Testing Effective Strategies for Reducing Child Disruptive Behaviours as an Alternative to Physical Punishment in Australia: An Evaluation of the 1-2-3 Magic Parenting Program

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STATEMENT OF CANDIDATE

I certify that the work in this thesis, entitled 'Testing Effective Strategies for Reducing Child Disruptive Behaviours as an Alternative to Physical Punishment in Australia: An Evaluation of the 1-2-3 Magic Parenting Program', has not previously been submitted for a degree, nor has it been submitted as part of the requirements for a degree to any university or institution other than Macquarie University.

I also certify that this thesis is an original piece of research and that it has been written by me. Any help and assistance that I have received in my research work and the preparation of the thesis itself have been appropriately acknowledged.

In addition, I certify that all information sources and literature used are indicated in the thesis.

The Macquarie University Ethics Review Committee approved the research presented in this thesis under the following reference numbers: HE29MAY2009-M06582HS (22 May 2009); 5200903518 (31 March 2010); 5201100254 (09 June 2011); and 5201200845 (15 January 2013).

Renate Porzig-Drummond (41132793)

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GENERAL ABSTRACT

With the intention of contributing to the halting of physical punishment of children in Australia, this thesis aims: (1) to summarise findings on the psychological effects of physical punishment of children, as well as Australian public opinion and policies regarding physical punishment of children; (2) to review evidence-based parenting programs that provide alternative disciplining strategies and are suitable for a public health approach in Australia; and (3) to expand the choice of evidence-based parenting programs in Australia by investigating the efficacy of group-based and of self-directed versions of the 1-2-3 Magic parenting program, a cognitive-behavioural parenting program that targets alternative disciplining strategies.

A summary of psychosocial and legal perspectives on physical punishment of children and Australian caregivers' perspectives (Paper One) identified that one key factor in achieving lasting change in parental use of harsh disciplining practices is the provision of alternative disciplining strategies to caregivers at a population level. For a public health approach, programs need to be cost-effective in terms of delivery, such as group-based programs, and conveniently accessible for caregivers, such as self-directed programs. A narrative literature review (Paper Two) revealed a limited choice of parenting programs that provide alternative disciplining strategies, are available in group- or self-directed formats, and have been evaluated in Australia. In order to expand the Australian evidence base of programs that meet the above criteria, the cognitive-behavioural 1-2-3 Magic parenting-program was selected for further investigation. The main experimental study (Paper Three) used a randomised trial design (n = 91) with a waitlist control to examine two group-formats of the 1-2-3 Magic program (Australian presentation-based, and American DVD-based format), each delivered over three 2-hour sessions to large groups of 30 caregivers. Caregiver reports on the primary outcome variables of child problem behaviour and dysfunctional

parenting were collected pre- and post-intervention and at 3-month and 2-year follow-up. A second experimental study (Paper Four) investigated a brief video-based self-directed format of the 1-2-3 Magic program (two 2-hour DVDs) in a randomised controlled trial (n = 84) with 6-month follow-up. A third outcome study (Paper Five) used an intervention-group only design (n = 50) to examine the Australian version of the 1-2-3 Magic parenting program in a metropolitan community-service setting. Results form all three outcome studies suggest that the 1-2-3 Magic program is effective in reducing child disruptive behaviours and dysfunctional parenting, with results from the self-directed and community-service studies preliminary in nature. Overall, results provide support for the conclusion that the 1-2-3 Magic parenting program is suitable for inclusion in a public health approach to the provision of alternative disciplining strategies.

As the provision of alternative disciplining strategies to caregivers is a key component in effecting lasting parental attitudinal and behavioural change, this thesis has contributed in two ways to the overall aim of halting physical punishment of children in Australia: First, it identified the limited number of parenting programs that (i) provide alternative discipline strategies, (ii) are available in group and self-directed formats and are hence well suited to a public health approach, and (iii) are evidence-based in Australia. Second, this thesis expanded the evidence base of such parenting programs through the evaluation of group-based and self-directed formats of the 1-2-3 Magic parenting program, a program that focuses on alternative disciplining strategies.

INTRODUCTORY OVERVIEW

The overarching aim of this thesis is to contribute to the body of knowledge that supports the reduction and eventual cessation of parental physical punishment of children in Australia. The specific aims are: (1) to summarise the current findings on the effects of physical punishment of children, and to summarise and discuss related Australian public opinion and policies in the context of international directions; (2) to review the Australian evidence base of parenting programs that provide alternative disciplining strategies, are effective at reducing child disruptive behaviours and dysfunctional parenting, and are suitable for a public health approach; and (3) to assess the effectiveness of one such program, the 1-2-3 Magic parenting program, in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in formats that are suitable for a public health approach.

The debate around parental physical punishment of children has been continuous internationally for more than 50 years and in Australia for almost two decades (Goddard & Saunders, 1998; Modig, 2014). By the end of 2014, eighty-five countries had either prohibited or committed to prohibiting parental physical punishment of children (Global Initiative to End All Corporal Punishment of Children, 2014). Surprisingly, Australian state Governments and the Australian Federal Government have made no such commitments (Attorney-General's Department, 2012; Committee on the Rights of the Child [CRC], 2012). Parental physical punishment of children continues to be lawful in Australia (CRC, 2012; New South Wales Department of Justice and Attorney General, 2010), despite current Australian law contravening the United Nations *Convention on the Rights of the Child* (United Nations, 1989), which Australia ratified in 1990 (CRC, 2012). This is despite a large body of evidence showing that physical punishment is an ineffective long-term disciplining strategy, reduces children's academic performance and psychological adjustment, increases

the risk of antisocial behaviours and mental illness for these children as adults, and increases the risk of child physical abuse (Gershoff, 2013; Gershoff, Lansford, Sexton, Davis-Kean, & Sameroff, 2012). Moreover, the majority of Australian caregivers oppose law reform and condone the physical punishment of children (Tucci, Mitchell, Goddard, 2006). In order to effect change in parental attitudes and behaviour regarding physical punishment of children, it is important to first explore the underlying reasons for caregivers' stance on the physical punishment of children in a psychosocial and legal context (Durrant & Ensom, 2012).

Aim 1: Summarise the current findings on the effects of physical punishment of children and summarise and discuss related Australian public opinion and policies in the context of international directions (Paper One).

Many caregivers believe that physically punishing children is a parent's right; that physical punishment is harmless; that it is an effective strategy to obtain children's compliance; and that there are no alternative disciplining strategies (Taylor, Hamvas, Rice, Newman, & De Jong, 2011). To explore these underlying issues, Paper One summarises and discusses psychosocial and legal aspects relating to the physical punishment of children in Australia, including: current views on the psychological and physical risks of physical punishment; current Australian law and international conventions; and international findings on successful strategies to help caregivers shift their opinion about physical punishment of children.

Aim 2: Review the Australian evidence base of parenting programs that provide alternative disciplining strategies, are effective at reducing child disruptive behaviours and dysfunctional parenting, and are suitable for a public health approach (Paper Two).

One key strategy to shift caregivers' attitudes and behaviours towards parental physical punishment of children is to raise public awareness about the effectiveness of

alternative disciplining strategies and to provide caregivers, at a population level, with free and convenient access to evidence-based parenting programs that focus on such alternative strategies (Boyson, 2002; Bussmann, Erthal, & Schroth, 2010; Shmueli, 2010). Parenting programs that are suitable for a public health approach need to not only target child disruptive behaviours, but also need to be easily accessible for caregivers (for example, through self-directed formats), and need to be cost-effective in terms of delivery (for example, through program brevity, group delivery, or self-directed formats). An additional factor that needs to be considered for inclusion in a public health approach is whether programs have been evaluated in the cultural context they will be used in (Jacobs, Jones, Gabella, Spring, & Brownson, 2012). A recent systematic review of four American and Australian behavioural parenting-programs found that these programs were as effective when transported to other cultural contexts (Gardner, Montgomery, & Knerr, 2015). Nevertheless, for a public health approach that involves government funding, parenting programs are expected to be evidence-based in the cultural context they will be used in (Barlow, Smailagic, Ferriter, Bennett, & Jones, 2010; Hindman, Brooks, & van der Zwan, 2012; Jacobs et al., 2012; O'Brien & Daley, 2011; Wade, Macvean, Falkiner, Devine, & Mildon, 2012). Given that a literature review of parenting programs that target child disruptive behaviours, and are easily accessible, cost-effective, and evidence-based in Australia, appears to not be available in the peer-reviewed literature to date, Paper Two attempts to fill this gap.

The first literature search was conducted at the beginning of this research project and revealed that only four parenting programs targeting disruptive child behaviours had been evaluated in a group format in Australia: *1-2-3 Magic & Emotion Coaching* (Hawton & Martin, 2006; Flaherty & Cooper, 2010); *Parenting Wisely* (Gordon, 2000; Cefai, Smith, & Pushak, 2010); the *Triple P Positive Parenting Program* (Sanders, 1999; Gallart & Matthey, 2005); and *Tuning into Kids* (Havighurst & Harley, 2007; Havighurst, Wilson, Harley, &

Prior, 2009). Only two programs had been evaluated in a self-directed format in Australia: Triple P (Markie-Dadds & Sanders, 2006); and Parenting Wisely (Cefai et al, 2010). This small choice of evidence-based programs suitable for a public health approach was further reduced when taking into account that Parenting Wisely (Kacir & Gordon, 1999) is designed for caregivers with children and teenagers aged 9-18, and that the evaluation of 1-2-3 Magic & Emotion Coaching was a pilot study (Flaherty & Cooper, 2010). Due to this scarcity of choice, the next aim of the current research project was to expand the choice of evidence-based group- and self-directed parenting programs in Australia.

Please note that the literature review presented in Paper Two was prepared for submission to a journal in early 2015. A second literature search was conducted again at that time in order to present the most current results. Paper Two represents the updated literature review (submitted manuscript) and includes two published experimental studies (Porzig-Drummond, Stevenson, & Stevenson, 2014, 2015) that are presented only later in this thesis (Paper Three and Paper Four).

Aim 3: Assess the effectiveness of one such program, the 1-2-3 Magic parenting program, in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in formats that are suitable for a public health approach (Papers Three, Four, and Five).

Of the parenting programs outlined above, Triple-P has (Sanders, 1999), overall, the largest evidence base in Australia (Wade et al., 2012). Accordingly, the New South Wales Government selected Triple P for funding and dissemination throughout the state (Department of Family & Community Services, 2011; Gaven & Schorer, 2013; Horin, 2009). Although this was an important step towards the provision of parenting strategies for caregivers, Australian community-based organisations and community service workers stress that, in order to achieve an optimal match between program and client, it is important for

community service workers and social workers to not be restricted to a single program (Horin, 2009; Martin, 2013). Community service workers further suggest that the 1-2-3 Magic parenting-program (Hawton & Martin, 2010) had been used successfully in community-service settings (Horin, 2009).

The reasons for selecting the 1-2-3 Magic parenting program for further investigation in this research project were manifold. First, the 1-2-3 Magic program targets disruptive child behaviours and provides alternative disciplining strategies. This characteristic was considered crucial in the context of providing caregivers with alternatives to the physical punishment of children (see Royal Australasian College of Physicians, Paediatric & Child Health Division, 2013). Nevertheless, other parenting programs, such as *Incredible Years* (Webster-Stratton, 2001) also fulfil this criterion and, hence, this characteristic was necessary but not sufficient for selection for further investigation. Second, the 1-2-3 Magic program is available in group-based format (aiding cost-effectiveness) as well as self-directed formats (aiding cost effectiveness and accessibility) (see Barlow et al, 2010; O'Brien & Daley, 2011). These elements were considered essential for a public health approach and narrowed the number of programs that were considered for evaluation in this research project, as fewer programs are available in self-directed formats than in group-formats. Third, the 1-2-3 Magic program is the briefest of the programs that was identified in the literature review (6 hours in total), further aiding cost effectiveness. The total program length of Parenting Wisely is also 6 hours but Parenting Wisely is directed at caregivers with children and teenagers aged 9-18 (Gordon, 2000), which excludes an important age group of target children and makes the program less suitable for a public delivery approach. Program length was a crucial factor in selecting 1-2-3 Magic for further investigation, as time impacts directly on delivery cost and caregiver engagement (Breitenstein et al., 2014; Hindman et al., 2012; Jacobs et al., 2012). In addition, existing results were also considered: the 1-2-3 Magic program had shown to be effective at

reducing child disruptive behaviours and dysfunctional parenting for caregivers with toddlers in a large international community study (Bradley et al., 2003) and had been shown to be similarly effective for caregivers with children spanning a wide age range (2-16) in an Australian pilot study (Flaherty & Cooper, 2010). Therefore, the 1-2-3 Magic program showed good potential for further investigation in Australia with a view to expand the choice of evidence-based programs in Australia. Finally, comments from community workers (as reported by Horin, 2009), suggesting that the program was effective in 'real world' settings, were also taken into account. The three outcome studies (Papers Three, Four, and Five) were designed with a focus on program delivery at a population level and, hence, considered cost-effectiveness, accessibility, and common barriers to program attendance.

