The BePresent universal online intervention for promoting positive parenting skills: a feasibility study

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Abstract

Background: Online parenting programs have great potential to promote positive parent-child relationships as well as to reach and engage parents.

Objective: To assess the universal online BePresent parenting intervention for families with three-year-old children and how it influences the child's behavior and daily life situations assessed by parents. The first aim of the study was to assess the change from baseline to follow-up in child hyperactivity and conduct problems, affective reactivity and daily activities. The second aim was to assess intervention completion rates. The third aim was to evaluate parent satisfaction with the intervention. The fourth aim was to assess all outcomes by comparing those who completed the intervention and those who did not.

Methods: We conducted a single-arm pre-post intervention study. Parents attending their child's three-year health check-up were recruited from children's health clinics. The intervention was an unguided online parenting program consisting of five modules. Self-reported measures were collected at baseline and at an eight-week follow-up. Linear mixed effects models were used to analyze the changes from baseline to follow-up.

Results: Altogether, 752 parents registered, and 515 started the intervention. Of those, 36% (n=183) completed the intervention. Parents reported high satisfaction with the intervention: the majority (68.8–84.9%) were satisfied with various aspects of the program, and 89.9% said the intervention provided information about positive parenting skills. The findings show significant decreases with small effect sizes in parent ratings of child hyperactivity (P=.034; d=0.12) and conduct problems (P=.001; d=0.20) between baseline and the eight-week follow-up. A similar finding was observed in the parent ratings of child irritability (P=<.001; d=0.27) using the Affective Reactivity Index. Parents reported improvement in the daily functioning of their child when it was measured with a questionnaire adapted from the Barkley Home Situations Questionnaire (P=.013; d=0.14).

Conclusions: Universal digital interventions have the potentiality to be implemented widely in community settings to improve knowledge and positive parenting skills. However, there is a need to assess the efficacy of digital universal interventions using randomized controlled designs, and to examine additional ways to increase adherence to universal programs.

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KEYWORDS

online, parenting, parent training, intervention, universal intervention, irritability, conduct problems, hyperactivity, preschool, digital, mental health. BePresent, Strongest Families

INTRODUCTION

Consistent evidence has shown that parent training can lead to improvements in parenting practices and that it promotes the psychosocial development of children [1, 2], which can, in turn, prevent various psychosocial and mental health difficulties [1,3]. Therefore, early preventive parent training programs are needed to enhance parent–child relationships and to promote the healthy development of children [2].

Preventative interventions can be indicated, selective or universal [4]. While indicated and selective interventions are intended for individuals with identified high risk, universal interventions can be offered to the general public or the entire population, typically regardless of individual risk factors [5]. Universal interventions aim to prevent the onset of illness or behavior by reducing exposure of risk factors [6]. In universal parent training, this means improving positive parenting [7], strengthening the relationships and interaction between parents and children [8] and reducing dysfunctional or abusive parenting practices [7]. In comparison to indicated or selective parenting programs, universal ones are typically briefer, targeting ordinary parenting challenges, and are hence aimed at all parents [9].

Universal programs typically have a large reach. They are considered to be less stigmatized since any parent can experience parenting as challenging and thus need support [10]. Moreover, when universal parenting programs are offered in an online format, typical barriers related to face-to-face programs can be avoided, such as logistical and financial barriers as well as the shortage of trained professionals [11]. Attrition rates in online parenting programs typically vary between 30% and 50%, similar to that of face-to-face parenting programs [12], but online programs generally have higher universal uptake [13].

A recent systematic review assessing universal digital parenting programs found small to moderate improvements in parent depression, anxiety, self-efficacy and social support, but found no effects on parent’s stress, satisfaction or parent-child relationship quality [11]. Due to limited data, the review was unable to assess the effects of universal digital parent training on child-specific outcomes [11], pointing out a clear research gap in the field. While the promise of universal parenting programs is

conceptually clear, their impact on public health remains unclear.

This study focuses on the universal online parenting program BePresent. The program is based on a Finnish Strongest Families 11-week targeted parent training program, which efficacy is proved in RCT design until two-year follow-up [14, 15]. Since the RCT study, the Strongest Families program has been implemented nationwide in Finland through child health clinics for parents whose four-year-old children have disruptive behavior problems [16, 17]. The parent training program has also been studied in clinical settings among 3–10-year-old children with disruptive behavior problems [18]. BePresent is a universal digital non-guided intervention aimed at all parents with three-year-old children. Within the Finnish health system, 77% of preschoolers attend annual health check-ups at a child health clinic [19], which makes these visits an ideal setting for the delivery of such a universal intervention.

The first aim of the study was to assess changes in child hyperactivity and conduct problems, affective reactivity and daily activities using a pre-post, single-arm intervention study design. The second aim was to assess intervention completion rates. The third aim was to evaluate parent satisfaction with the intervention. The fourth aim was to assess all outcomes by comparing those who completed the intervention and those who did not.

