Educating and Supporting Tennis Parents using Web-Based Delivery Methods: A Novel Online Education Program

Sam N. Thrower, Chris G. Harwood and Christopher M. Spray

Loughborough University

Author Note

Sam N. Thrower, School of Sport, Exercise & Health Sciences, Loughborough University, Loughborough, United Kingdom, LE11 3TU. Tel: +44 07716065298, Email: s.n.thrower@lboro.ac.uk

Chris N. Harwood, School of Sport, Exercise & Health Sciences, Loughborough University, Loughborough, United Kingdom, LE11 3TU. Tel: +44 01509 226342, Email: c.g.harwood@lboro.ac.uk

Christopher N. Spray, School of Sport, Exercise & Health Sciences, Loughborough University, Loughborough, United Kingdom, LE11 3TU. Tel: +44 01509 226339, Email: c.m.spray@lboro.ac.uk

Biographical Note:

Sam Thrower is a Post-Doctoral Research Associate, Chris Harwood is a Professor in Applied Sport Psychology and Chris Spray is a Reader in Sport & Exercise Psychology

Correspondence:

Correspondence concerning this article should be addressed to Sam N. Thrower, School of Sport, Exercise & Health Sciences, Loughborough University, Loughborough, United Kingdom, LE11 3TU. Tel: +44 07716065298, Email: s.n.thrower@lboro.ac.uk

Abstract

This study evaluated the effectiveness of a novel online education program for British tennis parents and their experiences of engaging in the program. Using a convergent parallel mixed-methods design, 13 parents completed pre- and post-program online questionnaires, while a subset of 9 participants also shared their experiences via an asynchronous email interview. Quantitative findings revealed positive directional changes for almost all of the variables in relation to emotional experiences, goal orientations, tennis parent efficacy, and general parenting efficacy. The contribution of the combined quantitative and qualitative findings and their practical implications are discussed.

Key Words: Youth Sport, Parenting, Online Education, Program

Educating and Supporting Tennis Parents using Web-Based Delivery Methods: A Novel Online Education Program

Parents not only provide the opportunities for their children to participate in sport but also have a significant influence on their early experiences and development. As a result, in recent years there has been growing academic interest in the role that parents play in children's participation and progress within the context of youth sport (see Knight, Berrow, & Harwood, 2017 for a review). Broadly speaking, this body of research has provided an in-depth understanding of the influence of parents in sport (e.g., Dorsch, Smith, & Dotterer, 2016; Knight & Holt, 2014), the factors influencing parental involvement (e.g., Knight, Dorsch, Osai, Haderlie, & Sellars, 2016), the strategies used by parents (e.g., Burgess, Knight, & Mellalieu, 2016; Knight & Holt, 2013), and the education and support parents want or need (e.g., Thrower, Harwood, & Spray, 2016). Within this literature there have been numerous calls to educate and/or support parents to ensure that a healthy youth sport environment is created and maintained (Harwood & Knight, 2015).

Despite growing interest in youth sport parenting, there are currently only a small number of published field-based intervention studies with sport parents (Dorsch, King, Dunn, Osai, & Tulane, 2017; Harwood & Swain, 2002; Smoll, Smith & Cumming, 2007; Thrower, Harwood, & Spray, 2017). Initial interventions (i.e., Harwood & Swain, 2002; Smoll et al., 2007) tended to focus on creating task-orientated motivational climates involving coaches, players, and parents through single workshops (Smoll et al., 2007) and season-long programs (Harwood & Swain, 2002). Within these programs, educational sessions focused on enhancing parents' knowledge and awareness of goal orientations, process goal setting, verbal and non-verbal communication strategies, and behavioral guidelines for parents of children participating in elite junior tennis (Harwood & Swain, 2002) and community-based basketball (Smoll et al., 2007). Taken together, these programs were successful in increasing young

athletes' task involvement, cognitive appraisal, self-regulation, self-efficacy (Harwood & Swain, 2002), and lowering cognitive and somatic anxiety (Smoll et al., 2007). However, these studies did not assess the relative contributions of the parent and coach, or which guidelines had the strongest influence on parents' behavior and consequently athlete outcomes. Furthermore, the highly focused nature of these early interventions (i.e., creating a task-orientated motivational climate) does not reflect our contemporary understanding of the complex nature of parenting in youth sport.

Taking this into consideration, researchers in the US (i.e., Dorsch et al., 2017) and UK (i.e., Thrower et al., 2017) have recently begun evaluating the effectiveness of group-based education programs specifically for sport parents. Initiating this body of research, Dorsch and colleagues (2017) conducted a pilot study to assess the impact of an evidence-based education program for parents in organized youth sport. A total of 88 youth soccer parents were assigned to a full (n = 18), partial (n = 36) or non-implementation (n = 27) condition. Those in the full implementation condition received a 33 page 'sport parent guide' and a 45 minute 'sport parent seminar', while those in the partial condition received only the guide. The program was based on an extensive literature review and included information about youth sport participation, developmental models of sport participation, participation rates in sport, communication, working with coaches, sport parent behavior and tips for positive sport parenting. Results indicated that those parents in the full implementation condition demonstrated more support and warmth, and less pressure and conflict than those in the partial or non-implementation groups. However, the program content appeared to be based on assumed needs rather than the actual needs of the parents participating in the program. In addition to this, the 'voice' of the parents was almost entirely missing and as a result it is not clear how these outcomes were achieved or what parents' experiences were of participating in this program.

Building on these limitations, Thrower et al. (2017) evaluated the effectiveness of a parent education program which targeted the needs of British tennis parents and was specific to the culture, social settings, and developmental stage within which parents were operating (see Thrower et al., 2016). Using a qualitative organizational action research framework, a series of six workshops were run for 31 parents of mini-tennis players (five to 10 years) over a 12-week period. Following the program, parents reported improved knowledge and confidence in their ability to support their children and make developmental decisions, which appeared both to serve as a buffer against the stressors tennis parents faced and to ameliorate their overall emotional experiences. Findings also revealed that parents perceived themselves to engage in more task-orientated behavior and communication with their children in competitive situations.

Collectively, these studies have demonstrated the effectiveness and value of sport parent education programs. Such evidence plays an important role in helping to encourage the integration of evidence-based interventions within sports clubs, organizations and national governing bodies (Knight et al., 2017). However, these studies have also highlighted the significant cost, time, and expertise needed to plan and deliver evidence-based face-to-face education programs for service providers. Furthermore, even when programs are provided, there appears to be a range of barriers to initiating and maintaining participation (e.g., work commitments, childcare responsibilities, a lack of understanding of the important role parents play in athletes' development) (see Thrower et al., 2017). As a result, there have been calls within the literature to develop alternative and more innovative delivery methods to supplement or even replace face-to face programs (Gould, Lauer, Rolo, Jannes, & Pennisi, 2008; Thrower et al., 2017).