In the first experimental study (Paper Three), two versions of the 1-2-3 Magic program were delivered to groups of 30 caregivers. One aim of this study was to compare two versions of the 1-2-3 Magic program (American and Australian). Another reason was to compare two group-delivery formats (presentation-based and DVD-based). A third and important element in the research design was the use of large groups of participants, as presenting a program to large groups of caregivers makes delivery more cost-effective (see National Institute of Clinical Excellence and Social Care (NICE, 2006). The maximum group size reported for delivery of the 1-2-3 Magic program in previous studies was 13 (Flaherty & Cooper, 2010), and up to 16 for other parenting programs identified in the literature review. Hence, a group size of 30 was a substantial increase.

The second experimental study (Paper Four) investigated a video-based self-directed format of the 1-2-3 Magic program (Booth & Phelan, 2004a, 2004b). Self-directed parenting programs play an important part in a public health approach to program delivery as they overcome common barriers to enrolment and attendance, such as conflicting work schedules, cost and distance of travel, lack of child care, and concerns about confidentiality and stigma

(Koerting et al., 2013; O'Brien & Daley, 2011; Tarver, Daley, Lockwood, & Sayal, 2014). In addition, self-directed programs are cost-effective due to the absence of therapist input (Enebrink, Högström, Forster, & Ghaderi, 2012; Sampaio & Feldman, 2014).

The third and last outcome study (Paper Five) examined a group format of the 1-2-3 Magic program in an Australian typical metropolitan community-services setting. This study was conducted to ascertain whether findings for the program obtained in controlled conditions translate into the 'real world' (see Forgatch, Patterson, & Gewirtz, 2013; Hayes, Giallo, & Richardson, 2010).

In summary, the overarching aim of this thesis is to contribute to the body of knowledge that supports the reduction and eventual cessation of parental physical punishment of children in Australia. The first aim is to summarise the current findings on the effects of physical punishment of children, and to summarise and discuss related Australian public opinion and policies in the context of international directions (Paper One). The second aim is to review the Australian evidence base of parenting programs that provide alternative disciplining strategies and that are available in formats suitable for a public health approach (Paper two). To the best of our knowledge, this is the first Australian literature review of parenting programs that meet these criteria. The third aim is to expand the choice of evidence-based parenting programs in Australia that reduce child disruptive behaviours and dysfunctional parenting, and provide alternative disciplining strategies to caregivers. The 1-2-3 Magic parenting program was selected for further investigation due to its focus on child disruptive behaviours, breadth of delivery formats, brevity, and promising published results to date. With a focus on suitability for broad delivery, the 1-2-3 Magic parenting program was investigated in this research project when delivered to large groups of caregivers (Paper Three), in a self-directed format (Paper Four), and in a typical metropolitan community setting in Australia (Paper Five). Based on the published literature, all three outcome-studies

were the first Australian 1-2-3 Magic outcome studies in these formats or settings.

One key factor in reducing and eventually ending the physical punishment of children in Australia is changing caregivers' attitudes and behaviours regarding harsh disciplining practices. A crucial component in effecting this change is to provide caregivers with non-physical disciplining strategies. After summarising the psychosocial and legal issues surrounding Australian caregivers' physical punishment of children, this thesis endeavours to contribute in two ways to the body of evidence that supports the cessation of physical punishment of children in Australia. First, a narrative review of the literature will show that only a limited number of evidence-based parenting programs available in Australia focus on providing alternative discipline strategies and are available in formats suitable to a public health approach. Second, this thesis will broaden the choice of evidence-based parenting programs through the evaluation of group-based and self-directed formats of the 1-2-3 Magic parenting program, a program that focuses on non-physical disciplining strategies.

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PAPER ONE

‘Help, Not Punishment’: Moving on From the Physical Punishment of Children

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Abstract

Although the physical punishment of children is overall an ineffective disciplining strategy, has adverse long-term psychological effects, and carries the risk of physical punishment escalating into child abuse, parental physical punishment is lawful in all Australian states and territories within the bounds of lawful correction or reasonable chastisement. What is considered to be reasonable is open to considerable interpretation, which further increases the risk of physical harm to children. Physical punishment of children also contravenes the United Nations Convention on the Rights of the Child, which Australia has ratified. Although more effective disciplining strategies, such as cognitive-behavioural parenting strategies, are available and have been advocated by professional organisations, the vast majority of Australian parents condone parental physical punishment of children and are opposed to its prohibition. Predictors for this stance include perceived social norms, the belief that physically punishing children is an effective disciplining strategy and a parent's right, a perceived absence of alternative parenting strategies, and fear of prosecution if physical punishment was to be banned. Countries that have phased out the physical punishment of children have demonstrated that, to encourage a shift in parental attitudes and behaviours, public awareness about the detrimental effects of physical punishment and the effectiveness of alternative disciplining strategies needs to be raised. Additionally, parents require support through free and convenient access to evidence-based parenting programs that promote alternative disciplining strategies; and the defense of lawful correction needs to be repealed, with the aim of setting a new standard, as well as education rather than prosecution.

Physical punishment of children by their parents remains a contentious issue in many parts of the community, including parents, psychologists, medical and legal practitioners, and policy makers. Physical punishment is "the use of physical force with the intention of causing a child to experience bodily pain or discomfort so as to correct or punish the child's behavior" (Gershoff, 2008, p.9). This includes hitting, slapping, smacking, and spanking a child (Australian Institute for Family Studies [AIFS], 2014; Holzer & Lamont, 2010). Those in favour of physical punishment of children maintain that it is an effective and harmless strategy to immediately stop children's aggressive behaviours (Baumrind, 2008; Larzelere & Kuhn, 2005). Opponents of physical punishment argue that physical punishment carries the risk of inflicting physical and psychological harm on children, that it models aggressive responses to conflict (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Australian Psychological Society [APS], 2014; Oates, 2010). Moreover, non-physical disciplining strategies, particularly cognitive-behavioural strategies, are as effective in obtaining immediate compliance and more effective in achieving lasting behaviour change (Durrant & Ensom, 2012; Furlong et al., 2012; Gershoff, 2010, 2013).

Australian state and territory legislation or common law distinguish between child physical abuse, which is prohibited, and parental physical punishment, which is permitted as a parental disciplinary measure as long as "reasonable" force is used for the purpose of *lawful correction* or *reasonable chastisement* (AIFS, 2014; Alexander, Naylor, & Saunders, 2011). Whereas some believe that the defence of lawful correction does not interfere with protecting children from excessive physical punishment (New South Wales Department of Justice and Attorney General, 2010), others argue that what constitutes reasonable physical punishment is ill-defined and that this lack of definition creates a grey area that leaves children vulnerable to physical abuse (Royal Australasian College of Physicians, Paediatric & Child Health Division [RACP], 2013; Saunders, 2013; Tucci, Mitchell, & Goddard, 2006). The majority of

Australian parents condone and engage in physical punishment, and view physically punishing their children as their right (Godfrey, 2011; Tucci et al., 2006). In contrast, a growing number of Australian professional organisations (APS, 2014; RACP, 2013) agree with the United Nations Committee on the Rights of the Child (CRC; 2011), that permitting physical punishment of children not only carries a multitude of risks but also violates "the right of the child to freedom from all forms of violence" (CRC, 2011, p. 1).

To encourage a shift in parental attitudes towards physical punishment of children, it is important to understand why parents continue to condone parental corporal punishment. Common reasons relate to perceived social norms, the belief that physical punishment is an effective and harmless parenting strategy and a parent's right, fear of prosecution if parental physical punishment were to be banned, and a perceived absence of alternative parenting strategies (Bell & Romano, 2012; Taylor, Hamvas, Rice, Newman, & DeJong, 2011). To address these concerns, a public health approach to raising awareness and to educating and supporting parents is required (Centre for Community Child Health [CCCH], 2010; CRC, 2012; RACP, 2013). Awareness campaigns need to include information about the detrimental effects of physical punishment on children, and information about the effectiveness of alternative disciplining strategies. In addition, parents need to be supported on a practical level by having free and convenient access to evidence-based parenting programs, such as cognitive-behavioural programs, which promote alternative disciplining strategies. In order to send a clear message that is consistent with awareness and education campaigns, government leadership is required (Oates, 2010; Reddington, 2002). In line with CRC recommendations, and with a view to educate rather than prosecute parents, the defence of lawful correction needs to be repealed (CCCH, 2010; CRC, 2012; Oates, 2010; RACP, 2013). As the countries that have led the way in phasing out parental physical punishment of

children have shown, law reform is an integral part of the change process (Global Initiative to End All Punishment of Children [GITEACPOC], 2009a; Modig, 2014).

Prevalence of physical punishment and parental attitudes in Australia

In 2006, 69% of Australian parents found it necessary to physically punish their children, 45% believed it to be reasonable to leave a mark on their child as a result of physical punishment, 10% believed that using a cane or belt was a reasonable method of punishment, and 41% thought that physical punishment was an effective parenting strategy to shape a child's behaviour (Tucci et al., 2006). While the number of parents who support the use of physical punishment to discipline children decreased from 75% in 2002 to 69% in 2006 (Tucci et al., 2006; Tucci, Saunders, & Goddard, 2002), results from a more recent survey of more than 4000 Australian parents suggest that the percentage of parents who physically punish their children has increased to 85% (Godfrey, 2011). In the same survey, 8% of parents reported regretting the use of physical punishment to discipline their children (Godfrey, 2011).

Parental factors influencing the use of physical punishment

A number of factors can contribute to parents condoning or using physical punishment: (1) lack of knowledge about child developmental stages (expecting behaviour from children that is beyond their ability, and misattribution of intent; (2) the belief that physical punishment will teach the child a lesson; (3) obtaining immediate compliance; (4) the belief that physical punishment is an effective parenting strategy that teaches the child discipline and self-regulation; (5) the belief that "mild" physical punishment is harmless or that parental warmth mitigates potential negative outcomes; (6) a personal history of physical punishment and the belief that it was harmless ('it didn't do me any harm'); (7) parental negative affect, such as depression; (8) parental stress and anger related to the child's behaviour or to the parent's circumstances; (9) the belief that parents own their children and have the right to

physically punish their child; (10) perceived approval of physical punishment by professionals, family and friends; and (11) a perceived lack of alternative disciplinary methods (Alexander et al., 2011; Alizadeh, Applequist, & Coolidge., 2007; Ateah & Durrant, 2005; Bell & Romano, 2012; Gagne, Tourigny, & Pouliot-Lapointe, 2007; Gershoff, 2010; GITEACPOC, 2008; Goddard & Saunders, 1998; Saunders, 2013; Taylor et al., 2011). It appears that many factors contributing to parents physically punishing their children are related to social norms, parents' mistaken beliefs, lack of knowledge, and lack of emotion regulation.

