

A pilot evaluation of an advocacy programme on knowledge, empowerment, family–school partnership and parent well-being

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Abstract

Background Internationally, it has been recognised that parents need to advocate for their children with disabilities to receive services. However, many parents find advocacy difficult because of systemic and logistical barriers. As such, parents of children with disabilities may seek a special education advocate to help them understand their child's rights and secure services. Yet little research has been conducted about programmes to develop special education advocates. **Methods** In this study, we conducted a comparison study to determine the association of an advocacy programme (i.e. the Volunteer Advocacy Project) on a primary outcome (i.e. special education knowledge) and other outcomes (i.e. family–school partnership, empowerment and parent well-being). Specifically, in 2017, 34 participants, all mothers of children with disabilities, were recruited from disability organisations in the USA. Seventeen mothers participated in the intervention group (i.e. the advocacy training), while 17 mothers participated in the wait list control group. The Volunteer Advocacy Project is a 36 hr advocacy training for individuals to gain instrumental and affective knowledge to advocate for their own children with disabilities and for other families. All

participants completed a pre-survey and post-survey; only intervention group participants completed a 6-month follow-up survey.

Results Compared with 17 wait list control group participants, the 17 intervention group participants demonstrated improvements in special education knowledge, $P = 0.002$, $\eta^2 = 0.32$, and self-mastery, $P = 0.04$, $\eta^2 = 0.15$, and decreases in the quality of family–school partnerships, $P = 0.002$, $\eta^2 = 0.32$. At the follow-up survey, intervention group participants demonstrated increases in empowerment, $P = 0.04$, $\eta^2 = 0.29$, and special education knowledge, $P = 0.02$, $\eta^2 = 0.38$.

Conclusions Implications for research including the need for a randomised controlled trial are discussed; also, practitioners need to evaluate advocacy training programmes regarding their effectiveness.

Keywords empowerment, family, school, services

Introduction

Internationally, there is a need for parents to advocate for educational services for their offspring with intellectual or developmental disabilities (IDD) (Cohen 2013). Advocacy refers to acting on behalf of an individual to ensure their needs are met (Burke *et al.* 2016). Unfortunately, many parents struggle to advocate for their children because of systemic barriers. Such barriers include feelings of

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intimidation (Love *et al.* 2017) and inaccessible (due to the college reading level) procedural safeguards (Dinnesen & Kroeger 2018). In response to the barriers to advocacy, special education advocacy trainings are becoming more common (Burke 2013). Such trainings often have purpose to educate individuals to advocate for their own children with IDD and for other families of children with IDD. However, little data have been collected to determine the impact of advocacy trainings. Using a comparison study, the goal of this pilot study was to determine the effect of an advocacy training programme among parents of children with IDD. Specifically, we aimed to examine the association of an advocacy training programme with special education knowledge (primary outcome) and family–school partnerships, empowerment, self-mastery, optimism and distress (other outcomes).

Perhaps the foremost goal of advocacy trainings is to increase special education knowledge (i.e. information about services, Burke 2013), empowerment (i.e. the capacity to act on one's behalf, Paczkowski & Baker 2007) and self-mastery (i.e. one's sense of efficacy in carrying out goals, Pearlin & Schooler 1978). For example, the Volunteer Advocacy Project (VAP) is a 36 hr training programme for individuals to become special education advocates for families of children with IDD. In a single-group, pre-design/post-design, VAP participants demonstrated significant increases in special education knowledge and advocacy (Burke 2013). In later iterations of the VAP using a wait list control group design among parents of children with IDD, participants demonstrated significant increases in special education knowledge and empowerment (Burke, Magaña *et al.* 2016b; Taylor *et al.* 2017). These latter studies were iterations of the VAP focusing on Latino families of children with autism spectrum disorder (ASD) and families of adults with ASD, respectively. Further, self-mastery is also a goal of advocacy trainings. Typically viewed as a dispositional trait (Paczowski & Baker 2007), self-mastery may enable advocates to disentangle the challenges a family faces with the school to identify the most important problems. Self-mastery may enable a parent to feel responsible to advocate for other families. To date, no studies have examined the impact of advocacy training on self-mastery.

