

Final Report
ADAPT: After Deployment Adaptive Parent Training
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Key Personnel participating:

<u>Name</u>	<u>Title</u>	<u>_____</u>
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A. Background

The stress of military deployment to combat zones and subsequent re-integration can disrupt family functioning at home and lead to negative outcomes for children and parents that include depression, anxiety substance abuse, mental illness, and other maladies. Deployment-related stressors include physical separation from the family, concerns about timing of mobilizations (e.g., when will units mobilize, length of deployment), worries for partners at home and in the field about combat danger (e.g., soldier's proximity to conflict and harm) (Huebner, et al., 2007; Pincus, et al., 2007). Families must reorganize daily routines and make emotional and other adjustments to accommodate for the deployment. Following the initial joy of reunification, stress may continue or even increase as the deployed parent reintegrates into the family system, parents renegotiate their roles and responsibilities, and families begin coping with the psychological costs of deployment and combat (e.g., trauma-related psychopathology, injuries, and in some cases, loss (Pincus, et al., 2007).

Research indicates that family stress is commonly associated with parenting challenges, especially in cases of deployment to conflict zones, when deployment and subsequent reintegration are associated with lowered levels of parent satisfaction, increased negative parent-child interactions and ineffective and coercive parenting practices (Cozza, et al., 2005; Fals-Stewart, 1995; Glenn, et al., 2002; Jordan, et al., 1992; Samper, et al., 2004). Ineffective and coercive parenting practices are well-known predictors of risk for children's maladjustment, including internalizing and externalizing challenges, such as depression, behavior problems, and school failure (Patterson, et al., 2002; Patterson, 1982; Sanders, et al., 2003). Such child adjustment problems can contribute to new and continuing stressors for parents, which in turn increases parental distress, and further disrupts parenting (DeGarmo, et al., 2004; DeGarmo, et al., 1997; Forgatch, et al., 1996). A key aim of this proposal is to strengthen family functioning during reintegration to improve child outcomes.

B. Objectives

Phase I aims included:

Aim 1: Tailoring two modules of the existing PMTO curriculum for military families and creating ADAPT internet program.

Aim 2: Producing ADAPT media assets, uploading to the IrisED.com web site, and conducting in-

house testing and external usability evaluation.

Aim 3: Conducting a feasibility study of ADAPT for reintegrating families.

In Phase II, we will develop the complete ADAPT program and conduct a randomized controlled field trial to test program effectiveness. Essential program components will also be available in a DVD/print package giving military families and supporting professionals additional options for accessing the material.

The central aim of this project was to create an accessible, low-cost parent-training program that is uniquely tailored to meet the needs of military families following deployment and reunion. The PMTO intervention has repeatedly demonstrated improvements to parenting practices, which benefit children's adjustment and reduces parental stress and distress, of particular importance for members of the US Military. An innovative feature of this program (and one that addresses an important research gap) is a sophisticated web delivery platform (irisedonline), which has been evaluated in a number of research projects (Sheehan, 2004; Jones & Seeley, 2008; Jones & Seeley, 2007). IRIS Ed Online delivers: (a) video-driven lessons that model targeted skills, (b) mastery exercises, (c) interactive assessments, (d) a journaling tool for self-reflection (not viewable by anyone other than the participant), (e) an expert-moderated web community, (f) printable resource materials, and (g) edCLIPS - email prompts that re-engage parents in training after completion of the program. Lessons are user-driven and provide systematic opportunities for practice, reinforcement, self-assessment and refinement of skills. Training is delivered in small accessible doses: parents can experience the training in their own homes, at a time that is convenient for them. Providing this program at low cost and increasing accessibility enables the program to reach more users, and support parents' long-term maintenance of skills and knowledge.

C. Project Development

The stress of military deployment to combat zones and subsequent re-integration to home life can disrupt family functioning, lead to increased family stress, and result in negative outcomes for children and parents.