One delivery method that is increasingly being used to make connections between research and practice within the field of parent training is web-based delivery (see

Breitenstein, Gross, & Christophersen, 2014). Web-based delivery methods are being used to save money and time by decreasing the travel and planning associated with traditional face-to-face delivery models. These delivery methods also help to eliminate some of the logistical barriers that parents face by allowing them to access the program when it is convenient to them. In addition, there is growing evidence to suggest that web-based interventions can reach large numbers of people, increase completion rates and yield comparable outcomes with face-to face methods (e.g., satisfaction, knowledge acquisition, parent and child behavioral outcomes) (see Breitenstein et al., 2014 for a review). For example, Bert, Farris and Borkowski (2008) directly compared self-directed web-based delivery with face-to-face delivery of the *'Adventures in Parenting'* program and found significant intervention effects for both delivery methods but substantial differences in completion rates (41.7% for web-based vs. 25% for face-to-face). In addition to this, there is evidence to suggest that parents prefer self administered online programs (Metzler, Sanders, Rusby, & Crowley, 2012) and the ability to repeat online activities and review content at one's own pace can actually lead to enhanced learning outcomes (Duijin, Swanick, & Donald, 2014). Taking these points into consideration, it would appear that online education represents a potentially fruitful approach that could be used to address some of the provider and parent specific barriers of face-to-face sport parent education and increase program reach and accessibility.

To date, there is an absence of empirical studies which have evaluated the effectiveness of evidence-based online sport parent education programs. As a result, it remains unclear if online sport parent education yields comparable results to face-to-face programs. It is also unclear if online delivery can increase the reach and accessibility of such programs. Given the lack of research in this area, it is also necessary to understand sport parents' experiences of engaging in online education programs. Providing answers to these questions is vital if resources are to be allocated to parent education in the future (Gould et

al., 2008). The purpose of the current study, therefore, was to build on existing research (i.e., Thrower et al., 2017) and evaluate the effectiveness of a large-scale online education program for British tennis parents. A mixed method approach was used to address the following research questions: 'what effect does a large-scale online education program have on tennis parents' affect, goals, and behavior?' and 'what are parents' experiences of engaging in an online sport parent education program?'

Methods

Methodological Overview

Based on the exploratory and confirmatory nature of the research questions, the current study adopted a fixed mixed methods research design (Creswell & Plano Clark, 2011), which included collecting, analyzing, integrating, and drawing inferences using both quantitative and qualitative methods within a single study. Mixed methods designs are deemed particularly appropriate for educational and evaluation research (Creswell & Plano Clark, 2011) and were used in this study to answer different research questions. Specifically, this approach was used for complementarity (i.e., the enhancement or clarification of findings from one method by use of another), initiation (i.e., the capacity to access new insights into a particular phenomenon), and utility purposes (i.e., combining the two approaches will be more useful to practitioners) (Bryman, 2006). Consistent with the use of mixed methods, these procedures were underpinned by the first author's pragmatic philosophical orientation, which is based on the notion that knowledge is constructed and made meaningful in relation to individuals' actions and interactions (Dewey, 1922).

Mixed Methods

In terms of the research design, the current study utilized a convergent parallel mixed method approach (Creswell, 2014), in which qualitative and quantitative data collection are conducted at the same time and given equal emphasis or priority (i.e., QUANT + QUAL)

(Morse, 1991). This design was upheld and facilitated by the mixed expertise of the research team in both qualitative and quantitative methods. It is important to note that the current study should be considered as partially mixed method, as the data collected were only mixed during the interpretation phase known as side-by-side comparison (Creswell, 2014). The key assumption underpinning this approach is that both qualitative (i.e., in-depth perspective) and quantitative data (i.e., transferable to a population) provide different types of information (Creswell, 2014). Therefore, the quality criteria for each aspect of the study should be considered separately. However, taken as a whole, this study can be judged on the capacity to which it is relevant for the research questions, is transparent, has a rationale for using mixed methods and the need for integration of mixed methods findings (Bryman, 2006).

Participants and Recruitment

Following institutional ethical approval, homogeneous purposeful sampling was used to select tennis centers that were part of the Lawn Tennis Association's (LTA) performance center network (i.e., three international high performance centers, 16 high performance centers, 69 performance centers) and could provide access to parents of an estimated 2500 British mini-tennis players (5-10 years) who were regularly attending these centers. The LTA award each center with a status based on a range of criteria, including the quality of their facilities, programs, coaching and players. All of these centers were asked (via email and post) to: (a) email all parents of mini-tennis players (5-10 years) and invite them to participate in the program; (b) put up posters around their center advertising the program; and (c) verbally encourage parents to participate in the program. Social media (i.e., Twitter) was also used as a way to recruit participants and provide on-going updates about the program. In terms on initial engagement, 62 parents registered interest by signing up for the program, and 38 (61%) of these parents (21 mothers, 17 fathers) from 30 different centers in Britain provided informed consent and completed the pre-program questionnaire. Participants ranged

in age from 31 to 59 years (M = 43.89; SD = 5.92) and had between 0.5 and 10.5 years of experience as a tennis parent (M = 3.66; SD = 2.28). The majority of participants identified themselves as being 'White British' (78.9%), were married (73.7%), possessed at least one degree (76.3%), were employed full time (57.9%) and had an annual household income of between £25,000 and £75,000 (44.7%) or over £75,000 (47.4%). Of these initial 38 participants, 13 (34%) finished the program by completing the post-program questionnaire. Following the program, a sub-group of nine parents responded to a request to participate in an asynchronous email interview and provide their views and experiences of the program.

Online Parent Education

Online parent education is an umbrella term referring to parent education that occurs exclusively via the Internet. Despite growing evidence to suggest that web-based delivery methods can increase program reach, sustainability, and yield comparable outcomes with face-to-face methods, relatively little is currently known about the mechanisms and practices associated with effective online learning for parent specific populations (see Breitenstein et al., 2014 for a review). However, there is clear evidence to suggest that instructor-directed and collaborative approaches are associated with more positive online learning outcomes than independent self-directed learning in adult populations (Means, Toyama, Murphy, Bakia, & Jones, 2010). Consequently, the current study used a series of eight short online educational videos (including the introductory video) lasting between 6 and 30 minutes (M = 22.2; SD = 8.1). Short videos of PowerPoint presentations with 'talking heads' (i.e., the first author was recorded delivering each workshop) were used to facilitate engagement, as parents have greater control over the learning process and can face distractions or temptations to alter their learning environment (e.g., fast forward) in ways not possible in more traditional face-to-face models (Gilson & Jung, 2014; Moore & Kearsley, 2011). Based on best practice guidelines in online education, parents were given control over their learning (i.e., learn at their own pace),

provided with informal assessment structures to assess their own learning (i.e., multiple-choice quizzes based on workshop content), given supplementary downloadable materials (e.g., journal articles, information sheets), set practical tasks to implement what they had learnt and encouraged to interact with the authors and other parents in an online discussion forum (Breitenstein et al., 2014; Means et al., 2010).

Procedure

A website (www.ltpep.com) was developed using Wordpress (Version 4.1) by the first author which included educational videos, quizzes, an open discussion forum, and a library database. Videos were recorded using Techsmith Camtasia (Version 2.9.1), uploaded to YouTube and subsequently embedded within the website. Parents were encouraged to visit the website, watch a 6-minute introductory video and sign up to become a pre-member. Once a pre-member, parents were provided with access to an online information sheet, informed consent form, and a pre-program online questionnaire. Following completion of the pre-program online questionnaire, the first author upgraded parents' membership within 24 hours to give them full access to the workshops and forum. Workshop topics were based on the needs of British Tennis Parents (Thrower et al., 2016) and a previous face-to-face tennis parent education program (Thrower et al., 2017). Specifically, topics included: (a) supporting your child during mini-tennis (Part 1 & 2); (b) the LTA's mini-tennis organizational system; (c) child and talent development during mini-tennis (Part 1 & 2); (d) competition roles; and (e) continual learning and support (see Table 1). Although parents were given control over the pace of their learning, they were encouraged to watch one workshop per week. Once parents had watched all seven videos, they were asked to complete the post-program questionnaire. Upon completion of the program, participants were given access to the library database of book chapters and journal articles. The website was available online for six months and participants on average took 77.85 (*SD* = 48.52) days to complete the program. This pacing is

consistent with similar self-directed online parenting programs (e.g., Sanders, Baker, & Turner, 2012)

Data Collection

Quantitative exploration. Quantitative measures were chosen based on findings from previous research (i.e., Thrower et al., 2017). Specifically, questionnaires were used to measure changes in affect (e.g., emotional experiences), goal orientations and predictors of behavior (i.e., efficacy beliefs) following the program. A measure of general parenting efficacy was also included to explore if the program had any impact on parenting beyond the sporting context.