METHODS

Study design

A single-arm pre-post intervention study involved the recruitment of participants to use the BePresent parenting intervention. Measures were conducted at baseline before starting the intervention and at an eight-week follow-up after filling in the baseline questionnaire.

Ethics approval

All study procedure and human subject research ethics were approved by the Ethical Committee of University of Turku (45/2017, 11 Sep 2017). Study permission was granted by each study site. The participants provided informed consent before enrollment in the study. No form of compensation, monetary or otherwise, was offered to participants.

Intervention

BePresent is a universal, unguided online parenting intervention. The content and structure of the intervention is based on the Finnish Strongest Families targeted parent training program. The universal intervention follows the basics of the targeted program but was shortened to be feasible for all parents with three-year-old children. BePresent focuses on the promotion of healthy parenting practices and developing parenting skills that strengthen the relationship and communication with the child. The topics include reinforcing the child's positive behavior, reducing conflict situations, planning situations in advance, managing daily transitions and being emotionally present with the child. The intervention includes five modules. Detailed information about the key training elements and parental goals of each module are presented in Table 1.

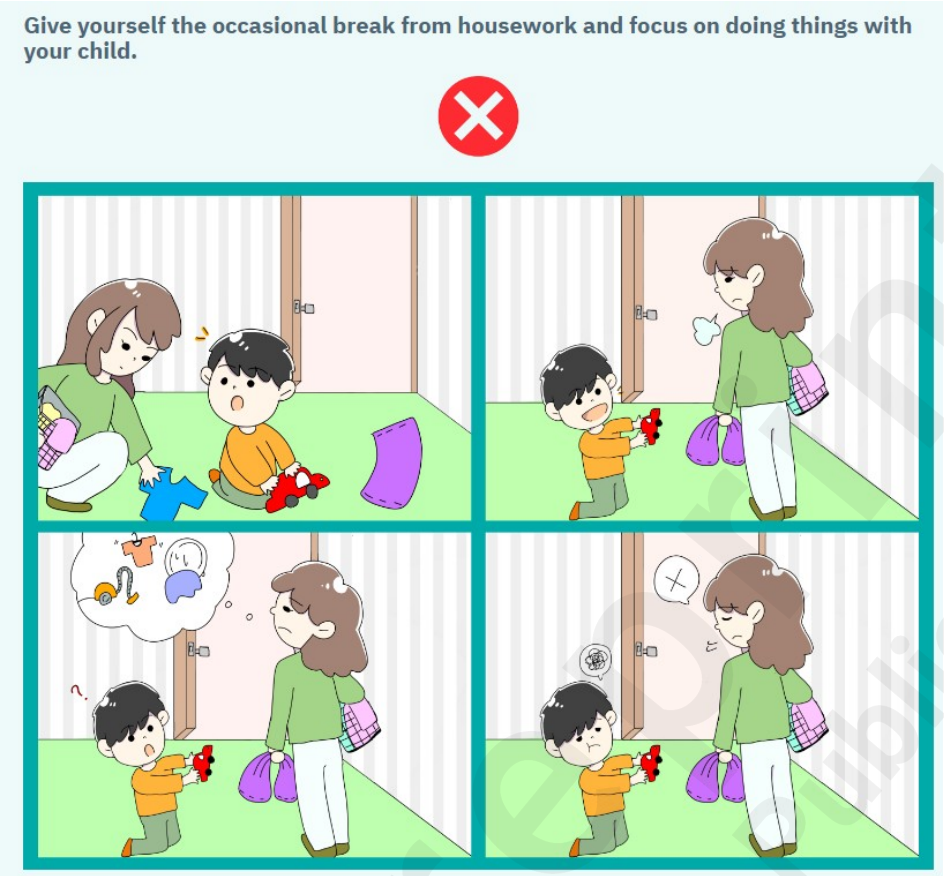
Table 1. Structure and content of the BePresent online parenting program

Module	Key training elements	Parental goals
1) Notice the good in your child	Positive attention Positive feedback Reducing unnecessary reminders	Positive interaction skills with child Active parenting
2) Understand your child	Acting in daily situations Boundaries for the child Self-controlled parenting	Self-regulation with child Staying calm Recognizing negative thoughts Turning thoughts into more positive
3) Prepare your child for changes	Modeling daily transitions Importance of daily routines	Reinforcing good daily routines
4) Plan ahead with your child	Planning together with the child Preparing child for upcoming situations	Involving the child in planning and reinforce good daily routines
5) Be present for your child	Conscious presence with the child Spending time with the child Mindfulness	Being present in the daily moments with the child

Each module includes theory material, example videos, comic strips (Figure 1), video practices and exercises. In the comic strips, the central ideas of the program's example videos are presented. For example, in Module Five the importance of spending time with the child, e.g., by playing, is presented in the video and in the comic strip. In both, first, a negative situation is presented, followed by a positive example of parents using the practiced parenting skills. There are different variations of

individual strategies to choose from to train parenting skills in practice.