Research indicates that family stress is commonly associated with parenting challenges, especially in cases of deployment to conflict zones, when deployment and subsequent reintegration are associated with lowered levels of parent satisfaction, increased negative parent-child interactions and ineffective and coercive parenting practices (Cozza, et al., 2005; Fals-Stewart, 1995; Glenn, et al., 2002; Jordan, et al., 1992; Samper, et al., 2004).

Ineffective and coercive parenting practices are well-known predictors of risk for children's maladjustment, including internalizing and externalizing challenges, such as depression, behavior problems, and school failure (Patterson, et al., 2002; Patterson, 1982; Sanders, et al., 2003). Such child adjustment problems can contribute to new and continuing stressors for parents, which in turn increases parental distress, and further disrupts parenting (DeGarmo, et al., 2004; DeGarmo, et al., 1997; Forgatch, et al., 1996). A key aim of the ADAPT Online, Phase I project was to develop a prototype of an online parenting intervention for returning military parents that would strengthen family functioning during reintegration and improve child outcomes. This prototype is the first-ever adaptation of an evidence-based parenting program, Parent Management Training, Oregon Model

(PMTO) and teaches returning parents of school-aged children how to deal with stress. Decreasing the severity of stressors and arming parents with skills of positive parenting can lead to reduced rates of coercive parent-child interactions, which in turn, impair child adjustment. In ADAPT Online the returning military parent learns how to, (a) identify their emotions and recognize consequences of emotion driven actions, (b) apply mindfulness techniques to regulate stress-related emotions that are potentially harmful to their partner and children, and (c) seek social support from other adults.

Military populations, like many other populations, are likely to respond more positively to specially tailored interventions that take into account the nature of their stressors, vulnerability to trauma-related pathology, and barriers to engaging in psychosocial interventions. Our approach combined media-based instruction with web technology to develop an effective parenting prevention program that would be viewed as acceptable, accessible, and engaging to deployed combat veterans and their families.

Initial Development

Development of ADAPT Online started with the creation of a content matrix that mapped intervention content across the various formats (e.g., video, print, audio, interactive web) to be used in ADAPT Online. In order to be included in the matrix, content had to be evidence-based and show strong evidence for efficacy among diverse populations. It also had to be effective in reducing stress, improving emotion regulation, strengthening parental monitoring, discipline, encouragement, positive involvement, and family problem-solving. Once the content was determined our goal was to produce program materials that would deliver that content in engaging, accessible, acceptable, and effective ways.

We employed an iterative process in developing these materials. At various stages of development drafts of treatments and scripts underwent review and generated corrective feedback from scientists, clinicians, media specialists, and military experts. Consultants included Drs. Marion Forgatch and Gerald Patterson, key developers of PMTO; Dr. Robert Ciulla, program manager for Telehealth/Technology Applications and the afterdeployment.org website; Dr. Stephen Cozza, Professor in the Department of Psychiatry at the Uniformed Services University of the Health Sciences, and Director of the Child and Family Program at the Center for the Study of Traumatic Stress; Dr. Melissa Polusny, Associate Professor of Psychiatry at the University of Minnesota Medical School and Staff Psychologist in the Posttraumatic Stress Recovery Program at the Minneapolis VA Medical Center; Master Sergeant (retired) Kevin Geck formerly assigned to the Deployment Cycle Support Office of the Oregon Army National Guard; and others. Throughout development, we coordinated with experts and organizations supporting military personnel to ensure that the ADAPT Online program is linked with educational resources that are currently available online and with access to individual treatment referrals available through the VA and other services. Critical feedback came from military families and from practitioners who work with them. We solicited this feedback during focus group discussions and from their comments after reviewing draft scripts.

Focus Groups

Two formative focus groups were held in November 2011. One group consisted of five males and two females, all military members. The second group (four females) represented military

spouses. Ages for both groups combined ranged from 21-44 years old with 35 years old being the average age. The military members' tenures differed from 2 years to 22. Six of the respondents had been deployed overseas with one participant having been deployed five times. For the respondents that had been deployed and returned, the average time of being back was two years. Eight of the respondents or their spouses had sought out counseling or other support services since returning from deployment. Seven of these services were for family related matters – marriage/couples counseling, therapy for children, play therapy, parent counseling, or reintegration.

