# WEB-BASED PARENTING PROGRAMMES

EMMIE Summary

## Acknowledgements

## This evidence summary is based on the following systematic review

Nieuwboer, C., Fukkink, R. and Hermanns, J. (2013a). Online programs as tools to improve parenting: A meta-analytic review. *Children and Youth Services Review*, 35, 1823-1829.

## About What Works for Children's Social Care

What Works for Children's Social Care seeks better outcomes for children, young people and families by bringing the best available evidence to practitioners and other decision makers across the children's social care sector. We generate, collate and make accessible the best evidence for practitioners, policy makers and practice leaders to improve children's social care and the outcomes it generates for children and families.

## About CASCADE

The Children's Social Care Research and Development Centre (CASCADE) at Cardiff University is concerned with all aspects of community responses to social need in children and families, including family support services, children in need services, child protection, looked after children and adoption. It is the only centre of its kind in Wales and has strong links with policy and practice.

To find out more visit What Works for Children's Social Care at: **whatworks-csc.org.uk**, or CASCADE at: **sites.cardiff.ac.uk/cascade**

If you'd like this publication in an alternative format such as Braille, large print or audio, please contact us at: **wwccsc@nesta.org.uk**

# Web-based Parenting Programmes

## What is the intervention?

Numerous authors have recognised the potential that the internet has for delivering parenting interventions in an accessible manner (Scharer, 2005; Daneback and Plantin, 2008; Funderburk et al., 2009). The internet offers a rapidly increasing number of parenting resources with hundreds of thousands of visitors to parenting websites each month (Brent, 2009; O'Connor and Madge, 2004; Sarkadi and Bremberg, 2005). Web-based parenting programmes can promote a public health approach to parenting by supporting, informing and assisting with common parenting questions. Further, they can also be targeted towards parents with different needs such as social isolation or illness or children at particular stages of child development such as infancy or adolescence. While meta-analytic reviews have reported positive effects for traditional parental support at the parent and child level, little is known about the effects of web-based parenting programmes (for example, MacLeod & Nelson 2000; Lundhal et al 2006; Fukkink 2008; Kaminski et al 2008). This evidence summary is based on the meta-analytic review conducted by Nieuwboer and colleagues in 2013 which aimed to summarise the effectiveness of web-based parenting programmes.

The systematic review considered 19 studies. Of these, seven studies were descriptive and twelve reported experimental findings. Hence, twelve studies were included in the meta-analysis. One intervention, Infant net, was based on two papers of the same study (Baggett et al (2009; 2010). Therefore, while twelve experimental studies were included in the review, only eleven interventions were identified:

- Problem-solving skills training[1]
- Infant net[2]
- Adventures in Parenting[3]

---

[1] Askins et al (2009)
[2] Baggett et al (2009, 20
[3] Bert et al (2008)

- Youth Mental Health, A Parent's Guide[4]
- New Fathers Network[5]
- Internet newborn-care education program[6]
- Kidz Grow Online[7]
- Triple P[8]
- Daughter-mother substance abuse program[9]
- Family Problem-solving Group (FPS)[10]
- I-InTERACT[11]

This review is supplemented by Nieuwboer and colleagues' systematic review from which the twelve studies for meta-analysis were drawn. This initial systematic review (Nieuwboer et al 2013b) reports findings from 75 empirical studies published between 1998 and 2010. In doing so, it provides a more general overview of the interventions and themes.

## How Strong is the Evidence?

Nieuwboer and colleagues identified web-based parenting studies published between 2000 and 2010 (Nieuwboer et al 2013a) exploring web-based parenting resources for parental competencies and children's development. Ten of the twelve studies in the meta-analysis were randomised controlled trials, with two having a one-group pretest-posttest design. Given the small sample size for the meta-analysis, the authors weighted studies equally rather than taking study quality into account. Nevertheless, the authors note that some studies had flaws. For example, in eleven of the twelve studies, the evaluated programme had been developed by the researchers so the evaluators were not independent. Further, attrition rates were unequal across studies and most studies relied upon self-report scales. The authors highlight that there were

---

[4] Deitz et al (2009)
[5] Hudson et al (2003)
[6] Kuo et al (2009)
[7] Na and Chia (2008)
[8] Sanders et al (2008)
[9] Schinke et al (2009)
[10] Wade et al (2006)
[11] Wade et al (2009)

examples of observation scales to detect behaviour changes, noting that with the advent of webcam technology this could be increased in future evaluations.

