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## City St George's, University of London

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**Background:**

Having a child with JIA presents many challenges. Many parents experience considerable stress. Parental distress and functioning have been found to be related to child outcomes (Cousino, 2013), therefore interventions that help parents to manage their child's illness are important for both parents and child. We developed a website for parents of children with newly diagnosed JIA to help increase parental confidence in managing their child's arthritis and reduce parenting stress.

**Objectives:**

To evaluate the efficacy of a web-based tool 'WebParC' for parents of children with JIA.

**Methods:**

*Design:* Multi-centre randomised controlled trial conducted in 16 tertiary paediatric rheumatology centres in England.

*Participants:* Parent(s) of children aged  $\leq 12$  years, diagnosed with JIA within the previous six months.

*Procedures:* Parents were enrolled when they attended the rheumatology service and were randomised by household to either the intervention arm (I) who were given access to the website in addition to their child's standard care or the control arm (C) who received standard care alone. The primary outcome was parenting stress, measured with the Pediatric Inventory for Parents (PIP) (Streisand, 2001), which parents completed prior to randomisation and at 4-months and 12-months post randomisation.

Website content was developed by a multidisciplinary team including rheumatology, physiotherapy, ophthalmology, social work, podiatry, occupational therapy, clinical and health psychology along with parents of children with JIA. It includes information about JIA and its treatment plus a 'toolkit' for parents. The toolkit is based on cognitive-behavioural principles to develop skills for managing JIA-related issues.

*Analysis:* We conducted linear mixed models to examine the main effect of trial arm (I vs C), main effect of time (between 4M and 12M scores), and interaction between trial arm and time on PIP scores, after controlling for baseline scores.

**Results:**

A total of 220 parents (183 mothers, 37 fathers) of 203 children were randomised, 106 intervention and 114 controls. Parents mean (SD) age was 36.5 (6.5). Their children with JIA were mostly female (137/203, 67.5%), mean (SD) age of 6.1 (3.4) years. There were 107 (52.7%) with oligoarthritis, 65 (32%) polyarthritis, 8 (3.9%) systemic and 23 (11.3%) other JIA subtypes. Seventy (34.5%) were prescribed methotrexate.

Trial arms did not differ significantly at baseline except for parent education, which was higher in the intervention group and was controlled for in the analysis.

Follow-up assessments were completed by 133 (I60, C73) at 4M and 124 (I58, C66) at 12M.

We found significant main effects of trial arm on PIP Difficulty ( $p=0.022$ , Control (Mean=93.62, SE=2.717) > Intervention (Mean=84.23, SE=3.025)) and PIP Frequency ( $p=0.008$ , Control (Mean=95.78, SE=2.400) > Intervention (Mean=86.23, SE=2.622)), with Controls reporting significantly greater frequency and difficulty of stressful events than the Intervention group (Fig 1).

**Conclusion:**

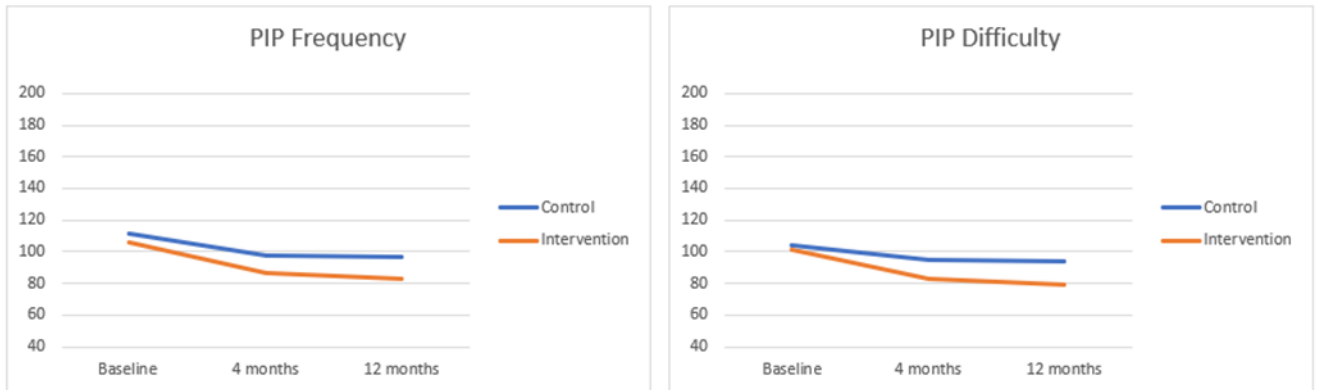
This trial found that a website for parents of children with JIA can help to reduce parenting stress.

**References:**

Cousino MK, Hazen RA. J Pediatr Psychol 2013; 38(8):809-28

Streisand R, Braniecki S, Tercyak KP, Kazak AE. J Pediatr Psychol 2001; 26(3):155-62.

Figure 1. Pediatric Inventory for Parents (PIP) - measure of childhood illness-related parenting stress



A higher score is worse, reflecting more frequent stressful events / greater difficulty experienced