To motivate and promote adherence to the program, SMS and email reminders were sent regularly during the program. The participants had eight weeks to complete the intervention. After this, they were asked to fill out the follow-up questionnaire.



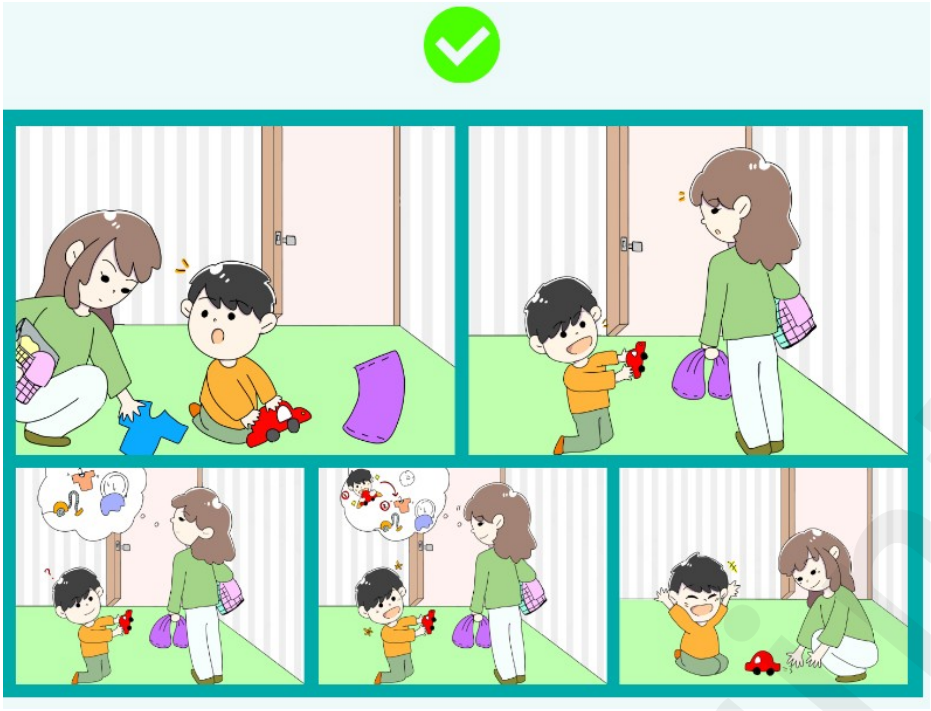


Figure 1. Negative and positive examples of how to be more present with your child in daily situations

Participants and setting

Parents with a three-year-old child participating in annual health check-ups in primary care child health clinics in Finland were considered eligible and were asked to participate. The program was offered in Finnish, Swedish and English; therefore, at least one of the parents had to understand one of those languages for the family to participate. The study setting was the public child health clinics, and the health check-ups offered there are free of charge for the families. Out of the 21 wellbeing services counties in Finland, 14 (67%) were included in this study.

Procedure

There were two paths to attend the BePresent program. First, as a part of the annual health check-up, a public health nurse informed the parents about the program and the study. The information was also provided in written format, including the web address of the program. The parents could sign in to the program's website and complete the registration form (name, email, phone number).

Second, three wellbeing services counties also recruited parents to the BePresent intervention through their website. If the parents fulfilled the inclusion criteria, registration instructions were sent to them.

The parents were asked to register to the intervention one month after the health check-up at the latest, but the registration stayed open until the end of the study. The website included information about the study and the intervention as well as an electronic informed consent form. After giving informed consent, parents were asked to fill in a baseline evaluation. The intervention lasted for eight weeks. After this, parents were asked to complete a follow-up questionnaire; they also received email and text message reminders about the follow-up questionnaire. Intervention completers were defined as parents who completed the first four modules, since those modules included the key elements of the parent training. The fifth theme concentrated on conscious presence with the child and was considered to be an additional skill.

Measures

Demographic background information

To gather demographic background information, participating parents were asked their gender, their child's sex, their family structure and their role in the child's life. The question about family structure referred to who lived with the child, and the response options were: both biological parents, the biological mother/father and their spouse, the biological mother/father alone, adoptive parents, foster parents, parents with the same gender, or some other type of family. In the analysis family types other than with both biological parents were pooled together.

Child hyperactivity and conduct problems

Hyperactivity and conduct problems were assessed with scales based on the content of subscales of the Strengths and Difficulties Questionnaire (SDQ) [20, 21]. The SDQ internalizing subscales were not included in the questionnaire because the aim was to have as brief of a questionnaire as possible. Altogether, the scales measuring conduct problems and hyperactivity consisted of 10 items. Responses were based on the format 0 = not true, 1 = somewhat true, and 2 = certainly true, so the scores for each scale of five items could range from 0 to 10. In the current study, the Cronbach's alpha was 0.77 for hyperactivity and 0.69 for conduct problems.