All twelve studies considered multiple aspects of parenting, which led to the inclusion of 35 parental measures and 19 child measures. Seven interventions[12] focused solely on parent outcomes, while only three programmes[13] studied both parent and child outcomes, and one intervention[14] focused on only the child outcomes. Parent outcomes included attitudinal, behavioural, and knowledge factors. Child outcomes focused on behavioural and attitudinal factors. Finally, the authors note that it was not possible to determine whether parents accessed other forms of parenting programmes or support.

## Which outcomes were studied?

Two main outcomes were studied:

- Parent Outcomes
- Child Outcomes

## Effectiveness: how effective are the interventions examined?

### Outcome 1: Parent Outcomes

| Effect rating | 1 |
|---|---|
| Strength of Evidence rating | 3 |

### Outcome 2: Child Outcomes

| Effect rating | 1 |
|---|---|
| Strength of Evidence rating | 3 |

---

[12] Askins et al (2009); Bert et al (2009); Deitz et al (2009); Hudson et al (2003); Kuo et al (2009); Na and Chia (2008); Wade et al (2009)

[13] Bagett et al (2009; 2010); Sanders et al (2008); Schinke et al (2009)

[14] Wade et al (2006)

The review concluded a statistically significant medium effect across parent outcomes, at 0.67. Exploratory analysis did not reveal significant differences between cognitive (0.71), attitudinal (0.65), and behavioural (0.67) outcomes. Examples of parent attitudinal outcomes include self-confidence as a parent, quality of the parent-child relationship, and depression. Behavioural outcomes consisted of problem-solving and communication to parenting, and parenting skills, while knowledge outcomes included knowledge of legal issues, newborn care or child development.

A statistically significant medium effect size for children's outcomes was also recorded (0.42). Sixteen outcomes related to behavioural measures such as alcohol consumption, social competence and adherence to family rules, while three were attitudinal outcomes, such as body esteem and the intention to stop drugs.

Eight programmes that had an effect size of 0.50 or greater were characterised as psycho-educational services involving a diverse range of topics and target populations. These include interventions aimed to handle or prevent social-emotional issues in young children (Baggett et al 2009; 2010), mental health problems in youths (Deitz et al 2009), or substance use in adolescents (Schinke et al 2009). Two interventions focused on assisting new fathers and mothers on their transition to becoming new parents and taking care of a newborn baby (Hudson et al 2003; Kuo et al 2009), while Wade et al (2006; 2009) focused on helping parents whose child had experienced traumatic brain injury. Three studies (Bert et al 2008; Na and Chia 2008; Sanders et al 2008) that related to public health models for everyday parenting only had small effects. This suggests that programmes that were tailored towards specific health problems seemed to be more successful than general programmes.

The two parenting programmes that have been rated as effective in regular settings (Problem Solving Skills Training, Askins et al., 2009; and Triple P, Sanders et al., 2008) had only modest outcomes in web-based delivery. This suggests that traditional face-to-face, evidence-based programmes do not automatically lead to positive outcomes after adaptation for online dissemination.

