (emotional, physical, social, cognitive development). Each question was labeled with one main topic by one researcher.

Furthermore, based on previous literature on parent-practitioner communication (chapter 3; Turnbull et al., 2000) we distinguished two types of questions: if the parent conveyed the need for understanding and employing the strengths of his family, trying to improve his own parenting competencies, we coded the question as a *parent oriented need*. If the parent conveyed the need for helpful resources, either by explicitly asking for a professional organization or implicitly asking for external help, we coded the question as a

*context oriented need.* Multiple needs may be communicated in one email and at different levels of intensity. As a consequence, parental need was coded using a scale from 0-5 (0 = not expressed, 3 = explicitly expressed, 5 = strongly expressed) for each type of need. Subsequently, parental need was characterised as *prevalent* with 3 as the cut-off score.

Inter-coder reliability was estimated by determining Cohen's kappa for a random sample of 20% of the parenting questions. Reliability proved good to excellent for parent oriented questions ( $\kappa = 1$ ) and for context oriented questions ( $\kappa = .83$ ). In the case of divergent codes, final codes were established by discussion.

*Advices.* Similarly, the texts of email advices were coded, distinguishing between the parent oriented type of response (including sentences which described the needs of family members and the way family strengths could be used) and the context oriented type of response (including sentences which referred to informal or formal helpful resources). Of all sentences in the advices (5,997 in total) 50.3% were assigned a code (3,019 sentences), which means that in these sentences a parent oriented or a context oriented technique was observed. Subsequently, an email advice was categorised as a *prevalent* type of parent-practitioner communication if more than four out of nine techniques per orientation were observed.

*Matching need and response.* We determined the match between questions and advice, meaning that a practitioner's response to a prevalent parent oriented question was also prevalently parent oriented (e.g., offering compliments and insights in knowledge and strengths); and that the response to a context oriented type of parenting question was also dominated by a context oriented content (e.g., referrals and encouragement to mobilise informal and formal resources). The prevalent match was scored dichotomously as either present (1) or absent (0).

*Empowerment oriented techniques.* We distinguished ten techniques of the Guiding the Empowerment model. The GEP model comprises ten techniques describing parenting supporting behaviours of professionals, with the specific aim to empower parents (see Cattaneo & Chapman, 2010; chapter 4). With regard to *goal-setting*, the practitioner may rephrase the parent's or family's goals and acknowledge the parent's perspective. Related to *action-taking*, he may provide a variety of options and encourage decision-making related to the described goals. Concerning *reflection on impact*, he may describe the needs of involved family members and identify and encourage the use of (new) knowledge or skills. Specifically, the developmental needs of children are a framework through which the impact of actions and goals can be reflected upon. Finally, in order to mobilise the *social context*, the practitioner may show opportunities for all family members to participate in problem-solving, refer to resources in the informal network, refer to resources in the professional context and identify opportunities on multiple community levels. Although parenting practitioners were not explicitly trained to understand and employ this model, they were familiarised with the ten techniques, belonging to the model, as an integrated part of the training.

We determined a GEP score for each email advice: if a technique was observed (either once or more), we assigned one point, and, hence, GEP scores range, theoretically, from 0 to a maximum score of 10; we followed this procedure because the length of the emails showed significant variation which was strongly related to the raw frequencies of the various techniques. Of all sentences (5,997 in total), 39.1% were assigned a GEP technique code (2,349 sentences).

Inter-rater reliability was good (ICC, two-way random, absolute agreement, mean .84). Finally, the realization factor of the GEP model was calculated by dividing the total model outcome by ten techniques (total GEP/10), indicating the mean number of techniques applied in the sample of email consultations. Reliability of the total

GEP score proved to be acceptable (Cronbach's  $\alpha = .62$ ). In a previous study (chapter 4) the GEP scores showed convergent validity with the model of social support, as defined by Braithwaite, Waldron and Finn (1999).

## Results

### Description of email consultations

Parenting practitioners confirmed that no previous contact or relationship between parent and practitioner preceded the email consultation. Average time spent on writing an email advice was 31-60 minutes; twelve advices were written in less than 15 minutes, eleven responses took more than 90 minutes. Consultations varied widely in length from 115 through 1993 words (mean 698,  $sd = 344$ ).

A dominant theme in the parenting questions was parental competence, including issues like punishment, rules, and arguments (40.6%). Most other questions were related to aspects of child development, in which questions about emotional development prevailed (tantrums, insolence, temperament, and claiming behaviour; 21.1%). Examples of themes in questions about physical development were sleeping and nutrition (18.8%). Most questions on social development involved bullying (12.5%). The other questions concerned the cognitive development of children and several other issues (7%). The age of children concerned varied from 0 to 21 years (mean 8.2 years,  $sd = 5.1$ ). Questions also showed great differences in length, from 9 through 1227 words (mean 232,  $sd = 206$ ).

There were 11 cases (8.5%) in which there was a prevalent match between parent oriented types of questions and advices and 8 cases (6.2%) in which there was a prevalent match between context oriented types of questions and advices. Parents were satisfied with the single session email consultations offered to them (mean 4.2,  $sd = .71$ ).



### The effect of single session email consultation on parental empowerment

Parents showed a significant increase in the subscale of ‘Self-confidence’ over time,  $F(1, 95) = 19.6, p < .001$ , partial  $\eta^2 = .17, d = 0.33$ , corresponding to a small-to-medium effect. No significant changes were found for the subscales ‘Confidence in network support’ ( $p = .19$ ) and ‘Ability to obtain informational support’ ( $p = .27$ , see Table 1 for details).