An additional factor that may be contributing to the perpetuation of the belief that physical punishment as harmless is the use of minimising language, such as smacking or spanking, to describe the physical punishment of children (Saunders, 2013; Saunders & Goddard, 2008). Smacking, for example, is generally considered to be mild physical punishment and considered to be harmless by most parents (AIFS, 2014; Keene, 2012). However, a smack is defined as "a sharp slap or blow, typically given with the palm of the hand" (Anon, 2014), and slapping is included in behaviours describing physical punishment as well as child physical abuse (AIFS, 2012, 2014). The use of terms such as smacking and spanking masks that the behaviour directed towards children is slapping, and this minimizing makes the behaviour sound less harmful and more acceptable (Goddard & Saunders, 1998; Saunders, 2013).

Regarding socio-economic correlates, a recent large-scale European study investigating the association between physical punishment of children and parental socio-economic factors showed that parents who physically punish their children are, on average, younger, less educated and less likely to be employed (duRivage et al., 2015). Parents' marital status and single parenthood were not associated with use of physical punishment (duRivage et al., 2015).

Effective parenting strategies

Those in favour of physical punishment argue that it achieves immediate compliance and, hence, is helpful in stopping children's aggressive behaviours quickly (Larzelere, Cox & Smith, 2010; Larzelere & Kuhn, 2005). There is little disagreement that physical discipline is associated with immediate compliance, however, detrimental long-term effects outweigh these short-term gains (Gershoff, 2010, 2013). A substantial body of evidence suggests that physical punishment, and the anxiety associated with it, interfere with the learning process and lead to the child repeating the undesired behaviours (Gershoff, 2010, 2013; Gershoff, Lansford, Sexton, Davis-Kean, & Samroff, 2012). Results from Gershoff's (2002) meta-analysis investigating the effects of physical punishment on child behaviour indicate that even mild physical punishment leads to a decline in the quality of the parent-child relationship and a reduction in the moral internalisation of the message and, hence, a decline in the learning of internal control of behaviour by the child (APS, 2014; Gershoff et al, 2012). Given this, it is not surprising that physical punishment has been shown to increase aggressive behaviours in children in the long term (Odgers et al., 2008; Scott, Doolan, Beckett, & Harry, 2011; Straus, 2005).

Larzelere and colleagues (2010), on the other hand, suggest that not only physical punishment but also non-corporal disciplining strategies increase children's aggressive behaviour, showing that mild physical punishment and grounding, if used twice per week, similarly increase children's aggressive behaviour. However, results from the same study also indicate that, when physical punishment or grounding were used three times per week, aggressive behaviour further increased for children who were physically punished and decreased for children who were grounded (Larzelere et al., 2010). Arguably, parents may not limit mild physical punishment of children to twice per week and, hence, it appears that physical punishment is more likely to increase aggressive behaviour in children than

grounding would. Larzelere and colleagues (2010) further suggest that adverse effects on aggressive behaviour were related to already existing externalising behaviours. Contrary to these findings, Taylor, Manganello, Lee and Rice (2010) showed that mild but frequent physical punishment (three times or more in one month) at age 3 was associated with an increase in aggressive child behaviour at age 5 that was above levels reported at age 3 (Taylor et al., 2010). Similar results were obtained by Lee, Altschul and Gershoff (2013) who showed that mild physical punishment of children aged 1-3 increased their aggressive behaviour at age 3-5 above initial levels (Lee et al., 2013). Results from the same study also suggest that maternal warmth does not mitigate an increase in aggressive child behaviour (Lee et al., 2013).

On balance, it seems that any short-term gains in reducing aggressive behaviour in children are outweighed by the risk of exacerbating this behaviour in the long term. Furthermore, given that not only a short-term reduction in aggressive behaviour, but also an increase in learning new adaptive behaviours and long-term behaviour change, are goals of child discipline, it seems that the physical punishment of children is overall ineffective as a disciplining strategy (American Academy of Child and Adolescent Psychiatry [AACAP], 2012; AIFS, 2014; APS, 2014; Holzer & Lamont, 2010; Tully, 2008). Discipline is an integral part of parenting (Centers for Disease Control and Prevention [CDC], 2009; Tully, 2008). However, as the RACP (2013) suggests in their recent position statement, "physical punishment is an out-dated practice" (p. 2) as "there are much more effective and positive ways to provide discipline" (p. 2).

A large body of evidence indicates that cognitive-behavioural parenting strategies are effective at reducing aggressive child behaviours (AACAP, 2012; CDC, 2009; Wade, Macvean, Falkiner, Devine, & Mildon, 2012). Cognitive-behavioural strategies include: setting clear expectations; correct and consistent use of time-out or time-out alternatives in

response to disruptive behaviours; parental modelling of self-regulation; and encouraging desirable behaviours through the use of incentives (Durrant, 2007; Oates, 2010; RACP, 2013; Tully, 2008). These strategies have been shown to be effective in the short term and long term, without the associated risks of increasing such behaviours in the long term (Anoula & Nurmi, 2005; Furlong et al., 2012 Gershoff, 2013; Tully, 2008;). Accordingly, the use of cognitive-behavioural parenting strategies, as opposed to physical punishment, to discipline children is advocated by an increasing number of Australian government and professional organisations, including the Australian Institute for Family Studies (2014), the Australian Parenting Research Centre (Wade et al., 2012), the Australian Psychological Society (2014), the Royal Australasian College of Physicians Paediatric and Child Health Division (2013), and the Centre for Community Child Health at the Royal Children's Hospital (2010).

Psychological risks

Proponents of physical punishment maintain that mild physical punishment does not negatively affect children's psychological development (Baumrind, 2008). Baumrind (2001) reports a strong correlation between severe punishment (such as striking a child on the face, throwing or shaking a child) and long-term psychological harm to children (such as low self-esteem and antisocial behaviour) but only a small correlation between mild punishment and adverse psychological effects on children. In contrast, other findings indicate that physical punishment is associated with an increase in anxiety, depression, substance use, and personality disorders (Afifi et al., 2012; Lansford et al., 2005; Leach, 2002). Further possible negative effects are an increase in child and adult antisocial behaviour, and adult abusive behaviour (Gershoff, 2010; Leach, 2002). Children who experience physical punishment from their parents are more likely to hit peers and siblings, and later in life are more likely to hit their spouses (Lansford et al., 2005; Straus, 2005). These effects are thought to be the result of parents modelling to children that violence is an acceptable way to resolve conflict

(Gershoff, 2010; Linke, 2002; Oates, 2010). This way, physical punishment of children contributes to an intergenerational cycle of violence, where parents' own experience of physical punishment is associated with parents physically punishing their children (AACAP, 2012; Trunk, 2010). In addition, Straus (2008) reported a correlation between physical punishment of children and sexual behaviour problems, such as sexual coercion and risky sexual practices, displayed by these children as young adults (Straus, 2008). Finally, physical punishment has been associated with a decrease in children's academic performance (Straus & Paschall, 2009).

Ferguson (2013) cautions that conclusions about long-term adverse psychological effects of physical punishment are being drawn based on limiting methodologies and statistical procedures. Ferguson (2013) argues that findings from studies investigating the link between physical punishment and adverse child outcomes are predominantly based on bivariate correlation analysis (rather than partial r), and that this procedure overestimates the association between physical punishment and adverse child outcomes by not sufficiently controlling for possible shared variance between independent variables. In addition, Lansford, Deater-Deckard, Dodge, Bates and Pettit (2004) found that ethnicity plays a moderating role between physical punishment of children and externalising behaviour of these children in adolescence. Nevertheless, overall, there seems to be little evidence suggesting that physical punishment of children has no adverse effect on children's psychological development, and there appears to be no evidence showing that physical punishment has positive effects on children's psychological development (AIFS, 2014). In contrast, evaluations of cognitive-behavioural parenting programs have shown that cognitive-behavioural strategies are not associated with adverse psychological outcomes (APS, 2014; CDC, 2009; Furlong, et al, 2012; Wade et al., 2012). Instead cognitive-behavioural programs, such as Triple-P (California Evidence-Based Clearinghouse [CEBC], 2014a; Sanders, 1999);

1-2-3 Magic (CEBC, 2014b; Phelan, 2014), and Incredible Years (CEBC, 2014c; Webster-Stratton, 1984), have been shown to promote psychological wellbeing through the development of emotion self-regulation in parents and children and the learning of non-aggressive responses to conflict (CDC, 2009; Sanders & Mazzuchelli, 2013; Tully, 2008).

Physical risks

Another potential risk associated with physical punishment is child physical abuse. In Gershoff's (2002) meta-analysis of 88 corporal punishment studies, one of the two largest reported effect sizes relates to the association between an increase in parental physical punishment and an increase in parental physical abuse of the child. These results indicate that physical punishment frequently escalates into child physical abuse. Gershoff's (2002) findings are supported by Zolotor, Theodore, Chang, Berkoff and Runyan (2008) reported that mothers who used physical punishment to discipline their child were 2.7 times more likely to physically abuse their child than mothers who did not use physical punishment. These findings are not surprising, given the ineffectiveness of physical punishment in shaping children's behaviour in the long term (Gershoff, 2002, 2010). Following physical punishment, child aggressive behaviour is likely to increase, which can prompt parents to increase the intensity of physical punishment in order to achieve compliance, and result in a downward spiral of the parent losing control and physically abusing the child (Oates, 2010; Saunders & Goddard, 2010; Straus, 2005).

Injuries inflicted on children that were reported as a result of escalated physical punishment include ruptured eardrums, broken jaws, and brain damage (GITEACPOC, 2013; Saunders & Goddard, 2008). The majority of child physical abuse cases reported by paediatricians are thought to be the result of parental loss of control when physically punishing their children (RACP, 2013); three quarters of substantiated child physical abuse cases are associated with excessive physical punishment (Durrant et al., 2006); and escalation

of physical punishment is commonly given as a reason for child homicide (Cavanagh & Dobash, 2007). In New South Wales (NSW) alone, 59 children died between 1991 and 2005 as a result of an escalation of physical punishment (Nielssen, Large, Westmore, & Lackersteen, 2009). The potential for escalation when parents lose control while physically punishing their children clearly poses a risk of physical harm to children (GITEACPOC, 2013; RACP, 2013; Saunders & Goddard, 2008). This risk is substantially reduced when the physical punishment of children is no longer an accepted social norm and when this change in attitude is reflected in the law (Oates, 2010; Saunders, 2013; Smith, 2012).

Findings by Bussmann, Erthal and Schroth (2010) suggest that prohibition of physical punishment of children does not stop escalation of parental physical punishment altogether but that it is associated with a substantial reduction in physical punishment of children, particularly severe physical punishment. Evaluating 2007 data from five European countries, Bussmann and colleagues (2010) observed that in Sweden, where corporal punishment of children was prohibited in 1979, only 4% of parents hit their child's face; in Germany (prohibition in 2000), 13% of parents hit their child's face; in Austria 18% (prohibition in 1989); and in France and Spain (no prohibition or very recent prohibition), 32% of parents hit their children's face (Bussmann et al, 2010). In addition, Trunk (2010) showed that, in those five countries, parents' awareness of prohibition of physical punishment correlated negatively with parents' advocacy of physical punishment as well as parents' use of severe physical punishment in those countries at the time (Trunk, 2010). These results indicate that prohibition of physical punishment is an important factor in reducing the risk of physical harm to children through escalated physical punishment.

The defence of lawful correction

Child physical abuse is defined as "the non-accidental use of physical force against a child that results in harm to the child" (AIFS, 2012, para. 5). Behaviours that constitute child

physical abuse include "shoving, hitting, slapping, shaking, throwing, and punching" children (AIFS, 2012, para. 5; Australian Childhood Foundation, 2009). Physical abuse of children is prohibited in all Australian states and territories through criminal law, family law and child protection legislation (Alexander et al., 2011; Australian Government, Australian Law Reform Commission, 2010).

