



# The Therapist-assisted Online Parenting Strategies (TOPS) program for parents of adolescents with clinical anxiety or depression: Development and feasibility pilot

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## ABSTRACT

**Objective:** To develop a Therapist-assisted Online Parenting Strategies (TOPS) program that is acceptable to parents whose adolescents have anxiety and/or depressive disorders, using a consumer consultation approach.

**Methods:** The TOPS intervention was developed via three linked studies. Study 1 involved content analysis of feedback from participants ( $N = 56$ ) who received a web-based preventive parenting intervention called Partners in Parenting (PiP), as part of a randomised controlled trial. Study 2 involved stakeholder consultations with: (i) parents of adolescents aged 12–17 years ( $N = 6$ ), and (ii) mental health professionals ( $N = 28$ ), to identify adaptations to PiP that are required to make it appropriate for parents of adolescents with anxiety and depressive disorders. Study 3 was a pilot of the resulting TOPS program with professionals ( $N = 10$ ) and a small sample of parents ( $N = 3$ ) to assess the acceptability of the program content and format that involved online modules and videoconferencing coaching.

**Results:** Study 1 indicated a need for an enhanced program for parents whose adolescents are experiencing anxiety and depressive disorders, while findings from Study 2 informed the content of the new TOPS program. In Study 3, mental health professionals endorsed the structure and content, while parents affirmed the acceptability of the TOPS program. Feedback from Studies 2 and 3 indicated that the therapist-coach was a valuable resource to (i) provide parents with strategies that are associated with the alleviation of adolescent anxiety and depression, (ii) discuss difficulties in implementing these strategies, (iii) assist parents with overcoming these difficulties; and (iv) support the development of a relapse prevention plan. Professionals felt that the TOPS program would broaden parental knowledge about how to recognise and respond to symptoms of clinical anxiety and depression in their adolescent.

**Conclusions:** This study provided preliminary support for the feasibility, acceptability and perceived usefulness of the TOPS program.

## 1. Background

Depression and anxiety disorders (also known as internalising disorders) are the principal contributors to non-fatal disease burden among young people (Stockings et al., 2016). For adolescents aged 13–17 years, the lifetime prevalence of having any anxiety disorder is 32.4%, and 14.4% for any mood disorder (Kessler et al., 2012). For young people under 18 years, cognitive behaviour therapy (CBT) is the recommended approach, with a combination of CBT and

antidepressants being regarded as potentially more efficacious for adolescents with anxiety disorders (Davey et al., 2019; Vitiello, 2019). Anxiety and depressive disorders have high relapse rates (Curry et al., 2011; Ginsburg et al., 2014; Melvin et al., 2013; Warwick et al., 2017) and even with optimal treatment, most of the burden of disease is not avertable (Andrews et al., 2004). Consequently, alternative approaches to reduce this disease burden are required (Yap et al., 2014a).

Interventions that involve parents appear promising since several modifiable family factors have been found to contribute to adolescent

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anxiety and depression (Schleider and Weisz, 2016). Transdiagnostic parenting interventions that are designed to address the family factors associated with both anxiety and depression could improve outcomes for adolescents (Yap et al., 2014a; Schleider and Weisz, 2016). Such programs may also reduce relapse after treatment has been successful if the programs take a risk-reduction approach by targeting factors associated with the development and maintenance of mental health disorders (Mrazek and Haggerty, 1994). For instance, by increasing parents' awareness and understanding of their adolescent's early relapse warning signs, and providing strategies for parents to respond appropriately, parenting programs could help to reduce relapse rates or severity.

A substantial body of research has examined the parenting behaviours that can influence adolescent anxiety and depression (Yap et al., 2014a; Schleider and Weisz, 2016). A systematic review and meta-analysis identified several modifiable parental behaviours that are associated with adolescent (aged 12–18 years) anxiety and depression (Yap et al., 2014a). Specifically, lower levels of parental warmth and higher levels of inter-parental conflict, over-involvement, and over-protectiveness were related to increased risk of anxiety and depression. Additionally, where parents practised less autonomy granting and had lower levels of monitoring, there was an increased risk for depression in the adolescent (Yap et al., 2014a).

Parenting interventions have demonstrated long term effectiveness in the prevention of a wide range of child mental health outcomes, lasting up to 15 years (Sandler et al., 2011; Yap et al., 2016). Many parenting interventions target the modifiable parenting behaviours described above, and improvements in parental competencies have been found to endure for up to twenty years post-intervention (Sandler et al., 2011). However, most existing programs are face to face, and the population-level benefits are hindered by an ongoing problem of low engagement levels, in part due to logistical difficulties (Finan et al., 2018). The online approach is one promising avenue to increase the reach of parenting programs, with online parenting programs such as 'Triple P Online' (Ralph and Sanders, 2004) for externalising problems and 'Cool Little Kids Online' (Morgan et al., 2015) for anxiety representing web-based versions of effective face-to-face programs (Collins et al., 2019; McLellan et al., 2017). However, there are currently no transdiagnostic online parenting interventions for clinical anxiety and depression in adolescents (Yap et al., 2017a) and a systematic review of technology-assisted parenting programs has found 'Partners in Parenting' (PiP) is the only program to target adolescent internalising problems (Hansen et al., 2019).

PiP is a multi-level web-based platform designed to empower parents for the prevention and early intervention of adolescent internalising problems (Yap et al., 2017a). To date, only Levels 1 to 3 have been developed and evaluated in community samples for their preventive effects (Cardamone-Breen et al., 2018; Yap et al., 2014b; Yap et al., 2018; Yap et al., 2019). The multi-level approach includes a Level 4 that makes PiP more appropriate for clinical populations by adding a therapist-support component (Yap et al., 2017a). The current research involves the development of this Level 4 therapist-support component. The parenting factors described above have been translated into parenting guidelines (Parenting Strategies Program, 2013) (PiP Level 1) that provide parents with practical strategies they can implement to reduce their adolescent's risk of developing clinical anxiety and depression (Yap et al., 2014b; Parenting Strategies Program, 2013). The parenting guidelines are available as a downloadable document, and an evaluation of 'user-perceived usefulness' indicated that parents of adolescents might benefit from the Level 1 universal prevention strategy as 98% of parents who downloaded the guidelines indicated that the guidelines contained information that the parent wanted to know, 88.7% found them useful, 77.9% learnt something from the guidelines, and most (Mean = 70.4%) had tried to improve their parenting across all domains included in the guidelines (Yap et al., 2017b).

PiP Level 2 is a single-session, web-based psychoeducation

intervention comprising tailored feedback for parents about their strengths and limitations in terms of their current parenting practices (Cardamone-Breen et al., 2018). Parents receive this tailored intervention based on their responses to the Parenting to Reduce Adolescent Depression and Anxiety Scale (PRADAS) (Cardamone-Breen et al., 2017), which assesses their current parenting practices against the parenting guidelines (Parenting Strategies Program, 2013). Results from a two-arm randomised controlled trial (RCT) with an active control group suggest that this brief parenting intervention improved the modifiable parenting factors associated with adolescent internalising problems, compared to a waitlist control group (Yap et al., 2018). PiP Level 3 is a tailored online parenting intervention that comprises the Level 2 tailored feedback and up to 9 interactive modules (Yap et al., 2018). Evidence from an RCT indicates that compared to an active-control group that received educational factsheets about adolescent development and wellbeing, PiP Level 3 was effective in improving the modifiable parenting factors associated with adolescent internalising problems at post-intervention (Yap et al., 2018) and 12-month follow up (Yap et al., 2019).