Table 1

#### *Pre-post differences in empowerment*

	Pretest <i>M (SD)</i> *	Posttest <i>M (SD)</i> *
Self-confidence		
Trained group	3.68 (0.55)	3.85 (0.44)
Control group	3.64 (0.57)	3.80 (0.50)
Total sample	3.66 (0.56)	3.83 (0.47)**
Ability to obtain informational support		
Trained group	4.17 (0.34)	4.14 (0.32)
Control group	4.06 (0.47)	4.18 (0.41)
Total sample	4.11 (0.41)	4.16 (0.37)
Confidence in network support		
Trained group	3.48 (0.58)	3.48 (0.63)
Control group	3.48 (0.59)	3.57 (0.54)
Total sample	3.48 (0.59)	3.53 (0.59)

*Note.* Trained group  $N = 47$ ; Control group  $N = 49$ ; Total sample  $N = 96$

\* Scale 0-5 \*\*  $p < .001$

Three potentially moderating variables (previous experience with providing email consultations, question length and response length) proved not to be related to the outcomes.

We examined the effect of the training of practitioners and found no significant effects for ‘Self-confidence’ ( $p = .89$ ) and ‘Confidence in network support’ ( $p = .26$ ). The subscale ‘Ability to obtain informational support’ showed a difference. However, this outcome is the result of a difference at the pre-test in favour of the experimental group

( $d = 0.28$ ) and a difference in the post-test in favour of the control group ( $d = 0.12$ ), resulting in a small reverse interaction effect,  $F(1, 94) = 4.89$ ,  $p = .03$ , partial  $\eta^2 = .05$ .

Furthermore, a match between prevalent questions and prevalent advice, indicated by the matching score (either present or absent) was only observed in 19 cases out of 129 (14.7%), precluding a strong test of the hypothesised relationship between a matching advice and improvements in empowerment.

The realization factor of the GEP model, indicated by the GEP score, was found to be modest: 4.36 (on a scale of 0-10). The experimental group used, on average, a bit more GEP techniques (realization factor 4.66) than the control group (realization factor 4.03),  $F(1, 128) = 3.09$ ,  $p = .08$ , partial  $\eta^2 = .02$ . The fourth component of the GEP model, guiding the parent towards resources in the context, was significantly more applied by the experimental group ( $p = .01$ ). The trained practitioners more often referred to resources in the informal network, like relatives and neighbours ( $p = .03$ ). They also showed a more ecological approach to parenting questions, referring to resources in at least two different eco-systems (micro-, meso-, exo-, or macro-) ( $p = .02$ ). We found no relation between the use of GEP techniques in advices and the changes in parental self-report on empowerment,  $F(3, 92) = .96$ ,  $p = .42$ , partial  $\eta^2 = .03$ .

## Discussion

Single session email consultation is a relatively new service which provides new opportunities for parents to obtain support. After receiving the advice, parents showed an increase in self-confidence, one of the aspects of empowerment, and were satisfied with this service offered to them. This result indicates that even a short web-based service to parents may be helpful in gaining confidence in how to deal with parenting questions. We found no changes in the ability of parents to obtain informational support and their confidence to rely on network support. In this study, we found that trained

practitioners took a more ecological approach to the parenting questions than non-trained practitioners. However, the two groups of practitioners were not distinctive enough to reach firm conclusions about the effectiveness of their typical approach.

This study investigated the effect of single session email consultation on the level of empowerment in parents with everyday parenting questions. In contrast, the body of literature on parental empowerment traditionally focuses on parenting disabled children (e.g., Turnbull et al., 2000), posing a more stressful condition than is to be expected in regular family life. Indeed, the pre-test scores on the questionnaire in this study were relatively high, showing that parents did not experience a low level of empowerment at the time they submitted a parenting question. In a recent meta-analytic study on 75 parenting programs Leijten, Raaijmakers, de Castro and Matthys (2013) found that initial problem severity was a strong predictor of effect sizes, indicating that parents with more severe problems benefitted more from the services. Therefore, although modest, it is interesting to find an improvement in self-confidence in parents, after such a brief kind of intervention in the setting of daily parenting.

The specific factors that contribute to the improvement in self-confidence through single session email consultation in the context of general parenting questions need further investigation.

This study showed that the results of a training, which was aimed at learning how to recognise the need of the parent and respond to it correspondingly, were too modest to show a general transfer effect on parental empowerment. Establishing a match between service delivery and parental perception has been found problematic in other settings as well (Fordham et al., 2012; Raghavendra et al., 2007; Van Riper, 1999). Further, the claim that a match between parental need and practitioner's advice is desirable

(e.g., Edwards & Gillies, 2004; Dempsey & Keen, 2008; Hoagwood, 2005) can be challenged. Dempsey and Keen (2008) found an indirect relation between the match, through satisfaction with services, on empowerment. However, ‘matching’ is often not clearly defined and in previous studies, the score of ‘matching’ mostly relies on self-reports by parents. In a previous study (chapter 3) we operationalised and theoretically grounded the concept of ‘matching’. Finding a low realization factor of matching in the current study may indicate that practitioners did not interpret a parenting question as being either parent or context oriented. In a setting of online counselling with adolescents Bambling et al. (2008) found that the risk of misunderstanding textual communications (mismatch) is experienced to be larger, compared to face-to-face counselling. Practitioners in our study generally took a broad perspective on the situation and offered different perspectives to open up several new opportunities in solving the issue.