Physical punishment is defined as the "physical force towards a child for the purpose of control and/or correction, and as a disciplinary penalty inflicted on the body with the intention of causing some degree of discomfort, however mild" (AIFS, 2014, para. 3). This can include "hitting, smacking, spanking, (…) kicking" (AIFS, 2014, para. 3). It can also include the use of objects to physically punish children, such as a belt, stick, wooden spoon or shoe (AIFS, 2014; Holzer & Lamont, 2010; Saunders & Goddard, 2008). Whereas these behaviours are viewed as assault when directed at adults, the defence of lawful correction makes it lawful for parents in all Australian states and territories to direct these behaviours at their children for the purpose of discipline (AIFS, 2014; Saunders, 2013). In NSW, for example, "Section 61AA of the Crimes Act 1900 provides a legal defence of lawful correction to what would normally constitute an assault" (New South Wales Department of Justice and Attorney General, 2010, p. 12). As Saunders (2013) suggests, the defence of lawful correction appears to be akin to a "lawful excuse" (p. 295).

For physical punishment to be regarded as lawful correction, parents in all states and territories are required to use 'reasonable force', and to consider the child's age and reasoning capacity, the method of punishment, and the harm inflicted on the child (AIFS, 2014; Holzer & Lamont, 2010). Only New South Wales has attempted to clarify the term reasonable, in order to "limit the use of excessive force to punish children" (Crimes Amendment Act 2001, New South Wales Government, 2001, p 1). The Act states that it is not considered reasonable for force to be applied to "(a) any part of the neck or head of the child, or (b) to any other part

of the body in such a way as to be likely to cause harm to the child that lasts more than a short period" (New South Wales Government, 2001, p 3). Based on recommendations made by the Model Criminal Code Officers Committee (1998), the Crimes Amendment Bill (2000) had proposed that force "applied by the use of a stick, belt or other object" (New South Wales Parliamentary Research Service, 2000, p. 25) would also be regarded as unreasonable. However, this recommendation was not included and the Act and the Act was consolidated into the Crimes Act 1900 (NSW) as Section 61AA (Section 61AA, Crimes Act 1900 [NSW], 2001). Ten years later, in preparation for a review of Section 61AA of the Crimes Act 1900 (NSW), several submissions were made suggesting amendments, including a submission by the Department of Corrective Services to legislate that the use of implements and a closed fist be regarded as unreasonable force. Despite these submissions, the Statutory Review of Section 61AA (2010) concluded that additional limitations to what would be considered unreasonable force were not necessary and that Section 61AA, Crimes Act 1900 (New South Wales Government, 2001) had achieved the objective of establishing "a reasonable community standard that people can understand" (New South Wales Department of Justice and Attorney General, 2010, p.15). A different view has been put forward by Saunders (2013) who argues that the definition of unreasonable physical punishment leaves much open to interpretation by failing to define what constitutes a 'short period' and 'harm' (Saunders, 2013).

Interpretations of what is reasonable physical punishment vary widely. Is it reasonable, for example, to leave a mark on a child as a result of physical punishment? Alexander and colleagues' (2011) survey of 60 lawyers revealed that over 90% had been involved in family law proceedings where lawyers had referred to physical discipline that left marks on a child (among other possible consequences) as child abuse. The lawyers also reported that judges were less likely to refer to leaving a mark on a child as child abuse (Alexander et al., 2011).

Results from a nationwide phone survey about parental use of physical punishment revealed that 45% of Australian parents believed it to be reasonable to leave a mark on a child as a result of physical punishment (Tucci et al., 2006). The Australian Institute for Family Studies (2014) states that physical punishment resulting in "bruising, marking or other injury lasting longer than a 24-hour period may be deemed unreasonable and thus classified as physical abuse" (para. 5). Such an interpretation was not supported by a Queensland judge in 2000, who interpreted the serious bruising of a 9-year-old child as a result of beatings with a tree branch as reasonable because the type of punishment was common when the child's mother was a child (Reddington, 2002). Not surprisingly, Alexander and colleagues (2011) found that more than half of the lawyers surveyed did not believe that the law in their state was sufficiently clear to distinguish between physical discipline and child abuse. It appears that the lack of clear definitions of terms in state and territory legislation or common law regarding parental physical punishment of children, makes it difficult to clearly differentiate between physical punishment and physical abuse of children (Alexander et al., 2011; Naylor & Saunders, 2009) and, therefore, enables interpretations of reasonable to include behaviours consistent with physical abuse (GITEACPOC, 2013).

The defence of lawful correction allows children to be the only people in Australia who can be legally slapped, kicked, and hit with objects (Naylor & Saunders, 2009; RACP, 2013). This, together with a lack of clear definitions surrounding the defence of lawful correction, creates a grey area that leaves children in all Australian states and territories to some degree unprotected from physical abuse (RACP, 2013; Saunders, 2013; Tucci et al., 2006).

Parents' rights

The majority of Australian parents believe it is their right to physically discipline their children (Tucci et al., 2006). The notion of parental rights relates back to Roman civil law doctrine of absolute paternal authority, in which wife and children were considered the

husband's/father's possessions (Jones & Basser-Marks, 1996). Common Law, originally based on this doctrine, has shifted over the centuries away from paternal ownership of wife and children to women's equality and parental ownership of children. The concept of parental ownership over children further evolved, with ownership being replaced with parental guardianship over children, and guardianship being replaced with parental responsibility for the care, welfare and development of children. By shifting the emphasis from parents' rights over their children to children's rights as the main concern, parents are now akin to trustees of their children (Jones & Basser-Marks, 1996). Accordingly, parents do not have the right to physically punish their children but can use lawful correction/ reasonable chastisement as a legal defence if they inflict injuries on the child in the process of punishing or correcting the child's behaviour (Jones & Basser-Marks, 1996; Naylor & Sanders, 2009).

Some who condone the physical punishment of children argue that prohibition of parental physical punishment of children would conflict with articles 18 and 26 of the Universal Declaration of Human Rights (United Nations, 1948), which guarantee freedom of religion and parents' choice of their children's education (GITEACPOC, 2011; Young Earth Creation Club, 2008). However, rights to freedom of religion and choice of education cannot override basic human rights, such as the right to freedom from violence (GITEACPOC, 2011, 2013). Congruent with this view, two Christian denominations in the United States have endorsed alternative disciplining strategies over physical punishment (General Assembly of the Presbyterian Church, 2012; United Methodist Church, 2004).

Children's rights

As rights bearers, children are entitled to the fundamental human right to respect for human dignity and equal protection under international law (Articles 1 and 7; *Universal Declaration of Human Rights* [*UDHR*], United Nations, 1948), and the right to physical integrity (Category 1, *International Covenant on Civil and Political Rights*, United Nations,

1966; Saunders, 2013). The United Nations *Convention on the Rights of the Child* (*UNCRC*, United Nations, 1989), which Australia ratified in 1990, further states that children have the right to be equally protected by human rights as adults are, and that a state's legislation must protect children from all forms of physical or mental violence, injury or abuse while in the care of parents (Article 19, UNCRC, United Nations, 1989). In additional comments, the monitoring body of the UNCRC, the Committee on the Rights of the Child (CRC), has clarified that this includes protection from any violence, including physical punishment (CRC, 2011, 2006).

As of October 2014, forty-one countries, including New Zealand, Sweden, Norway, Finland, Denmark, Germany, Austria and the Netherlands, have prohibited the physical punishment of children (some countries first repealed the defence of lawful correction and only later explicitly prohibited physical punishment); another 44 countries have followed CRC recommendations and committed to achieving full prohibition of physical punishment in the future; and 111 countries, including Australia, have not made a commitment to prohibit parental physical punishment of children (GITEACPOC, 2014). The CRC, in 1997 and 2005, made recommendations to Australia to prohibit physical punishment in all settings, and specifically to remove the parental legal defence of reasonable chastisement (CRC, 1997, 2005). The Council of Australian Governments (COAG) in 2009 endorsed the *National Framework for Protecting Australia's Children 2009-2020* (Commonwealth of Australia, 2009) but this framework does not address the physical punishment of children (AIFS, 2014). In its most recent recommendation, the CRC (2012) suggests that Australia "take all appropriate measures to explicitly prohibit corporal punishment in homes (…) in all states and territories" (para. 44a), and that Australia "ensure that reasonable chastisement is not used as defence to a charge of assault of a child" (para. 45a). The CRC (2012) further states

that it is

> gravely concerned at the high levels of violence against women and children prevailing in the country and notes that there is an inherent risk that the coexistence of domestic violence, lawful corporal punishment, bullying, and other forms of violence in the society are interlinked, conducing to an escalation and exacerbation of the situation (para. 46).

The CRC (2012) urged the Australian Government "to develop federal legislation as a general framework to reduce violence and promote the enactment of similar and complementary legislation at state and territory level" (para. 47). Despite the CRC's concerns and recommendations, the Australian Government has not yet expressed commitment to prohibit parental physical punishment of children (GITEACPOC, 2014).

Moving on from the physical punishment of children

Although physical punishment is not an effective long-term disciplining strategy and carries the risk of harming children, 69-85% of Australian parents condone the use of physical punishment, and 92% believe that it should not be prohibited (Godfrey, 2011; Keene, 2012; Tucci et al., 2006). Factors contributing to these views include: (1) the belief that parents own their children and that physically punishing children is a parent's right (Saunders, 2013; Tucci et al, 2006); (2) fear of prosecution if physical punishment of children was banned (Bell & Romano, 2012; Leach, 2002; Naylor & Saunders, 2009); (3) social norms, including the belief that professionals approve of physical punishment (Taylor et al., 2011); and (4) lack of knowledge about the ineffectiveness of physical punishment as a parenting strategy, and the effectiveness of alternative disciplining strategies (Alexander et al., 2011; GITEACPOC, 2008). Before parental attitudes can change, all of these factors must be addressed.

Legislation

Boyson (2002) examined 11 countries that partly or fully prohibited physical punishment of children and found that prohibiting only some types of corporal punishment was associated with confusion among parents and professionals. Results also showed that public awareness and education campaigns, when not supported by law reform, were less successful at shifting parental attitudes than campaigns that were supported by a change in legislation (Boyson, 2002). The reverse was also demonstrated. Law reform that was not supported by public awareness and education campaigns, providing parents with alternative disciplining strategies through parenting programs, was also not successful at changing parents' attitudes towards physical punishment (Shmueli, 2010). In contrast, law reform accompanied by public awareness and education campaigns was associated with significant shifts in attitudes and behaviours, even when parents were opposed to prohibition of physical punishment of children at the start of the change process (Boyson, 2002; Modig, 2014).

In Sweden, for instance, where the defence of lawful correction was repealed in 1957 and prohibition of physical punishment was legislated in 1979, public support for physical punishment decreased from 53% in 1965, to 20% in 1982, and 9% in 2010 (Durrant, 1999; GITEACPOC, 2009b; Modig, 2014). Another example is New Zealand (NZ), where 89% of the public condoned physical punishment of children in 1981, physical punishment was prohibited in 2007, and public support for physical punishment decreased to 58% in 2008, and to 9% in 2009 (Children's Commissioner, 2008; Lawrence & Smith, 2009). Moreover, not only public opinion changed but parents' behaviour changed as well. In 1997, 88% of NZ parents hit their children, compared with 64% in 2009, and 56% in 2012 (Johnston, 2012). Similar results were observed in Sweden and Germany. In Sweden, over 90% of parents physically punished their children in the 1960s (Modig, 2014). Following law reform, the percentage of parents using physical punishment decreased to 50% in the 1970s, 35% in the

1980s, 20% in the 1990s, and 11% in the 2010s (Modig, 2014). In Germany, where physical punishment of children was banned in 2000 (GITEACPOC, 2009b), parental slapping of children decreased from 84% in 1996 to 39% in 2008 (Trunk, 2010). The reduction was even more significant for severe corporal punishment, such as boxing a child's ear: in 1996, 83% of parents used this form of physical punishment, compared with 25% in 2008 (Trunk, 2010).

It appears that law reform, in tandem with public awareness and education campaigns, reduces parental approval of physical punishment of children as well as parents' behaviour over time, even when the majority of parents condone and engage in physical punishment at the time legislation is introduced (Boyson, 2002; GITEACPOC, 2009b; Oates, 2010; Reddington, 2002; Saunders, 2013). Crucially, following law reform, the rate of severe physical punishment of children decreases (GITEACPOC, 2009a; Österman, Bjorkqvist, & Wahlbeck, 2014; Trunk, 2010). These findings show the importance of law reform and that government leadership is required to initiate the change process (Modig, 2014).