Six of the respondents had three children and all others had two children. 23 of these children were biological to the participant, and five were stepchildren. The age range of the children was infant to 12 years of age. All but five of these children lived in the participant's home full-time.

All of the participants identified themselves as Euro-American/White. Eight of the respondents were employed at the time of the group and all of those employed were employed full time, out of the home. All but one of the participants had been employed for all twelve of the last twelve months.

Both groups were asked questions about parenting skills, classes they may have taken, differences between military and non-military families and the challenges of parenting prior to, during and after deployment and reintegration. Most participants felt that it was 50/50 on whether parenting skills could be taught and only a few had taken any kind of parenting classes. They felt that barriers to military members taking parenting classes had a lot to do with the stigma of seeking out help in a military setting. They also felt that the classes would need to be set up so that only parents of specific age ranges of kids would attend, the class would need to be specific to one topic, they were given time to practice that topic, and that they would be able to come to a follow up session to talk about what went well and what didn't with the topic. For example, they believed that military members wouldn't be interested in taking a general parenting class, but would be interested in taking a class that focused on a topic such as "back talking". They believed that if a parenting program were part of the reintegration process, it would be more accepted by the military member (especially if it was just something that they HAD to do). Spouses said that the biggest thing that the military member needed to learn was patience.

Prior to deployment, parents prepped by buying a journal so that their children could write or draw a picture each of the days that the deployed parent was gone. Pre-deployment was particularly stressful due to the fact that for some people, it took a long time to actually deploy out of the US. During deployment, the deployed parent was not as involved in parenting activities and the spouse at home tried not to let the day-to-day stressors of parenting be known. They would gloss over any issues that they would have dealt with had they been together so that the deployed parent could concentrate on their job. They stayed in touch via Facebook and Skype. When one parent was deployed, the at-home parent was both the "soft and hard" parent and after reintegration, the previously deployed parent became the "hard" parent while the previously at-home parent became the "soft" parent. However, this caused conflict with routines and how the recently deployed parent perceived things were or were not working. The at-home parent had to get used to giving up some control and the kids had to get used to having another parent.

Production

Once we were assured that scripts and other drafts of materials were satisfactory, we began the production of video, text, audio, and interactive web assets. The IRIS Ed approach strives to make video presentations engaging and realistic, aiming for authenticity in language, setting, and situation. In the pre-production stage, we carefully cast actors, selected appropriate locations, and identified realistic theatrical props. To produce the video, we employed a professional crew (director, camera operator, lighting technician, audio recordist, production grip, makeup specialist, and production assistant), and used high-definition video, digital audio, and a full-complement of lighting and grip equipment. The video footage was filmed in real settings in order to provide a natural context. As much as possible, we attempted to cast actors who had military experience, paying attention to the need to represent the racial, ethnic, and gender diversity of military families. Through attention to quality and detail, realism, effective writing, and creative presentation, IRIS productions have been recognized for excellence in non-broadcast media with 12 Telly Awards and numerous awards from other professional organizations.

Once program footage was shot, it was edited in IRIS' post-production studio, which employs the most current digital editing, graphics, and audio equipment available. After rough drafts of video sequences were developed, they were reviewed by project staff and refined accordingly. Near-final versions of video components, with graphics and animation added, also underwent review by staff and consultants. After revisions were completed, the videos were audio edited and audio processed (e.g., voice equalization, mixing, "sweetening" of sound). The final step was uploading the videos to IRIS web platform, irised.online, for testing and eventual delivery to participants of the feasibility study. Video materials were authored and mastered to DVD as well. Other online intervention materials (text, audio, web interactive) were prepared and uploaded as well. These materials are presented in as simple, clear, and concise manner as possible in keeping with the goal of IRIS Ed media materials to elicit behavior change.