## Mechanisms

The review provides the theory of change for each of the eleven interventions, with some using more than one theory of change. These included cognitive behavioural

theory[15]; early intervention theory[16]; parent-child interaction theory[17]; family interaction theory[18]; advantages of mass media[19]; advantages of online learning[20]; developmental knowledge base[21]; self-efficacy theory[22]; transition theory[23]; social support theory[24]; parent training theory[25]; social cognitive theory[26]; and promoting sensitive and responsive parenting behaviour[27]. Moreover, the mechanisms by which this change occurred varied across studies. These included; individual problem-solving sessions and interaction with therapists; evidence based interventions, with elements of instruction, coaching, reflection, and exercise; mental models of parenting; multimedia rich, and interactive mechanisms; social (peer) support; provision of learner-centred education and social support; interaction between parents and established information about child development; structured-self-help and helplines; interactive activities in mother-daughter dyads; family involved self-guided problem-solving; and self-guided web sessions, including modelling content, exercises and coaching.

## Moderators: when, where and who does it work for?

Nine of the twelve studies were conducted in the US. One study was conducted in Australia, Singapore and Taiwan. As the review did not specify the suitability of these programmes to other contexts it is not possible to ascertain whether, or how some are applicable to the UK.

There were three inclusion criteria that had to be met for the review. These were; that the delivery of programmes and resources were done so online; the target group were parents whose children ranged from 9 months (pregnancy) to 21 years of age (adulthood); and that all the programmes were aimed at improving parenting competencies. No detailed information is provided in relation to the sample group,

---

[15] Askins et al (2009); Wade et al (2006)
[16] Baggett et al (2009; 2010)
[17] Wade et al (2009)
[18] Schinkle et al (2009)
[19] Sanders et al (2008)
[20] Na and Chia (2008)
[21] Na and Chia (2008)
[22] Kuo et al (2009)
[23] Hudson et al (2009)
[24] Hudson et al (2009)
[25] Bert et al (2008)
[26] Deitz et al (2009)
[27] Bagett et al (2009; 2010)

including demographic characteristics such as age of parents or ethnicity. However, the review briefly mentions that four studies focused on parent characteristics, with three programmes targeting pregnant or first time parents, one study focused on parents with low income and infants at risk of poor social-emotional development and one study developed and evaluated two web-based training modules for foster carers. Eight programs specified child characteristics by describing health issues or behavioural problems, such as children with cancer, ADHD and disabilities. One programme focused on drug abuse in adolescent girls.

## Implementation: How do you do it?

All of the parenting programmes were designed and guided by parenting professionals. All but one study offered three or more types of multimedia challenges, such as video, test and interactive exercises, and animated characters. Three studies offered peer support via discussion boards. The time and intensity of service varied with five programmes offering intense sessions in a short period of time through weekly sessions, while three programmes offered long term sessions, up to, and across, two or three months. Four interventions were self-guided, one offered e-mail consultation on demand, and three were intensively guided by a therapist or coach; and included a review of sessions with parents via telephone or conference call. Three programmes started with a face-to-face session. Self-guided programmes showed higher outcomes of parental knowledge, while guided programmes showed higher outcomes of parental attitude and behaviour.

## Economics: What are the costs and benefits?

No economic analysis is included in the study and cost-effectiveness is not mentioned.

## What are the strengths and limitations of the review?

This is a robust review of web-based parenting programmes which have the potential to be aimed at a large population of parents and families to specifically enhance parental competencies. The review demonstrated evidence to attest the effectiveness of participating in web-based programmes to support parenting roles, albeit with a small number of studies.  Additionally, the review claims that online interventions may not only lead to an increased knowledge or attitudinal aspects amongst parents, but that it may also enhance parenting skills. Moreover, the findings of the meta-analysis support previous research based on the effectiveness of web-based interventions as a means to

help people with different health needs and various life issues (for example, Wantland et al. 2004; Sorbi & Riper 2009; Bailey et al 2010; Cugelman et al 2011; Maon et al 2012). Furthermore, the review also contributes to a greater understanding of how the internet can be used as not only a key source of knowledge, but also for parental support and training.