Help, not punishment

While it is essential for legislative change to lead the way, it is equally important to assure parents that the aim of new legislation is to set a new standard and not to prosecute parents (GITEACPOC, 2009a, 2009b; Modig, 2014; Naylor & Saunders 2011; RACP, 2013; Oates, 2010; Saunders, 2013; Shmueli, 2010). Leach (2002) reported results from a 1999 UK survey, indicating that 78% of parents would support the prohibition of physical punishment if parents were not prosecuted for using mild physical punishment to discipline their children. Similarly, Bell and Romano (2012) found that fear of prosecution was one of the predictors for parents opposing prohibition of physical punishment of children. In all Scandinavian countries, as well as Austria, Germany, and New Zealand, physical punishment was prohibited through law reform but the new laws were rarely used to prosecute parents (Shmueli, 2010). Shmueli (2010) suggests that legislation without prosecution "conveys a

firm message as to the importance of protecting children's rights without irreparably harming the family unit in mild cases. The purpose of the declarative statement is a legal declaration that is not intended to be enforced in practice" (p. 294). Mirroring this stance, Germany employed the slogan 'Help, Not Punishment' when physical punishment was prohibited in 2000 (GITEACPOC, 2009b). This statement indicated to parents that the government had no intention of prosecuting parents for mild physical punishment of children but, instead, was providing help by offering education about alternative disciplining strategies. Interestingly, the slogan could also be interpreted to include a change in parents' attitudes towards children, to help children learn and grow, rather than punish children for making mistakes.

It appears that positive framing of legislative change is associated with greater acceptance of changes from the public and from parents (GITEACPOC, 2009b; Saunders, 2013). In line with this, a further slogan accompanying the 2000 German law reform was 'More Respect for Children', which included information about inconsistencies in the law regarding children's rights. In Denmark, a public awareness campaign used the slogan 'When I have Children I will not Smack Them', providing a positive role model. In Germany, the idea of positive parenting was introduced with the slogan 'Love, not Slaps'. In both countries, change was not phrased in terms of parents losing their perceived right to physically punish children but, instead, change was phrased in terms of children and parents gaining respect and love (GITEACPOC, 2009b). The defence of lawful correction needs to be repealed and physical punishment of children prohibited, not with a view to prosecute parents but in order to set a new standard and to support the change process (Modig, 2104; RACP, 2103; Saunders, 2013).

Raising public awareness

In order to achieve a comprehensive shift in attitude toward physical punishment of children, it is crucial that parents, professionals, and the general public understand why

change is important. To this end, public awareness campaigns about the overall ineffectiveness of physical punishment as a parenting strategy, the adverse psychological effects of physical punishment on children, and the benefits of alternative disciplining strategies are essential (APS, 2014; CCCH, 2010; Oates, 2010; RACP, 2013; Sanders & Pidgeon, 2011). In Denmark, Finland, Germany and Sweden, public awareness and education campaigns (which were implemented by federal and local government agencies in conjunction with non-government agencies) employed a variety of channels that are typically used in a public health approach (GITEACPOC, 2009b). These included: (1) leaflets and brochures distributed to professionals, pharmacies, agencies working with children or families, and to private households with children; (2) posters distributed to primary schools and child care centres; (3) a television program featuring interviews with children, therapists and mothers; and (4) video vignettes conveying the main messages screened on prime-time television.

In addition, children from all German states and the chancellor attended a children's summit, where children were given a chance to voice their ideas about children's rights and responsibilities. Three of seven changes children advocated related to the abolition of physical punishment, indicating that physical punishment was an important issue for children (GITEACPOC, 2009b). In Australia, Saunders and Goddard (2008) gave a voice to children by asking 31 children and adolescents about their view of physical punishment in a series of individual semi-structured interviews and focus groups. Participants candidly described the physical and emotional pain they experienced as a result of physical punishment, that parents sometimes hit out of anger and frustration, that parents model aggressive behaviour and are more likely to hit children at home than in public, and that they respect parents less who use physical punishment. Although some children viewed physical punishment as a natural part of being a child, most participants were clearly opposed to physical punishment (Saunders &

Goddard, 2008).

Given that parents' attitudes toward physical punishment of children are influenced by professionals' opinions (Taylor et al., 2011), the position statement made by the Royal Australasian College of Physicians, Paediatric and Child Health Division (RACP, 2013) was an important development. The RACP's (2013) stance also generated extensive media coverage, contributing further to raising public awareness (Saunders & Goddard, 2002; White, 2013). Several other Australian professional, research and charitable organisations have taken a stance against physical punishment of children in Australia, including the Royal Children's Hospital Centre for Community Child Health (CCCH, 2010), the National Association for Prevention of Child Abuse and Neglect (NAPCAN, 2013), Child Abuse Prevention Research Australia (2014), White Ribbon (2013), and the Australian Psychological Association (APS, 2014). International organisations that campaign worldwide for the prohibition of physical punishment of children include the Global Initiative to End All Corporal Punishment of Children (GITEACPOC, 2013), Save the Children International (2014), and the United Nations Children's Fund (UNICEF End Violence Against Children; United Nations Secretary-General, 2006). The Committee on the Rights of the Child (2005, 2012) has recommended repeatedly that Australia prohibit physical punishment of children, "while raising awareness about the adverse consequences of corporal punishment" (CRC, 2012, para. 44). It appears that, currently, Australian professional organisations lead the way in raising awareness about the detrimental effects of physical punishment of children (ABC News, 2013; RACP, 2013; The Age, 2013).

Alternative disciplining strategies

Key elements associated with successful disciplining of children are cognitive-behavioural parenting strategies, such as: (1) setting clear rules and expectations that are appropriate to the child's age and developmental stage; (2) non-argumentative parental

communication skills; (3) correct use of time-out or time-out alternatives, such as withdrawal of privileges (time-out or loss of a privilege need to follow the child's anti-social behaviour immediately and need to be in proportion to the child's age and the behaviour); (4) consistent responding to a child, including consistent use of time-out or time-out alternatives in response to disruptive behaviours; (5) differentiating the child from the child's behaviour (difficult behaviour, not difficult child); (6) providing the child with behaviour alternatives; (7) parental modelling of self-regulation; (8) enhancing the parent-child relationship through removal of anger from disciplining; (9) positive parent-child interactions; and (10) encouraging desirable behaviours, such as getting ready, through the use of incentives (CDC, 2009; Durrant, 2007; Oates, 2010; RACP, 2013; Tully, 2008). In addition, Durrant (2007) emphasises that it is important for parents to keep long-term goals of parenting in mind and to not let short-term frustrations or anger interfere with those long-term goals. Evidence-based cognitive-behavioural parenting programs include all of these strategies (APS, 2014; RACP, 2013; Sanders & Mazzuchelli, 2013; Sanders & Kirby, 2009; Tully, 2008).

Parenting programs

To support parents, it is essential to provide parents with free and convenient access to education about new disciplining and emotion-regulation strategies (CRC, 2012; Naylor & Saunders, 2009; RACP, 2013). Many of the European countries that introduced new legislation regarding physical punishment offered structured parent education courses as part of the awareness and education campaign surrounding law reform (GITEACPOC, 2013). The Australian Government supports positive parenting education programs and promotes these through the *Family Support Program*, in tandem with services provided by counsellors, early childhood workers, and welfare agencies (Attorney-General's Department, 2012). This is an important first step in shifting parental attitudes (CRC, 2012). The CRC (2012) endorsed Australia's move towards parent education and recommended for Australia to "strengthen

and expand awareness-raising and education campaigns, in order to promote positive and alternative forms of discipline" (para. 44).

Prinz, Sanders, Shapiro, Whitaker and Lutzker (2009) investigated whether the Triple-P Positive Parenting Program (Triple-P; Sanders, 1999), an Australian cognitive-behavioural parenting program, would be effective in reducing child maltreatment when delivered as a population-based prevention program. Triple-P training was provided to over 600 US service providers (including counsellors and social workers) who, in turn, provided parent education to more than 9000 parents. Program delivery in the targeted areas was accompanied by universal media-based communication strategies, such as press releases, newspaper articles, newsletters to parents, radio announcements, and community events. Prinz and colleagues' findings indicate that a primary prevention approach can significantly reduce the rate of child maltreatment, child injury due to maltreatment, and out-of-home placements in targeted areas (Prinz et al., 2009). Triple-P has also been evaluated extensively in Australia and has been shown to reduce behavioural problems in children and to increase effective parenting (Sanders, 2008; Sanders & Kirby, 2009). It is the most widely disseminated parenting program in Australia, with the NSW government alone spending over $6 million since 2009 to deliver the program to more than 30,000 families (Browne, 2013; Department of Family & Community Services, 2011; Horin, 2009; NSW Government, Families NSW, 2014). Despite Triple-P's strong evidence base, Australian community service agencies suggest that no single parenting program is suitable for all parents and, therefore, advocate the funding of a variety of parenting programs (Horin, 2009). According to Sue Richard, the then chief executive of NSW Family Services, "many agencies were disappointed the government had directed so much money to a single program rather than provide some funds to enable organisations to choose parenting courses suited to their clients" (cited in Horin, 2009, para. 5).

The CEBC (2014a, 2014b, 2014c) and the Australian Parenting Research Centre (Wade et al., 2012) suggest that a number of cognitive-behavioural parenting programs provide effective strategies to reduce disruptive child behaviour, including Triple-P (Sanders, 1999); 1-2-3 Magic Effective Discipline for Children (Phelan, 2010, 2014); 1-2-3 Magic & Emotion Coaching (Hawton & Martin, 2011); Incredible Years (Webster-Stratton, 1984); and Parent Child Interaction Therapy (PCIT; Eyberg, 1988). However, not all of these programs are suited to a broad delivery approach. Parenting programs best suited to a public health approach are those that have been evaluated in Australia (as effectiveness can vary from culture to culture); are manualised (to increase treatment fidelity); are brief (to maximise parent engagement and minimise cost); are cost-effective; and have convenient and flexible delivery options in order to reach as many parents as possible (Sanders, 2008; Sanders & Kirby, 2011; Wade et al., 2012). Parenting programs that can be delivered to large groups of caregivers are six times more cost-effective than programs that are delivered to individuals (Cunningham, Bremner, & Boyle, 1995). Similarly, self-administered parenting programs, including online programs, are more cost-effective than programs delivered with the assistance of health care workers (Enebrink, Högström, Forster, & Ghaderi, 2012). In addition, self-administered programs overcome many of the barriers that prevent some parents from attending parent education programs in person, such as work schedules, distance, availability of child care, travel cost, stigma, concerns about confidentiality, and wait lists (Koerting et al, 2013; O'Brien & Daley, 2011). Cognitive-behavioural parenting programs that provide alternative disciplining strategies, have been evaluated in Australia, are brief, and cost-effective (either because they can be delivered to large groups or because they can be self-administered), include: Group Triple-P (Gallart & Matthey, 2005); 1-2-3 Magic (Hawton & Martin, 2011; Phelan, 2010; Porzig-Drummond, Stevenson, & Stevenson, 2014); Self-help Triple P and Triple-P Online (Sanders, Dittman, Farrugia, & Keown, 2014).

The Australian government' promotion of positive parenting programs is an important step towards raising awareness about alternative parenting and disciplining strategies. Nevertheless, this initiative needs to be expanded upon and needs to be accompanied by public awareness campaigns and law reform (CRC, 2012).