The development of the therapist-support component of PiP Level 4 was guided by the Supportive Accountability model of human support (SA) (Mohr et al., 2011) to enhance the support available to parents and make it more suitable for a clinical population. The SA model posits that having the support of a trained therapist-coach can increase intervention adherence (Mohr et al., 2011). Human support has been found to be efficacious for some participants such as when applying strategies to their unique circumstances and encouraging participants' continued engagement (Andersson, 2016; Andersson and Cuijpers, 2009; Andersson et al., 2014; Richards and Richardson, 2012). The SA model provides a comprehensive theoretical framework for computer-mediated communication designed to enhance participant motivation and adherence to the program, with the ultimate intention of achieving positive behaviour change (Mohr et al., 2011). Further, when the adolescent is already experiencing clinical-level difficulties, the provision of additional support for parents is particularly vital to ameliorate the heightened distress and caregiver strain parents experience (Yap et al., 2017a; Brannan et al., 2018).

Based on evidence from prior research in the development of technology-based programs that highlight the benefit of stakeholder consultation (Sanders and Kirby, 2012), the current study consulted with both mental health professionals and parents of adolescents. Consultation with professionals and the intended recipients of the interventions has become an important mechanism to improve the uptake of web-based interventions (Santucci et al., 2012). The consultation process enables alternations in program content, delivery method, and program format to increase interest, engagement (Metzler et al., 2012), and acceptability among the intended user population (Orlowski et al., 2015). Consumer consultation focuses on a review of program content during the development phase of the intervention, with feedback sought regarding the usability of the online platform via pilot testing (Orlowski et al., 2015).

## 2. The current study

The current research used consumer involvement methods to develop and pilot a new PiP Level 4 intervention, the Therapist-assisted Online Parenting Strategies (TOPS) program, through three linked studies. Study 1 used data from a recent Level 3 PiP RCT (Yap et al., 2018) to understand the characteristics and needs of parents who may need more support than the self-guided PiP program can provide. Study 2 utilised perspectives from parents and youth mental health professionals to inform the development of the TOPS program. Study 3 enhanced and clarified the TOPS content via consultation with professionals who treat young people and therefore might refer parents to the TOPS program. A small acceptability pilot of TOPS was also conducted with parents whose adolescents were receiving treatment for anxiety or

depressive disorders. The aims, methods and findings of each study are presented in turn.

### 3. Study 1 aim and methods

#### 3.1. Aim

The aim of Study 1 was to understand the characteristics and needs of parents who may require more support than a self-guided PiP can provide. Study 1 had three objectives: 1) to ascertain if there is a subgroup of parents who find PiP inadequate, and may need or request more support than a self-guided online program can provide; 2) to explore what additional support or content these parents requested or suggested; and 3) to explore how these parents differ from other parents who received PiP.

#### 3.2. Participants

Participants were 56 parents participating in an RCT of the PiP program, who comprise a subset of the 179 parents who had been randomised into the intervention group (Yap et al., 2018). This sub-set of parents was identified based on feedback they had provided about PiP, which indicated that they would like more information or support than PiP could provide. Parent participants had a mean age of 45.2 years ( $SD = 4.92$ ), were mostly female (83.9%), and spoke only English at home (71.4%).

#### 3.3. Procedure

Study 1 involved secondary data analysis of notes taken by research assistants (RAs) during telephone calls with parent-participants in the intervention arm of the PiP RCT (Yap et al., 2018). During the intervention phase, RAs conducted these weekly check-in calls following a standard script of questions, to ascertain whether the parent had engaged in their weekly module and completed their goal. The questions were: “Did you complete your module for the week?” and “Did you try to put into practice or apply any of the information you read?” During these calls, many participants spontaneously provided feedback regarding their experience with the PiP content, although the RAs did not provide any therapeutic content or specifically elicit this type of feedback.

#### 3.4. Data analysis

The analytic approach used was basic Content Analysis (CA) (Drisko and Maschi, 2015; Julien, 2012) since unlike other forms of qualitative data analysis, this process is unrestricted by theoretical frameworks. Furthermore, basic CA is often used to document a perceived problem, or in this case, to address the three objectives of Study 1. Basic CA was undertaken using QSR International's NVivo 11 Software (NVivo qualitative data analysis Software, 2016). First, the researcher (first author, CF) read and re-read the RA notes to become familiar with the data and generate initial codes. These codes were then clustered by theme, which led to the development of a coding framework (see Appendix B for the coding hierarchy), giving rise to a clear, reliable description of the findings. Deductive coding identified a priori themes based on the components included in the Supportive Accountability model (e.g., one RA note indicated that the parent: “seemed to be asking me for advice”) while inductive coding enabled the themes to develop based on the frequency of occurrence (e.g., 21 instances were recorded of parents wanting more from the program than was being provided). Emerging themes were discussed and substantiated with the last author (MBHY) throughout the data coding process. Theoretical saturation was achieved when all codes had been identified and developed into agreed themes.

### 3.5. Results

The first objective of Study 1 was to ascertain if there is a subgroup of parents who find PiP inadequate and may need or request more support than a self-guided online program can provide. This objective was achieved by close examination of 1509 RA notes that were recorded from calls with intervention group parents ( $N = 179$ ). Most of these notes were about requests for technical support or responses to the RA's questions. However, 134 notes that were from 56 participants could be grouped into five themes that indicated that these parents might have benefited from additional support (for a detailed breakdown of the notes, see Appendix A). The second objective of Study 1 was to explore what additional support or content these parents requested or suggested. The five themes identified through basic content analysis were: (i) ‘require more support’ (75 comments); (ii) ‘want to increase knowledge about mental illness’ (46 comments); (iii) ‘recommendations for additional content’ (13 comments); and (iv) ‘confronting’, (2 comments); and (v) ‘positive feedback’ (38 comments).

Seventy-five notes were associated with the first theme ‘require more support’ which indicated that the parent required more support than the self-guided PiP program was designed to provide. One RA quoted a parent stating that: “there needs to be some ‘deeper’ advice to draw on about what to do when your teen is not receptive to the ideas you are putting out there.” Several notes made by RAs stated that a parent: “reported finding the program difficult to implement,” or “has found it hard to apply it due to a difficult relationship with her teenager.” This feedback suggested that having support from a therapist-coach could benefit parents, specifically to assist with translating the program theory into action, as well as the implementation of the weekly goal.