It also seems crucial to determine the impact of advocacy training on family–school partnerships.

Often, participants in advocacy trainings are parents of children with IDD (Jamison *et al.* 2017). Given that the advocacy training programme may also impact the relationships of the parent participants with their schools (Burke & Goldman 2018), the impact of training on family–school partnerships is important. In a cross-sectional, descriptive study, there was a negative correlation between the parent advocacy and the quality of the family–school partnership among parents of children with IDD (Burke & Hodapp 2016). Indeed, when families advocate for school services, their partnership with the school may weaken (Fish 2008). Thus, although strong family–school partnerships lead to improved student outcomes (Newman 2005), an advocacy training may weaken family–school partnerships.

Finally, it seems crucial to determine the association of an advocacy training with parent well-being. Parents of children with (versus without) IDD report significantly greater stress (Patton *et al.* 2018). Further, increased parent stress relates to increased child maladaptive behaviours (Neece *et al.* 2012) and worse physical health in parents (McEwen 1998). Notably, parent–school relations may contribute to parent stress. In a national sample of parents of children with IDD, Burke & Hodapp (2014) found a positive, non-linear correlation between maternal stress and advocacy. Notably, other parent trainings (for a review, see Singer *et al.* 2006) have been found to decrease parent stress. However, it is unclear how parent advocacy trainings impact parent stress or other constructs of well-being. Indeed, when parents have more knowledge about their child's disability, they are more likely to access services (Kyzar *et al.* 2016). However, despite this knowledge, parents continually report challenges in accessing services and, accordingly, great stress (Ryan & Quinlan 2017). When parents feel more empowered, they respond to challenges (e.g. advocacy) with optimism leading to better child outcomes (Jones & Prinz 2005). Given that greater parent optimism may lead to improvements in targeted behaviours (e.g. advocacy activities), it is important to determine whether advocacy training impacts optimism. Similar to self-mastery, optimism is typically considered a disposition (e.g. Baker *et al.* 2005). However, in a single group, intervention study of parents of children with health impairments, Huffman *et al.* (2015) found that parent training

can improve optimism leading to improved health behaviours.

Despite the global need for parent advocacy (Cohen 2013), little research has been conducted about advocacy trainings examining all the goals that self-advocacy purports to benefit (e.g. well-being and family–school partnerships). Further, most of such research has lacked a control group (e.g. Burke *et al.* 2013; Magaña *et al.* 2015) and lacked maintenance data to determine the ongoing effect of advocacy trainings. We conducted a comparison, pilot study to determine the association of the VAP on various outcomes with respect to a parent's ability to advocate for their own child. The objectives of this study were twofold: to determine the association of the advocacy programme on specific outcomes (i.e. family–school partnerships, special education knowledge, empowerment and parent well-being) and to examine the maintenance of outcomes among the intervention group participants. Specifically, we had two research questions: (1) did the intervention (versus wait list control) group demonstrate change with respect to special education knowledge, family–school partnerships, self-mastery, stress, optimism and empowerment? And (2) within the intervention group, was there change over time with respect to special education knowledge, family–school partnerships, self-mastery, stress, optimism and empowerment? We hypothesised that the intervention (versus wait list control) group would demonstrate (1) increases in knowledge, self-mastery, stress, optimism and empowerment; (2) decreases in family–school partnerships; and (3) that such changes would persist over time.

Method

Design and procedures

This pilot study was approved by the University Institutional Review Board. This study was conducted in the USA. As a comparison study, this study included an intervention group and a wait list control group. The objectives of this pilot study were twofold: to determine the association of the advocacy programme on specific outcomes and to examine the maintenance of outcomes among the intervention group participants. Specifically, participants who wanted to participate in the advocacy programme

signed up to complete the training in either the fall or the spring. Participants who completed the programme in the fall and met the inclusionary criteria were the intervention group participants; participants who completed the training in the spring were the wait list control group participants. Only the intervention group participants were asked to complete a follow-up survey 6 months after they completed the VAP. The pre-survey, post-survey and follow-up surveys included the same measures with the identical language.