In other words, since it involves a narrowing interpretation and limits the perspective on the parenting issue, matching the need of the parent may not be the best way to provide single session email consultation. It may even be argued that a strict match, as we defined it, distinguishing between family and context, is in conflict with an empowerment oriented approach, in which both family strengths and resources in the context can play such an important role (Cattaneo & Chapman, 2010).

A relationship between application of empowerment oriented techniques and its effects on empowerment could also not be confirmed in this study. Content analysis of the emails showed that the techniques were not applied to their full potential and the realization factor of the GEP model, comprising ten empowerment oriented techniques, was modest in both groups. Similarly, Chardon et al. (2011) found a low level of realization of counselling components in single session online consultation with adolescents, specifically in the guidance towards setting goals and planning actions.

This raises the question whether it is feasible to apply a rich, but rather complex model in a brief textual advice. In fact, there is no consensus between counsellors whether the limited time and means of single session online consultation is enough to provide adequate counselling (Bambling et al., 2008).

A relation between the model and improvements in the empowerment of parents was not empirically demonstrated in this study. Further experimental study should clarify whether the model can be realised with more success. Also, different modalities of the model can be investigated in the future, in order to identify the way in which the professional guidance of a process towards more empowerment works.

This study includes a content analysis of email consultations with a high level of reliability between coders, assessment of empowerment in general parenting, and a better understanding of both the implementation and the effect of single session email consultations. Outcomes show that aspects of parental empowerment can be improved by a brief email consultation service.

### **Limitations**

The procedure we followed may have led to self-selection and a stronger representation of participants who preferred online communication over face-to-face contact or no contact at all, which may have affected the empowerment measure in an unpredictable way. Also, because of their expectations of the usefulness of email consultation the participants do not represent all parenting practitioners and all parents, who may be more reluctant to use this medium. Therefore, findings are to be interpreted with this limitation in mind.

# CONCLUSIONS

## **Online Parenting Support**

**Guiding parents towards empowerment  
through single session email consultation**

In this final part of the dissertation, issues that were raised in the previous chapters are discussed, in order to provide suggestions to advance both web-based services for parents, especially email consultation, and research in this rapidly developing field.

In *chapter 1*, we described studies which evaluated or analyzed empirical online services for parents, identifying resource and user characteristics and assessing methodological characteristics of the evaluation studies. Our research suggests that scholarly interest in the subject of online parenting programs is growing.

Many of these studies have analyzed the contents of postings and messages from parents, finding that well-known benefits of traditional peer support (e.g., Belsky & Rovine, 1984) are intensified and made much more accessible through web-based media (e.g., McKenna, 2008; Nieuwboer & Fukkink, 2014, *in press*).

Also, consistent with reports on other internet interventions, online programs for parents were increasingly interactive, offering multi-layered and multi-component types of online communication (Barak & Suler, 2008; Ritterband et al., 2009)

Furthermore, we found that first initiatives to provide web-based resources were specifically aimed to improve accessibility to (health) care and support for parents in isolated areas or challenging circumstances (e.g., Huws, Jones, & Ingledew, 2001; Scharer, Colon, Moneyham, Hussey, Tavakoli, & Shugart, 2009), and were directed mainly at parents of young children. However, since the Internet has become a popular and widely used medium, the focus point of studies shifted gradually towards general parenting portals and supportive practices to improve parenting. Topics included social networking for new parents, information on youth mental health, and parent skills or conflict training.

Compared to the vast amount of online resources for parents, the number of rigorous scientific evaluations is still small, and the characteristics of parenting websites show a high degree of diversity, which makes it hard to generalize claims about the efficiency and effectiveness of online parenting support.

In conclusion, we found interesting and inspiring examples of web-based services for parents, following technological trends, varying from discussion boards for peer support to hand-held devices with tailored information. With the development of new easy-to-use devices, it is to be expected that Internet-based interventions and programs can be made more and more available for a larger part of the population, supplementing existing services.

In *chapter 2*, we focused on the evidence for effectiveness of online parenting programs, using a combination of a narrative review and meta-analysis in order to identify the factors and design characteristics which contribute to reported effects.

We found positive outcomes for both parents and children after participation in a short web-based intervention.

Unguided modules, i.e. e-learning sessions without any personal involvement of practitioners, showed promising results to enhance knowledge and can be further optimized by offering inter-session progress assessments. Other services involve interactive guidance of practitioners, for instance through conversations, video-conferencing, chat or email consultation. If the purpose of a program is to improve other aspects of parental competencies than knowledge, like behavioral aspects (e.g., responsive and disciplinary skills) and attitudinal aspects (e.g., self-confidence and satisfaction about the parenting role), we have learned that guided elements of online programs were associated with better outcomes than unguided online programs. For instance, online sessions were started with a face to face session ('blended' help-giving) or reviewed through a video-conference with parents at home ('multi-layered'



help-giving). Also, programs with a training-like set-up with multiple sessions were more successful than programs without such structured content, like an online portal which offers information.