Once online assets were finalized, a variety of application development tools were used to create an online environment where program materials could be accessed by remote users regardless of users' computer operating systems. To create these platform-independent assets, irised.com uses a Cold Fusion-driven interactive learning environment and a Content Management System (CMS) whose Graphical User Interface (GUI) allows media developers to easily upload, configure and modify diverse program assets (see Facilities and Other Resources). The program was formatted for DVD delivery as well, linking video assets on the disk with interactive applications on the Internet. The DVD version was intended for military families who do not have a high speed connection.

After completion of program assets, IRIS staff assembled components and uploaded them to the Internet site. The graphical interface on the web site was designed for simple operation and maximum user control in which navigation icons and menu panels meet standard user requirements and expectations. The program underwent an initial test conducted by two IRIS employees not associated with the project for content and spelling errors, menu hyperlink functionality, and system compatibility. Once corrections were made and the quality and stability of the product was ensured, the web site was ready for a further external usability evaluation along with other components of the program.

Description of the ADAPT Online program

Our central tenet is that online delivery of evidence-based training is effective in enhancing positive parenting practices and reducing deployment-related stress in military families. For Phase I we developed a prototype program with an emphasis on stress reduction strategies supplemented by instruction in core parenting practices. In order to determine the impact and acceptability of the program with the post military deployment family member, the Phase I prototype of ADAPT Online was tested with the reintegrating military family member who had undergone deployment in Iraq or Afghanistan.

The Phase I ADAPT Online program consists of two online modules delivered by IRIS Ed's online learning management system, *irised.com* (see ADAPT Online program dashboard, Figure 1). This content is accessible on computers, tablets, and Smartphones using a wide combination of standard operating systems, web browsers, and media players. Module 1 delivers stress management training via video, print, and interactive assessment components covering (a) recognizing emotions and (b) responding to emotions. The content for Module 1 is derived from Cognitive Behavioral (Lambert, Bergin, & Garfield, 2004) strategies for coping with stress, mindfulness research (Kabat-Zinn, et al., 1992; Linehan, 1993) and Acceptance Commitment Therapy (ACT) (Hayes & Harris, 2000). The instructional design methodologies used to present these strategies include explicit instruction (Becker & Engelmann, 1978; Engelmann & Carnine, 1991), modeling instruction (Bandura, 1977), and instructional engagement practices (Adams & Engelmann, 1996; Engelmann, 1999; Engelmann & Carnine, 1991). The materials developed for ACT Online are characterized by realistic scenarios; naturalistic settings; and use of diverse racial, ethnic, and gender protagonists. Materials and images were meticulously exactly crafted, relying on input and feedback from military families. Careful attention was paid to using the appropriate tone, language, and theatrical props in presenting content.

The Recognizing Emotions components in Module 1 offer explicit instruction and modeled-based learning for understanding and reducing emotional arousal. The five-minute video features a combat veteran struggling with PTSD and the stresses of everyday family life. Teaching vignettes in the video dramatically present typical problems (e.g. stress of reintegration, spousal disagreements on family routines, different types of ineffective coping mechanisms, effect of stress on children, etc.) and model effective strategies for countering these problems (e.g., mindfulness, stepping back from engaging in futile struggles with negative thoughts and feelings, accepting problems while committing to personal values). Also provided is an interactive self-assessment or Knowledge Check, which is a self-correcting teaching assessment that uses video situational vignettes to query responses from users. Another Module 1 component is mindfulness Audio Exercise, which can be streamed off the ADAPT Online site or downloaded for future playback on a wide variety of devices. Screenshots from the Recognizing Emotions video, printable summary and knowledge check are provided in Figures 2 through 4.

The Responding to Emotions components also include video, printable summary, and knowledge check materials. The five-minute video features another military family whose situation exemplifies differences between unregulated, angry responses to problems and regulated responses. The video presents right-way wrong way vignettes on ways to enhance coping, reduce emotional

arousal, and restore family members' capacities for future positive action. Strategies taught and modeled include in-the-moment skills such as pausing to interrupt automatic response patterns and focusing on breath, and long-range preventive practices such as physical exercise, planned relaxation, and social interaction. Screenshots from the Recognizing Emotions video, printable summary and knowledge check are provided in Figures 5 through 7.