Sport emotion questionnaire (SEQ). An adapted version of the SEQ was used to measure tennis parents' emotional experiences as a tennis parent within the last month (Jones Lane, Bray, Uphill, & Catlin, 2005). The SEQ examines five emotions, which can be grouped into two higher-order dimensions: (a) unpleasant emotions (anxiety, dejection, and anger); and (b) pleasant emotions (excitement and happiness). The SEQ contains 22 items that are scored on a 5-point Likert type scale ranging from 0 (not at all) to 4 (extremely). Following consultation with the authors of the questionnaire, the stem was changed to: 'reflecting on the most recent month where you were involved as a tennis parent, please indicate how much you have experienced these feelings'. Jones et al. (2005) reported excellent reliability for the SEQ scales (Cronbach's alpha between .81 and .90).

Achievement goal scale for youth sport (AGSYS). An adapted version of the AGSYS was used to measure the level of task and ego achievement goal orientations parents had for their children (Cumming, Smith, Smoll, Standage & Grossbard, 2008). This 12-item measure was chosen as it is sensitive to interventions designed to enhance task orientation and reduce ego orientation (Smoll et al., 2007). Items were adapted for use with parents. For instance, 'My goal is to learn new skills and get as good as possible' was changed to: 'my goal is for

my child is to learn new skills and get as good as possible'. Reponses are measured on a 5-point Likert scale ranging from 1 (not at all true) to 5 (very true). Cumming et al. (2008) provided initial evidence for the factorial validity and internal reliability of the measure. Cronbach's alpha internal reliability coefficients were .78 for task orientation and .88 for ego orientation and test-retest reliabilities were .92 and .95 for task and ego scores respectively.

Tennis parent efficacy scale (TPES). The TPES was an applied tool developed specifically for the current study to provide a non-hierarchical scale of parents' belief in their own ability to perform competently and effectively as a tennis parent. Drawing upon relevant literature (e.g., Harwood & Knight, 2015; Thrower et al., 2016), a conceptual analysis of the situational demands and sub skills needed as a tennis parent in Britain was conducted to develop the scale. This multidimensional measure has 11 subscales with each representing a distinct dimension of tennis parent efficacy: (a) parent-coach relationship efficacy; (b) parent-parent relationship efficacy; (c) learning efficacy; (d) informational support efficacy; (e) emotional support efficacy; (f) tangible support efficacy; (g) organizational efficacy; (h) developmental efficacy; (i) pre-match role efficacy; (j) in-match role efficacy; and (k) post-match role efficacy. These subscales were comprised of 51 items (see Table 2) and each item used the stem: 'rate how confident you are right now that you can…' to measure what parents think they can do at a specific time point (i.e., a judgment of capability). The TPES uses an 11-point Likert scale ranging from 0 (not at all confident) to 10 (extremely confident) to detect subtle differences before and after interventions (Bandura, 2006). The TPES was checked for face and construct validity by a panel of seven experts. Items were only removed or changed if four or more (>57%) of the experts rated an item as 'no' or 'unsure' in terms of its relevance, clarity and/or specificity. One item was removed and the wordings of eight items were changed. Subsequently, the TPES was pilot tested with mini-tennis parents (*n* =

13) who were not participants in the program. Comments on the face validity of the tool were used to make minor changes to the wording of items and further refine the measure.

Tool to measure parenting self-efficacy (TOPSE). The TOPSE was used to measure tennis parents' general parenting efficacy (Kendall & Bloomfield, 2005). The TOPSE is a parenting program evaluation tool that is theoretically underpinned by self-efficacy theory, is specific to parenting in the United Kingdom, and takes into account the views and experiences of a diverse range of cultural, educational, and social backgrounds (Kendall & Bloomfield, 2005). The 48 multidimensional item measure has eight scales, with each scale having six statements and representing a distinct dimension of parenting. These include: emotion and affection (e.g., I am able to show affection towards my child), play and enjoyment (e.g., I am able to have fun with my child), empathy and understanding (e.g., I understand my child's needs), control (e.g., I can remain calm when facing difficulties) discipline and boundaries (e.g., I am able to stick to the rules I set for my child), pressures (e.g., I do not feel a need to compare myself to other parents), self-acceptance (e.g., I know I am a good enough parent), and learning and knowledge (e.g., I am able to learn and use new ways of dealing with my child). Each item used the stem: 'to what extent do you agree with each statement'. The items are rated on an 11-point Likert scale from 0 (completely disagree) to 10 (completely agree). The scale contains positively and negatively worded items and the responses are summed to create a total score, with a higher score indicating higher levels of parenting self-efficacy. Internal reliability coefficients for the subscales ranged from 0.80 to 0.89 and the overall scale reliability was 0.94.

Qualitative exploration. Based on the range of qualitative data that the website provided, informal data were collected from comment boxes and the online discussion forum throughout the duration of the program. In addition to this, post-program asynchronous online email interviews (O'Conner, Madge, Shaw, & Wellens, 2008) were used to prove additional

depth and detail in relation to participants' experiences. This approach was selected for three reasons: (a) participants were spread across Britain making face-to-face interviews logistically difficult; (b) email was the primary way in which the researchers had communicated with participants throughout the study; and (c) consistent with the design of the program, this approach allowed parents to work through the questions at their own pace and at a convenient time. Research has also highlighted the value of asynchronous online email interviewing in generating rich, open, candid, honest, detailed and reflexive data because of the heightened levels of anonymity and privacy (Hewson, 2014). Initial and follow up email interview questions focused on parents' reasons for registering, experiences of using an online resource, aspects of the workshop that could be improved and their overall experiences of participating in the program.

Data Analysis

Quantitative analysis. Descriptive statistics were used as a way to summarize the information clearly, accurately, and as effectively as possible. Paired sample *t*-tests were used to determine whether there was a statistically significant difference between parents' mean scores before (pre) and after (post) the program. It is important to note given the small sample size that the data met the assumptions of parametric statistics. Bonferroni corrections were used to determine the statistical significance for each measure in order to reduce the chances of making a type 1 error (i.e., differences are found that do not exist) when making multiple comparisons. The statistical significance for each measure was adjusted to: $p = .006$ (.05/8) for the TOPSE, $p = .004$ (0.05/11) for the TPES, $p = .025$ (.05/2) for the AGSYS, and $p = .010$ (.05/5) for the SEQ. Effect sizes were also used to explore the practical significance of the program. Exploring the size of difference was considered particularly important in the current study as effect sizes are independent of sample size. Based on its common use in practice, a pooled standard deviation effect size was calculated (Rosnow & Rosenthal, 1996).

In line with Cohen's (1988) suggestions, .8 was considered as a large effect, .5 a moderate effect, and .2 a small effect.