Concluding Comments

The adverse effects and the risks associated with the physical punishment of children are numerous: increased aggressive behaviours in children, antisocial behaviours in these children as adults, anxiety, depression, substance use, personality disorders, learned aggressive responses to conflict, and physical punishment escalating into child physical abuse (Afifi et al., 2012; Anoula & Nurmi, 2005; Gershoff, 2010; Lansford et al., 2005; Zolotor et al., 2008). In addition, physical punishment is an ineffective long-term parenting strategy (APS, 2014; RACP, 2013). Cognitive-behavioural disciplining strategies, on the other hand, have been shown to be equally effective as physical punishment in obtaining immediate behaviour change, and more effective than physical punishment in achieving long-term behaviour change in children (CDC, 2009; Furlong et al., 2012; Tully, 2008). Furthermore, the defence of lawful correction or reasonable chastisement that is available to parents in all Australian states and territories, makes children the only people in Australia who can be legally hit (Oates, 2010; Saunders, 2013), and contravenes several articles of the UNCRC (1989; CRC, 2011, 2006). Finally, the grey areas created by ill-defined terms within legislation and common law leave Australian children not sufficiently protected from child physical abuse (Naylor & Saunders, 2009; Tucci et al., 2006). For all these reasons, an increasing number of Australian professional and charitable associations advocate law reform and the parental use of alternative disciplining strategies (APS, 2014; CCCH, 2010; RACP, 2013).

Despite the overwhelming evidence against physical punishment of children, the

majority of Australian parents condone the use of physical punishment as a disciplining strategy and oppose its ban (Keene, 2012). Reasons for this viewpoint include perceived social norms, a perceived absence of alternative parenting strategies, and also fear of prosecution if physical punishment was banned (Bell & Romano, 2012; Modig, 2014; Naylor & Saunders, 2009; Taylor et al., 2011). All of these concerns need to be addressed to achieve a shift in parental attitude and behaviour. First, the change process needs to be supported by a public health approach to raising awareness about the detrimental effects of physical punishment and the effectiveness of alternative disciplining strategies (Boyson, 2012; CRC, 2012; Modig, 2014). Second, parents need to be provided with free and convenient access to evidence-based parenting programs, such as cognitive-behavioural programs, which promote alternative disciplining strategies (CRC, 2012; RACP, 2013). For a public health approach, suitable parenting programs need to have been evaluated in Australia, be cost-effective and offer flexible delivery options, for example, parenting programs that can be delivered to large groups or self-directed programs (Sanders & Pidgeon, 2011). Finally, the defence of lawful correction needs to be repealed and physical punishment of children prohibited, not with a view to prosecute parents but in order to set a new standard and to move on from physical punishment of children to helping parents as well as children (Modig, 2104; RACP, 2103; Saunders, 2103).

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PAPER TWO

Parenting Programs for Child Disruptive Behaviours:

A Narrative Literature Review of Group-based and Self-directed Programs

Evidence-based in Australia

Paper submitted for publication

Abstract

Parenting programs that provide effective strategies to manage child disruptive behaviours are crucial in order to prevent and halt dysfunctional parenting practices and to reduce the multiple negative effects associated with child problem behaviour and harsh disciplining practices. Hence, a broad delivery approach to the dissemination of such parenting programs is advocated. For a public health approach, programs also need to be easily accessible and cost-effective, which are characteristics inherent in group- or self-directed delivery formats. In addition, programs need to be evidence-based in the cultural context in which they are used. This narrative literature review identified (1) evidence-based parenting programs that target child disruptive behaviours and that are available in group- or self-directed formats, and (2) those that are evidence-based in Australia. Of the ten parenting-programs that were identified across 33 peer-reviewed studies that used standardised measures and a randomised-controlled trial design, five have been evaluated in Australia in group-formats and three in self-directed formats. The benefits of these programs for population-level delivery, and future directions for research, are discussed.

Introduction

There is growing support for the need to provide caregivers with effective strategies to manage child disruptive behaviours, in order to prevent the negative effects associated with harsh disciplining practices (Committee on the Rights of the Child [CRC], 2012; Royal Australasian College of Physicians, Paediatric & Child Health Division [RACP], 2013). In tandem, the pool of evidence-based parenting programs is widening, and many parenting programs expand on the traditional one-on-one delivery format by offering alternative delivery options, such as group- or self-directed formats (Barlow, Smailagic, Ferriter, Bennett, & Jones, 2010; California Evidence-based Clearinghouse [CEBC], 2014a; O'Brien & Daley, 2011; Wade, Macvean, Falkiner, Devine, & Mildon, 2012). Effectiveness in reducing child disruptive behaviours, and providing flexible delivery options, are two characteristics of parenting programs suitable for a public health approach (Forgatch, Patterson, & Gewirtz, 2013; Voisine & Baker, 2012). In addition, programs also need to have been found to be effective in the cultural contexts in which they are used (Jacobs, Jones, Gabella, Spring, & Brownson, 2012; Wade et al., 2012). Accordingly, the aims of this narrative literature review are: (1) to establish which evidence-based parenting programs that target child disruptive behaviours are available in a group format or self-directed format, and (2) to ascertain which of these programs have been evaluated in Australia.

Child Disruptive Behaviours and Parenting Strategies

Up to 25 percent of Australian caregivers report disruptive behaviours for their children in the clinical range (Australian Institute of Family Studies [AIFS], 2010). Disruptive child behaviours include oppositional and aggressive behaviours, such as yelling, arguing, fighting, hitting and temper tantrums (AIFS, 2010). The potential adverse effects associated with persistent child disruptive behaviours have been well documented and include: poor academic and social outcomes during childhood (Reid, Gonzalez, Nordness,

Trout, & Epstein, 2004) and poor outcomes in social adjustment, mental health and employability during adolescence and adult life (Bayer et al., 2011; Bor, McGee, & Fagan, 2004; Colman et al., 2009; Croudace & Jones, 2009). A key factor associated with child emotional and behavioural health is parenting, including caregivers' ability to manage child disruptive behaviour (Knerr, Gardner, & Cluver, 2013; Tully, 2009; Kaminski, Valle, Filene, & Boyle, 2008). Effective strategies to manage child disruptive behaviour include: providing children with age-appropriate expectations and clear and consistent guidelines regarding socially acceptable behaviour; using consequences, such as non-physical disciplining strategies, to reduce undesirable behaviours; linking consequences to the behaviour of the child and not the child as a person; rewarding desirable behaviours; using consequences and rewards consistently; and teaching children techniques to regulate their emotions and behaviours (RACP, 2013).

If caregivers lack effective disciplining strategies, child disruptive behaviours are likely to worsen and parental stress is likely to increase, which, in turn, can lead to caregivers using dysfunctional parenting strategies (Aunola & Nurmi, 2005; Gershoff, 2010, 2013). Dysfunctional parenting includes the use of punishment that is not appropriate to the child's age and the use of harsh parenting practices, such as the physical punishment of children (Gershoff, 2013; RACP, 2013). Between 69 and 85 percent of Australian caregivers have used physical punishment to discipline their children (Godfrey, 2011; Tucci, Mitchell, & Goddard, 2006), even though it is an ineffective long-term parenting strategy and is associated with a multitude of negative outcomes and risks (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Gershoff, 2010; Saunders, 2013).

In order to reduce child disruptive behaviours and harsh parental disciplining methods, it is crucial for caregivers to have alternative disciplining strategies (Gershoff, 2013; Mistry et al., 20102; Porzig-Drummond, 2015; RACP, 2013). Therefore, a growing

number of Australian and international organisations advocate broad dissemination of parenting programs that provide effective strategies for caregivers to address child disruptive behaviours (Child Abuse Prevention Research Australia [2014]; Centre for Community Child Health at the Royal Children's Hospital [2010]; Committee on the Rights of the Child [2012]; National Institute of Clinical Excellence and Social Care [NICE, 2006]; Save the Children International [2014]).

Parenting Programs

In this narrative literature review, 'parenting program' is defined as an intervention that is directed at parents and includes information on child behaviour as well as practical strategies (see CEBC, 2014a; Wade et al., 2012). Parenting programs may be delivered to individual parents or to groups of parents; they may be presented by therapists or family workers, or they may be self-administered; and they may be implemented at a population level (primary prevention/public health approach) or only to caregivers in need (selective/secondary level or indicated/tertiary level) (Hunter, 2014; O'Donnell, Scott, & Stanley, 2008; Sanders & Kirby, 2014). Regardless of format, the overarching goal of parenting programs is to increase caregivers' and children's emotional and behavioural wellbeing (Centers for Disease Control and Prevention [CDC], 2009).

The methods to achieve this goal are generally informed by one or several psychological theories (CDC, 2009; Kaminski et al., 2009; Tully, 2009), such as: behavioural, cognitive-behavioural and social learning theories (see Bandura, 1977; Beck, 1979; and Skinner, 1953); attachment theory (see Bowlby, 1958); and emotion socialisation and meta-emotion (see Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Katz, & Hooven, 1997). Depending on their theoretical orientation, parenting programs fall into two major groups: behavioural and non-behavioural programs (Lundahl, Risser, & Lovejoy, 2006; Tully, 2009). Within the group of behavioural parenting programs, one prominent direction is

Parent Management Training (PMT), which is based on behavioural, cognitive-behavioural and social learning principles (Kazdin, 2005; Pearl, 2009). Well-established programs, such as *Triple-P Positive Parenting Program* (*Triple P*; Sanders, 1999), *Incredible Years* (Webster-Stratton, 1984), *Parent-Child Interaction Therapy* (*PCIT*; Eyberg, 1988), *Parent Management Training Oregon Model* (*PMTO*; Forgatch, 1994), *Helping the Noncompliant Child* (Forehand & McMahon, 1991), and *1-2-3 Magic and Effective Discipline for Children 2-12* (Phelan, 1984) broadly fall into this category (CEBC, 2014b; Pearl, 2000). Within the group of non-behavioural parenting programs, two popular orientations are: attachment-based programs, such as *Circle of Security* (Marvin, Cooper, Hoffman, & Powell, 2002); and emotion-focused programs, such as *Tuning into Kids* (Havighurst & Harley, 2007). Examples of programs that span two theoretical orientations are PCIT, combining PMT and attachment theory (Eyberg, 1988), and *1-2-3 Magic & Emotion Coaching* (Hawton & Martin, 2006), combining PMT and emotion coaching.

No single theoretical orientation, let alone single program, covers all aspects that might contribute to child disruptive behaviours (Dretzke et al., 2009; Duncombe et al., 2014). Accordingly, different parenting programs, or different components of parenting programs, may be effective at addressing particular behavioural or emotional issues (Assemany & McIntosh, 2002). A recent meta-analytic review by Kaminski and colleagues (2009) showed parenting programs that are effective at reducing child disruptive behaviours to have the following characteristics: (i) they stress the importance of consistency in parenting; (ii) they introduce caregivers to non-aggressive ways of communicating that lead to improved parent-child interactions; (iii) they teach caregivers the correct use of time-out (or time-out alternatives); and (iv) they require caregivers to practice and model these skills (CDC, 2009; Tully, 2009; Kaminski et al., 2009). Although parenting programs from a number theoretical backgrounds have been shown to be effective at improving parenting skills and the parent-

child relationship (Dretzke et al., 2009; Lindquist & Watkins, 2014; Lundahl et al., 2006), PMT programs, based on cognitive-behavioural and social learning principles have been found to be particularly effective at managing child disruptive behaviours (Furlong et al., 2012; Kazdin, 2005; Maughan, Christiansen, Jensen, Olympia, & Clark, 2005; Pearl, 2009; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2008). Accordingly, the RACP (2013) recommended PMT programs, including the Incredible Years Parenting Program (Webster-Stratton, 2005a) and the Triple P Positive Parenting Program (Sanders, 1999), in its recent position statement against the physical punishment of children.