The second theme was associated with parents desiring a better understanding of mental illness due to concerns about their adolescent showing symptoms of anxiety, depression, or another mental health issue (46 comments). Notes recorded by one RA indicated that the parent was requesting “detailed information about depression and anxiety.” Another parent expressed concerns that “talking about depression/anxiety could cause depression/anxiety.” These findings support the value of having a trained coach to provide additional psychoeducation to meet the higher level of needs presented by some parents.

In terms of the third theme, ‘recommendations for additional content’, parents’ feedback (13 comments) indicated that they wished to have printed handouts, as well as case vignettes of parents who have implemented program content, and the progress these parents made as a result. For example, an RA note stated that the parent: “would prefer specific scenarios, like case studies... really good examples of what they’re experiencing as the information given is quite theoretical.”

The fourth theme, ‘confronting’ was identified by two participants who reported that the information provided was too challenging. One of these parents found the information about the risk of suicide in adolescents confronting and indicated that she was worried her adolescent was at higher risk due to having a chronic health condition. The parent said it “made her think about some things and more aware that her son might be at greater risk because he has diabetes and has factors associated with that that he needs to worry about.” Another parent reported finding the ‘Good health habits’ module, which covers four health behaviours, including substance use, difficult to complete as “she found out he had been doing drugs.” These comments support the findings of online intervention research (Hackworth et al., 2018) that indicates having a coach with whom to process the information may be helpful to parents in such situations, where the child is already experiencing various challenges.

The fifth theme ‘positive feedback’ indicates that some of the PiP content was helpful for the 56 participants. For instance, one RA's notes indicated that one parent found it helpful to apply “the Anxiety module in terms of [their teen's] anxiety travelling up and down lifts”. Similarly, following a call to a father, one RA noted that: “[Parent] picked up the importance of being aware of his own anxiety as well as his child's and has

**Table 1**  
Study 1 participant characteristics.

	Study 1 sample ( <i>N</i> = 56)	Rest of PiP intervention group ( <i>N</i> = 123)	<i>t</i> or $\chi^2$ ( <i>p</i> value)
Gender			0.16 (0.692)
Female, <i>n</i> (%)	47 (83.9)	106 (86.2)	
Male, <i>n</i> (%)	9 (16.1)	17 (13.8)	
Parent age, <i>M</i> ( <i>SD</i> )	45.2 (4.92)	45.2 (5.47)	−0.04 (0.970)
Parent marital status			2.6 (0.463)
Single, <i>n</i> (%)	6 (10.7)	6 (4.9)	
Married or de facto, <i>n</i> (%)	40 (71.4)	98 (79.7)	
Separated or divorced, <i>n</i> (%)	9 (16.1)	18 (14.6)	
Widowed, <i>n</i> (%)	1 (1.8)	1 (0.8)	
Child sex			0.90 (0.343)
Female, <i>n</i> (%)	27 (48.2)	50 (40.7)	
Male, <i>n</i> (%)	29 (51.8)	73 (59.3)	
Child age, <i>M</i> ( <i>SD</i> )	13.6 (1.1)	13.7 (1.0)	−0.87 (0.385)
Family situation			6.08 (0.194)
Child participant lives with both parents, <i>n</i> (%)	40 (71.4)	91 (74.0)	
Parents separated but both involved in the care of child participant, <i>n</i> (%)	10 (17.9)	11 (8.9)	
Parents separated with only the registered parent involved in the care of the child participant, <i>n</i> (%)	2 (3.6)	14 (11.4)	
Sole parent of child participant, <i>n</i> (%)	4 (7.1)	6 (4.9)	
Other, <i>n</i> (%)	0 (0.0)	1 (0.8)	
Number of children, <i>M</i> ( <i>SD</i> )	2.16 (0.93)	2.47 (0.94)	−1.96 (0.053)
Language			2.95 (0.086)
English, <i>n</i> (%)	43 (76.8%)	107 (87.0%)	
Other, <i>n</i> (%)	13 (23.2%)	16 (13.0%)	
Parent employment			1.87 (0.393)
Full-time, <i>n</i> (%)	19 (33.9)	58 (47.2)	
Part-time, <i>n</i> (%)	29 (51.8)	52 (42.3)	
Unemployed, <i>n</i> (%)	8 (14.3)	13 (10.6)	
Parent studying status			0.22 (0.896)
Studying full-time,	1 (1.8)	3 (2.4)	
Studying part-time, <i>n</i> (%)	9 (16.1)	17 (13.8)	
Not studying, <i>n</i> (%)	46 (82.1)	103 (83.7)	
Parent's highest education level			13.17 (0.022)
Year 7–12, <i>n</i> (%)	4 (7.2)	22 (17.9)	
Trade or apprenticeship, <i>n</i> (%)	0 (0.0)	2 (1.6)	
Other technical or further education (TAFE) or technical, <i>n</i> (%)	6 (10.7)	12 (9.8)	
Diploma, <i>n</i> (%)	3 (5.4)	23 (18.7)	
Bachelor degree, <i>n</i> (%)	27 (48.2)	36 (29.3)	
Postgraduate degree, <i>n</i> (%)	16 (28.6)	28 (22.8)	
Parent's mental health diagnosis			4.3 (0.364)
None, <i>n</i> (%)	28 (50.0)	44 (35.8)	
Past history, <i>n</i> (%)	15 (26.7)	45 (36.6)	
Current diagnosis, <i>n</i> (%)	13 (23.2)	32 (26.0)	
Unanswered, <i>n</i> (%)	0 (0.0)	2 (1.6)	
Child's past mental health diagnosis			12.26 (0.199)
Depression, <i>n</i> (%)	2 (3.6)	1 (0.8)	
Any anxiety disorder, <i>n</i> (%)	3 (5.4)	8 (6.5)	
Autism or Asperger's syndrome, <i>n</i> (%)	1 (1.8)	3 (2.4)	
Other, <i>n</i> (%)	3 (5.4)	1 (0.8)	
Multiple diagnosis, <i>n</i> (%)	1 (1.8)	4 (3.3)	
No formal diagnosis, but parent concerned, <i>n</i> (%)	14 (25.0)	17 (13.8)	
No past diagnosis, <i>n</i> (%)	29 (51.8)	76 (61.8)	
Unanswered, <i>n</i> (%)	3 (5.4)	13 (10.6)	
Child's current mental health diagnosis			16.25 (0.039)
Depression, <i>n</i> (%)	0 (0.0)	0 (0.0)	
Any anxiety disorder, <i>n</i> (%)	5 (8.9)	8 (6.5)	
Autism or Asperger's syndrome, <i>n</i> (%)	0 (0.0)	3 (2.4)	
Other, <i>n</i> (%)	1 (1.8)	5 (4.1)	
Multiple diagnosis, <i>n</i> (%)	3 (5.4)	9 (7.3)	
No formal diagnosis, but parent concerned, <i>n</i> (%)	19 (33.9)	19 (15.4)	
No diagnosis, <i>n</i> (%)	26 (46.4)	78 (63.4)	
Unanswered, <i>n</i> (%)	2 (3.6)	1 (0.8)	
Concern for their child developing depression			4.09 (0.043)
Not at all, <i>n</i> (%)	10 (17.9)	25 (20.3)	
A little, <i>n</i> (%)	17 (30.4)	53 (43.1)	
Yes, <i>n</i> (%)	19 (33.9)	26 (21.1)	
Very much so, <i>n</i> (%)	10 (17.9)	18 (14.6)	
Not answered, <i>n</i> (%)	0 (0.0)	1 (0.8)	
Concern for their child developing anxiety			1.6 (0.208)
Not at all, <i>n</i> (%)	8 (14.3)	24 (19.5)	
A little, <i>n</i> (%)	21 (37.5)	51 (41.5)	
Yes, <i>n</i> (%)	16 (28.6)	24 (19.5)	
Very much so, <i>n</i> (%)	11 (19.6)	23 (18.7)	