However, there are some limitations to the review. The authors acknowledge the paucity of research that exists in this area and that further research is needed to increase understanding and establish a firm knowledge base. The review also recognises that the quality of the study designs were not taken into account and the effect sizes of all studies carried equal weight. Therefore, the variations in effect sizes, and sample sizes, across studies were not accounted for. The review recognises the bias that may exist as a result of all but one of the studies reviewed being developed and guided by researchers. Also, because the studies relied heavily on self-reporting by parents, this may also result in bias. Although the authors mention the inclusion criteria for the review, there is no further elaboration on the exclusion process. The review does not take into account whether parents who participated in the studies used additional or complementary interventions other than solely web-based programmes offered by the interventions.

## Summary of key points

- A medium effect size was found across parental outcomes including cognitive, behavioural and attitudinal outcomes.
- A medium effect size was found for children's outcomes, particularly in relation to behavioural measures.
- Eight of the twelve web-based parenting programmes offered psycho-educational interventions aimed at a diverse range of topics and target populations.
- Findings suggest that programmes tailored towards specific problems are more effective than programmes aimed at general parenting.
- Findings suggest that traditional face-to-face, evidence-based programmes do not automatically lead to positive outcomes after adaptation for online dissemination.
- This review suggests that web-based parenting programmes are a promising method for improving parenting competencies.

# References

Askins, M., and Sahler, O., and Sherman., S., and Fairclough, D., and Butler, R., and Katz, E., and Doglin, M., and Varni, J., and Noll, R., and Phipps, S. (2009). Report from a Multi-Institutional Randomized Clinical Trial Examining Computer-Assisted Problem-Solving Skills a Training for English- and Spanish-Speaking Mothers of Children with Newly Diagnosed Cancer. *Journal of Pediatric Psychology*, 34(5), 551-563.

Baggett, K., and Davis, B., and Feil, E., and Sheeber, L., and Landry, S., and Carta, J., and Leve, C. (2010). Technologies for Expanding the Reach of Evidence-Based Interventions: Preliminary Results for Promoting Social-Emotional Development in Early Childhood. *Topics in Early Childhood Special Education*, 29(4), 226-238. (First published 2009).

Bert, S., and Farris, J., and Borkowski, J. (2008). Parent training: Implementation strategies for Adventures in Parenting. *The Journal of Primary Prevention*, 29(3), 243-261.

Cugelman, B., and Thelwall, M., and Dawes, P. (2011). Online Interventions for Social Marketing Health Behaviour Change Campaigns: A Meta-Analysis of Psychological Architectures and Adherence Factors. *Journal of Medical Internet Research*, 13(1), 84-107.

D'Alessandro, D., and D'Alessandro, M., and Colbert, S. (2000). A Proposed Solution for Addressing the Challenge of Patient Cries for Help Through an Analysis of Unsolicited Electronic Mail. *Pediatrics*, 105(6), 74.

Daneback, K., and Lars, P. (2008). Research on Parenthood and the Internet: Themes and trends. *Journal of Psychosocial Research on Cyberspace*, 2(2).

Deitz, D., and Cook, R., and Billings, D., and Hendrickson, A. (2009). A web-based mental health program: Reaching parents at work. *Journal of Pediatric Psychology*, 34(5), 488-494.

Fukkink, R. (2008). Video feedback in widescreen: A meta-analysis of family programs. *Clinical Psychology Review*, 28(6), 904-916.

Funderburk, B., and Ware, L., and Altshuler, E. (2008). Use and Feasibility of Telemedicine Technology in the Dissemination of Parent-Child Interaction Therapy. *Child Maltreatment*, 13(4), 377-382.

Hudson, D., and Campbell-Grossman, C., and Fleck, M., and Elek, S., and Shipman, A. (2009). Effects of the new fathers network on first-time fathers' parenting self-efficacy

and parenting satisfaction during the transition to parenthood. *Issues in Comprehensive Pediatric Nursing*, 26(4), 217-229.

Kaminski, J., and Valle, L., and Filene, J., and Bolye, C. (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology*, 36(4), 567-589.