Child affective reactivity

The Affective Reactivity Index (ARI-P) [22] is a 7-item instrument measuring the irritability of a child. The ARI-P has been proved to be valid for measuring parent-rated irritability among small children [23]. Each item could be responded to using a scale of 0 to 2, indicating the responses of not true, somewhat true or certainly true, respectively. The total score was calculated as the sum of the first 6 items, meaning that the total score range was 0–12. The impairment item was not counted in the total score. The Cronbach's alpha was 0.84.

Daily activities

Daily activities were assessed by asking the parents to rate the impact of the child's behavior during daily transitions, including getting dressed, getting ready for day care, during the evening meal and getting ready for bed. It also covered social interactions, including playing with siblings and other children, traveling situations and being in public places such as the supermarket. The questionnaire was adapted from the Barkley Home Situations Questionnaire, which asks the parent to rate whether the child's behavior causes problems during specified daily routines [22]. The instrument has been previously used in the Finnish Strongest Families parent training program, when it presented adequate reliability with a Cronbach's alpha of 0.64 [17]. In the current study, the Cronbach's alpha was 0.87.

Intervention completion

Completion and non-completion of the intervention for the eight-week period was assessed using the data recorded by the intervention platform. Intervention completers were defined as parents who completed module four, as the first four modules included the key elements of the intervention. Participation in the follow-up measures was also assessed using the data from the intervention platform.

Intervention satisfaction

Participants were asked to rate their satisfaction with the intervention with one item, with the response options being 0=Very dissatisfied, 1=Somewhat dissatisfied, 2=Neither dissatisfied nor satisfied, 3=Somewhat satisfied, and 4=Very satisfied. In the analysis, the options were categorized as Dissatisfied/Neither dissatisfied nor satisfied/Satisfied. The questionnaire included 10 items used to rate how well participants felt the intervention provided support in specific areas of parenting. The response options were 0=Disagree, 1=Somewhat disagree, 2=Neither disagree nor agree, 3=Somewhat agree, and 4=Agree. In the analysis, the responses were categorized as Disagree/Neither disagree nor agree/Agree.

Statistical analysis

Demographic characteristics and satisfaction with the program are presented as numbers and percentages. The difference between groups of completers and non-completers were tested with Pearson's Chi-Squared test. The changes from baseline to the eight-week follow-up in outcome variables were analyzed with linear mixed effect models for those who completed the follow-up questionnaire, with time as the within factor (baseline and eight-week follow-up) and the child’s sex as a covariate. The differences in outcome variables between completers and non-completers at the eight-week follow-up were analysed with linear regression models , adjusting for the baseline measurement of the outcome and child’s sex. A two-sided significance level of 0.05 was used during the statistical testing, and 95% confidence intervals (95% Cl) were calculated for the point estimates. Cohen’s d was calculated as a measure of effect size, to complement the statistical testing. The statistical analyses were carried out with SAS statistical software (SAS 9.4, SAS Institute, Cary, NC, USA).

RESULTS

Detailed information about enrolment, participation per module, and completion rates of the modules are presented in Figure 3. Altogether, 752 parents registered for the BePresent parenting intervention, and 515 started the intervention; 32% registered but did not begin the intervention. Out of the 515 who started the intervention, 202 (36%) answered the follow-up questionnaire, and 183 (36%) completed the intervention.