Qualitative analysis. A thematic analysis was conducted which involved becoming immersed in the data by reading comments, forum posts, emails, and asynchronous online email interview transcripts to become familiar with participants' shared experiences and understand their perceptions of the program. All qualitative data were then inductively analyzed via line-by-line coding to generate initial codes and grouped together to generate themes. Recurring themes were subsequently identified, labeled, and compared with similar data and clustered together to create higher-order themes (Sparkes & Smith, 2014). The raw data were then re-visited to ensure that these higher order themes were represented appropriately. These qualitative findings were presented as a realist tale (Sparkes & Smith, 2014), allowing the reader to gain an insight into participants' perceptions and experiences of the program.

Results

Consistent with a convergent parallel mixed methods approach, the quantitative data are presented first followed by the qualitative findings, known as side by-side comparison (Creswell, 2014). It is important to note that within the qualitative results section individual participants were considered more or less experienced depending on whether they were over or under the mean years of experience as tennis parents within this study (i.e., 3.66 years).

Preliminary Analysis

Based on the completed pre-program questionnaires (n = 38), Cronbach alpha coefficients were calculated for all subscales (see Table 3). All of the alpha coefficients were deemed acceptable based on Nunnally's (1978) cut-off criterion of .70 with the exception of 'pressures' (.61) and 'affect & emotion' (.57) from the TOPSE, and 'learning efficacy' (.67) and 'tangible support efficacy' (.60) from the TPES. Although items could have been

removed from these variables to improve or in some cases attain the cut-off criterion, due to the practical importance of these items in the current study, these subscales were retained.

Quantitative Results

Table 3 provides the means and standard deviations for the variables of interest before (pre) and after (post) the program. Desirable directional changes in mean values occurred for all variables following engagement in the program with the exception of a decrease in 'tangible support efficacy' from the TPES, 'affect & emotion' and 'play and enjoyment' from the TOPSE (see Table 3). Paired sample *t*-tests revealed a significant difference in the pre-post scores for parent-parent relationship efficacy $t(12) = -3.53$, $p = .004$, $d = -0.747$ when adopting an adjusted *p*-value of .004. The other variables measured in the current study were not statistically significant when adopting Bonferroni adjusted *p*-values. Despite this, there are a number of large (i.e., informational support efficacy, developmental efficacy, post-match role efficacy) and moderate (i.e., parent-parent relationship efficacy, organizational efficacy, pre-match role efficacy, in-match role efficacy) effect sizes for items in the TPES and smaller effect sizes found for items in the SEQ (i.e., anxiety), AGSYS (i.e., ego-orientation), and TOPSE (i.e., empathy and understanding, self acceptance, pressures) (see Table 3).

Qualitative Results

Thematic analysis of the qualitative data revealed six higher order themes: (a) awareness of the program; (b) initiating engagement in parent education programs; (c) online education and program accessibility; (d) workshop content and program effectiveness; (e) program design and effectiveness; and (f) factors influencing program completion.

Theme 1: Awareness of the Program

The online education program was promoted through social media (i.e., Twitter) and by emailing and posting promotional packs to 88 of the LTA's performance centers. Despite

this widespread promotion, only 62 parents registered for the program. Interestingly, participants felt that there was reluctance from some coaches and centers to promote or pass on information about the program to their mini-tennis parents. One father explained how he believed that a lot of mini-tennis parents were simply not made aware of the program:

> A lack of awareness [of the program] is the biggest issue. I heard about it from one of my kid's coaches but not the others. There are some great opportunities which not all clubs are good at promoting. The more you can encourage coaches and clubs to promote the better (Parent 9).

Another parent offered a possible explanation for this: "I feel that perhaps these centers use their own methods and maybe don't want to encourage potential different ways of thinking" (Parent 13). As a result, some participants believed that ensuring that all British mini-tennis parents were aware of the program would require greater investment, backing, and promotion from the National Governing Body (i.e., LTA). As one father suggested: "The LTA should have this stuff [the program] on their website. Tennis is so kids focused and it needs to focus on parents as well but it probably comes down to money" (Parent 7).

Theme 2: Initiating Engagement in a Parent Education Program

For parents who were aware of the program, their motivation to engage appeared to be determined by their desire to improve their knowledge and skills as a tennis parent. For parents new to tennis, the program appeared to represent a way to gain an understanding of mini-tennis. As one mother explained: "My child is competing in something I know nothing about and I don't know how to deal with certain situations…my initial thoughts were this is everything I need as a tennis parent!" (Parent 28). Other parents were already researching information and therefore saw the program as an opportunity to further develop their existing knowledge and skills:

> Since my son first started playing tennis I have always researched information in regards to being a tennis parent. I have read various documents from the ITF [International Tennis Federation] and LTA websites, which gave me a better understanding of mini-tennis and the path to elite level. Therefore, when I saw [on Twitter] you were running an education program for parents it was only natural that I wanted to find out more. I hadn't seen any other websites on the Internet where you can find that amount of information dedicated to being a sports parent so I found it quite refreshing (Parent 3).

Similarly, some more experienced mini-tennis parents also recognized the need for parent education, although this appeared to be based on mistakes they had made and a desire to improve their parenting skills. As one father with 6.5 years of experience honestly admitted:

> I know I have not been good enough as a tennis parent. With my eldest boy I used to discuss results more than processes with him at mini red level [age 8 or under]! He now doesn't particularly enjoy tennis and I take some of the blame for this. Based around Twitter I learnt a great deal about how a tennis parent should behave but I feel that I still make mistakes so a course would help me say the correct things to my children. My youngest son still plays so tennis parent education is still important (Parent 2).

However, there was a general consensus that not all parents believed that they needed to engage in a tennis parent education program. One father explained the current situation: "Parents are very busy but I do think some lack the humility to take such a course. Many parents seem to think that they know more than coaches about how their children should be taught" (Parent 2). Other participants felt that most parents do not believe they need education until they experience difficulties. The following quote captures this point:

> People may think that they don't have the time [for parent education] when in fact the opposite is true with an online resource. I don't think some people believe that they need it. Most parents have a way of parenting and don't necessarily believe they need to change their ways unless they are faced with problems (Parent 10).

As a result, participants felt that proactive parent education needs to be incentivized or made compulsory by the governing body. As one father suggested: "It would be good if there were incentives (e.g., 2 hours of free lessons) or requirements (e.g., to enter a grade 3 event a parent or guardian must have taken this course) that parents take such a course…but I also think all coaches should be encouraging this course to their parents" (Parent 2).

Theme 3: Online Education and Program Accessibility

For parents who participated in the program, the ability for them to access the online workshops at any time enabled participants to fit the program in around their busy schedules. The following quote demonstrates how crucial accessibility is for parent education programs: "I liked the online resource because you could access them whenever you wanted and I found it easy to fit the parenting course around my schedule because the only time I am able to do this kind of thing is very late in the evenings" (Parent 5). Importantly, parents felt that the online education was more accessible than traditional face-to-face programs. As one parent explained: "I liked the flexibility that online courses give because it can be carried out at home when convenient. I would be prepared to turn up to a scheduled [face-to-face] course at a venue and time but life with two boys, playing two sports, and two working parents might make this difficult" (Parent 2).

Participants also believed that the length of the workshops (around 20 minutes) further enhanced this accessibility. One parent explained the reasons for this: "It [the online program] worked very well. Time is precious when you have kids and to have something as accessible as this was great. I liked that it was in reasonably small chunks which made it easier to dip in

to and absorb" (Parent 9). However, some participants believed that providing workshop content in other formats (e.g., books, paper copies) to supplement online education would help to further improve accessibility. The following quote explains how this could be achieved in practice:

> I think the Internet is a good platform for educating parents but it may be worth considering providing workshops in a simplified readable format like an e-book or a PDF, it would allow parents to reflect on the main outcomes of each workshop at a later date. Something that can be read easily on a smart device, so parents can read them in their spare time without accessing the internet (i.e., on trains, even at tennis coaching sessions/tournament). Providing hard copies of the workshops to tennis clubs may also help (Parent 3).