Participants

Overall, 111 individuals were recruited and interested in participating in the advocacy programme. For this study, the inclusionary criteria were to be (1) the parent of a child with a disability between the ages of 3–22; (2) willing to complete a 36 hr advocacy programme; and (3) willing to complete all research activities. Participants were excluded from the study if they were not the parent of a school-aged child with a disability or if they were not willing to complete the VAP. Regarding the former, in the USA, school services are the same for children aged 3–22. As such, the VAP targets services for this entire age range. However, we controlled for age in all analyses. Of the 111 individuals, 71 were parents of individuals with IDD; the remaining participants were professionals (e.g. teachers) who were able to participate in the programme but were excluded from the study. Of the 71 parents, 18 were excluded as their children were not receiving school services. Of the 53 participants, 15 were excluded as they had scores of 10 or below on the defensive responding scale of the Parenting Stress Index. A score of 10 or less suggests that the participants were responding in a defensive manner (Abidin 1995). Of the 38 participants, two participants from the wait list control group and two participants from the intervention group were lost to attrition (see Table 1).

We had 17 participants in the intervention group and 17 participants in the wait list control group. All participants were mothers of children with IDD. Participants had a wide range of educational backgrounds and household incomes; however, most participants were highly educated with middle-to-high incomes. The majority of participants were Caucasian (specifically, 70.6% were

Table 1 Participant demographics

	Intervention (n = 17)	Control (n = 17)	χ^2	P
Respondent gender: female	100% (17)	100% (17)	—	—
Education			2.52	0.47
High-school degree	5.9% (1)	5.9% (1)		
Some college	23.5% (4)	11.8% (2)		
4-year degree	52.9% (9)	41.2% (7)		
Graduate degree	17.6% (3)	41.2% (7)		
Income			3.05	0.69
Less than \$15 000	—	5.9% (1)		
\$15 000–29 999	5.9% (1)	11.8% (2)		
\$30 000–49 999	11.8% (2)	17.6% (3)		
\$50 000–69 999	11.8% (2)	17.6% (3)		
\$70 000–99 999	17.6% (3)	17.6% (3)		
Over \$100 000	52.9% (10)	29.4% (5)		
Ethnicity			4.13	0.25
Caucasian	70.6% (12)	82.4% (14)		
Hispanic	—	11.8% (2)		
African American	17.6% (3)	5.9% (1)		
Asian	5.9% (1)	—		
Marital status			4.53	0.10
Married	100% (17)	76.5% (13)		
Never married	—	17.6% (3)		
Divorced	—	5.9% (1)		
Child gender: male	52.9% (9)	70.6% (12)	0.73	0.39
Child's type of disability [†]				
Autism spectrum disorder	58.8% (10)	47.1% (8)	0.47	0.49
Intellectual disability	17.6% (3)	29.4% (5)	0.83	0.36
Down syndrome	11.8% (2)	23.5% (4)	0.81	0.37
Learning disability	23.5% (4)	23.5% (4)	—	—

[†]Numbers exceed 100% as participants could mark multiple types of disabilities.

Caucasian in the intervention group; 82.4% were Caucasian in the wait list control group). Most offspring were male. In both groups, the most frequent type of disability of the offspring was ASD. There were no parent or child demographic differences between the groups. For the intervention group, the attendance rate was 90.20% with no participant missing more than two sessions.

Of the 17 participants in the intervention group, 11 participants completed the 6-month follow-up survey (response rate = 64.71%). We compared the demographic characteristics of the non-responders and responders. There were no differences (Table 2).

Recruitment

For 3 weeks, participants were recruited via recruitment emails and flyers listing the inclusionary

criteria for the study. Specifically, flyers and emails were distributed to 300 local and statewide disability agencies, parent groups and Parent Training and Information Centres. Such agencies distributed the study information to their constituencies. Interested participants complete the application and pre-survey online via SurveyMonkey. Participants could also complete a paper-and-pencil copy of the survey if requested.