Module 2 of the ADAPT Online Phase I prototype provides an introduction to effective positive parenting practices by providing components from two key PMTO (DeGarmo & Forgatch, 2002; Forgatch & DeGarmo, 1999; Forgatch & Patterson, 1989; Forgatch, Patterson, & Degarmo, 2005; Patterson, 2002; Patterson, 2005; Patterson & Forgatch, 1975) strategies: effective directions and family problem solving. These PMTO strategies are derived from social interaction learning theory, which accounts for how parenting practices mediate the relationship between stressful family transitions and children's behavior and emotional problems, across a range of circumstances, including family transitions, poverty, mental illness, substance abuse, and family violence (Belsky, 1984; Conger, et al., 2002; Conger, et al., 1992; Elder, et al., 1986; Patterson 1982, 2005) and has been shown to be effective with a range of high risk populations (e.g., divorced and re-partnered families, families living in high crime neighborhoods, poor and poorly educated parents, parents suffering with mental health problems, and maltreating parents) (Patterson, 1982; Reid & Eddy, 2002; Bank, et al., 1991; Chamberlain, 1999; Forgatch & DeGarmo, 1999; Forgatch, et al., 2005; Reid & Kavanagh, 1985).

D. Pilot Study

To evaluate the feasibility and usability of the *ADAPT* program we completed a two-panel, pre- and post-training study design. While the design does not control for potential threats to internal validity, it does allow for the evaluation of changes in stress, knowledge, child behavior, mindfulness, and intentions. Additionally, post-test evaluation of consumer satisfaction and were collected from participants. Threats to internal validity will be addressed during the Phase II evaluation by conducting a large-scale randomized control trial comparing parents assigned to the *ADAPT* Program and a wait-list control group.

Method

Participants. Thirty-eight veterans enrolled in the Phase 1 study and completed the online ADAPT modules. Phase 1 included modules on recognizing and responding to emotions and positive parenting practices. Participants completed online questionnaire data including information on demographics, psychological and family functioning, parenting, and mindfulness. Participants also completed questionnaires on consumer satisfaction and usability of the online modules.

Measures. The following assessments were collected, either at pretest (T₁), posttest (T₂), or both (T₁ & T₂):

Demographics (T₁): Demographic information (gender, age, racial and ethnic identity, employment, income, date(s) and numbers of deployment for each parent, and number of children in the family) were collected at pretest.

Parent Military-Related Risks (T₁): Number and Length of Deployments were assessed using three open-ended questions to obtain information about the extent of respondents' deployment history.

Additionally we collected the Risk and Resilience Inventory (DRRI) which is ecologically valid for the use of assessing risk and resilience factors among military personnel participating in recent and current deployments (e.g., Operation Desert Storm, OEF, OIF, e.g., Vogt, et al., 2008). In samples from Gulf War I and OIF, DRRI showed predicted relationships with measures of mental health difficulty (PTSD, depression, general anxiety), physical health, and quality of life (King, et al., 2006).

Parental mental health (T₁): To assess parental mental health we collected a number of assessments. The Post-Traumatic Stress Checklist (PCL; 17 items; alphas = .94; Blanchard, et al., 1996) is a clinically validated, self-report screening tool used to assess respondents levels of PTSD symptoms during the past month (“not at all” to “extremely”). The PCL has been used extensively with both civilian and military veteran populations (e.g., Grieger, et al., 2006; Lang, et al., 2003). The Center for Epidemiologic Studies Depression Scale (CESD, 20 items, alphas >.90; Eaton, et al., 2004; Radloff, 1977) was developed by the CES, and assesses depressive mood and motor and somatic difficulties and has been widely used and validated in national health surveys. Scores range from 16-60, with total scores of 16 or more indicating a “depressive case” (Eaton et al., 2004). The Alcohol Use Disorders Identification Test (AUDIT, 10 items, alphas >.80, (Babor, et al., 2001) is a self-report measure developed by the World Health Organization as fast, reliable and effective way to screen for excessive drinking. The AUDIT has been validated in over two decades of research with multinational samples and deemed effective for early identification in military populations. Cut-off scores of 8 show adequate sensitivity, but scores between 9-10 are suggested for heavy drinking populations (e.g., veterans).