(continued on next page)

Table 1 (continued)

	Study 1 sample (N = 56)	Rest of PiP intervention group (N = 123)	t or X <sup>2</sup> (p value)
Not answered, n (%)	0 (0.0)	1 (0.8)	
Baseline PRADAS, M (SD)	47.48 (7.50)	46.05 (7.63)	1.18 (0.241)
Baseline PSES, M (SD)	23.16 (5.40)	24.47 (5.30)	−1.50 (0.136)
Baseline parent-reported adolescent symptoms, M (SD)			
Anxiety (SCAS)	20.51 (11.38)	18.70 (12.03)	0.96 (0.338)
Depression (SMFQ)	6.84 (6.06)	4.33 (5.26)	2.66 (0.009)
Baseline adolescent-reported symptoms, M (SD)			
Anxiety (SCAS)	38.56 (21.22)	36.26 (18.22)	0.70 (0.487)
Depression (SMFQ)	7.29 (7.67)	4.88 (5.13)	2.13 (0.036)

Note: M = Mean; SD = Standard Deviation; PRADAS (Parenting to Reduce Adolescent Depression and Anxiety Scale (Cardamone-Breen et al., 2017)); PSES (Parental Self-Efficacy Scale, (Nicolas et al., 2019)); Anxiety (Spence Children's Anxiety Scale, (Spence, 1997)); Depression (Short Mood and Feelings Questionnaire, (Angold et al., 1995)).

adopted an activity related to that.” These diverse responses from parents suggest that for the same parent the level of information provided by PiP may be adequate for some topics but not others. This underscores the value of having a therapist-coach available to build on the PiP content for topics that provide inadequate information for the particular parent.

The third objective of Study 1 was to explore how these parents (n = 56) differ from other parents who received PiP (n = 123). We conducted independent-sample t-tests (for continuous variables) and chi-square tests (for categorical variables) to compare Study 1 participants with the remaining PiP participants on a range of characteristics (refer to Table 1).

Compared to the rest of the PiP intervention group participants, Study 1 parents reported more depressive symptoms in their adolescents, as did their adolescents. Additionally, Study 1 participants expressed greater concern for their child developing depression and meeting diagnosis for a mental disorder in the absence of a formal diagnosis (which accounted for the group difference in ‘Child’s current mental health diagnosis’). Study 1 participants also had a higher level of education than the other sub-group.

## 4. Study 2 aim and methods

### 4.1. Aim

Study 2 aimed to inform the development of the TOPS program consultations with parents and youth mental health professionals.

### 4.2. Participants

Professional and parent participants were recruited via the researchers’ professional networks and advertising via social media. Eligible participants resided in Australia, had access to a computer, the internet, and a valid email address. Parents could participate if they had an adolescent aged 12–17 years. Eight parents and 31 professionals initially registered for the study, but six parents and 28 professionals participated in the study (see Table 2 for details of participant characteristics).

### 4.3. Procedure

Study 2 utilised consumer involvement from parents and mental health professionals to obtain input regarding the proposed content for the TOPS program. After obtaining written consent to participate, participants were given access to PiP for six weeks (see ‘The Partners in Parenting (PiP) Intervention’ section below for a detailed description). Thereafter, parents were asked to provide feedback via a semi-structured telephone interview, although some feedback was gained via email communication at the request of the participant (n = 3) where

Table 2

Study 2 participant characteristics.

Study 2 participants, n (%)		
	Parent	Professional
	N = 6	N = 28
Gender		
Female	5 (83.3)	26 (92.9)
Male	1 (16.7)	2 (7.1)
Age, mean (standard deviation)		
Age, n (%)		
20–29	–	1 (3.6)
30–39	–	13 (46.4)
40–49	3 (50.0)	8 (28.6)
50–59	3 (50.0)	5 (17.9)
60–69	–	1 (3.6)
Gross family income, n (%)		
Up to \$80K/yr	2 (33.3)	
Over \$81K/yr	3 (50.0)	
Prefer not to answer	1 (16.7)	
Ethnicity, n (%)		
Anglo-Australian	24 (85.7)	
Other	4 (14.7)	
Profession, n (%)		
Psychologist/counsellor		13 (46.4)
Other health professional <sup>a</sup>		10 (35.7)
Manager/executive		4 (14.3)
No response		1 (3.6)

<sup>a</sup> Other Health Professionals included social workers, community health nurses, youth workers, and community development workers.

the interview questions were emailed, and the participant provided a typed response in lieu of a telephone interview. Professionals were invited to provide feedback via an online survey or a telephone interview.

### 4.4. Measures

All participants were asked what they would add to the PiP content to make it more suitable for parents whose adolescents were already experiencing clinical anxiety and depression. An example question from parents’ interview (see Appendix C for full schedule) was: “How do you think parents of adolescents with anxiety and depression would benefit from the online parenting program.” For professionals, the online Qualtrics questionnaire (see Appendix F) asked them to endorse or reject a list of proposed factors for inclusion in the new program. For example, the question “Do you think having access to a therapist via telephone would enhance the usefulness of an online parenting program?” allowed for a ‘yes’, ‘no’, or ‘don’t know’ response with a free-text follow-up probe “Please tell us more about this if you would like to.” The Qualtrics survey also asked professionals to indicate how long they spent viewing each module (from 5 to 30 min/module). The average time spent on each



module was 15 min ( $SD = 5.83$ ), ranging from 13.67 min ( $SD = 4.96$ ) spent on the Health Habits module to a maximum of 16.43 min ( $SD = 5.53$ ) spent on Connect, the first module. Example online survey questions for professionals include: "Have the parents of the young people you work with approached you for advice regarding how to best support their child with their anxiety and/or depression?" response options are 'Yes', 'No', and 'Cannot Remember' with a free-text box option for participants who respond 'Yes' to provide further information. Professionals who were interviewed were asked similar questions (see Appendix E for interview questions) to those in the online survey and were provided with the opportunity to elaborate further, via additional probes. Twelve professionals completed a Qualtrics survey, and the remaining 16 completed a phone interview.