Data collection

Both participant groups completed the pre-survey in summer, 2016. Specifically, participants had 3 weeks to complete the pre-survey (i.e. baseline) via an online survey platform. The intervention group completed the advocacy training in fall, 2016. Within 1 week of the intervention group completing the advocacy

Table 2 Difference between responders and non-responders at the follow-up survey

	Did not complete follow-up (n = 6)	Completed follow-up (n = 11)	χ^2	P
Respondent gender: female	100% (6)	100% (11)	—	—
Education			3.69	0.29
High-school degree	16.7% (1)	—		
Some college	16.7% (1)	27.3% (3)		
4-year degree	66.7% (4)	45.5% (5)		
Graduate degree	—	27.3% (3)		
Income			2.25	0.69
\$15 000–29 999	—	9.0% (1)		
\$30 000–49 999	16.7% (1)	9.0% (1)		
\$50 000–69 999	16.7% (1)	18.2% (2)		
\$70 000–99 999	—	18.2% (2)		
Over \$100 000	66.7% (4)	45.5% (5)		
Ethnicity			0.71	0.70
Caucasian	83.3% (5)	72.7% (8)		
African American	16.7% (1)	18.2% (2)		
Asian	—	9.0% (1)		
Marital status: married	100% (6)	100% (11)	—	—
Child gender: male	50% (3)	45.5% (5)	2.05	0.15

training, all participants then completed the post-survey via hard copy or the online survey platform. In spring, 2017, the wait list control group completed the advocacy training. The intervention group participants completed the follow-up survey 6 months after completing the advocacy training. Because of the comparison group completing the VAP in the spring of 2017, there was insufficient time for them to complete the follow-up survey before beginning the VAP.

Advocacy training

The intervention was the VAP. The purpose of the VAP is to educate and empower individuals to become special education advocates for their own children with disabilities (if they have children with disabilities) and for other families. A 36 hr training, the VAP includes 12 weekly, 3 hr sessions. VAP content relates to special education policy and non-adversarial advocacy including evaluations, extended school year services, discipline and behaviour, least restrictive environment, research-based instruction, assistive technology, individualised education programmes, transition, advocacy skills, legislative advocacy and dispute resolution. For example, with respect to non-adversarial advocacy, in the training, participants have

specific sessions about advocating for other families; also, there are cross-cutting exercises (e.g. exercises that reflect content and advocacy for other families) about how to support other families in each session. Each VAP session is delivered by a content expert, who was experienced in group facilitation. Such experts included parents of children with IDD and staff at agencies that support individuals with IDD. The VAP content includes didactic information, role plays and case study activities for the participants. At the conclusion of the VAP, participants are expected to advocate, *pro bono*, for four families of children with IDD. Notably, the VAP was offered in person and via videoconferencing; in this study, nine participants attended the in-person site, while eight participants participated at a distance site via videoconferencing. Previous studies indicate that the VAP has been effective for in-person and videoconferencing participants (Burke *et al.* 2016). For more information about the VAP, see Burke (2013).

Treatment fidelity

At each session, a research assistant completed a treatment fidelity checklist. The treatment fidelity checklist included 10 items per topic. For example, items included the presentation of key concepts, the

completion of case study activities and the facilitation of dialogue with the participants. If an item was covered by the facilitator, the research assistant marked that there was treatment fidelity for that item. Another research assistant also conducted treatment fidelity for 66.68% ($n = 8$) of the sessions.

Outcomes

Special education knowledge scale

Composed of 10 multiple choice items about special education policy, this scale has strong reliability with parents of children with IDD (e.g. the Kuder–Richardson coefficient was 0.72, Burke, Magaña, *et al.* 2016b). For example, participants were asked: ‘What are the three reasons for a unilateral 45 day removal?’ Participants had four response options, only one of which was correct. In this study, the Kuder–Richardson was 0.68 at the pre-surveys and post-surveys.

Family–Professional Partnership Scale

Composed of two sub-scales with nine items apiece, the Family–Professional Partnership Scale (FPPS) has 18 items relating to a child-focused relationship sub-scale and a family-focused relationship sub-scale (Summers *et al.* 2007). For example, participants were asked ‘To what extent does the school let you know about the good things your child does?’ Previous studies indicate high reliability for both sub-scales among parents of children with IDD (α s = 0.93 and 0.90, Summers *et al.* 2007). For the child-focused relationship sub-scale, the α s were high at pre-survey and post-survey (0.94 and 0.93, respectively). For the family-focused relationship sub-scale, the α s were also high (0.96 and 0.95 at pre-survey and post-survey, respectively).