Theme 4: Workshop Content and Program Effectiveness

Parents' perceptions of the program and its effectiveness appeared to be influenced by their existing knowledge and experience as a tennis parent. The first three workshops (i.e., supporting your child during mini-tennis (Part 1 & 2) and the LTA's mini-tennis organizational system) appeared to be most beneficial for parents new to the sport. As one parent with less than 3 years of experience suggested: "I found it [Workshop 2] very useful, it helped me to understand the structure, how I can support my child in a positive way and break down some barriers in knowledge" (Parent 9). However, for more experienced parents, or parents who had done their own research, these workshops were not considered to be as relevant. One parent with over 5 years of experience explained: "There is a lot of basic stuff at the start that will be useful for many [new mini-tennis parents] but I imagine many parents are also able to skip it" (Parent 8).

For more knowledgeable or experienced parents, the workshops that were perceived to be most beneficial were on child and talent development during mini-tennis (Part 1 & 2),

competition roles, and continual learning and support, because they were directly related to the practical challenges these parents were facing and/or the skills which they wanted to develop. The following quote from a parent with over 8 years of experience illustrates these points:

> The main impact that the course had on my parenting was to reinforce the growth mind-set view that I should be focusing on my children's tennis development and progression rather than the outcome of their matches. I am really trying now to make sure that they are thinking carefully after matches about how they played on what they could improve on rather than the result of the match. I am also trying to work well as a team with my partner to ensure we both do roles that we enjoy in order to make the journey more sustainable (Parent 5).

Taking this into consideration, there was a general consensus among the participants that parent education programs would be most effective if delivered to parents at the start of their involvement. The following quote illustrates this point: “It [the program] has been beneficial, although in the past six years I have educated myself about good parenting in tennis. This would have been very beneficial when my children were starting out in tennis or for a parent who hasn’t educated themself on this” (Parent 2).

Theme 5: Program Design and Effectiveness

Participants felt that the design of the program also influenced overall effectiveness. For instance, parents’ felt that compared to other online tennis parent resources, the lecture style video presentations helped them to take in and absorb the information. One parent explained the reasons for this:

> The online resource was very useful and I thought it was a very good idea to have the mixture of slides and narrative. Sometimes online educational resources can be difficult to absorb as it is all written. Having the audio narrative made it a lot easier to

take in (Parent 13).

However, one parent suggested a way in which the workshop design could be made more effective: “The video format worked well but got somewhat repetitive. If I was trying to improve it I would suggest different presenters/voices or perhaps some animations” (Parent 7). In addition to this, the ability to pause, rewind, or fast-forward these videos appeared to positively impact the effectiveness of the program by enabling parents to learn at their own pace and effectively tailor their learning experience. One mother explained how beneficial this was: “It was a very good experience. I was able to work through the workshops at my own pace, it was easy to go back and start the workshop from the beginning” (Parent 12).

Parents felt that the post-workshop quizzes also positively impacted the effectiveness of the program. For instance, participants felt that the quizzes were a useful way of evaluating their own learning and monitoring their progress. One parent explained the impact this had: “I felt a lot more confident about my knowledge when I was able to answer the questions after watching the workshop” (Parent 12). However, some parents felt the effectiveness of the quizzes was limited by a lack of feedback, as one father suggested: “The quizzes could be improved by providing feedback on the questions you answered incorrectly; it would be nice to know which questions we got wrong and why they were incorrect, rather than just a score” (Parent 3).

As a final point, parents felt that the lack of interaction that occurred in the parent forum limited their experiences of the program. One parent explained the reasons for this: “With more participants the forum might have been a livelier place. It might have been useful to discuss the workshops with fellow parents more” (Parent 2). Despite this, there appeared to be reluctance for participants to start or join in online discussions. The following quote captures this point: “I didn't use the forum, I would have liked to but there never seemed to be any other users joining in any conversations” (Parent 13).

Theme 6: Factors Influencing Program Completion

Despite 62 parents registering for the program, there were only 38 (61%) parents who completed the pre-workshop questionnaire to become a member and gain access to the workshops. Some parents felt that having to complete the pre-workshop questionnaire before being able to access the workshops prevented some parents from participating in the program. The following quote offers a potential explanation for this: “The start up process was inviting, captured my interest and worked well, but the initial questionnaire is tedious” (Parent 7).

In addition to this, of the 38 participants who completed the pre-workshop questionnaire, only 13 (34%) of these participants went on to complete the program. Some parents who did not complete the program attributed this to the impersonal nature of online education. These parents felt that because the program was designed to address the needs of British mini-tennis parents as a group, some of the workshop content (particularly at the start) was not relevant to their own individual needs. One parent with over 5 years of experience cited this as the reason he failed to complete the program: “The program was not very useful [for me]. Online education is very impersonal and not specific to you or your child so lots of information is not relevant…but the course was great for parents inexperienced in sport” (Parent 37).

The most commonly given reason for not completing the program was a lack of time. The following quote from one mother illustrates this point: “Time is a factor, especially if you work. I work and spend most of my "free time" taking my child to tennis, football and cross-country. Had I not had a leave of absence from work I would not have had the time to complete the program” (Parent 12). Another parent in a similar position attributed a lack of time as the reason she was unable to complete the program: “I wanted to do more but sadly work, moving home and holiday got in the way. I would have loved to have got the most out of this – I would definitely do it again if the chance came up and I would highly recommend

it" (Parent 28).

Discussion

The purpose of this study was to evaluate the effectiveness of an online education program for British tennis parents and to explore parents' experiences of engaging in this program. Findings indicated positive directional changes (albeit not statistically significant) in participants' tennis parent efficacy, general parenting efficacy, emotional experiences, and goal orientations following engagement in the program. Therefore, the findings offer initial evidence to suggest that online sport parent education programs can positively influence parents' experiences and involvement in youth sport settings. However, findings also offer unique insights into the range of challenges and barriers faced when designing and delivering an online sport parent education program. This discussion will integrate the mixed methods findings by linking and connecting the quantitative and qualitative strands to provide a fuller understanding of the effectiveness of this online education program (Bryman, 2006).

Taking into consideration the small sample size, it is perhaps not surprising that only one of the variables, parent-parent relationship efficacy, was statistically significant. However, changes in parent-parent relationship efficacy provide further support for the notion that parent education programs play a key role in providing parents with the knowledge and confidence needed to interact, support and share information with other parents (Knight & Holt, 2013; Thrower et al., 2017). Despite this, it is important to note that changes in parent-parent efficacy did not help facilitate online interactions between parents in the current study. It may be that sport parent education programs help parents feel more efficacious in interacting with other parents in person within youth sport settings (i.e., during training sessions and tournaments), particularly in individual sports where face-to-face interactions may be less common, and therefore are less like to use online discussion forums.