Interestingly, although they may be inspiring and attractive, positive effects of more complex (multi-media) programs have not yet been convincingly demonstrated, as we have seen in the mixed results of the set of studies which provided three or more channels of communication, such as video, tests, animated characters. Comparing several studies which reported mostly positive outcomes, we found that the adaptation of well-known evidence-based programs (like Problem Solving Skills Training and Triple P) for online dissemination does not guarantee success. Finally, the most successful programs were targeted at specific groups of parents, addressing a limited topic.

Focusing on one of the types of online parenting support, single session email consultation is a very brief supportive service, convenient and easily accessible for parents, but methods, protocols and procedures for parenting practitioners were lacking.

In *chapter 3*, we hypothesized that a match between parental need and professional response would enhance the quality of online consultation, following empirical evidence in other parenting support studies (Dempsey & Keen, 2008; Fordham, Gibson, & Bowes, 2011; Raghavendra, Murchland, Bentley, Wake-Dyster, & Lyons, 2007; Van Riper, 1999). On the basis of previous literature (Dunst et al., 2002; Turnbull, Turbiville, & Turnbull, 2000), we developed a coding system, distinguishing between expert oriented, parent oriented and context oriented perspectives on help-giving. We collected email questions and advices and questionnaires on parental empowerment in a primary care setting in the Netherlands.

Almost half of the questions parents submitted online concerned parenting competencies, and the other half concerned child development. The age of the children

involved was diverse, but they were mainly young (pre-)school children and questions about adolescent children were rare. In line with our findings on online parenting support, which is often targeted at parents of young children (see chapter 1 and 2), this part of the dissertation shows the same pattern for parental self-selection.

Overall, the match between prevalent parental need and professional advice was found to be weak. Interestingly, parents often used this communication channel with multiple expectations. For instance, a question about an excess of children's computer gaming showed the need for sharing worries, seeking multiple options how to deal with the situation and looking for useful resources. In other words, most questions were parent- and context oriented and showed multiple prevalent needs. Practitioners showed an even higher preference to a broad approach to writing their advices, offering a few techniques of every perspective, rather than restricting the advice to one parental need, and they showed low levels of prevalence.

Although parental need requires professional consideration, we discussed the benefits of a broader approach, offering parents multiple perspectives. In doing so, misinterpretations of the parental expectation, which is only conveyed through a short text, can be avoided. However, we also concluded that practitioners may employ a greater variety of textual techniques than currently applied.

The literature on single session email consultation is scarce and the few studies reporting on the subject (Bagraith, Chardon, & King, 2010; Car & Sheikh, 2004a; 2004b; Chardon, Bagraith, & King, 2011; Harris, Danby, Butler, & Emmison, 2012; Nijland, van Gemert-Pijnen, Boer, Stehouder & Seydel, 2009) were not aimed at parents. Gains of this study include a better insight in the topics and types of questions submitted by parents online and knowledge about the way practitioners respond to them.

The characteristics of single session online communication appear to be in contrast with the way empowerment and empowerment oriented behavior are mostly perceived: as long term processes and interactions of some duration, building trust and rapport (e.g., Dunst et al., 2002; Popp & Wilcox, 2012). Although several overviews and checklists exist for parent-practitioner communication (Baumann, Kolko, Collins, & Herschel, 2006; St-Cyr Tribble et al., 2008; Trivette & Dunst, 2005; Verzaal, 2002), we found that the concept of empowerment in parenting support was not operationalized in a detailed enough manner, fit to enable a content analysis of texts.

In *chapter 4*, we developed a model on the basis of a conceptual explanation of the process towards more empowerment. Building upon the study of Cattaneo and Chapman (2010) and literature on empowerment in parenting support (Turnbull et al., 2000) we were able to relate some of the previously described textual techniques (see chapter 3) to this process, resulting in the Guiding the Empowerment Process model (GEP model). The model identifies how the practitioner can guide the parent in components of this process towards more empowerment which proved to be difficult, for instance defining a goal, taking action, reflecting on impact or mobilizing resources in the context. It involves ten techniques which can be used in email consultation, like ‘rephrasing family goals’, ‘providing a variety of options’, ‘describing the needs of involved family members’, and ‘show opportunities for family members to participate in problem-solving’ (see chapter 4, Figure 1).

By defining empowerment as a process with separate stages and relating it to the support a practitioner can provide, we have developed a practical instrument to measure the level of empowerment oriented content in single session email consultations.

We found good results for internal consistency and concurrent validity of the GEP model. Also, we observed all ten described techniques in the online advices, providing guidance in all four components of the empowerment process. Thus, feasibility of the GEP model for content analysis of email counseling from the perspective of

empowerment was demonstrated. This study is a first attempt to relate the practice of email consultation to the key concept of empowerment. In doing so, we suggest that usability of the concept for everyday parenting practice has increased.

This study advances the knowledge about the way parenting practitioners may guide parents towards more empowerment in situations for which they seek help or support, by analyzing its practical implications and also its concurrent validity with social support. The underlying hypothesis that parental empowerment is enhanced by guiding the empowerment process in this manner deserves further investigation.

Finally, in *chapter 5*, we investigated the improvement of parental empowerment after receiving an online advice, using an adapted version of the Family Empowerment Scale (Koren et al., 1992).

We designed an experiment, collecting email questions and advices and questionnaires on parental empowerment in a primary care setting in the Netherlands. Furthermore, we trained a group of parenting practitioners, teaching them to respond to parental questions through email consultations. Implicitly integrated in the training, all techniques of the Guiding the Empowerment Process model were present. The other group of professionals received no specific training, but were similarly educated, generally on a bachelor level in their discipline.