Family Empowerment Scale

The Family Empowerment Scale (FES) includes 34 items relating to three sub-scales: family, community and services (Koren *et al.* 1992). For this study, only the services sub-scale was used; the services sub-scale has 12 items. For example, participants were asked the extent they agreed with this statement: ‘I know what services my child needs’. Previous studies have

indicated high reliability of the FES with parents of children with IDD (α s ranged from 0.85 to 0.93, Singh *et al.* 1995). In this study, the α was 0.82 at the pre-survey and 0.83 at the post-survey.

The Life Orientation Test – Revised

The Life Orientation Test – Revised is a 10-item scale that measures optimism (Scheier *et al.* 1994). For example, participants responded to ‘I don’t get upset too easily’. Previous studies have indicated high reliability of the Life Orientation Test – Revised with parents of children with IDD (e.g. $\alpha = 0.80$, Scheier *et al.* 1994). In this study, α was 0.68 at the pre-survey and 0.84 at the post-survey.

Self-mastery scale

With seven items about control over life events (Pearlin & Schooler 1978), this scale has strong reliability among parents of children with IDD ($\alpha = 0.75$, Paczkowski & Baker 2007). A sample item is ‘What happens to me in the future mostly depends on me’. In this study, at the pre-survey, the α was 0.69; at the post-survey, the α was 0.68.

Parenting stress

Parent stress was measured by the Parenting Stress Index – Short Form (PSI-SF) (Abidin 1995), a 36-item instrument used to assess the effect that parenting has on stress. The PSI-SF yields three sub-scales: parental distress, parent–child dysfunctional interaction and difficult child. The responses are then totalled for each sub-domain with larger scores indicating increased stress. The PSI-SF also has high reliability (Abidin 1995). In this study, only the parental distress sub-scale was used as it measures parent stress independent of child behaviour. For example, a parental distress item was ‘I often have the feeling that I cannot handle things very well’. For the parental distress sub-scale, the α was 0.85 at pre-survey and 0.87 at post-survey.

Sample size justification

Prior to conducting this pilot study, we conducted a power analysis. Using traditional assumptions

(power = 80%, $P < 0.05$, two tailed), we conducted a power analysis. We solved for the minimum detectable effect size for 80% power resulting in needing a 0.45 or larger effect size for the primary outcome (i.e. post-survey special education knowledge). On the basis of previous studies about the VAP (Goldman *et al.* 2017), common practice and barring attrition, we expected this study to be adequately powered to detect differences between groups. Accordingly, it was determined that a sample size of 20 participants per group would be necessary. Thus, this pilot study was underpowered. After collecting data, we conducted preliminary analyses. We examined the distributions of the data and found them to be normally distributed. Also, with respect to the pre-survey and post-survey, we had no missing data. At the follow-up survey, we had missing data (i.e. a 65% response rate). We compared responders with non-responders for the follow-up survey and found no differences; all non-responders were excluded from the follow-up analyses. We compared the intervention and control group participants with respect to demographic characteristics (Table 1). We found no differences.

Analyses

For our primary analyses, we conducted paired t -tests within groups and a multivariate analysis of covariance (MANCOVA). We conducted a MANCOVA controlling for the pre-survey scores and examining differences between the groups with respect to all of the outcome variables (i.e. family-focused relationship sub-scale, the special education knowledge scale and the family empowerment sub-scale, parental distress sub-scale, optimism and self-mastery) in a single analysis. We also controlled for child age, ASD and whether the participants completed the VAP in person or via videoconferencing. We controlled for age because family-school partnerships worsen and parent distress increases over time (Burke & Hodapp 2014). We controlled for ASD as families of children with (versus without) ASD report greater stress (Hayes & Watson 2012). We controlled for videoconferencing as participants who videoconferenced (versus attended in person) the VAP demonstrated greater advocacy (Burke *et al.* 2016). For the second research question, we conducted a repeated measures analysis of variance. For the effect size, we used η^2 for the