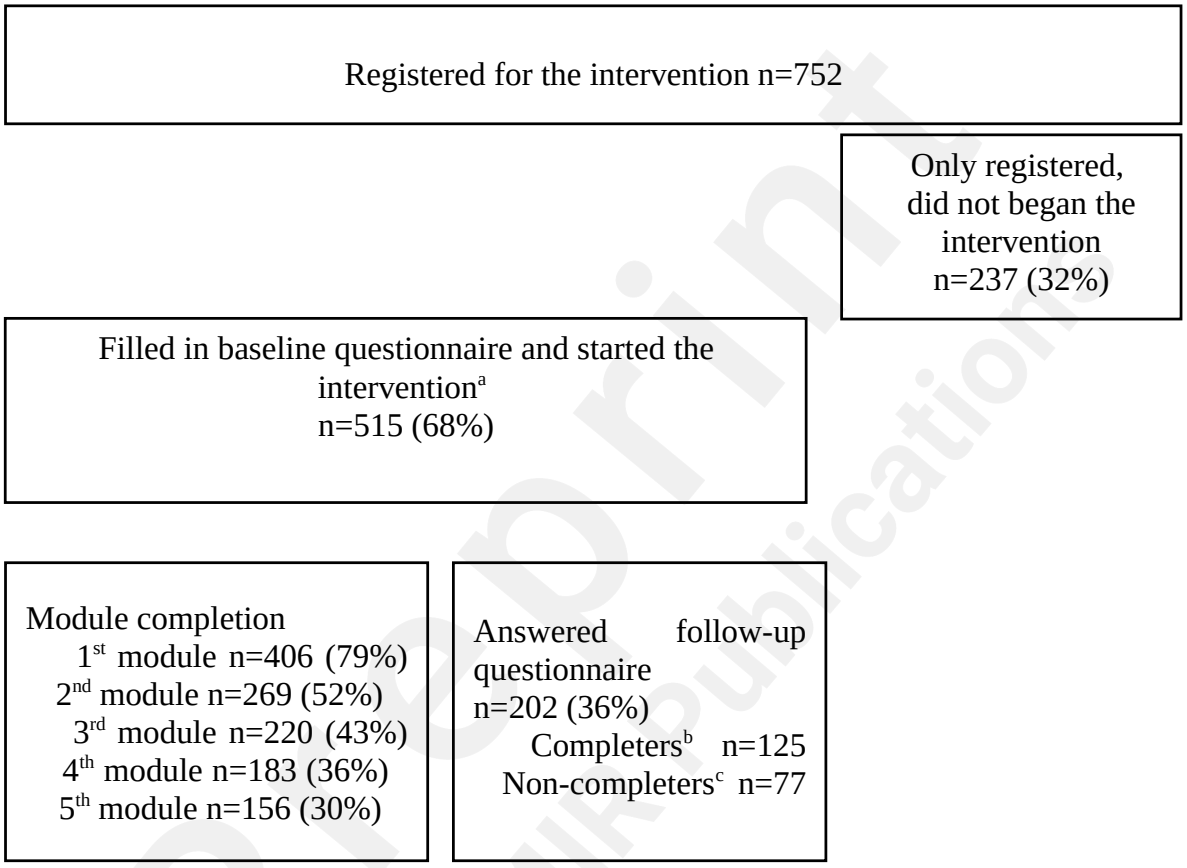


Figure 3. Flow chart of the study participants

[a]Began module one
[b]Completed first four modules
[c]Started the intervention but did not complete the first four modules

Table 2 presents the participants' background characteristics and a comparison between those of completers and non-completers. The majority of participating parents were mothers (90.9%) and most of the children were boys (57.9%). Most families had a structure including both biological parents (92.2%). The percentage of completers who were boys was significantly higher than that of non-completers who were boys (67.8% vs. 52.4%, $P < 0.001$). No other demographic difference was found between intervention completers and non-completers. The average time spent on the intervention website was 8.3 hours among those who completed the intervention and 3.5 hours among non-completers.

Table 2. Background characteristics and intervention usage of the participants and comparison between completers and non-completers

Characteristics	Total (N=515) n (%)	Completers (n=183) n (%)	Non-completers (n=332) n (%)	Completers vs. non-completers *p-value*[b]
Child's sex				**<.001**
Boy	298 (57.9)	124 (67.8)	174 (52.4)	
Girl	217 (42.1)	59 (32.2)	158 (47.6)	
Family structure				.73
Both biological parents	475 (92.2)	170 (92.9)	305 (91.9)	
Other	40 (7.8)	13 (7.1)	27 (8.1)	
Participant's gender[a]				
Female	463 (89.9)	164 (89.6)	299 (90.1)	.81
Male	46 (8.9)	16 (8.7)	30 (9.0)	
Not specified	6 (1.2)	3 (1.6)	3 (0.9)	
Intervention usage, mean (SD)				*p-value*[c]
Number of days completing the intervention (days)	19.1 (22.3)	28.6 (19.6)	11.2 (21.3)	**<.001**
Number of days per completed module (days)	6.4 (12.0)	5.9 (4.1)	6.8 (15.7)	.451
Active use of website per completed module (hours)	2.1 (1.6)	1.7 (1.2)	2.4 (1.8)	**<.001**
Active total use of website (hours)	5.7 (4.9)	8.3 (5.7)	3.5 (2.8)	**<.001**

[a]Gender of the parent who registered to the program and responded to the questionnaires
[b]Pearson's chi-square
[c] Student's t-test

Behavioral outcomes

Table 3 presents a sample including completers and non-completers, showing the changes in child behavior and daily situations from baseline to the follow-up measurement for those who completed the measures at both time points (n=202). There were significant improvements from baseline to the eight-week follow-up in hyperactivity (*P*=.034; d=0.12) and conduct problems (*P*=.001; d=0.20). Child affective reactivity also improved significantly (*P*<.001; d=0.27) from baseline to follow-up. In daily situations, improvements were found in total scores (*P*=.013; d=0.14) as well as in transition

(*P*<.001; d=0.26) and eating situations (*P*=.002; d=0.20).