The results of the evaluation showed that parental self-confidence was moderately enhanced after this short intervention, on which practitioners spent less than an hour on average. Single session email consultation therefore seems a feasible method to improve self-confidence of parents. Also, parents were very satisfied with the service of single session email consultation. A specific factor to explain the effect of single session email consultation could not be identified: neither the provision of a matching response, nor the application of techniques of the GEP model proved to contribute to the effects on the empowerment scale.

Thus, although finding no specific mediating factors, this first study into the effects of single session email consultation shows that some interesting improvements in the way parents perceive their family situation can be achieved.

To conclude, both the results and research methodology of these studies lead to a number of questions and issues which may direct future research.

Progress can be incited by both technological opportunities and evidence of effective programs or program components. It stands to reason that in the near future new devices and software will inspire new forms of online parenting support. Over the last few years, tablet computers, smart phones and apps have found their way into our daily lives, inspiring new innovations. Online services have the potential to reach a wide audience of parents and it would be useful to use the experiences and knowledge of previous scholarly literature as a way to upscale good practices. Also, the effects and quality of online public health programs, which are aimed at informing large groups of parents, for instance through a portal with information pages, should be investigated. Furthermore, in order to understand its dynamics and design imperatives, researchers should initiate more randomized controlled trials to find evidence for effectiveness of specific components and characteristics of online services, especially on parental attitude and behavior. Many research opportunities lay ahead, concerning design (multimedia, interaction, peer and professional support), and target groups (all parents, parents of adolescents, specific underprivileged groups).

In order to enhance our knowledge on the way online programs improve parenting more diverse approaches should be employed in addition to self-report by parents, for instance using more information sources (e.g., children, teachers), more methods (e.g., observation through webcam technology) and more tests (e.g., follow-up at three or six months). More programs on online parenting support should be evaluated

to substantiate firmer claims about their effectiveness. Within this field, researchers are especially challenged to make sense of all the different topics and target groups these services may encompass. In fact, although of important influence in family functioning, parenting and parenting support is a domain which is often neglected within the scope of studies on addiction, mental health and well-being. Parent participation in online services and the impact of internet interventions on parenting competencies are understudied subjects in the field of sociological and psychological research. Also, guidelines which clarify how online tools for counseling and supportive practices can be applied in a professional manner are lacking. Enhancements in this line of study could include the evaluation of protocols and manuals for online guidance, providing stronger evidence for what does and does not work in family services and raise the accountability of web-based or blended support.

More specifically, it remains a challenge to relate innovative online practices to previous knowledge about efficacy and theory in parenting support practice. We chose to relate our study to the key concept of ‘empowerment’, a term which in itself is not without controversy. Several authors have described how the meaning of the term is often diffused and lacking in consistency, because it is used in many different contexts and interpreted accordingly (e.g., Holmström & Röing, 2010; Woodall, Warwick-Booth, & Cross, 2012). However, the notion still seems compelling and much employed throughout social sciences and practice (Cattaneo & Chapman, 2010; Turnbull et al., 2000). Using the term to describe a process which can be guided by practitioners, we chose to operationalize the concept in a practical manner. We also suggested that practitioners are capable of fulfilling their role as guides towards more empowerment in problematic parenting situations, enabling parental capacity for autonomous thinking. In our research we found that empowerment oriented techniques can indeed be observed in email advices. Further, in our sample, we found that not all available

empowerment oriented techniques we incorporated were used to their full potential. It would, therefore, be interesting to investigate the effect of consultations which are enriched by such content.

Further, we do not know if it would be feasible and efficient to match the advice to a specific component of the empowerment process (goals, actions, impact and context). In theory, the best way a practitioner could support parents is to differentiate to their needs, helping one to clarify goals, and the other with a reflection on the impact of his actions. This would implicate a fine-tuning of the interpretation of parental need in terms of one or more empowerment process components. In the limited time of our research, we were not able to investigate the parent-practitioner communication at this level of detail.

The studies from this dissertation suggest that after some forty years of adoption of empowerment principles in parenting support, the concept of empowerment still requires more exploration. More specifically, clarification and implementation of empowerment principles could be enhanced by practice-based or practice-led research, in which models for empowerment oriented guidance can be tested.

The results of sixteen years of scientific evaluation in this innovative domain of online services suggest that internet technologies offer ample opportunities to support parents, and it deserves a thorough approach to program design, professional competence and research.

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## Summary

Internet technology offers a lot of new opportunities for the dissemination of information, sharing of support and consultation of professionals. The research for this dissertation is situated in the full flow of rapid technological developments, which bring us not only new devices and easy access to resources, but which also urge the need for new skills, design guidelines and pose dilemmas for practitioners. Innovating professionals from multiple disciplines have begun to exploit the new opportunities for parenting support. The studies, presented in this dissertation, are meant to deepen our insights in the subject of online parenting support and investigate the feasibility to use single session email consultation to empower parents.

In *chapter 1* empirical studies on peer and professional online support for parents ( $n = 75$ ) were systematically reviewed, including randomized controlled trials and quasi-experimental designs (totaling 1,615 parents and 740 children) and content analyses of emails and posts (totaling 15,059 coded messages). These studies generally reported positive outcomes of online parenting support. The results of this review show that the Internet offers a variety of opportunities for sharing peer support and consulting professionals.