Table 3 Within-group change

	Pre-change: X (SD)	Post-change: X (SD)	t	p	ES
Wait list control group					
Self-mastery	18.73 (2.99)	19.26 (2.13)	-0.68	0.50	0.20
Empowerment	53.00 (5.09)	52.63 (5.67)	0.47	0.64	0.11
Family-focused sub-scale	33.74 (9.01)	36.37 (8.39)	-1.92	0.07	0.44
Child-focused sub-scale	30.84 (8.52)	32.89 (8.35)	-1.49	0.15	0.34
Special education knowledge	5.57 (1.80)	5.89 (1.44)	-0.78	0.45	0.19
Optimism	17.36 (2.75)	17.21 (2.84)	0.31	0.76	0.07
Parent distress	26.44 (8.13)	26.06 (7.64)	0.27	0.79	0.06
Intervention group					
Self-mastery	19.78 (2.13)	19.06 (2.01)	1.66	0.11	0.39
Empowerment	53.61 (5.02)	54.00 (3.82)	-0.31	0.76	0.07
Family-focused sub-scale	36.00 (6.71)	34.00 (6.28)	1.37	0.19	0.32
Child-focused sub-scale	34.05 (6.28)	32.17 (5.40)	1.23	0.24	0.29
Special education knowledge	5.39 (1.29)	7.56 (1.76)	-4.96	0.01**	1.74
Optimism	18.22 (3.00)	17.39 (4.38)	0.87	0.39	0.21
Parental distress	23.78 (3.69)	26.39 (6.91)	-2.13	0.05*	0.62

* $p < 0.05$.

** $p < 0.01$.

SD, standard deviation.

MANCOVA and Cohen's d for the paired t -tests. For η^2 , the effect size are as follows: small = 0.01, medium = 0.06 and large = 0.14 (Table 2).

Results

Treatment fidelity

Fidelity to the curriculum was 98.31%. Inter-rater agreement was 92.86%.

Within-group pre-changes to post-changes

Within the wait list control group, there were no changes from the pre-survey to the post-survey. Within the intervention group, with a large effect size, there was an increase in special education knowledge ($ES = 1.74$). There was also an increase in parental distress with a large effect size ($ES = 0.62$) (Table 3).

Pre-changes to post-changes

We excluded the child-focused relationship sub-scale of the FPPS as it was highly correlated with the family-focused relationship sub-scale of the FPPS ($r = 0.73$). Compared with the control group, the intervention group demonstrated increases on the dependent variables after controlling for pre-survey scores, $F = 5.57$, $P = 0.002$, $\eta^2 = 0.63$. Upon looking at the individual analyses, we saw increases with respect to special education knowledge and self-mastery and a decrease with respect to the family-focused sub-scale of the family-professional partnership sub-scale (Table 4).

Table 4 Comparison of the intervention and wait list control groups

	F	p	η^2
Family-focused sub-scale	11.60	0.002**	0.32
Special education knowledge	12.37	0.002**	0.32
Self-mastery	4.39	0.04*	0.15
Parent distress	2.91	0.10	0.10
Optimism	0.74	0.39	0.03
Empowerment	0.15	0.71	0.01

* $p < 0.05$.

** $p < 0.01$.

Pre-changes, post-changes and follow-up changes

A repeated measures analysis of variance was conducted only with the intervention group; it determined that there were overall differences from the pre-tests to the post-tests and follow-up tests, $F = 4.72$, $P < 0.001$, $\eta^2 = 0.70$. *Post hoc* tests using Bonferroni correction revealed that there was an increase with a large effect size with respect to empowerment from the post-survey to the follow-up survey ($\eta^2 = 0.29$). Also, regarding special education knowledge, there was an increase from the pre-survey to the follow-up survey ($\eta^2 = 0.38$). Finally, there were increases from the pre-survey and the post-survey to the follow-up survey with respect to optimism ($\eta^2 = 0.69$). Notably, there was a marginal ($P = 0.07$) increase in parental distress from the pre-surveys to the latter surveys (Table 5).