#### 4.5. The Partners in Parenting (PiP) Intervention

The self-guided PiP program (Level 3) involves parents receiving a tailored feedback report (Level 2 of PiP) after responding to a self-assessment parenting scale (the PRADAS (Cardamone-Breen et al., 2017)) that highlighted areas where they were concordant with the Parenting Guidelines and areas where they were not concordant with the Guidelines. The PRADAS is a criterion-referenced measure of parental concordance with the parenting guidelines (PiP Level 1). An example question from the PRADAS is "I make myself available for [child name] whenever [he/she] want to talk about [his/her] concerns." Parents were then able to access up to nine online modules which were designed to support them in making improvements in those areas where they were non-concordant with the Guidelines. The PiP intervention modules were developed from the topics contained in the Parenting Guidelines (Yap et al., 2017a; Yap et al., 2018; Parenting Strategies Program, 2013). Specific modules were recommended to parents based on their responses to the PRADAS. Parents could further tailor their program by deselecting the recommended modules and selecting additional modules. Once parents had selected their modules, they could commence their personalised program. Each module takes 15 to 25 min to complete. Each module allows parents to select one goal, from a choice of up to five, which they are encouraged to complete between sessions, to help the parent put the theory into practice.

#### 4.6. Data analysis

NVivo 11 was used for basic Content Analysis (CA) of the data in a similar process to that described in Study 1. The aim of the CA was to ascertain whether the content and resources identified as relevant in the parenting literature were aligned with the participants' recommendations for TOPS. Consequently, the themes were identified *a priori* via relevant literature and formed the questions that participants responded to. Participant responses to survey and interview questions were then used to determine the approach of TOPS and its core content. Pertinent data from Study 1 were also incorporated as part of this process. Participants endorsed the coach-supported approach of TOPS, as well as four core areas to be included in the TOPS program content, namely, Anxiety & Depression, Relationships, Time online, and Sleep. These findings will be presented in turn below.

#### 4.7. Study 2 results

##### 4.7.1. The TOPS approach

All six Study 2 parents felt that having access to a coach would allow parents to address specific difficulties their adolescent is experiencing. For instance, Parent 100 stated: "how could I see the program being a little bit better?... to have some 'real-life' support, so you could work through real examples that you're having at home, about, how can I better handle, you know: 'this is the scenario, what would you [the coach] suggest?'" The parent went on to recommend that it would be: "fantastic if there was... focused assisted conversation around the modules. That would

[be] beneficial, because... it's all good reading about it... but applying it to the day to day life, that's difficult."

Sixteen of the professionals who participated in Study 2 also saw the presence of a coach as beneficial, to: "clarify any queries... that aren't answered [in the PiP module text]" (Professional 300). Other professionals (Professional 302) commented on how a therapist-coach could be helpful to tailor the content of the modules to each family: "specifically to what the child was presenting with." Another (Professional 310) added that the therapist-coach would be critical to assisting participants with planning and completing the goal associated with each topic. She explains: "we move into the domain of homework adherence... parents... probably wouldn't necessarily do it by themselves without the assistance of MI [motivational interviewing]."

With regard to the 12 professionals who responded to the online survey, almost all (87.5%) believed that the parents of adolescents accessing their services would benefit from an online parenting program to help them support their adolescent children from anxiety and depression, with the remaining participants (12.5%) recording an 'unsure' response. All online respondents felt that the 'therapist-coach' could help the parent to address specific difficulties their adolescent is experiencing and talk through specific difficulties the parents might have in implementing the strategies recommended. Free text options saw participants recommending that the therapist could provide support for how parents are feeling, to address any experiences of shame or stigma related to their adolescent experiencing anxiety or depression, as well as to encourage the parent to implement the strategies in their family.

Professionals who responded via online questionnaires differed in their opinions regarding the potential benefit of the 'therapist-coach' having contact with the adolescent's mental health provider (with consent). Responses for 'yes' were 66.7% of participants, with the remaining 33.3% split equally between, 'no' and 'unsure'. The free text follow-up box enabled an expanded response. One professional felt having the therapist in contact with the adolescent's mental health provider could support the development of "a clear formulation regarding the family and ensure a consistent message is provided to parents re. ways they can help." While another professional had an alternate stance: "I think that the online program needs to be quite separate as it could lead to some difficult ethical issues around confidentiality of information and risk." A third professional suggested "This information could be beneficial in supporting the young person through any change the family might be implementing. It could also help us to develop strategies with the young person for meaningful engagement with their family."

##### 4.7.2. The content of the TOPS program

Participants were asked to identify content areas they considered essential elements for the TOPS program. The four key areas recommended included: (1) the provision of psycho-education regarding anxiety and depression; (2) Relationships, which comprised: (i) managing emotions, (ii) parent-adolescent relationship, (iii) communication, (iv) parental role-modelling, (v) family rules, and (vi) peer relationships; (3) Time Online, the amount and quality of time online spent by adolescents; and (4) Sleep, the provision of information regarding sleep hygiene, and information regarding adolescent sleep cycles.

##### 1: Psychoeducation regarding anxiety and depression

Parent and professional participants recommended that the program includes detailed information regarding symptoms of anxiety and depression. Additionally, one parent in Study 2 suggested information regarding the possibility of relapse. Her daughter had experienced clinical anxiety and depression, and Parent (101) described the importance of knowing her daughter's early warning signs to anticipate a possible relapse: "you're gonna have some setbacks at sometimes and what-not, but you know getting in early and working through." The details regarding the psycho-educative content was expanded by professionals

from Study 2 identifying key issues to be (i) the difference between anxiety and depression and typical adolescent development, (ii) the impact of anxiety and depression on their adolescent, and (iii) how they as parents can assist their adolescent in managing their symptoms. For instance, one professional (304) who works with adolescents stated: *"It might just be normal adolescent dysregulation... and that's unfortunately just developmental. So, I think helping parents to understand the distinction between 'what can I expect of a normal adolescent', versus 'what to expect of someone who is anxious or depressed'."* All online participants ( $n = 12$ ) felt the program would benefit parents if it included information on anxiety and depression and how sleep, exercise, and nutrition can influence anxiety and depression (and vice versa).

## 2: Relationships

Participants in Study 2 identified a number of aspects that could be useful under the content 'relationships.'

### (i) Managing emotions

Discussions with professionals included suggestions that the enhanced program should address the adolescent's emotional responses to stimuli, provide the parent with emotional regulation strategies that they can teach their adolescent, as well as help parents to manage their adolescent's bad moods.

### (ii) Parent-adolescent relationships

All endorsed the provision of information about how to talk to their adolescent about anxiety and depression, help-seeking for their adolescent, warning signs regarding a decline in their adolescent's functioning, and when to intervene. Online participants also endorsed the suggestion that parents would benefit from information about how to spend time with their adolescent, information regarding young people's online habits, sexual orientation and gender identity and the use of substances including alcohol and drugs.