In *chapter 2* a systematic review was undertaken of studies ( $n = 19$ ), that describe parenting programs of which the primary components were delivered online. Twelve studies (with in total 54 outcomes,  $N_{tot}$  parents = 1,615 and  $N_{tot}$  children = 740) were included in a meta-analysis. The meta-analytic results show that online interventions can make a significant positive contribution for parents and children.

In *chapter 3* we aimed to determine if and how practitioner response in single session email consultation matches the need of parents. We conducted a content analysis of single session email consultations (129 questions; 5,997 response sentences). Three perspectives on the parent-practitioner communication were distinguished to assess the

match between parenting questions and consultations, i.e., the expert oriented, parent oriented and context oriented perspective. We found that professionals have a broad approach to email consultation, offering advice of different perspectives, rather than restricting the advice to match a prevalent parental need.

In *chapter 4*, based on empowerment theory, we developed the Guiding the Empowerment Process model (GEP model), which describes techniques to guide the parent towards more empowerment. The model showed good inter-observer reliability and internal consistency and evidence for its concurrent validity with the Social Support model was confirmed, although it was also distinctive. Feasibility of the GEP model for content analysis of email consultation in parental support from a theoretical empowerment perspective has been demonstrated.

Finally, in *chapter 5* we evaluated the effect of single session email consultation on empowerment of parents (n=96). A group of practitioners was trained to match the need of the parent and they learned to use empowerment oriented techniques. Parents showed a significant increase in self-confidence after receiving the email advice. Thus, study findings lend support to the feasibility of single session email consultation as a brief intervention to improve self-confidence of parents. The training for practitioners did not influence the outcomes.

Online services have the potential to reach a wide audience of parents. This dissertation describes design characteristics and identifies factors which positively influence effects across parent and child outcomes. Furthermore, in our studies we analyzed single session email consultation and investigated its use as an empowering method to support parents. Within its limitations, study findings lend support to the feasibility of single session email consultation as a brief intervention to improve self-confidence of parents.

## Biographical Note

**Christa Nieuwboer** (1964) obtained her academic degree at Leiden University, in the field of religious anthropology, psychology and literature studies (Theology and Religious Studies, 1989). She worked several years as a youth/parenting practitioner and as a freelance graphical designer/journalist. After becoming the mother of twins (2000) she published a book about relationship skills during pregnancy and the transition to parenthood<sup>1</sup>. She began teaching at Fontys University of Applied Sciences in 2006, training future professionals for their work with parents and children. In 2010 her next book, describing a methodological approach to empowerment oriented parent support was published<sup>2</sup>. Next to teaching and training, she conducted her Ph.D. research from 2009 onwards at the University of Amsterdam, which was funded by Fontys University of Applied Sciences, enabling her to do research in the field of online parenting support. She has since dedicated her attention and knowledge on online parenting support to the development of a curriculum for parenting practitioners.



Christa's research interests include parent-practitioner communication, online social networking, tools for online counseling for youth and families, and empowerment oriented guidance in parent support.

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1 Nieuwboer, C.C. (2005). *Samen zwanger, het zwangerschapsboek met oog voor je relatie*. Lannoo, Tielt: België/Nederland.

2 Nieuwboer, C.C. (2010). *Niet achter het behang, maar wat dan? Methodiek doelgerichte opvoedingsondersteuning*. Noordhoff, Groningen: Nederland.

**Christa Nieuwboer** (1964) studeerde af aan de Universiteit van Leiden in de studierichting Godsdienstwetenschappen, met accenten op godsdienstpsychologie en literatuurwetenschap (1989). Zij werkte enkele jaren als jeugdwerkadviseur en freelance grafisch vormgever/journalist in de non-profit sector. Nadat zij zelf moeder was geworden van een tweeling (2000) schreef zij een boek over relatievaardigheden tijdens de zwangerschap en de overgang naar het ouderschap<sup>1</sup>. Ze ging les geven bij Fontys Hogeschool Pedagogiek in 2006, en leidt daar toekomstige professionals op voor hun werk met gezinnen. In 2010 verscheen haar volgende boek, waarin een doelgerichte methode voor opvoedingsondersteuning wordt beschreven<sup>2</sup>. Naast haar werk als docent begon zij in 2009 aan haar promotieonderzoek aan de Universiteit van Amsterdam. Het onderzoek naar online opvoedingsondersteuning werd mogelijk gemaakt door een stipendium van de Fontys Hogescholen. Tegelijkertijd heeft zij in deze periode haar aandacht en kennis gewijd aan het ontwikkelen van een curriculum rond online hulpverlening voor beroepskrachten.

Christa's onderzoeksbelangstelling richt zich met name op de communicatie tussen beroepskrachten en ouders, online sociaal netwerken, methoden voor online hulpverlening voor jongeren en gezinnen en op empowerment gerichte opvoedingsondersteuning.



## Dankwoord

Dit proefschrift gaat over diverse elementen van online opvoedingsondersteuning, maar naar mijn overtuiging ligt de kern niet in het middel maar in het doel: empowerment van ouders. Hoe belangrijk empowermentgerichte ondersteuning en hulp is heb ik zelf tijdens dit onderzoek op veel verschillende manieren mogen en moeten ervaren.