Table 3. Comparing hyperactivity and conduct problems, affective reactivity and daily situations mean scores between baseline and the eight-week follow-up among those who completed the baseline and the follow-up questionnaire

Total n=202[b]	**Baseline**	**Follow-up**	**Change from baseline to eight-week follow-up**		
Behavioral outcome	Mean[c] (SE)	Mean[c] (SE)	Mean[c] (95% CI)	*p-value*	Cohen´s d
Hyperactivity[a]	3.9 (0.2)	3.7 (0.2)	0.3 (0.0-0.5)	**.034**	0.12
Conduct problems[a]	3.6 (0.1)	3.2 (0.1)	0.4 (0.2-0.6)	**.001**	0.20
Affective Reactivity[a]					
Total	4.2 (0.2)	3.4 (0.2)	0.8 (0.5-1.1)	**<.001**	0.27
Daily situations[a]					
Total score	35.3 (0.7)	34.0 (0.7)	1.3 (0.3-2.3)	**.013**	0.14
Transition situations	12.7 (0.3)	11.7 (0.3)	1.0 (0.5-1.5)	**<.001**	0.26
Eating situations	7.2 (0.2)	6.6 (0.2)	0.5 (0.2-0.8)	**.002**	0.20
Situations outside home	7.5 (0.2)	7.6 (0.2)	-0.1 (-0.4-0.2)	.671	-0.03
Situations inside home	7.9 (0.2)	8.1 (0.2)	-0.2 (-0.5-0.2)	.421	-0.05

[a]Adjusted for child's gender

[b]Includes both intervention completers and non-completers

[c]Model based on least squares means

While Table 3 includes results for completers and non-completers combined, Table 4 presents a comparison between the two groups and more a more detailed description of changes among completers and among non-completers from baseline to follow-up. As presented in Table 4, affective reactivity improved more among non-completers than among completers (P=.033; d=0.30).

Table 4. Comparing changes in hyperactivity, conduct problems, affective reactivity and daily situations mean scores at baseline and follow-up among completers and non-completers

Behavioral outcome	**Completers (n=125)**				**Non-completers (n=77)**				**Completers vs. non-completers**		
	Baseline Mean[c] (SE)	Follow-up Mean[c] (SE)	Change[a] Mean[c] (95% CI)	*p-value*[c]	Baseline Mean[c] (SE)	Follow-up Mean[c] (SE)	Change[a] Mean[c] (95% CI)	*p-value*[c]	Mean[b,c] (95% CI)	*p-value*	Cohen´s d
Hyperactivity	4.1 (0.2)	3.8 (0.2)	0.3 (0.0-0.7)	**.035**	3.6 (0.3)	3.4 (0.3)	0.2 (-0.3-0.6)	.440	0.0 (-0.5-0.5)	.964	0.25
Conduct problems	3.7 (0.2)	3.3 (0.2)	0.4 (0.1-0.7)	**.006**	3.4 (0.2)	3.0 (0.2)	0.4 (-0.0-0.7)	.077	0.0 (-0.5-0.5)	.976	0.17
Affective Reactivity											
Total	4.4 (0.3)	3.7 (0.3)	0.6 (0.2-1.1)	**.006**	4.0 (0.3)	3.0 (0.2)	1.0 (0.6-1.4)	**<.001**	0.6 (0.0-1.1)	**.033**	0.30
Daily situations											
Total score	35.6 (0.9)	34.0 (0.9)	1.5 (0.3-2.8)	**.013**	34.5 (1.0)	33.7 (1.0)	0.8 (-1.1-2.7)	.390	-0.2 (-2.2-1.9)	.883	0.12
Transition situations	13.1 (0.4)	12.0 (0.4)	1.1 (0.5-1.7)	**<.001**	11.9 (0.4)	11.1 (0.4)	0.8 (-0.0-1.6)	.055	0.2 (-0.7-1.1)	.633	0.28
Eating situations	7.1 (0.3)	6.7 (0.3)	0.4 (0.0-0.8)	**.032**	7.1 (0.3)	6.5 (0.3)	0.7 (0.1-1.2)	**.019**	0.3 (-0.3-0.9)	.261	0.16
Situations outside home	7.4 (0.2)	7.4 (0.2)	0.0 (-0.4-0.4)	1.000	7.6 (0.3)	7.8 (0.3)	-0.2 (-0.8-0.4)	.510	-0.2 (-0.8-0.4)	.536	-0.08
Situations inside home	8.0 (0.3)	8.0 (0.3)	0.0 (-0.4-0-4)	.971	7.9 (0.3)	8.3 (0.4)	-0.5 (-1.2-0.3)	.207	-0.3 (-1.0-0.4)	.415	-0.02

[a]Change from baseline to follow-up

[b]Adjusted with corresponding baseline and child's sex

[c]Model based least squares means

Intervention satisfaction Parents reported high levels of satisfaction with the program (see Table 5). Over 80% of all the parents indicated that they would recommend the program to others and agreed that the program provided information about positive parenting skills as well as ways to notice the good in their child. Satisfaction was significantly higher among those who completed the program.