Public Health Approach

In order to address harsh disciplining practices at a population level, and aid in the prevention of the multiple negative outcomes associated with dysfunctional parenting, it is crucial to maximise program effectiveness, parent engagement, and cost-effectiveness (Forgatch et al., 2013; Mistry et al., 2012; NICE, 2006). First, to increase a program's effectiveness, the program needs to focus on the provision of strategies for managing child disruptive behaviours (as alternatives to harsh disciplining practices), be evidence-based in the cultural context of the target population (ensuring suitability), and be manualised (aiding implementation fidelity) (Breitenstein et al., 2010; Voisine & Baker, 2012; Wade et al., 2012). Second, to reach as many caregivers as possible and to increase parent engagement, programs need to be free, brief, and easily accessible (overcoming common barriers to program attendance, such as conflicting work schedules, time and financial investment, lack of child care, travel distance, stigma, and lengthy wait lists) (Breitenstein, Gross, & Christophersen, 2014; Gross et al., 2011; Hindman, Brooks, & van der Zwan, 2012; Koerting et al, 2013; Mytton, Ingram, Manns, & Thomas, 2014; Oates, 2010). Finally, to be cost-effective at a population level, programs need to be implemented with minimal therapist input. Therapist costs can be reduced through delivering parenting programs in a group

format (rather than individual sessions), particularly when the group program is brief and can be delivered to large groups of caregivers (Enebrink et al., 2012; NICE, 2006; Sampaio & Feldman, 2014; Tully, 2009). Another way to reduce delivery cost is the implementation of self-directed delivery formats, such as video-based, workbook-based, or online programs (Niewboer, Fukkink, & Hermanns, 2013; O'Brien & Daley, 2011). Support for the effectiveness of group-based and self-directed parenting programs in reducing child disruptive behaviours has grown exponentially over the last decade (Breitenstein et al., 2014; Furlong et al., 2012; Tarver, Daley, Lockwood, & Sayal, 2014).

Parenting Program Reviews

Previous papers have reviewed the evidence for the effectiveness of parenting programs that address disruptive child behaviours according to several categories: cognitive-behavioural parenting programs (Furlong et al., 2012; Lundahl et al., 2006; Pearl, 2009); group-based parenting programs (Barlow et al., 2010; Furlong et al., 2012); early-intervention parenting programs (Barlow et al., 2010; Piquero et al., 2009); media-based parenting programs (Montgomery, Bjornstad, & Dennis, 2006); self-directed parenting programs (O'Brien & Daley, 2011; Tarver et al., 2014); digital or online programs in particular (Breitenstein et al., 2014; Niewboer et al., 2013); parenting programs suitable for delivery in community service settings (Michelson, Davenport, Dretzke, Barlow, & Day, 2013) and low- to middle-income countries (Knerr et al., 2013); and reviews of specific parenting programs, such as Incredible Years (Menting, de Castro, & Matthys (2013), Parent-Child Interaction Therapy (PCIT; Thomas & Zimmer-Gembeck, 2007), and Triple P-Positive Parenting Program (Triple-P; Sanders, Kirby, Tellegen, & Day, 2014). Surprisingly, there appears to be no peer-reviewed published review to date of evidence-based parenting programs that have been evaluated in Australia, other than those specific to PCIT and Triple-P (see Sanders, Kirby, et al., 2014; Thomas & Zimmer-Gembeck, 2007).

Aims

Keeping the broader aim of reduction of physical punishment of children in mind, the focus of this narrative literature review will be on parenting programs that provide effective alternative disciplining strategies and that are suitable for a population-level delivery approach. Specifically, this narrative literature review aims to (1) establish which manualised evidence-based parenting programs that provide strategies for managing child disruptive behaviours are available in group-based or self-directed delivery formats; and (2) which of these have been evaluated in Australia.

Method

Selection Criteria

This narrative literature review used the following inclusion criteria: (i) studies were published and peer-reviewed; (ii) if studies were conducted in Australia, they used a randomised controlled trial design; (iii) the intervention targeted caregivers with children whose mean age was between 3 and 12; (iv) studies used at least one standardised child behaviour outcome measure (rather than exclusively using non-standardised surveys about child behaviour, measures of parental adjustment, or measures of parental attitudes); (v) the evaluated parenting programs targeted child disruptive behaviours (rather than exclusively targeting the parent-child relationship or parental attitudes); and (vi) the evaluated parenting programs were manualised or provided a delivery fidelity-measure.

We excluded studies that focused on children with specific conditions (e.g. anxiety, autism spectrum disorder, traumatic brain injury) or parents with diagnosed mental health issues (e.g. depression), as results from these studies may not be indicative of the program's effectiveness for parents in the general population. We also excluded studies of parenting programs that were not available in group-format or self-directed format (e.g. *Helping the*

Noncompliant Child, McMahon & Forehand, 2003), as individual-delivery formats were considered to be too cost-intensive for a broad delivery approach. For similar reasons, we excluded studies of self-directed programs that used home visits as an additional component of the intervention (e.g. Taylor et al., 2008). We did not apply publication date or language restrictions.

Search Strategy

We searched the following electronic databases on 28 January 2015: Cochrane Library (Cochrane Collaboration), PsychINFO (American Psychological Association), Scopus (Elsevier), and Web of Science (Thomson Reuters). Search terms were used in combination and included: disruptive behaviour, problem behaviour, antisocial behaviour, externalising behaviour, conduct disorder, parenting program, parent education, parent training, parent intervention, group-based, self-directed, self-help, behavioural program, behavioural intervention.

In addition to electronic databases, we also searched the websites of the California Evidence-Based Clearinghouse for Child Welfare, the Parenting Research Centre (Melbourne, Australia), and the websites of several parenting programs, including Incredible Years, Parent-Child Interaction Therapy, Triple P-Positive Parenting Program, and Tuning into Kids. Finally, we searched the reference lists of key systematic reviews, including Barlow et al., 2010; Breitenstein et al., 2014; Furlong et al., 2012; Lundahl et al., 2006; Montgomery et al., 2006; Niewboer et al., 2013; O'Brien & Daley, 2011; and Tarver et al., 2014).

Table 1

Parenting programs that target child disruptive behaviours, are available in group-format, and have been evaluated in Australia

Program	Age of target child	Theoretical focus of the program	Group-format of the program	Examples of international evaluations of the group-based format of the program	Australian evaluations of the group-based format of the program (RCT; peer-reviewed)	Number and length of sessions	Maximum number of participants in each group	Age of target children	Program Effectiveness (measure: ECBI*) Cohen's *d*	Longest follow-up period
1-2-3 Magic: Effective Discipline for Children 2-12 (Phelan, 1984, 2014)	2-12	Parent Management Training (PMT) based on cognitive, behavioural and social learning principles	• *1-2-3 Magic* videos (Boot & Phelan, 2004a,2004b) • *1-2-3 Magic: Effective Discipline for Children 2-12* (Phelan, 2010)	Bradley et al. (2003) - video-based group format	1) Bailey et al. (2012) - presentation- based 2) Porzig-Drummond et al. (2014) - video-based group format	1) 2 x 3 hours 2) 3 x 2 hours	1) 5 caregivers 2) 30 caregivers	1) 6-12 2) 2-12	1) n/a 2) 1.09-1.12	1) pre-post only 2) 2 years
1-2-3 Magic & Emotion Coaching Parenting Program (Hawton & Martin, 2006, 2011)	2-12	PMT and Emotion Coaching (EC). based on principles of meta-emotion and emotion socialisation	*1-2-3 Magic & Emotion Coaching Parenting Program* (Hawton & Martin, 2006, 2011)	n/a	1) Flaherty & Cooper (2010) 2) Porzig-Drummond et al. (2014)	3 x 2 hours	1) 13 caregivers 2) 30 caregivers	1) 2-16 2) 2-12	1) n/a 2) .8-1.01	1) 3 months 2) 2 years
Communication Method (Comet) (Kling & Sundell, 2006)	3-10	PMT	*Communication Method (Comet)* (Kling & Sundell, 2006)	Kling et al. (2010)	n/a	2 formats: - 11 x 2.5 hs - 1 x 7 hours	10 families (caregivers)			
Incredible Years (IY) (Webster-Stratton, 1984, 2005a)	3-8	PMT	The *Incredible Years BASIC Parent Training Program* (IYBPP; Webster-Stratton, 2005a)	• Bywater et al., (2009) • McGilloway et al. (2012) • Fergusson et al. (2009) - intervention only	n/a	12 - 14 x 2 hours	16 caregivers			
Parent-Child Interaction Therapy (PCIT) (Eyberg, 1988)	2-7	PMT, and also inlcudes components based on attachment theory	1) *Primary Care PCIT* (Berkovits et al., 2010) 2) *Group PCIT* (Eyberg et al., 2009)	• Niec et al. (2005) • Berkovits et al. (2010) • Nieter et al. (2013) (intervention group only)	n/a	1) 4 x 1.5 hour 2) 12 x 1.5 hours	1) 4 families 2) 5 families (cargiver and child)			
Parent Management Training - Oregon Model (PMTO) (Forgatch, 1994)	3-16	PMT	*Handbook of PMTO Parent Group* (Askeland, Solholm, Jørgensen, & Pettersen, 2006)	Kjøbli et al. (2013)	n/a	12 x 2 - 2.5 hours	16 caregivers			
Parenting Wisely (Kacir & Gordon, 1999)	9-18	PMT	*Parenting Wisely* (video-based) (Gordon, 2000)	Cotter et al. (2013) - video based group format	Cefai et al. (2010)	2 x 2-3 hours	n/a	9-15	.45-.69	3 months
Systematic Training for Effective Parenting (STEP) (Dinkmeyer & McKay, 1976)	0-18	PMT	*Systematic Training for Effective Parenting* (Dinkmeyer, McKay, & Dinkmeyer, 1997a)	Fennel & Fishel (1998)	n/a	7 - 9 x 1 - 1.5 hours	14 caregivers			
Triple P - Positive Parenting Program (Sanders, 1999)	0-12	PMT	*Group Triple P* (Turner, Markie-Dadds, & Sanders, 1998)	• Bodenman et al. (2008) • Fujiwara, Kato, & Sanders (2011); • Heinrichs, Kliem, & Hahlweg (2014)	1) Ireland et al. (2003) 2) Gallart & Matthey (2005)	1) 4 x 2 hours and 4 phone calls 2) 4 x 2 hours (with/without 4 phone calls)	up to 12 caregivers	1) 2-5 2) 3-8	1) .46-.93 2) n/a	1) 3 months 2) pre-post only
Tuning into Kids (Havighurst & Harley, 2007)	1-18	EC	*Tuning into Kids* (Havighurst & Harley, 2007)	n/a	1) Havighurst et al. (2009 and 2010) 2) Havighurst et al. (2012)	6 x 2 hours	1) 15 caregivers 2) 4 caregivers	1) 4-5 2) 4-5	1) .57 2) 1.05-1.2	1) pre-post only 2) 6 months

* *Eyberg Child Behavior Inventory* (ECBI; Eyberg & Pincus, 1999)

Synthesis of the Findings

All studies included in this narrative literature review used a randomised controlled trial design, used standardised outcome measures, and had evaluated parenting programs that were manualised or provided a delivery fidelity-measure. Group-program results are summarised according to number of sessions, total program length, group size, and Australian evaluation. Results for self-directed program are summarised according to total program length and Australian evaluation.

Group-based Programs

Table 1 provides a summary of the ten evidence-based parenting programs that were identified to (a) be effective in reducing child disruptive behaviours and (b) have been evaluated in a group delivery format.

Number of sessions: Programs ranged in number of sessions from 2 to 14: Two sessions (Parenting Wisely); 2-3 sessions (1-2-3 Magic Effective Discipline for Children 2-12); 3 sessions (1-2-3 Magic & Emotion Coaching); 4 sessions (Group Triple P); 4-12 sessions (Primary Care PCIT, Group PCIT); 6 sessions (Tuning into Kids); 7 sessions (abbreviated version of Comet); 7-9 sessions (STEP); 11 sessions (Comet); 12 sessions (PMTO); and 12-14 sessions (Incredible Years).

Total program length: In terms of total program length, programs ranged from 6 to 30 hours: Six hours (1-2-3 Magic Effective Discipline for Children 2-12, 1-2-3 Magic & Emotion Coaching, Primary Care PCIT, and Parenting Wisely); 7 hours (abbreviated version of Comet); 7-13.5 hours (STEP); 8 hours (Group Triple P); 12 hours (Tuning into Kids); 18 hours (Group PCIT); 24-28 hours (Incredible Years); 24-30 hours (PMTO), 27.5 hours (Comet).