Mijn promotoren Jo Hermanns en Ruben Fukkink begeleidden het onderzoek op kundige wijze, gaven aan wat de hoofdlijn moest blijven en daagden me precies uit op de punten waarop ik dat nodig had. Verder gaven ze mij voortdurend het gevoel mijn ijver, inzicht en keuzes te vertrouwen. Ik ben hen erg dankbaar dat ze mij de kans hebben gegeven om op hun jarenlange kennis en expertise, die zij altijd genereus deelden, voort te bouwen en mijn van nature onderzoekende aard dóór te ontwikkelen tot op wetenschappelijk niveau. De commissieleden wil ik van harte bedanken voor het kritisch lezen van het manuscript vanuit hun diverse disciplines.

In de loop van deze promotiejaren heb ik vanwege gezondheidsproblemen van veel verschillende mensen hulp nodig gehad op (para-)medisch gebied, en daarin heb ik zelf ervaren hoe belangrijk het is om realistisch onder ogen te zien wat het probleem is, en daarna voluit gesteund te worden in vechtlust en ambities, in plaats van afgeremd te worden en in termen van problemen en beperkingen te denken. Zonder hen bij name te kunnen noemen bedank ik die chirurg, artsen, fysiotherapeuten en coaches die samen met mij op zoek gingen naar wat ik nog wél kon en dat uit te bouwen. Deze zeldzame professionals durfden hun *evidence-based* methodieken en systemen aan te passen aan de persoon en dat maakt hen niet alleen competent, maar excellent. Zonder hen had ik dit onderzoek niet kunnen voltooien.

Fontys Hogescholen, en meer specifiek de directie, het management en de lectoren van Fontys Hogeschool Pedagogiek, wil ik graag bedanken voor de gelegenheid die zij mij hebben geboden om dit onderzoek te doen en de bevindingen op verschillende manieren

in het curriculum te mogen verwerken. En dan in het bijzonder mijn teamleidster Marjolijn Roosch, die gaandeweg op mijn soms wat eigenzinnige manier van werken kon gaan vertrouwen.

Zonder Marieke van den Hurk, die mij als teamleidster aanmoedigde te gaan promoveren, had ik dit mooie avontuur waarschijnlijk nooit ondernomen. Belangstelling en steun heb ik van meerdere collega's ervaren, maar vooral van Inge Saris, en andere disciplinegenoten "opvoedingsondersteuning".

Aan het experiment in dit onderzoek hebben ruim veertig beroepskrachten, meer dan tweehonderd ouders, twee student-assistentes en diverse andere studenten actief meegewerkt. Het was een intensieve fase van het onderzoek, waarin de stroomdiagrammen van wat iedereen achtereenvolgens moest doen soms meerdere complexe pagina's besloegen. Ik bedank met name de beroepskrachten en hun organisaties voor hun inzet voor een kwalitatief hoogwaardig e-mailconsult voor ouders en hun bereidheid nieuwe wegen te bewandelen. Dat geldt ook voor het inmiddels uitdijende netwerk van innovatoren op het gebied van online hulpverlening in binnen- en buitenland, dat mij o.a. via social media inspireert en activeert.

Tijdens de laatste jaren van het onderzoek ben ik me steeds breder gaan oriënteren. Ik bedank de organisatoren van de congressen Think Parents! (2012) en de International Society for Research on Internet Interventions (2013) voor de gelegenheid die zij mij boden om op een internationaal platform presentaties over dit onderwerp te verzorgen. Speciale dank ook voor de Jacobs Foundation Fellowship, waardoor ik een bijdrage kon leveren aan het congres van de European Association for Developmental Psychology (2013). Ook de reviewers van tijdschriften, die ik vanzelfsprekend niet bij name ken, wil ik bedanken voor hun stimulans om een artikel nóg beter en consistentier uit te werken. Daarnaast wil ik ook de auteurs en onderzoekers noemen die me inmiddels hebben betrokken bij nieuwe interessante publicaties en projecten.

Onbetwist op nummer 1 wil ik mijn grote dank en waardering voor mijn gezin uitspreken. Rogier, het is een voorrecht om meerdere passies met jou als levenspartner te delen: bijvoorbeeld empowerment, levenskwaliteit, het veilig opgroeien van kinderen, en competente beroepskrachten... Onze domeinen, onderwijs en opvoeden, raken elkaar voortdurend, ook al zijn we regelmatig duizenden kilometers van elkaar verwijderd. We gingen ervan uit dat elk praktisch en logistiek probleem dat ontstond met onze soms bizarre agenda's opgelost kon worden en ja, we hebben het gefikst - en daarbij onze passies behouden! Onze dochters waren 9 toen ik met dit promotieonderzoek begon. Meiden, jullie hebben me van jongs af aan duidelijk gemaakt dat jullie de echte experts zijn als het gaat om opvoeden en jullie vonden het maar raar dat je daarover kon studeren of les geven. Ik zie dat als het grootst mogelijke compliment, want voor gelukkige kinderen is opvoeden geen issue. Het dagelijks leven met jullie drieën, “in de pannen roeren met daarnaast een SPSS-output op het aanrecht”, heeft me altijd met beide benen op de grond gehouden.

Voor een onderzoek als dit zijn vele vaardigheden nodig. Ik wil, tenslotte, iedereen bedanken die mij heeft geholpen al die vaardigheden te ontwikkelen, maar vooral die sleutelfiguren die mij in mijn leven de waarde van “leren” hebben bijgebracht. Ik ben ervan overtuigd dat alle andere vaardigheden allemaal pas ten volle benut kunnen worden als er één extra element aanwezig is: de wil om te leren. En dat geeft altijd weer volop energie om door te gaan.