In terms of practical significance (i.e., effect sizes), findings revealed large changes in

parents' beliefs in their ability to provide their children with informational support, make appropriate tennis-related decisions based on child and talent development, and fulfill their roles as a tennis parent after a match. It is perhaps not surprising that the strongest effect sizes were found in these variables given that the knowledge and skills required to fulfill these roles are more commonly associated with coaching rather than sport parenting per se. Based on the qualitative data, it appears that even experienced tennis parents struggled to develop feelings of competence in these areas through self-education alone. Small effects were also found in relation to reducing tennis parents' anxiety and ego goal orientation. Overall, these findings closely relate to those reported in previous face-to-face sport parent education programs (e.g., Harwood & Swain, 2002; Smoll et al., 2007; Thrower et al., 2017), supporting the notion that online education yields comparable results to face-to-face parent education (Bert et al., 2008).

In addition to changes in tennis parent efficacy, an interesting finding to emerge from the current study was the small changes in general parenting efficacy. Although changes in general parenting efficacy were not a primary focus of the program, increases in parents' feelings of competence in relation to empathy and understanding, pressures, and self-acceptance suggest that sport parent education programs can positively influence parenting outside of the sporting context. It stands to reason that online sport parent education programs could be used as a way to prevent, or address, general parenting issues with fewer stigmas attached than traditional parent training programs (e.g., Breitenstein & Gross, 2013). Researchers are encouraged to build on these findings, and explore this notion in greater depth.

Theoretical and Applied Implications

Beyond program effectiveness, the current study also explored the extent to which online delivery improves the accessibility of parent education programs. Qualitative findings

support the notion that online delivery can reduce logistical barriers by allowing parents to access the program at convenient times and enhance learning transfer by allowing parents to learn at their own pace (Breitenstein et al., 2014; Duijin et al., 2014). In addition to this, results also suggest that parents watched the workshops multiple times and also paused, fast-forwarded, and re-wound workshops in order to tailor their own learning environment.

Despite improving accessibility, the current program was unable to reach large numbers of parents. Findings indicate that some performance centers and coaches were reluctant to promote educational material to parents without the LTA's approval or backing. With this in mind, it is likely that large-scale dissemination of online (and face-to-face) parent education programs is only likely to be achieved through national governing body backing or promotion to parents directly. In addition to this, findings suggest that some parents do not believe they needed to engage in education programs. This belief represents an interesting and challenging proposition for researchers and the LTA alike. While more effective promotion and advertising (i.e., emphasizing the vital role parents play in children's early participation and development in sport) may help, consistent with previous research (Thrower et al., 2017), some parents in the current study suggested that parent education (like coach education) should be made compulsory or, at the very least, incentivized for parents. Given the increasingly complex, challenging, and professionalized nature of youth sport, this appears to represent an increasingly necessary proposition. As a final point, it is important to note that even when online education programs do reach their intended audiences, conducting thorough program evaluations appear to negatively impact participation and completion rates. Although program evaluations are vital to determine effectiveness and secure future funding (Gould et al., 2008), applied researchers must consider the impact they can have on both initial and ongoing engagement in online education programs. Efforts to minimize pre- and post-evaluation time through concise survey administration are advised in order to mitigate

against potential attrition.

Building on these points, the current study also provides an insight into parents' experiences of engaging in a group-based online education program. Qualitative findings suggested that the program was most effective for parents who had limited knowledge and skills as a tennis parent, with more experienced parents less likely to find certain aspects of the program (i.e., the first three workshops) beneficial and subsequently complete the program. These findings are consistent with adult learning theories, which suggest that parents will only be motivated to learn when educational content is directly relevant to their lives (Knowles, Holton, & Swanson, 1998). From a practical perspective, these findings suggest that future educational initiatives should target parents at the start of their involvement, or tailor educational content to the individual needs of parents based on their existing knowledge and experience. One possible way to achieve this would be to use existing pre-program measures (e.g., TPES) to identify a parent's individual needs and prescribe them certain workshops. Support for this notion can be found in the coaching literature where coaching efficacy scales have effectively been used to identify coaches' needs in order to promote more tailored educational content (Fung, 2003).

As a final point, it is important to note that despite creating and promoting an online forum for parents, the current study largely failed to facilitate interaction between the participants and the research team. Difficulty in communicating and establishing rapport with participants has been cited as one of the most common disadvantages of online education (Hewson, 2014) and can limit the co-construction of learning. Based on the importance and value of informal learning (e.g., group discussions, interactions) in sport parent education programs (see Thrower et al., 2017), there appears to be a need to supplement online programs with face-to-face discussion groups, parent-coach meetings, or even peer mentoring programs. Exploring the effectiveness of 'blended learning' as a delivery method for sport

parent education programs represents an interesting avenue for future research.

The current study and the aforementioned recommendations should be considered in light of several limitations. Firstly, the present study was limited by its reliance on self-efficacy as a core construct that mediates between tennis parents' knowledge and their behavior. Researchers have highlighted how self-report measures do not always align with actual sport parent behavior (e.g., Dorsch et al., 2015). As such, future research should explore if parent education programs change parents' actual behavior and communication within these contexts and if they remain consistent over time. Such understanding would require parent behavior assessment systems, longitudinal research designs, and children's perceptions of parental involvement. Secondly, although the internal reliabilities provide some evidence for the factor structure of the TPES, they cannot be relied on as sole indicators of subscale consistency. As such, additional research is needed to explore the factorial and construct validity of the TPES. Thirdly, despite providing suggested guidelines in relation to pacing (i.e., one workshop per week), there was a large range in the time parents took to complete the current program. Whilst self-pacing appears to be a critical component of effective online learning, it can reduce the likelihood of differences being found if participants progress through programs too quickly, especially when using measures that locate the respondent in a specific time frame (e.g., SEQ). Finally, many of the parents were already experienced and/or knowledgeable when they signed up for the program. This may explain why pre-workshop questionnaire scores were high and large effects did not occur in all targeted variables following the intervention. Future research is needed to explore the impact of such interventions at the start of parental involvement in youth sport.

In conclusion, the current study has highlighted the impact of a novel online education program for British tennis parents and offers initial evidence to suggest online education represents an accessible and effective way to educate and support sport parents in real world

settings. However, findings also illustrate a range of difficulties and challenges associated with initiating and maintaining participation in online sport parent education programs. Although more research is clearly needed, the current study provides empirical foundations from which clubs, organizations and national governing bodies can build upon. With this in mind, we hope that this study will lead to the introduction of evidence-based online education programs for sport parents.

References

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 307-337). Greenwich, CT: Information Age Publishing.

Bert, S. C., Farris, J. R., & Borkowski, J. G. (2008). Parent training: Implementation strategies for adventures in parenting. *Journal of Primary Prevention*, *29*(3), 243–261.

Breitenstein, S. M., & Gross, D. (2013). Web-based delivery of a preventive parent training intervention: A feasibility study. *Journal of Child and Adolescent Psychiatric Nursing, 26,* 149-157.

Breitenstein, S. M., Gross, D., & Christophersen, R. (2014). Digital delivery methods of parenting training interventions: A systematic review. *Worldviews on Evidence-Based Nursing, 11*(3), 168-176.

Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research, 6,* 97-113.

Burgess, N. S., Knight, C. J., & Mellalieu, S. D. (2016). Parental stress and coping in elite youth gymnastics: An interpretative phenomenological analysis. *Qualitative Research in Sport, Exercise & Health, 8,* 237-256.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Hillsdale, N.J.: Lawrence Erlbaum.

Creswell, J. W. (2014). *Research design, qualitative, quantitative & mixed methods approaches* (4th Ed.). London: Sage.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

Cumming, S. P., Smith, R. E., Smoll, F. L., Standage, M., & Grossbard, J. R. (2008). Development and validation of the achievement goal scale for youth sports.