Table 5. Program satisfaction and acknowledged support in specific areas of parenting and comparison between completers and non-completers

Satisfaction-related factors[a]	Total n=186 n (%)	Completers (n=123) n (%)	Non-completers (n=63) n (%)	Completers vs. non-completers *p-value*
Satisfaction				
The program met my expectations				**.001**
Agree	142 (76.3)	104 (84.6)	38 (60.3)	
Neutral	27 (14.5)	13 (10.0)	16 (25.4)	
Disagree	17 (9.1)	11 (8.9)	9 (14.3)	
The program suited my needs				**.005**
Agree	141 (75.8)	102 (82.9)	39 (61.9)	
Neutral	21 (11.3)	11 (8.9)	10 (15.9)	
Disagree	24 (12.9)	10 (8.1)	14 (22.2)	
I could recommend the program to others				**<.001**
Agree	158 (84.9)	114 (92.7)	44 (69.8)	
Neutral	20 (10.8)	6 (4.9)	14 (22.2)	
Disagree	8 (4.3)	3 (2.4)	5 (7.9)	
I could join the program again				.098
Agree	147 (79.0)	102 (82.9)	45 (71.4)	
Neutral	21 (11.3)	13 (10.6)	8 (12.7)	
Disagree	18 (9.7)	8 (6.5)	10 (15.9)	
How satisfied you have been with the program				**.003**
Satisfied	128 (68.8)	94 (76.4)	34 (54.0)	
Neutral	37 (19.9)	21 (17.1)	13 (23.2)	
Dissatisfied	21 (11.3)	8 (6.5)	16 (25.4)	
Support in Specific Areas				
The program provided information about positive parenting skills				**<.001**
Agree	167 (89.8)	119 (96.7)	48 (76.2)	
Neutral	12 (6.5)	1 (0.8)	11 (17.5)	
Disagree	7 (3.8)	3 (2.4)	4 (6.3)	
The program offered ways to notice the good in my child				**<.001**
Agree	164 (88.2)	116 (94.3)	48 (76.2)	
Neutral	13 (7.0)	3 (2.4)	10 (15.9)	
Disagree	9 (4.8)	4 (3.3)	5 (7.9)	
The program gave me confidence in my ability to be a parent				**.002**
Agree	146 (78.5)	106 (86.2)	40 (63.5)	
Neutral	27 (14.5)	12 (9.8)	15 (23.8)	
Disagree	13 (7.0)	5 (4.1)	8 (12.7)	
The program offered ways to manage everyday situations				**<.001**
Agree	144 (77.4)	106 (86.2)	38 (60.3)	
Neutral	26 (14.0)	12 (9.2)	16 (25.4)	
Disagree	16 (8.6)	10 (8.1)	9 (14.3)	
The program offered ways to manage transitions				**<.001**
Agree	134 (72.0)	99 (80.5)	35 (55.6)	
Neutral	34 (18.3)	14 (11.4)	20 (31.7)	
Disagree	18 (9.7)	10 (8.1)	8 (12.7)	
The program offered ways to be present with my child				**.002**
Agree	146 (78.5)	106 (86.2)	40 (63.5)	
Neutral	32 (17.2)	16 (12.3)	19 (30.2)	
Disagree	8 (4.3)	4 (3.3)	4 (6.3)	

[a]Disagree combines strongly disagree and disagree. Agree combines agree and strongly agree.

DISCUSSION

In this study, we examined the use and feasibility of a universal unguided online parenting intervention and whether it improves child behavior and daily activities. Hyperactivity, conduct problems, affective reactivity and daily activities improved from baseline to follow-up, and parents reported a high level of satisfaction with the intervention and showed rather good adherence to it. Out of all the parents who started using the intervention, 36% (n=183) completed it.

The outcomes were also assessed by comparing those who completed the intervention and those who did not complete it, and we found that child irritability improved among the completers and the non-completers. This finding is important; interventions targeting small children irritability are central, as irritability in childhood predicts mental health problems, functional impairment and outpatient treatment use in later life [25]. However, at the moment the number of studies on the topic is limited, especially studies on parent training for decreasing irritability [26]. This study also found decreases in child hyperactivity and conduct problems with small effect sizes.

Although effect sizes in universal programs are typically smaller than in targeted programs [27], our findings are encouraging and may reflect that universal online interventions can improve child-specific mental health outcomes. In addition, online parenting programs are effective for several parenting outcomes. A meta-analysis of parenting programs by Spencer et al. [28] found no significant differences when comparing programs that included clinical support to programs that only contained online components. Moreover, the parents reported high satisfaction with the interventions and felt that the interventions gave them confidence in their parenting capabilities, which is in line with previous studies in this field. Thus, considering the limited resources in society, online parenting interventions may offer a wise way of supporting parenting.