### (iii) Communication

Participants from Study 2 identified activities that build parental empathy as an essential aspect of effective communication that can strengthen the parent-adolescent relationship. For instance, parent (103) from Study 2 reflected: *"trying to talk, you know communicate more, that connection bit."* This approach was especially helpful for this parent when her daughter: *"wouldn't come out of her room... [and was] not seeing her friends."*

### (iv) Parental role-modelling

Professionals recommended that the TOPS-coach encourage parents to role model adaptive behaviours. Examples included (i) managing stress and conflict effectively, (ii) encouraging parents to practise what they preach in terms of screen time, and (iii) undertaking activities that contribute to a healthy lifestyle, including nutrition, exercise, and effective sleep practices.

### (v) Family rules

Both parents and professionals endorsed the importance of covering how parents can establish family rules when their adolescent has clinical anxiety and depression. For example, professional (204) from Study 2, stated that: *"parents will come in with a completely different set of expectations, rules, um, for their depressed child, vs their non-depressed children, and they get stuck in this dynamic and don't actually know how to pull themselves out of it. So how [to] change the rules, the expectations so that they align more with the family values, [is important because] you don't*

*want to pathologise them and give them a whole different set of rules, um, because that will actually make them stuck."*

### (vi) Peer relationships

Study 2 participants endorsed the TOPS program acknowledging the importance of healthy peer relationships. For example, parent (100) recognised the importance of her daughter having opportunities to socialise and meet new people; she explained: *"making a-uh, a deeper friendship with somebody else other than her usual cohort, so she's sorta spreading out..."*

## 3: Time online

All Study 2 parents and professionals agreed with the suggested inclusion of adolescents' use of technology as a topic. Both groups of participants indicated that providing parents with information about the 'ideal' amount of online time and cyber safety was pertinent to helping parents to support their adolescents to manage their anxiety and depression.

## 4.8. Topic 4: sleep

All parents and professionals endorsed the suggestion that including information about adolescent sleep issues would be beneficial for the program. Participants in Study 2 endorsed the inclusion of psychoeducation on sleep issues, including typical sleep patterns during adolescence, and the importance of regular sleep-wake cycles and reducing screen time at night.

### 4.8.1. Development of TOPS content

Findings from Study 1 and 2 were used to develop the TOPS program, including the content for each TOPS-session (presented as presentation slides, e.g. using Microsoft PowerPoint software) for the TOPS-coach to work through with the parent-participant and a detailed TOPS-coach manual. The TOPS program comprises a set of modules that supplement the corresponding self-guided PiP modules. The drafted content for each TOPS module was comprehensively revised during multiple workshops involving all authors. Authors MBHY and AJ developed the Guidelines (Parenting Strategies Program, 2013), which form PiP Level 1 (Yap et al., 2017a), and have conducted several systematic reviews that investigated the role of parenting in the prevention of child and adolescent anxiety and depression (e.g., Yap et al., 2014a; Yap et al., 2016; Yap and Jorm, 2015). Authors MBHY, AJ, and KL developed Level 2 (Cardamone-Breen et al., 2017), and Level 3 of PiP (Yap et al., 2017a; Yap et al., 2018). Author GAM has researched extensively on the topic of adolescent depression, anxiety, and school attendance problems (Melvin et al., 2013; Carless et al., 2015). Author CF is a graduate clinical psychology student conducting doctoral research on the topic.

The PiP program contains nine online modules; the TOPS program was extended to include 12 coaching sessions, as the PiP Health Habits module was unpacked over up to 4 coaching sessions to cover each of the four content areas (sleep, nutrition, physical activity, substance use). An orientation session via videoconferencing was developed to introduce the parent and coach and start building rapport. This session also oriented the parent to the structure and aims of the TOPS program, including covering the use the secure video-conferencing program (Yuan, 2011). The final TOPS-session, offered to all parents, addresses the relapse and recovery process for clinical anxiety and depression in adolescents, and helps the parent develop an individualised wellness and relapse prevention plan for their adolescent. Table 3 shows the additional content developed for parents of adolescents who were receiving treatment for anxiety and/or depression. This content draws from the online PiP module content and enables parents to work with the TOPS-coach to process situations they are experiencing with their

**Table 3**  
Outline of module content from PiP with the additional content developed for TOPS.

Partners in parenting	Key focus <sup>a</sup>	TOPS additional content
	Difference between Anxiety & Depression as distinct from Adolescent growth and development	Orientation Anxiety Depression
Connect	Establish and maintain a good parent-teen relationship. Know how to talk about strong emotions and sensitive topics	5 core emotions Separating emotion from behaviour
Nurture roots & inspire wings	Avoid over-involvement and encourage autonomy	Facilitated discussion
Raising good kids into great adults	Establish family rules and consequences	3 key areas of family rules
Calm versus conflict	Minimise conflict in the home through role modelling and reducing criticism of your teen	Bi-directional relationship between: Anxiety & depression (and parental stress) Conflict
Good friends, supportive relationships	Encourage supportive peer relationships & friendships	Impact of anxiety and depression on peer friendships for adolescent How to encourage your adolescent to maintain peer friendships
Good health habits	Encourage good health habits around nutrition, exercise, sleep, and substance use	Individual session on one or all of the following:  <ul style="list-style-type: none"> <li>• Sleep – morning/evening strategies</li> <li>• Exercise – ways to increase physical activity</li> <li>• Nutrition – foods for brain function</li> <li>• Substances – how to discuss with adolescent</li> </ul>
Partners in problem-solving	Help your teenager to deal with problems	Stress management Facilitated discussion
From surviving to thriving	Help your teenager to deal with anxiety	The vicious cycle of anxiety
When things aren't okay	Encourage professional help-seeking when needed	Relapse prevention

<sup>a</sup> Key Focus section reference: [Parenting Strategies Program \(2013\)](#).

adolescents.

## 5. Study 3 aims and methods

### 5.1. Aims

Study 3 had two key aims. First, to evaluate the acceptability of the format and the program content of the TOPS program with parent participants whose adolescents were receiving treatment for anxiety and/or depression. Second, to obtain professional stakeholders' feedback about the suitability of the content and program format, as these participants represented key stakeholders in the implementation of the TOPS program.

### 5.2. Participants

Thirteen individuals (3 parents, 10 professionals) participated in Study 3 (see [Table 4](#) for participant characteristics). Six other parents registered for the study; however, did not go on to participate in the TOPS pilot. Recruitment methods were the same as for Study 2. However, to ensure the findings were relevant to the target population, the adolescents of the parents participating in Study 3 were required to be receiving support from mental health services for clinical anxiety and depression.

The adolescents of the three parents who participated were experiencing depression and anxiety-related school refusal and were receiving mental health support from their local Child and Adolescent Mental Health Services (CAMHS). The ten professionals who participated included eight who had also participated in Study 2. Maintaining eight professionals across Study 2 and 3 was advantageous as these participants had knowledge of the project from its inception through to completion and thus could provide feedback regarding whether the program was developed in the manner they originally envisaged. Interview questions can be viewed in Appendix I.