Psychology of Sport and Exercise, 9(5), 686-703.

Dewey, J. (1922). *Human nature in conduct.* New York, NY: Henry Holt.

Dorsch, T. E., Smith, A. L., Wilson, S. R., & McDonough, M. H. (2015). Parent goals and verbal sideline behavior in organized youth sport. *Sport, Exercise & Performance Psychology, 4,* 19-35.

Dorsch, T. E., King, M. Q., Dunn, C. R., Osai, K. V., & Tulane, S. (2017). The impact of evidence-based parent education in organized youth sport: A pilot study. *Journal of Applied Sport Psychology, 29,* 199-214.

Dorsch, T. E., Smith, A. L., & Dotterer, A. M. (2016). Individual, relationship, and context factors associated with parent support and pressure in organized youth sport. *Psychology of Sport & Exercise, 23,* 132-141. http://dx.doi.org/10.1016/j.psychsport.2015.12.003.

Duijin, A., Swanick, K., & Donald, E. (2014). Student learning of cervical psychomotor skills via online video instruction versus traditional face-to-face instruction. *Journal of Physical Therapy Education, 28*(1), 94–102.

Fung, L. (2003). Assessment: Coaching efficacy as indicators of coach education program needs. *Athletic Insight, 5,* 12-18.

Gilson, T. A., & Jung, J. (2014). Delivering engaging content for online education: Key principles and solutions. *Kinesiology Review, 3,* 235-240.

Gould, D., Lauer, L., Rolo, C., Jannes, C., & Pennisi, N. (2008). The role of parents in tennis success: Focus group interviews with junior coaches. *The Sport Psychologist, 22,* 18-37.

Harwood, C. G., & Knight, C. J. (2015). Parenting in youth sport: A position paper on parenting expertise. *Psychology of Sport and Exercise, 16,* 24-35. doi:10.1016/j.psychsport.2014.03.001

Harwood, C. G., & Swain, A. B. (2002). The development and activation of achievement goals within tennis II: A player, parent, and coach intervention. *The Sport Psychologist, 16,* 111-137.

Hewson, C. (2014). Qualitative approaches in internet-mediated research: Opportunities, issues, possibilities. In P. Leavy (Eds.), *The Oxford handbook of qualitative research methods.* New York: Oxford University Press.

Jones, M. V., Lane, A. M., Bray, S. R., Uphill, M., & Catlin, J. (2005). Development and validation of the sport emotion questionnaire. *Journal of Sport and Exercise Psychology, 27,* 407-431.

Kendall, S., & Bloomfield, L. (2005). TOPSE: Developing and validating a tool to measure parenting self-efficacy. *Journal of Advanced Nursing, 51*(2), 174-181.

Knight, C. J., Berrow, S. R., & Harwood, C. G. (2017). Parenting in sport. *Current Opinion in Psychology, 16,* 93-97.

Knight, C. J., Dorsch, T. E., Osai, K. V., Haderlie, K. L., & Sellars, P. A. (2016). Influences on parental involvement in youth sport. *Sport, Exercise & Performance Psychology, 5,* 161-178.

Knight, C. J., & Holt, N. L. (2013). Strategies used and assistance required to facilitate children's involvement in competitive tennis: Parents' perspectives. *The Sport Psychologist, 27,* 281-291.

Knight, C. J., & Holt, N. L. (2014). Parenting in youth tennis: Understanding and enhancing children's experiences. *Psychology of Sport and Exercise, 15,* 155-164.

Knowles, M., Holton, E. F., & Swanson, R. A. (1998). *The adult learner: The definitive classic in adult education and human resource development* (5th Ed.). Houston, TX: Gulf Publishing Company.

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of*

evidence based practices in online learning. A meta-analysis and review of online learning studies. Washington, DC: U.S. Department of Education.

Metzler, C. W., Sanders, M. R., Rusby, J. C., & Crowley, R. N. (2012). Using consumer preference information to increase the reach and impact of media-based parenting interventions in a public health approach to parenting support. *Behavior Therapy*, *43*(2), 257–270.

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning.* Belmont, CA: Cengage Learning.

Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research, 40,* 120-123.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.

O'Connor, H., Madge, C. H., Shaw, R., & Wellens, J. (2008). Internet-based interviewing. In N. Fielding, R. Lee & G. Blank (Eds.) *The Sage handbook of online research methods* (pp. 271-289). London: Sage.

Rosnow, R. L., & Rosenthal, R. (1996). Computing contrasts, effect sizes, and counternulls on other people's published data: General procedures for research consumers. *Psychological Methods, 1,* 331-340.

Smoll, F. L., Smith, R. E., & Cumming, S. P. (2007). Effects of coach and parent training on performance anxiety in young athletes: A systemic approach. *Journal of Youth Development, 2* (1), 0701FA001

Sanders, M. R., Baker, S., & Turner, K. M. T. (2012). A randomized controlled trial evaluating the efficacy of Triple P online with parents of children with early-onset conduct problems. *Behaviour Research and Therapy*, *50*(11), 675–684.

Sparkes, A. C., & Smith, B. (2014). *Qualitative research methods in sport, exercise and health: From product to process.* Abingdon: Routledge.

Thrower, S. N., Harwood, C. G., & Spray, C. M. (2016). Educating and Supporting Tennis Parents: A Grounded Theory of Parents' Needs During Childhood and Early Adolescence. *Sport, Exercise & Performance Psychology*, *5*(2), 107-124.

Thrower, S. N., Harwood, C. G., & Spray, C. M. (2017). Educating and Supporting Tennis Parents: An Action Research Study. *Qualitative Research in Sport, Exercise and Health*, *9*(5), 600-618.

Table 1

An Overview of Workshop Titles, Learning Objectives, and Content (Adapted from Thrower et al., 2017)

	Workshop Title	Workshop Learning Objectives	Workshop Content
		Following this workshop parents should be able to:	
1	Supporting your child during mini-tennis (Part 1)	▪ A*dopt* multiple goals for their child's tennis involvement ▪ *Manage* their expectations ▪ *Prepare* for the financial and time commitment of mini-tennis participation	▪ Types of parental involvement (Un-supportive, supportive, pressurizing) ▪ Providing informational, emotional, and tangible support: - Multiple benefits of tennis participation - Financial and time commitment
2	Supporting your child during mini-tennis (Part 2)	▪ *Explain* the rules, levels, and demands of tennis ▪ *Empathize* with their child's on court experiences ▪ *Explain* the stages of mini-tennis	▪ Providing informational, emotional, and tangible support: - Knowledge of tennis ▪ The stages, equipment, court sizes, and scoring system of mini-tennis
3	The LTA's mini-tennis organizational system	▪ *Enter* their child into an appropriate level tournament based on their age and rating ▪ *Plan* their child's schedule to help them improve their rating and ranking ▪ *Explain* how the LTA's talent identification system works	▪ Mini-tennis tournament entry ▪ The LTA's mini-tennis ratings and ranking system ▪ The LTA's talent identification and development system
4	Child and talent development during mini-tennis (Part 1)	▪ *Identify* their child's psychosocial needs during childhood ▪ *Adopt* a task-orientated view of success in junior-tennis ▪ *Create* an intrinsically motivating mini-tennis environment	▪ Psychosocial needs during childhood ▪ Introduction to motivation in mini-tennis ▪ Developing and maintaining motivation: autonomy, competence, and relatedness ▪ Short term performance and process goal setting
5	Child and talent development during mini-tennis (Part 2)	▪ *Evaluate* the strengths and weaknesses of following different talent development pathways ▪ *Select* a talent development pathway to follow during mini-tennis based on their child's needs	▪ Introduction to talent development ▪ Early specialization vs. early diversification: strengths and weaknesses ▪ Selecting a pathway during mini-tennis: factors to consider
6	Competition roles	▪ *Engage* in task-orientated verbal interactions with their child in the competition context ▪ *Facilitate* short term pre-match goal setting ▪ *Manage* the range of emotional demands they experience during competition ▪ *Demonstrate* task-orientated body language during matches	▪ How to communicate before a match ▪ How to control emotions during a match ▪ Body language during a match ▪ When and how to communicate post-match
7	Continual learning and support	▪ *Identify* their social support network ▪ *Appreciate* the importance of social support ▪ *Develop* and *maintain* healthy relationships with coaches and other parents. ▪ Reflect on and learn from their experiences	▪ Who or where to turn to for education and support ▪ Informal learning: how each source of social support can be helpful ▪ How to develop and maintain relationships ▪ Self-directed learning: reflective practice