Of the parents who started using the intervention, 36% completed it, forming an attrition rate of 64%. Previous studies on universal unguided parenting programs have reported similar attrition rates. For example, in the Australian online self-directed parenting program ParentWorks, which included six sequenced modules, Dadds et al. [13] found 68% attrition up until module four of the program. ParentWorks was free-of-charge, and parents were recruited through a national media campaign. In another example, from the US, which recruited parents from a well-child visit in primary care, Breitenstein et al. [29] assessed digitally delivered the self-administered parent training intervention ezParent and found that, out of program’s six modules, 33% of parents completed at least four modules.

Main reasons for discontinuing use of a universal parenting program include the parent being too busy or finding the program unhelpful [30]. In fact, a typical disadvantage of universal programs is their tendency to lose sufficient focus on the individualized needs of users, causing a modest matching of program goals with individual needs [31]. In our universal intervention, simple personalized and customized strategies were used, such as the possibility to choose individual strategies to complete the exercises. However, the main parts of the intervention were the same for everyone. Parenting programs that address families' actual needs facilitate program adherence [32], and personalized approaches could extend the program completion for those who currently do not benefit from such programs [33]. For example, in a recent pilot trial, Baumel et al. [34] found that the program completion of an unguided digital parent training program aimed at treating child disruptive behaviors increased from 28% in a standard version (12/43 of participating parents) to 69% (31/45 of participating parents) in an enhanced version, through the use of features such as intervention tailoring, timely reminders, automated monitoring and feedback. BePresent had sequential modules, meaning that the modules were in a defined order and the order was the same for everyone. Offering programs in which a parent could choose the modules they feel they need, or use technology to personalize the modules, could address some of the issues related to high attrition rates. Universal parenting programs could benefit from evolving technology to provide more personalized approaches. For example, it would be worth examining the possibility to personalize universal parenting programs by suggesting different modules and different program lengths based on parent reports on their needs and skills they already possess.

The current study and previous studies about universal parenting programs have shown short-term improvements in individual-level outcomes, but it is important to notice that universal interventions can also foster changes in public health at the population level, too. This means focusing on prevention at the population level, for example, by increasing knowledge or changing attitudes [35]. From a parent training perspective, universal programs can aim to prevent problems in parenting and in child behavior, and the results can be seen in the number of those who eventually seek treatment. However, when aiming for population-level changes, the reach of the intervention must be comprehensive enough. Universal interventions typically have low penetration rates, mainly because it is a family's own responsibility to seek out the intervention [31]. Our parent training program was offered when families attended a free-of-charge annual health check-up—something that all families in Finland are invited to participate in. Using this kind of setting, participation in the intervention was designed to be as easy as possible. Reach and easiness to participate should be carefully considered when implementing universal parenting programs. In addition, it would be important to also assess population-level effects of universal parenting programs rather than focusing only on individual-level outcomes [35].

Limitations

The study has several limitations to consider. First, this was not a randomized controlled study; therefore, effectiveness and efficacy could not be assessed. Second, it was not possible for us to assess how many parents were offered the chance to participate in the program. The child health clinics were instructed to offer the program to all parents who fulfilled the inclusion criteria. Third, because this was an acceptability study, we were not aiming to reach the population level, so the reach of this study was limited. However, the program was studied in a wide geographical area, covering 67% of wellbeing services counties in Finland, making the study geographically highly representative. Fourth, the effect sizes seen in this study are low, reaching a Cohen's d of 0.27, at the highest. The effect sizes in previous universal online parenting interventions have been small to moderate [11]. Effect sizes of parent training trials based on clinical samples have typically been higher, including large effects [36]. One reason for the low effect size in our study was that the level of problems among the sample, taken from the general population, was less severe than that of clinical samples, indicating that there was less room for improvement. Fifth, the study did not ask participants their reasons for not completing the intervention; therefore, this could not be factored and take into account into our analysis.

Conclusions

The universal online parenting program BePresent may promote improvements in behavior and the daily lives of children. The completion rate was similar to that of other online unguided universal parenting programs. In addition, parents were satisfied with the program and perceived that it supported their positive parenting skills. This type of program is low in cost, requires minimal resources and can produce several benefits. Therefore, programs like this have the potentiality to be implemented widely in community settings to improve knowledge and positive parenting skills. However, there is a need to assess the impact of personalizing digital universal interventions to increase program adherence, and to assess the efficacy of such programs in randomized controlled designs.

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Supplementary Files

Figures

Negative and positive examples of how to be more present with your child in daily situations.

Flow chart of the study participants.