Kuo, S., and Chen, Y., and Lin, K., and Lee, T., and Hsu, C. (2009). Evaluating the effects of an Internet education programme on newborn care in Taiwan. *Journal of Clinical Nursing*, 18(11), 1592-1601.

Lundhal, B., and Risser, H., and Lovejoy, C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review*, 26(1), 86-104.

MacLeod, J. and Nelson, G. (2000). Programs for the promotion of family wellness and the prevention of child maltreatment: a meta-analytic review. *Child Abuse & Neglect*, 24(9), 1127-1149.

Madge, C., and O'Connor, H. (2006). Parenting gone wired: empowerment of new mothers on the internet? *Social & Cultural Geography*, 7(2), 199-220.

Mallen, M., and Vogel, D., and Rochelen, A., and Day, S. (2005). Online Counselling: Reviewing the Literature From a Counselling Psychology Framework. *The Counselling Psychologist*, 33(6), 819-871.

Maon, S., and Edirippulige, S., and Ware, R., and Batch, J. (2012). The use of web-based interventions to prevent excessive weight gain. *Journal of Telemedicine and Telecare*, 18(1), 37-41.

Na, J., and Chia, S.W. (2008). Impact of online resources on informal learners: Parents' perception of their parenting skills. *Computers & Education*, 51(1), 173-186.

Nieuwboer, C., and Fukkink, R., and Hermanns, J. (2013a). Online programs as tools to improve parenting: A meta-analytic review. *Children and Youth Services Review*, 35, 1823-1829.

Nieuwboer, C., and Fukkink, R., and Hermanns, J. (2013b). Peer and professional parenting support on the Internet: a systematic review. *Cyberpsychology, Behavior, and Social Networking*, 16(7), 518-528.

Sanders, M., and Calam, R., and Durand, M., and Liversidge, T., and Carmont, S.A. (2008). Does self-directed and web-based support for parents enhance the effects of viewing a reality television series based on the triple P—Positive Parenting programme? *Journal of Child Psychology and Psychiatry*, 49(9), 924-932.

Self-Brown, S., and Whitaker, D. (2008). Parent-Focused Child Maltreatment Prevention: Improving Assessment, Intervention, and Dissemination with Technology. *Child Maltreatment*, 13(4), 400-416.

Scharer (2005). Internet Social Support for Parents: The State of Science. *Journal of Child and Adolescent Psychiatric Nursing*, 18(1), 26-35.

Schinke, S., and Fang, L., and Cole, K. (2009). Preventing Substance Use among Adolescent Girls: 1-Year Outcomes of a Computerized, Mother-Daughter Program. *Addictive Behaviours*, 34(12), 1060-1064.

Sorbi, M., and Riper, H. (2009). e-Health—Health care through the internet. *Psychologie en Gezondheid*, 37(4), 191-201.

Ritterband, L., and Palermo, T. (2009). Introduction to the Special Issue: eHealth in Pediatric Psychology. *Journal of Pediatric Psychology*, 34(5), 453-456.

Wade, S., and Carey, J., and Wolfe, C. (2006). The efficacy of an online cognitive-behavioral family intervention in improving child behaviour and social competence following pediatric brain injury. *Rehabilitation Psychology*, 51(3), 179-189.

Wade, S., and Oberjohn, K., and Burkhard, A., and Greenberg, I. (2009). Feasibility and preliminary efficacy of a web-based parenting skills program for young children with traumatic brain injury. *The Journal of Head Trauma Rehabilitation*, 24(4), 239-247.

Wantland, D., and Portillo, C., and Holzemer, W., and Slaughter, R., and McGhee, E. (2004). The effectiveness of web-based vs. non-web-based interventions: A meta-analysis of behavioral change outcomes. *Journal of Medical Internet Research*, 6(4), 67-84.

info@whatworks-csc.org.uk
@whatworksCSC
whatworks-csc.org.uk

Alliance for
Useful Evidence

nesta

scie

CASCADE

CARDIFF
UNIVERSITY
PRIFYSGOL
CAERDYᴅ

What
Works
Network