### 5.3. TOPS-coach/interviewer

The interviewer and TOPS-coach (CF) was a provisional psychologist at an advanced stage of her Doctorate of Clinical Psychology

**Table 4**  
Study 3 participant characteristics.

	Parent N = 3	Professional N = 10
Gender		
Female	3 (100.0)	9 (90.0)
Male	– (0.0)	1 (10.0)
Adolescent age, mean (SD)		N/A
Parent age		
40–49 years	1 (33.3)	
50–59 years	2 (66.7)	
Gross family income		
Under \$80K/year	1 (33.3)	
Over \$81K/year	2 (66.7)	
Ethnicity		
Anglo-Australian	2 (66.7)	9 (90.0)
Aboriginal/Torres Strait Islander	1 (33.3)	0 (0.0)
Other	– (0.0)	1 (10.0)
Profession		
Psychologist/counsellor	N/A	7 (70.0)
Other health professional		3 (30.0)

training, who also had 20 years' prior clinical experience as a psychotherapist.

### 5.4. Procedure

Study 3 involved piloting the first TOPS program developed based on findings from Study 1 and 2. Parents received the full TOPS intervention (see 'Study 3 Intervention'), and professionals were presented with an overview of the TOPS program, including content from two modules and an overview of the manual structure. The overview was delivered to professionals via videoconferencing to replicate the parent-participant experience so that the professionals could assess the delivery format. Feedback from the parents was gathered from comments made during the sessions, via emails from the parents, and via telephone contact after receiving the TOPS sessions. Professionals provided feedback during the videoconference, responding to specific content, asking questions about the content, in response to the questions (see



## Appendix I).

## 5.5. Measures

Study 3 measures included the interview questions for Study 3 Parents (Appendix E) and Professionals (Appendix I) were designed to ascertain the acceptability of the TOPS program. For instance, was the language used during the TOPS sessions relevant and usefulness to the parents, while also meeting the recommendations of the professional stakeholders. Parents and professionals provided feedback and input regarding the in-session activities and the support required for goal completion. Parents identified instances where careful wording was required to avoid misinterpretation or an unintended negative reaction from parents receiving the TOPS program. An example question to parent-participants was: “*What aspects of the therapist-support/coaching sessions were most useful to you, personally?*” Professionals were asked questions such as: “*How would it be helpful to your work with the young person if you could contact the therapist that supports the parents through the online program?*”

## 5.6. Intervention: the first TOPS program

The TOPS intervention comprised the self-guided Level 3 PiP program and a corresponding TOPS coaching session for each PiP module selected by the parent. Hence, the process for Study 3 parent-participants was similar to Study 2 parent participants, with the addition of: (1) an Orientation module via Zoom videoconferencing, after parents had received their personalised feedback report (a component of Level 3 PiP) and before having access to the first online module; (2) a corresponding TOPS-coaching session via Zoom videoconferencing, after completing each PiP module. Each session had the same general format, whereby the TOPS-coach: (i) reviewed content from the self-directed module; (ii) presented additional information that built on the online content (e.g. psycho-education relevant for clinical anxiety and depression); and (iii) supported the parent's goal planning. The goal planning process used motivational interviewing (Miller & Rollnick, 1991) to assist the parent in identifying the practicalities of goal completion, including possible barriers and choosing the best circumstance in which to implement the goal.

## 5.7. Results

Results from Study 3 primarily concern the acceptability of the TOPS program to both parents and mental health professionals. All participants endorsed the need for the adolescent to be receiving support from mental health services, including the adolescent having regular contact with a therapist while their parent accessed the TOPS program. Professional participants recommended that responding appropriately to an adolescent's suicidal ideation be included in the TOPS program. One professional (313) noted the need to address the topic of suicide within the program. She endorsed the inclusion of Standard Operating Procedures to address risk issues, including suicidal ideation that may arise for the adolescent during the TOPS program.

Professionals endorsed the inclusion of a therapist-coach, identifying the relationship between the TOPS-coach and the parent to be of fundamental importance to the outcomes of participation. The stance of the TOPS-coach needed to be one of active curiosity without assigning blame. One professional (204) stated: “*things that would prevent parents, what if they're concerned about, you know, them being judged, or being, the finger being pointed at them.*” Professionals also highlighted the importance of a robust coach-participant relationship, wherein the coach would be aware of, and compassionate towards, the parent's mental health, thereby increasing the potential for positive parental behaviour change.

The provision of psychoeducation was endorsed, as well as information about emotions to help parents to manage parent-adolescent

relationships, their adolescent's bad moods, and situations of conflict. The inclusion of activities that build parental empathy was regarded as an essential aspect of effective communication that can strengthen the parent-adolescent relationship. Participants endorsed an activity in the “Connect” module as providing parents with the opportunity to reflect and consider situations from the perspective of their adolescents which parents stated would assist them in developing a problem-solving resolution. Professionals also recognised the importance of assisting parents in developing their adolescent's autonomy through the activities included in the TOPS program. For instance, one of the professionals (200) from the focus group referred to this as “*supporting the process of individuation.*”

Like professionals, the parents who piloted the program endorsed the delivery of TOPS sessions via videoconferencing. The provision of additional information for parents who requested more detail about a topic was also appreciated, as was the session content being emailed to parents as a PDF since the annotations personalised the content and served as a memory prompt. Other recommendations included the request for an SMS appointment reminder and the option for parents to schedule an additional brief session between regular TOPS-coach sessions. The reason for the inclusion of this option was to assist parents in implementing the session content and address difficulties with goal progress.

Following consultation in Study 3, minor amendments were made to PiP (in the PRADAS and feedback report), for implementation as part of the new TOPS program. The PRADAS is a measure of parenting practices associated with adolescent anxiety and depression. One parent-participant (116) provided feedback that the language used in one PRADAS item regarding showing interest in what was happening at school for their adolescent did not resonate with her as her adolescent was not attending school. Consequently, a ‘Not Applicable’ response option was added and the wording of the PRADAS item and the corresponding message in the feedback report was altered slightly to be more suitable for parents whose adolescents are already experiencing anxiety and depression. The parent-participant reviewed and endorsed the revised wording in the PRADAS and the feedback report.

## 5.8. Discussion

Through three linked research studies, this project successfully (1) substantiated the need for a therapist-assisted online program to support parents of adolescents who have higher levels of need; (2) developed the Therapist-assisted Online Parenting Strategies (TOPS) program for parents whose adolescents are experiencing clinical levels of anxiety and depression; and (3) established the acceptability of the TOPS program to parents of adolescents with anxiety and depressive disorders, and to professionals working with adolescents.

The elements of the final TOPS intervention are displayed in Table 5, below. The table shows whether the content was suggested (S) or endorsed (E) by professionals and parents who participated in the development of this program. ‘Suggested’ indicates that participants generated the program element without priming or being provided with possibilities. ‘Endorsed’ indicates that the researcher presented the program element to the participant and the participant valued the element being included in the program. Some elements were ‘Suggested’ in Study 1 or 2 and then ‘Endorsed’ by other participants in Study 2 or 3.