Emotion Knowledge (T₁ & T₂): We assessed the extent to which participants understood the basic knowledge delivered in the program, i.e., intervention techniques to increase positive parenting practices and regulate and recognize emotions at both pre and posttest.

Mindfulness Behavior Intentions (T₁ & T₂): We measured the extent to which parents planned to implement mindfulness strategies prior to and after exposure to the *ADAPT* program.

Parent mindfulness/stress regulation (T₁ & T₂): The Mindful Attention Awareness Scale (MAAS; Goodman, et al., 2004); 15 items) is a measure of receptive awareness of and attention to present-moment events and experience. All items comprise a single factor of mindful awareness. The scale has been validated in college, adult, and patient populations, and shown to have adequate reliability and validity (Brown & Ryan, 2003). It has been used in research on emotional/behavioral health, and interpersonal processes.

Parenting Stress and Social Support (T₁ & T₂): To assess parent stress we collected the Parental Stress Scale (PSS; Berry & Jones, 1995), which has been developed to assess parental stress of mothers and fathers of children both with and without clinical problems, and contains 18 items representing both positive and negative parenthood components. The PSS has demonstrated both internal reliability (.83) and test-retest reliability (.81). Validity has been demonstrated through convergent validity with other measures of stress, emotion, and role satisfaction.

Child Behavior (T₁ & T₂): To assess child behavior we collected the Strengths and difficulties questionnaire; Parent Report (SDQ-P; Goodman, 1997): The SDQ-P is a 25-item parent-report version of a behavioral screening questionnaire for children 4-16 years of age. It assesses both positive and

negative behaviors in the following domains: conduct problems, inattention-hyperactivity, emotional symptoms, peer problems, and pro-social behavior. The SDQ-P has demonstrated acceptable psychometric properties.

Parenting Practices (T₁ & T₂): To assess parenting practices we collected the Alabama Parenting Questionnaire (APQ short form; Elgar, et al., 2007). The APQ is a widely used assessment of parenting practices, with three subscales: Positive Parenting, Inconsistent Discipline and Poor Supervision. This version, a 9-item short scale has been validated in community samples using confirmatory factor analysis. The short form has good validity in distinguishing parents of children with behavior disorders from those without.

Table 1. ADAPT Phase 1 Sample Characteristics

	<u>Minimum</u>	<u>Maximum</u>	<u>Median</u>	<u>M</u>	<u>SD</u>
Age	25	48	33.50	34.39	5.71
Times Deployed Overseas	0	6	2	2.51	1.35
Months Employed	1 "0"	13	"12mos."	10.95	3.95
Income Categories	1 "<10K"	8 "75K-1M"	6 "50K-60K"	5.50	1.97
Financial Stress	1	4.42	1.79	2.20	1.10
Education	2	7	5	4.76	1.32
Depression CESD total	"GED"	"Masters"	"Associate"	14.76	10.97
PTSD PCL total	3.00	47.00	12.00	35.18	17.03
Drinking AUDIT total	17.00	73.00	30.00	5.24	8.06
Combat Experience DRRI	.00	44.00	2.50	4.55	3.33
Negative Life Events	.00	14.00	4.50	2.34	3.30
DDRI	.00	11.00	1.00		
Social Support DDRI	2.00	4.87	3.83	3.81	0.70
Dyadic Adjustment	1.41	4.66	3.38	3.34	0.81
	<u>Percent</u>				
Male	87%				
Single	5%				
Married	84%				
Divorced	11%				
Deployed Afghanistan	50%				
Deployed Iraq	71%				
PTSD DSMIV Cut Score	26%				
CESD Clinical Cut Score	24%				