Discussion

To examine the association between the VAP and the outcomes, we used a comparison, pilot study to examine pre-differences, post-differences and follow-up differences between the intervention and wait list control groups. We had three main findings.

First, the advocacy training was associated with increased special education knowledge and self-mastery; the increase in knowledge was maintained at the follow-up survey. Also, at the follow-up survey, there was an increase in empowerment from the post-survey to the follow-up survey. This finding confirms previous studies about advocacy trainings and their effect on special education knowledge (Burke, Goldman *et al.* 2016a; Burke, Magaña *et al.* 2016b; Taylor *et al.* 2017). Further, this study extends prior research documenting that the increase in special education knowledge may persist over time. Special education knowledge is key in accessing special education services (Wang *et al.* 2004). Indeed, when parents have special education knowledge, they report being better able to access services for their offspring (Taylor *et al.* 2017). Thus, this finding is especially poignant.

Second, intervention (versus wait list control group) participants demonstrated worse family-school partnerships at the post-survey. At the follow-up survey, the family-school partnership resumed the same mean it had at the pre-survey. As

Table 5 Change over time within the intervention group ($n = 11$)

	Pre-survey (T1)	Post-survey (T2)	Follow-up survey (T3)	<i>F</i>	<i>p</i>	η^2	Follow-up analyses
Empowerment	53.0 (1.88)	51.55 (4.15)	56.18 (3.62)	4.13	0.04*	0.29	T2 and T3
Family-focused sub-scale	32.55 (9.18)	31.09 (8.56)	32.55 (8.95)	0.57	0.54	0.05	—
Special education knowledge	5.81 (1.47)	6.72 (1.85)	7.81 (.87)	6.13	0.02*	0.38	T1 and T3
Self-mastery	18.45 (2.50)	19.0 (2.61)	17.54 (2.42)	2.61	0.10	0.21	—
Parent distress	25.18 (4.99)	28.00 (8.25)	29.27 (7.76)	3.10	0.07	0.24	—
Optimism	19.09 (1.22)	17.09 (3.21)	23.91 (3.96)	22.07	0.01**	0.69	T1 and T3 T2 and T3

* $p < 0.05$.** $p < 0.01$.

noted by previous research, there is a negative relation between advocacy and family–school partnerships (Burke & Hodapp 2016). This finding, although expected, may be troublesome. On one hand, advocacy inevitably involves struggle (Wang *et al.* 2004); thus, there may be a negative impact on the family–school partnership. On the other hand, the quality of family–school partnerships is a key predictor of student outcomes (Newman 2005). Future research is needed to determine whether this effect on the family–school partnership is temporary. Also, future research should examine the facets of the school, family and their partnership that may mediate this relation. At the most basic level, the dimensions of family–professional partnerships (i.e. respect, communication, commitment, trust, advocacy, equity and professional skills, Haines *et al.* 2017) should be carefully measured in future studies to determine whether certain dimensions are most effected by advocacy training programmes. In addition, research should measure the culture of the school and the advocacy practices of the family, which could mediate the effect on family–school partnerships (Love *et al.* 2017).

Third, there seems to be an association between the advocacy training and the parent well-being. In the within-group analyses, participants demonstrated increases in parental distress. However, in the follow-up survey, increases in parental distress were only marginal, whereas optimism increased among participants. Previous research has documented a relation between parent well-being and advocacy (Burke & Hodapp 2014). Notably, some parent training interventions do not impact distress but

rather impact other outcomes. For example, in a systemic review of parent-mediated interventions for young children with ASD, Oono *et al.* (2013) found that none of the interventions impacted parent stress; however, the interventions did impact other, parent (e.g. synchrony), child (e.g. language and communication and adaptive behaviour) and parent–child outcomes (e.g. parent–child interactions). Notably, none of these parent, child or parent–child outcomes were similar to this pilot study. Future research should examine other measures of parent well-being and their association with measures of satisfaction and perception of changes for the family.