Some suggestions were not implemented in this version of the TOPS program. For instance, parents' request for case vignettes will be considered in a future iteration of the TOPS program, with case study content being developed in consultation with parents who have participated in the current version of the program. In terms of the suggestion made by professionals for the therapist-coach to have contact with the adolescent's therapist, the research team could see the validity of all perspectives that were offered. Ultimately the decision was made to maintain a separation between the support provided to the parent from

**Table 5**  
Elements of the TOPS intervention developed through stakeholder consultation.

	Professionals	Parents
Having a therapist-coach	E	E
The role of the therapist-coach		
Motivational interviewing	S	
Goal planning	S	S
Support to implement strategies	S	S
Trouble-shooting barriers to implementing strategies	S	S
Tailor session content to the parent and adolescent	S	S
Provide support and validation to the parent	S	
Validate and dispel any mental health stigma	S	
In-session activities		
Videoconferencing	E	E
Live annotation of notes		S
Session notes provided		S
Session content/psychoeducation		
Anxiety and depression	S/E	S/E
Relapse and suicide prevention planning	S/E	S/E
Relationships	S/E	S/E
Time online	S/E	S/E
Sleep	S/E	S/E
Changes to PiP for implementation as part of TOPS		
Changes to the wording of the PRADAS and feedback report		S
Support structure		
Adolescent receiving support from mental health services	E	E
SMS session reminders		S
Other suggestions not incorporated into this version of the TOPS program		
Case vignettes		S
Contact between the adolescent's therapist and TOPS-coach	S	

the 'therapist-coach' and the adolescent's mental health provider. This stance was intended to minimise any boundary-blurring or expectation that the 'therapist-coach' could operate as a substitute for the adolescent receiving direct mental health support.

The TOPS-coaching component of the intervention comprises an extensive manual, the foundations for which are based on the extant literature regarding effective parenting practices for the alleviation of adolescent anxiety and depression. The intervention comprises (a) content for the parent-participant displayed as a presentation during the videoconferencing session via the screen-share function; and (b) a manual for the 'TOPS-coach.' This manual contains five components: (1) a rationale for each strategy covered in the given TOPS session; (2) key points for the TOPS-coach to address in each module; (3) a suggested script for the TOPS-coach; (4) signposting to further resources for both the parent-participant and the TOPS-coach; and (5) protocols or Standard Operating Procedures (SOPs) developed to cover risk management disclosures (e.g. active suicidal ideation, risk of harm towards self, or from others). These SOPs provide the TOPS-coach with a step-by-step guide to follow. The implementation guidelines (TOPS Manual), and the resources the TOPS program involved (a TOPS-coach, stable Internet, and videoconferencing software) were endorsed by participants.

The theoretical framework of Supportive Accountability (Mohr et al., 2011) underpins the approach of the TOPS-coach. The acceptability of the therapist-coach model is thought to be enhanced through the TOPS-coach clarifying expectations between themselves and the participant during the orientation session. The importance of the clarification of role and expectations from the outset of a program was identified by (Mohr et al., 2011) and concurred with prior findings that when coaches and participants have shared expectations, better outcomes are more likely (Knaevelsrud and Maercker, 2007). It was important that the TOPS-coach could engage parents from a non-judgemental stance to assist parents' ability to adapt and implement the

parenting strategies to their specific circumstances. Both parent and professional participants regarded this stance of active curiosity without assigning blame as necessary for facilitating goal achievement.

Designing interventions that are acceptable to consumers has long been recognised as critical to both the implementation of and the effectiveness of interventions (Byrne, 2019; Vale et al., 2012), including parenting programs. For instance, the Triple P program has tested intervention content with parents and used consumer preference surveys to ask parents' and practitioners' views on critical features of the program (Sanders, 2012). Successful consumer involvement can foster a sense of ownership and empowerment among consumers, improving the acceptability of the intervention among those for whom it was developed (Nastasi et al., 2000). The professionals who contributed to the development of TOPS appeared to support this view, as they indicated a willingness to support recruitment for the open trial of TOPS (currently underway).

Although Study 3 had input from only a few parents from the intended population, their contribution was vital both to ensure that the tone of the TOPS program was appropriate and to highlight the complexity of their adolescent's mental health issues. As mentioned earlier, the adolescents of the three participating parents had each been involved in the Child and Adolescent Mental Health Services (CAMHS), and the parents disclosed that their adolescents had expressed suicidal ideation and some levels of school refusal as part of their depression and anxiety disorders. This knowledge enabled the research team to recognise that further trials of the TOPS program would warrant the adolescent receiving ongoing support from mental health services. Professionals that participated in Study 3 also recommended that future TOPS-coaches need to have completed Mental Health First Aid (Jorm et al., 2013) training as a minimum requirement.

During the time the parent-participants were in contact with the research team, several of their adolescents engaged in self-injury, had expressed suicidal ideation to their parents and had crisis interventions from the CAMHS team. As part of the Study 3 pilot, the TOPS team worked hard to try to alleviate the stresses parents faced, rather than exacerbate them, for instance, by offering flexible session times. This strategy was based on findings from a recent systematic review which found parents to be more likely to engage in a program that provided them with more control over when and where they engaged with it (Finan et al., 2018). In line with evidence that engagement is increased when session reminders and between-session contact are used (Baumel et al., 2017), these strategies were used by the TOPS-coach in the pilot and recommended during the consultation. These activities, while small acts of respect in themselves, are intended to maintain a strong bond between TOPS-coach and parent, which has been related to treatment outcome in telehealth interventions (Beckner et al., 2007). Further, the behaviour of the TOPS-coach in each interaction with the parent is intended to provide a role-modelling opportunity that the parent may transmit to their adolescent, that their views and experiences are important, and a valuable part of the recovery process.

In terms of acceptability, an essential goal of this research was to ensure that the TOPS program reaches its intended clinical population and is responsive to address any implementation problems identified. An online therapist-assisted parenting program was found to be acceptable to parents of adolescents experiencing anxiety and depression, its intended population. To the authors' knowledge, there is no other online parenting program designed to empower parents to support their adolescents with clinical anxiety and depression.

## 6. Limitations

A limitation of this research was that the parent samples in Study 2 and Study 3 were both small. Several parents who made enquiries about participating in both studies did not complete the research. Those parents who provided their reason for withdrawing from the study had specific life stressors that were instrumental in their choice not to

participate. It remains to be ascertained whether these parents would complete participation in a fully developed version of the TOPS program, where they would not be required to provide feedback to the researchers. As stated earlier, the difficulty in recruiting and sustaining parental engagement during program development indicated the complex circumstances that the target parents were experiencing.

## 7. Future directions

The next stage is to demonstrate the effectiveness of the TOPS program, which is the focus of a subsequent research study. An open-label double baseline trial of the TOPS program is currently in progress (Trial Registration: ACTRN12618000290291). This trial will assess the TOPS program's ability to bring about change in parenting behaviours that are related to adolescent anxiety and depression. The trial will also establish whether any change in parenting behaviour can translate into a reduction in the symptoms of clinical anxiety and depression in adolescents. If the TOPS program is found to be an effective intervention, the program might address a significant gap that currently exists for parents whose adolescents are experiencing anxiety and depressive disorders.

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.invent.2019.100285>.

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