Sample characteristics are displayed in Table 1. The sample was largely male (87%), married (95%) and were largely veterans of Operation Iraqi Freedom (70%) and half were veterans of Operation Enduring Freedom (50%). The median number of deployments was 2 and the average was 2.5. On average, the sample was 35 years old and were largely employed averaging 11 months of employment reported in the last year. Among the measures collected on psychological and social wellbeing, about one quarter of the sample were above thresholds for clinical levels of PTSD (26%) and levels of depression (24%). On average, the participating sample reported relatively low levels of

drinking risk on the AUDIT ($M = 5.14$, $SD = 8.06$), relatively high levels of social support on the DRRI scale (ranging from 1 to 5, $M = 3.81$, $SD = .70$), and moderate levels of marital satisfaction on the DAS7 (ranging from 1 to 5, $M = 3.38$, $SD = .81$). *Recruiting Efforts.* Our recruiting efforts were extensive. Through the contacts established by the project PI's we were able to offer participation in our study to all branches of the military / national guard for service members, with qualifying children, who had served in Iraq or Afghanistan in the past two years. Our efforts included in person recruiting at an yellow ribbon events for returning veterans, and a wide variety of word of mouth networking, posting on social media sites/blogs, flyers mailed to all National Guard stations, Oregon Veterans Centers, and Oregon Politian's. A few of the social networking sites were invitations to participate in our study included: the wounded warrior project, mil family, marinemoms, 4militaryfamilies, Circleofmoms, troupsupport, militaryfamily, usmilitaryfamilies, militaryfamilysupport, veteransunitednetwork, militarychild, realwarriors, STOMP, operation militaryfamily, operationwearehere, navyformoms, armytimes, various Craig lists, and operationhomefront. We also partnered with our associates at the University of Minnesota to invite individuals who had responded to an invitation to screen for participation in an in person study but failed to qualify.

Participant Tracking. Our online screening and survey questionnaires were hosted by Qualtrics.com. Twice a week, if not more often, qualifying participant information would b gathered from this secured site: 1. Qualifying participate information would be entered into a secured database. Each participant would be given an anonymous identification number, and sent an individual link to the first questionnaire, 2. Upon completion of the initial questionnaire the participants, would receive an emailed invitation to establish an individual, IRIS Educational Media account and watch the program. The participant would be given four weeks time in which to complete the training. If participants had not created an account within this time frame they would be dropped from the study, 3. Participants who had accessed the materials during the required training process were sent the 2nd and final questionnaire.

Hypotheses and Findings

Given a focus of mindfulness and parenting content in the Phase 1 modules, we hypothesized that participants completing the ADAPT Phase 1 online modules would (a) report high levels of consumer satisfaction and usability and (b) would exhibit increases in pre-post measures of mindfulness, decreases in parenting stress, and increases in effective parenting. Study hypotheses were tested using both standard normal paired-sample Student's t and a Wilcoxon signed ranked Z for small samples. Also known as the Wilcoxon t , the Z test is a paired sample mean rank difference from pre to post intervention. It is a non-parametric analogue to q paired-sample t and should be used for small samples or if the distribution of differences between pairs may be non-normally distributed. Results of the pre-post comparisons are shown in Table 2.

Results with paired sample t and Wilcoxon Z were consistent among the significant increases or decreases for the sample. Among the mindfulness measures, Emotion Knowledge and Behavioral Intentions exhibited significant increases as expected; however, the MAAS measure exhibited a significant decrease. For parenting, the sample reported significant decreases in parenting stress measured by the PSS. None of the subscales on the APQ were significant. The parent reported change

in problem behaviors on the SDQ were in the expected direction but were only significant at $p < .10$ one tailed ($M = 4.07$ and 3.80 , respectively over time, $p = .09$).