Notably, the finding regarding optimism is interesting; however, given the small sample and lack of a control group at the follow-up survey, this finding should be interpreted with caution. Future research with a larger sample and a control group is needed to determine whether optimism increases after attending an advocacy training programme. If replicated, this finding may align with prior research (e.g. Huffman *et al.* 2015) that optimism is a malleable disposition that can be improved by an intervention. Further, if replicated, this finding should be further examined to see if optimism facilitates improved student outcomes (Jones & Prinz 2005). Indeed, this finding has the potential to shed light on an effect (i.e. increased optimism) that may have benefits for both parents and their offspring with IDD.

In this pilot study, we examined the goals of a parent advocacy training that had not been previously examined. Although an important first step in understanding the association of advocacy training programmes on parent outcomes, this study has a few

limitations. First, the study had a small, convenience sample of primarily Caucasian mothers of children with IDD. Most offspring had ASD; future research should consider whether the type of disability influences the effect of an advocacy training. To address this limitation, we controlled for ASD in our analyses. Also, there were no pre-differences/post-differences in empowerment that could be due to a ceiling effect as both the intervention and wait list control group participants scored very high on the pre-survey. Further, although no differences were detected between the groups, there could have been unaccounted for differences that impacted the results of this study. Notably, there were some observable (but not significant) demographic differences between the intervention and wait list control groups. Also, the design would have been stronger if there had been randomisation, a control group for the follow-up survey, a larger sample to allow a powered study and data from the families who worked with advocates. Without randomisation and a control group for the follow-up survey, our findings are associational; without other data sources, our findings are based on self-report.

Directions for future research

First, research is needed to confirm the results of this study with a larger, more diverse sample with random assignment. Notably, culturally and linguistically diverse (versus Caucasian) families face greater barriers to advocacy (Magaña *et al.* 2015). Although a few other advocacy studies have focused on such families (e.g. Burke, Magaña *et al.* 2016; Jamison *et al.* 2017), the research remains scant regarding the effect of advocacy trainings on diverse populations. Notably, such diversity not only should be limited to race and ethnicity but also should include other underserved populations. For example, rural families of children with IDD may have less access to educational resources (Epley *et al.* 2010). Yet little research has been conducted in such communities. Further, advocacy programmes outside of the USA should also be tested especially given that advocacy can be a lever to improve equity for individuals with disabilities (Cohen 2013).

Second, research is needed about the post-training activities of VAP graduates. On average,

VAP graduates advocate for 5.5 families (Goldman *et al.* 2017). It is unclear whether *pro bono* advocacy impacts the maintenance of effects of the training. Research is needed to examine whether post-training advocacy activities mediate the effectiveness of the training. Relatedly, a hierarchical research design is needed to determine whether VAP advocates are able to effectively advocate for other families. This study suggests that, at the initial level, advocacy training may work in educating advocates. However, it is important to determine if the advocates are able to effectively access services for other families. Relatedly, it is also important to determine whether advocates influence the well-being of families.

Implications for policy and practice

Although advocacy trainings are becoming more common (Burke 2013), there is little uniformity or accountability across advocacy trainings. Regarding the latter, it seems necessary for policy not only to consider regulating the field of advocacy but also to have accountability mechanisms ensuring that advocacy training programmes are effective. Without such, parents of children with IDD who are seeking special education advocates lack the needed information to determine whether the training of a given advocate has been effective. Put simply, it is important for practitioners to examine how parent advocacy training impacts parents of children with IDD.

Relatedly, advocacy training programmes need to be evaluated. Across the USA, various agencies are creating advocacy training programmes. For example, the Protection and Advocacy (P&A) Agency in Georgia has an advocacy training (Burke 2013). As a federally funded agency designed to provide legal assistance to individuals with disabilities and their families, a Protection and Advocacy Agency may be a natural setting for an advocacy training. Additionally, Parent Training and Information Centres are federally funded agencies designed to educate and empower parents of children with disabilities about their rights; Parent Training and Information Centres have also been conducting advocacy trainings (e.g. Burke, Magaña *et al.* 2016). The availability of different advocacy training programmes is admirable; however, with such diversity, it seems necessary for

the agencies sponsoring such programmes to also evaluate their effectiveness. Given the newness of advocacy training programmes, evaluation data may be especially helpful not only in determining their effectiveness but also in identifying ways to improve such programmes.

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