Table 2

Subscales and Items for the Tennis Parent Efficacy Scale (TPES)

Subscales	Items
Parent-Coach Relationship Efficacy	Show that you respect the expertise of your child's main coach
	Establish clear roles with your child's main coach
	Show that you trust your child's main coach to look after your child's tennis
	Be honest with your child's main coach
	Share tennis relevant information about your child with your child's main coach
	Openly communicate with your child's main coach
Parent-Parent Relationship Efficacy	Interact with other tennis parents
	Provide other mini-tennis parents with emotional support (e.g., being caring and reassuring)
	Resolve disputes with other mini-tennis parents if they occur
	Share relevant tennis information with other mini-tennis parents
Learning Efficacy	Learn from your experiences as a tennis parent
	Learn by engaging in formal tennis parent education programs
	Learn by researching information about tennis (e.g., reading books)
	Learn through your informal interactions with others (e.g., coaches and other parents) whilst at tennis
Informational Support Efficacy	Provide your child with information to help them understand mini-tennis (e.g., scoring systems, psychological demands)
	Provide your child with advice in relation to their on court experiences
	Provide your child with guidance in relation to their mini-tennis involvement
Emotional Support Efficacy	Always be there for your child in relation to their mini-tennis
	Care for your child in relation to their mini-tennis
	Relate to your child's on-court experiences
	Provide your child with comfort and security in relation to their mini-tennis
	Show concern for your child in relation to their mini-tennis
Tangible Support Efficacy	Provide your child with the time commitment needed to participate in mini-tennis
	Provide your child with the finance needed to participate in mini-tennis
	Provide your child with transport needed to participate in mini-tennis
Organizational Efficacy	Organize your child's tournament schedule
	Enter your child into the right grade (i.e., standard) of tournaments based on their rating and ranking
	Identify which stage(s) of mini-tennis your child is allowed to play in each season based on their age and rating
	Understand the governing body's (i.e., The LTA) talent identification selection process
Developmental Efficacy	Make age appropriate decisions about the number of sports/activities your child does in addition to tennis
	Make age appropriate decisions about the amount of tennis training your child does
	Make decisions about the most appropriate training group(s) based on your child's developmental needs
	Make age appropriate decisions about the type of tennis training your child engages in (e.g., unsupervised play vs. structured practice)
	Make age appropriate decisions about the frequency that your child competes in tennis tournaments
	Select a coach with specific skills based on your child's developmental needs
	Evaluate the appropriateness of your child's coach based on your child's developmental needs
	Make decisions about the most appropriate tennis tournaments to attend based on your child's developmental needs
Pre-Match Role Efficacy	Set your child clear and consistent behavioral expectations (e.g., effort, sportspersonship) before a match
	Reinforce to your child the importance of personal improvement rather than the result before a match
	Manage the range of emotions that you may experience before a match (e.g., worry, excitement)
	Teach your child how to cope with challenging match situations (e.g., cheating, pre-match nerves)

In-Match Role Efficacy	Manage the range of emotions you may experience during a match (e.g., frustration, happiness, anxiety)
	Role model appropriate morals (e.g., sportpersonship) to your child during a match
	Use appropriate non-verbal communication (e.g., clapping, nodding) to praise your child's effort, sportspersonship, and improvements during a match
	Watch a match without advising or instructing your child
	Not interfere with anything that happens on court during a match (e.g., bad line calls, disputes)
Post-Match Role Efficacy	Address poor on-court conduct that does not meet your behavioral expectations (e.g., creating consequences for throwing a racket)
	Provide appropriate feedback to your child at a time when they are ready
	Manage the range of emotions you may experience after a match (e.g., disappointmer pleasure)
	Help your child to reflect on a match to identify strengths and areas for improvement
	Provide feedback to your child after matches based on personal improvements and no overall outcome

Table 3

Means, Standard Deviations, Cronbach Alpha Coefficients and Effect Sizes of all Variables for Program Completers (n = 13)

	Pre Workshop	Post Workshop		
	M (SD)	*M (SD)*	α	*d*
TPES				
Parent-Coach Relationship Efficacy	7.45 (2.55)	8.15 (2.62)	.787	0.270
Parent-Parent Relationship Efficacy	7.71 (1.33)	8.65* (1.18)	.949	0.747
Learning Efficacy	8.50 (1.11)	8.90 (.85)	.667	0.404

Emotional Support Efficacy	8.15 (1.01)	8.58 (1.05)	.824	0.417
Informational Support Efficacy	7.33 (1.00)	8.26 (.91)	.783	0.972
Tangible Support Efficacy	8.69 (1.21)	8.54 (1.35)	.602	-0.117
Organizational Efficacy	6.88 (2.38)	8.29 (1.59)	.734	0.696
Developmental Efficacy	6.43 (2.35)	8.12 (1.07)	.941	0.925
Pre-Match Role Efficacy	7.33 (1.57)	8.31 (1.06)	.834	0.731
In-Match Role Efficacy	7.65 (1.65)	8.49 (.92)	.782	0.628
Post-Match Role Efficacy	6.92 (1.47)	8.14 (.89)	.853	1.004
TOPSE				
Affect and Emotion	8.96 (.86)	8.83 (1.00)	.568	-0.139
Play and Enjoyment	8.79 (.83)	8.64 (1.00)	.788	-0.163
Empathy and Understanding	7.72 (1.02)	8.15 (.98)	.916	0.429
Self-Control	6.90 (1.49)	7.06 (1.34)	.826	0.112
Discipline and Boundaries	7.42 (1.49)	7.69 (1.39)	.906	0.187
Pressures	7.54 (.94)	7.91 (1.38)	.612	0.313
Self-Acceptance	7.86 (1.67)	8.29 (1.34)	.832	0.284
Learning and Knowledge	8.17 (1.01)	8.32 (1.04)	.855	0.146
AGSYS				
Task-Orientation	4.78 (.45)	4.79 (.39)	.821	0.023
Ego-Orientation	2.77 (.87)	2.56 (1.03)	.886	-0.304
SEQ				
Anxiety	1.60 (.90)	1.32 (.80)	.865	-0.328
Dejection	0.89 (.97)	0.74 (.91)	.883	-0.159
Excitement	2.27 (1.08)	2.31 (.94)	.746	0.039
Anger	0.98 (1.02)	0.87 (.97)	.896	-0.110
Happiness	2.58 (.84)	2.62 (0.69)	.854	0.026

1 Note. * = Change is statistically significant, $p < .004$