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This publication can be compared to a journey full of discoveries, first ‘exploring the country’ of web-based services for parents, then ‘scouting the city’ of email consultation and trying to understand it.

All in all, having to read and reread (and again, and again...), code, review, analyze, plan, recruit, develop, train, test, communicate, manage, supervise, report, conceptualize, validate, analyze some more, archive, hypothesize, present, write, analyze even more, rewrite (and again, and again...), and occasionally rejoice in publishing a study, working on this dissertation was an always varying and interesting journey in this relatively new area of web-based parenting services.

I’d like to express my gratitude to everyone who I met during the past few years, who was just as eager to learn and discover as I am. The journey continues.

# Online Parenting Support

## Guiding parents towards empowerment through single session email consultation

### Overview of publications and presentations

- Nieuwboer, C.C. (2012, October). *Presenting Preliminary Results of a Review and Meta-analysis of Studies on Online Parenting Support*. Paper session presented at the ThinkParents! Conference of the Nederlands Jeugdinstituut, The Hague.
- Nieuwboer, C.C. (2012, November). *Do's en don'ts van empoweren via e-mailhulp*. Paper session presented at Congres Online Hulp of Bohn Stafleu van Loghum / Stichting E-hulp, Utrecht.
- Nieuwboer, C.C. (2013, May). *Improving Parental Competencies through Web-based Programs*. Paper session presented at the ISRII conference of the International Society for Research on Internet Interventions, Chicago.
- Nieuwboer, C.C. (2013, May). *Empowering Parents through Online Communication*. Poster session presented at the ISRII conference of the International Society for Research on Internet Interventions, Chicago. Retrieved from Onlinecounseling website: [http://media.wix.com/ugd/77e78d\\_f49f746888c3dcf2c321244b3c0faf26.pdf](http://media.wix.com/ugd/77e78d_f49f746888c3dcf2c321244b3c0faf26.pdf)
- Nieuwboer, C.C., Fukkink, R.G., & Hermanns, J.M.A. (2013a). Peer and professional support on the Internet: A systematic review. *Cyberpsychology, Behavior and Social Networking*, 16(7), 518-528.
- Nieuwboer, C.C. (2013, September, Jacobs Foundation Fellowship). *Empowering Parents through Online Communication*. Workshop and poster presentation at the EADP pre-conference on Positive Parenting of the European Association for Developmental Psychology / Jacobs Foundation, Lausanne.
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- Nieuwboer, C.C., Fukkink, R.G., & Hermanns, J.M.A.. Practitioner Response to Parental Need in Email Consultation: How do They Match? A Content Analysis. *Child Youth Care Forum* (2014), doi: 10.1007/s10566-014-9253-2
- Nieuwboer, C.C., Fukkink, R.G., & Hermanns, J.M.A. (*conditionally accepted*). Analyzing empowerment oriented email consultation for parents: Development of the Guiding the Empowerment Process model. *Child and Family Social Work*.
- Nieuwboer, C.C., Fukkink, R.G., & Hermanns, J.M.A. (*conditionally accepted*). Single session email consultation for parents. An evaluation of its effect on empowerment. *British Journal of Guidance and Counselling*.

### **Other publications related to this dissertation**

- Nieuwboer, C.C. (2012, November 12). *TRI-O: training online opvoedingsondersteuning*. Tilburg, The Netherlands, Fontys Hogescholen.
- Nieuwboer, C.C. (2011, September 12). Rapportage enquête digitale opvoedingsondersteuning [PDF file]. Retrieved from [http://onlinecounseling.wix.com/parent-empowerment#!publications/component\\_74511](http://onlinecounseling.wix.com/parent-empowerment#!publications/component_74511)
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- Nieuwboer, C.C. & Fukkink, R.G. (*in press*, 2014). Peer and professional online support for parents. In G. Riva, B. Wiederhold, & P. Cipresso (Eds.), *The Psychology of Social Networking, Communication, Presence, Identity and Relationships in online communities*. London, UK: Versita.



## Meewerkende organisaties

### Vooronderzoek:

Centrum Jeugd & Gezin 's-Hertogenbosch  
Centrum Jeugd en Gezin Gemeente Tilburg  
Centrum Jeugd en Gezin Maasland  
Centrum voor Jeugd en Gezin Leudal,  
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Loes Info Centrum Jeugd en Gezin  
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Coaching Today  
Connecting Hands  
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Educadora  
GGD IJsselland  
GGD Zaanstreek-Waterland  
Het CJG (Weert e.o.)  
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Pestweb  
Puur Menselijk  
Ruimte voor jezelf  
Sankofa  
Sensire





Internet technology offers a lot of new opportunities for the dissemination of information, sharing of support and consultation of professionals. Innovating professionals from multiple disciplines have begun to exploit the new opportunities for parenting support. The studies presented in this book are meant to deepen our insights in the subject of online parenting support and investigate the feasibility to use single session email consultation to empower parents.

This publication includes:

- A systematic review of 75 studies on online parenting support
- A meta-analytic review of 12 studies on online tools to improve parenting
- A content analysis of 129 parenting questions and responses in single session email consultation
- An analysis and validation study of the newly developed Guiding the Empowerment Process model
- An evaluation study of the effects of single session email consultation on parental empowerment

The results of this research indicate that the Internet is not only a source of information, but it can also be an instrument for support and training, aiming to improve parental competencies.

Doctoral dissertation

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