Table 2. ADAPT Phase 1 Paired Sample t tests and Wilcoxon Signed Rank test ($n = 38$)

	Pre		Post		Paired Sample t	Wilcoxon Signed Rank Z
	<u>Intervention</u>		<u>Intervention</u>			
	M	SD	M	SD		
<u>Mindfulness</u>						
Emotion Knowledge	5.84	1.94	7.97	2.02	5.56***	4.31***
Mindfulness Scale MAAS	4.07	0.93	3.80	0.85	2.28*	2.34*
Mindful Behavioral Intentions	5.10	1.03	5.73	0.63	4.43***	3.87***
<u>Parenting</u>						
Parental Stress Scale PSS	38.11	11.6 5	35.68	10.64	2.32*	2.42*
Positive Parenting APQ	12.95	2.27	12.82	1.87	0.47	0.79
Poor Discipline APQ	6.63	2.14	6.63	2.22	0.00	0.11
Poor Supervision APQ	3.68	1.16	3.87	1.32	0.74	0.89
<u>Child Behavior</u>						
Child Difficulties SDQ	30.92	7.18	29.82	5.49	1.36	1.10

*** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$

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Table 3. ADAPT Phase 1 Bivariate Correlations Among Change Scores ($n=38$)

<u>Change Scores</u>	1	2	3	4	5	6	7
Problem Behaviors SDQ							
Behavioral Intentions	-.12						
Mindfulness MAAS	-.24	.30†					
Emotion Knowledge	.04	.30†	.06				
Parental Stress PSS	.18	-.48***	-.28†	-.26			
Positive Parenting APQ	.10	.35*	.16	.10	-.26		
Poor Discipline APQ	.10	-.14	-.11	-.15	.38**	-.17	
Poor Supervision APQ	.02	-.10	-.07	-.36*	.29†	-.01	.24

*** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$

Associations among the pre-post change scores are shown in Table 3 in the form of bivariate correlations. Although the rank order changes in the MASS mindfulness measure did not change in the expected direction, there was evidence of correlated associations in the expected directions for convergence of change in Behavioral Intentions with change in MAAS ($r = .30$) and change in

Emotion Knowledge ($r = .30$). Further, change in behavioral intentions was associated with decreases in Parenting Stress ($r = -.48$) and increases in positive parenting ($r = .35$). Increases in Emotion Knowledge were associated with decreases in Poor Supervision ($r = -.36$), and Parenting Stress change was associated with Poor Discipline ($r = .38$) and Poor Supervision ($r = .29$). Thus in addition to observed change from pre to post, associations among the parenting and mindfulness domains were in the expected direction.

Finally, mean sample scores for the 9 item Consumer Satisfaction scale and the 7 item Usability scale are provided in Table 4. On average, the sample rated the project high in consumer satisfaction and high in usability.

Table 4. Consumer and Acceptability Ratings

	Range	<i>M</i>	<i>SD</i>
9 item Consumer Satisfaction Scale ($\alpha = .97$)	1 Strongly Disagree to 6 Strongly Agree	5.13	1.07
7 item Usability Scale ($\alpha = .98$)	1 Strongly Disagree to 6 Strongly Agree	4.45	1.61

E. Discussion

Results from Phase 1 of this project suggest that web-based ADAPT is feasible, acceptable, and is associated with improvements in participant behavioral intentions, emotion knowledge, and reductions in parenting stress. As hypothesized, changes in behavioral intentions were associated both with decreases in parenting stress, and improvements in positive parenting. In addition, improvements in emotion knowledge were associated with reductions in poor supervision, and reductions in parenting stress were associated with reductions in poor discipline and supervision. These findings are particularly striking given the sample of primarily male, multiply deployed fathers, who are often far harder to reach than their non-deployed spouses (Connell, Gewirtz et al., in preparation). In a separate study of a primarily group-based and web-enhanced version of the ADAPT program that recruited both deployed parents and their non-deployed partners, recruitment findings indicated that in 80% of participating families, the non-deployed spouse was the first to join the study, or contact the study staff. Thus, we have experience engaging both military parents and partners/spouses. Successfully recruiting and retaining military mothers and fathers bodes well for the success of a web-based ADAPT, and suggests that veterans find this intervention relevant and useful.

Satisfaction and usability data suggest that veterans were highly satisfied with the ADAPT web intervention, and that they found it easy to use.

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