Group size: The number of adult participants per group reported in outcome studies ranged from 5 to 30. Two studies reported the number of families per group: up to 5 families,

including the target children (PCIT); and up to 10 sets of caregivers (Comet). The remaining studies reported the number of caregivers per group: up to 12 (Group Triple P), up to 14 (STEP), up to 15 (Tuning into Kids), up to 16 (Incredible Years, and PMTO), and up to 30 (1-2-3 Magic Effective Discipline for Children 2-12, and 1-2-3 Magic & Emotion Coaching).

Australian evaluations: Of the ten group-based programs, five have been evaluated in Australia: (1) 1-2-3 Magic Effective Discipline for Children 2-12 (Porzig-Drummond, Stevenson, & Stevenson, 2014); (2) 1-2-3 Magic & Emotion Coaching (Flaherty & Cooper, 2010; Porzig-Drummond et al. 2014); (3) Group Triple P (Gallart & Matthey, 2005); (4) Parenting Wisely (Cefai, Smith, & Pushak, 2010); and (5) Tuning into Kids (Havighurst, Wilson, Harley, & Prior, 2009; Havighurst et al., 2012). PCIT and STEP have been evaluated in Australia but, to the best of our knowledge, have only been evaluated in a one-on-one delivery format (Nixon, Sweeney, Erickson, & Touyz, 2003; Phillips, Morgan, Cawthorne, & Barnett, 2008; Sharpley, & Pointer, 1980).

Table 2

Parenting programs that target child disruptive behaviours, are available in self-directed format, and have been evaluated in Australia

Program	Age of target child	Self-directed Program	Examples of international evaluations of the self-directed format of the program	Length of program	Australian evaluations of a self-directed format of the program (RCT; peer-reviewed)	Age of target children	Program Effectiveness (measure: ECBI*) Cohen's *d*	Longest follow-up period
1-2-3 Magic: Effective Discipline for Children 2-12 (Phelan, 1984, 2014)	2-12	1-2-3 Mgic videos (Booth & Phelan, 2004a, 2004b)	n/a	4 hours (two 2-hour videos)	Porzig-Drummond et al. (2015)	2-10	.70-.74	6 months
1-2-3 Magic & Emotion Coaching Parenting Program (Hawton & Martin, 2006, 2011)	2-12	n/a	n/a		n/a			
Communication Method (Comet) (based on PMTO and IY; (Kling & Sundell, 2006)	3-10	*Internet-based Parent Management Training* (based on *Comet,* Enebrink et al., 2012)	Enebrink et al. (2012)	10.5 hours (7 x 1.5 hours)	n/a			
Incredible Years (IY) (Webster-Stratton, 1984, 2005a)	3-8	1) video-based (Webster-Stratton, 1981, 2001); 2) workbook-based (Webster-Stratton, 1992, 2005b)	1) Webster-Stratton et al. (1989); Webster- Stratton (1990) 2) Lavigne et al. (2008)	10 sessions	n/a			
Parent-Child Interaction Therapy (PCIT) (Eyberg, 1988)	2-7	PCIT Anticipatory Guidance	Berkovits et al. (2010)	n/a	n/a			
Parent Management Training - Oregon Model (PMTO) (Forgatch, 1994)	3-16	n/a	n/a		n/a			
Parenting Wisely (Kacir & Gordon, 1999)	9-18	video/CD-ROM and workbook based (Gordon, 2000)	Cotter et al. (2013)	2-3 hours (viewed twice)	Cefai et al. (2010)	9-15	.70-.89	3 months
Systematic Training for Effective Parenting (STEP) (Dinkmeyer & McKay, 1976)	0-18	•workbook (Dinkmeyer, Mckay, & Dinkmeyer, 1997b; •video (Dinkmeyer, Mckay & Dinkmeyer, 1997c)	n/a		n/a			
Triple P - Positive Parenting Program (Sanders, 1999)	0-12	1) *Self-directed Triple P* (i) workbook (Markie Dadds, Sanders, & Turner, 1999; (ii) video (Sanders, Markie-Dadds, & Turner, 1996) 2) *Triple P Online* (Turner & Sanders, 2011)	2) Sanders, Dittma et al. (2014)	1) 10 sessions (with or without weekly phone calls) 2) 8 sessions	1) a. Markie-Dadds & Sanders (2006); b. Morawska & Sanders (2006); c. Sanders et al., (2000 and 2007) 2) Sanders, Baker, & Turner (2012)	1) a. 2-5 b. 1.5-3 c. 3 2) 2-9	1) a. 1.03-1.16 b. .69 - .90 (with phone calls) .26- .64 (no phone calls) c. .46-1.23 2) .71- .89	1) a. 6 months b. 6 months c. 3 years 2) 6 months
Tuning into Kids (Havighurst & Harley, 2007)	1-18	n/a	n/a		n/a			

* *Eyberg Child Behavior Inventory* (ECBI; Eyberg & Pincus, 1999)

Self-directed Programs (video, workbook, or online/ internet-based)

As can be seen in Table 2, of the above ten evidence-based parenting programs, six programs were identified to have been evaluated in a self-directed format. : (1) a video-based version of 1-2-3 Magic Effective Discipline for Children 2-12 (Porzig-Drummond, Stevenson, & Stevenson, 2015); (2) an online version of Comet (*Internet-based Parent Management Training*; Enebrink, Högström, Forster, & Ghaderi, 2012;); (3) a video-based and a workbook-based version of Incredible Years (Lavigne et al., 2008; Webster-Stratton, Kolpacoff, & Hollinsworth, 1989; Webster-Stratton, 1990); (4) a video-based version of Parenting Wisely (Cefai et al., 2010); (5) a self-help format of PCIT (*PCIT Anticipatory Guidance*; Berkovits et al., 2010); and (6) two self-administered formats of Triple P: a video- and workbook-based version (*Self-directed Triple P*; Markie-Dadds & Sanders, 2006; Sanders, Bor, & Morawska, 2007; Sanders, Markie-Dadds, Tully, & Bor, 2000), and an online version (*Triple P Online*; Sanders, Baker, & Turner, 2012).

Program length: The self-directed programs ranged in length from 4 to 10.5 hours: 4 hours for the 1-2-3 Magic Effective Discipline for Children 2-12 video-based program; 4-6 hours for the Parenting Wisely video-program; 8 hours for Triple P Online; 10 hours (and phone calls) for Self-directed Triple P; 10.5 hours for the Comet-based Internet-based Parent Management Training; and 10 sessions for the self-directed versions of Incredible Years.

Australian evaluations: Of the six self-directed programs, three had been evaluated in Australia: 1-2-3 Magic Effective Discipline for Children 2-12 (Porzig-Drummond et al., 2014); Parenting Wisely (Cefai et al., 2010); and both self-administered Triple P programs, Self-directed Triple P and Triple P Online (Markie-Dadds & Sanders, 2006; Sanders et al., 2012).

Effect sizes

All of the identified Australian studies that evaluated group- and self-directed parenting programs targeting child disruptive behaviours employed the *Eyberg Child Behavior Inventory* (*ECBI*, Eyberg & Pincus, 1999) as a caregiver-report measure of child disruptive behaviour. This measure consists of two scales: the Intensity Scale (frequency of child problem behaviour) and the Problem Scale (caregivers rating the child's behaviour as problematic or not) (Eyberg & Pincus, 1999). Effect sizes for the ECBI indicate the magnitude of the effect the intervention had on child disruptive behaviour between pre- and post-intervention assessment. The effect sizes (Cohen's *d*) represented in Table 1 and Table 2 were either reported in the respective studies or, for studies that did not report effect sizes, were calculated from the data provided in those studies. As a general guideline, a Cohen's *d* value of .10 to .30 is considered to indicate a small effect, .30 to .70 a medium effect, and above .70 a large effect (Cohen, 1988).

When interpreting the effect sizes reported in Table 1 and 2, it is important to keep in mind that a direct comparison between the identified programs cannot be made as the studies differed substantially in their methodology. For example, some studies reported data for only the Intensity Scale of the ECBI and some studies spilt results according to caregiver gender. Consequently, effect sizes represented in Table 1 and 2 merely provide a general overview. Based on this overview, it appears that the effect of both group-based and self-directed parenting interventions on reducing child disruptive behaviours is overall in the medium to large range. There seems to be no effect size pattern according to delivery format: one program shows greater effects when delivered in a group-based format (1-2-3 Magic Effective Discipline for Children 2-12); and one program shows greater effects when delivered in a self-directed format (Parenting Wisely). Triple P, which is available in a group

format and several self-directed formats, shows overall similar effects for self-directed formats and Group Triple P.

Discussion

Group Programs

The five group programs targeting child disruptive behaviour that were evaluated in Australia (two 1-2-3 Magic programs, Group Triple-P, Parenting Wisely, and Tuning into Kids) are all manualised, comparatively brief (4-12 hours over 2-6 sessions), and their group-format minimises per-participant therapist input. There are also several differences between these five group programs.

Parenting Wisely (Gordon, 2000) is delivered in the shortest time frame (two 2-3 hour sessions) of the five programs. However, the program targets caregivers with children and teenagers aged 9-18. Given the program's exclusion of the important target age-range of 2-8, Parenting Wisely appears to be less suited for a public health approach.

Tuning into Kids (Havighurst & Harley, 2007) focuses on teaching parents emotion-coaching skills and has been shown to be effective at reducing child disruptive behaviours (Havighurst et al., 2009, 2012). However, the program is delivered over six 2-hour sessions (to groups of up to 15 caregivers), which makes it the longest of the five identified group programs evaluated in Australia.

Group Triple-P is delivered over four 2-hour sessions to groups of up to 12 caregivers and generally includes four 15-minute one-on-one phone-support sessions (Gallart & Matthey, 2005; Ireland et al., 2003). Group Triple-P has also been shown to reduce child problem behaviours when it was delivered without the additional phone calls (Gallart & Matthey, 2005). Triple-P (Sanders, 1999) includes several levels and types of programs, including Group Triple-P. When taking all levels and types into account, it has the largest evidence base of any parenting program in Australia (Wade et al., 2012).

Both 1-2-3 Magic group programs are generally delivered over three 2-hour sessions (Hawton & Martin, 2006; Phelan, 2010). In a recent pilot study, the 1-2-3 Magic Effective Discipline for Children 2-12 (Phelan, 2010) has also been shown to reduce child problem behaviours when the program was delivered over two 3-hour sessions (Bailey, van der Zwan, Phelan, & Brooks, 2012). Both 1-2-3 Magic programs have been shown to be effective when delivered to groups of up to 30 caregivers (Porzig-Drummond et al., 2014). The programs' brevity and efficacy when delivered to large numbers of participant raise the programs' potential to be the most cost-effective group programs available for parents with children aged 2-12.

Self-directed Programs

Three programs targeting child disruptive behaviour were evaluated in self-directed formats in Australia. The 2 to 3-hour video-based Parenting Wisely program (Gordon, 2000) has been found to be effective at reducing child disruptive behaviours for caregivers with children aged 9-15, with results maintained at 3-month follow-up (Cefai et al., 2010). The 4-hour video-based version of 1-2-3 Magic: Effective Discipline for Children 2-12 (Booth & Phelan, 2004a, 2004b) has recently been trialled in a randomised controlled pilot study and shown to be effective at reducing child disruptive behaviours and dysfunctional parenting for caregivers with children aged 2-10, with results maintained at 6-month follow-up (Porzig-Drummond et al., 2015). Two self-directed formats of Triple-P have been shown to reduce child problem behaviours and dysfunctional parenting: The 10-session Self-directed Triple-P program (Markie-Dadds, Sanders, & Turner, 1999; Sanders, Markie-Dadds, & Turner, 1996) and the 8-session Triple-P Online program (Turner & Sanders, 2011), with results maintained at 6-month follow-up (Markie-Dadds & Sanders, 2006; Morawska & Sanders, 2006; Sanders, Baker, & Turner, 2012). In addition, similar results were obtained when Triple-P Online was evaluated in New Zealand (Sanders, Dittman et al., 2014).

Self-directed parenting programs can reach larger numbers of caregivers, as they overcome a number of the barriers inherent to face-to-face programs, such as accessibility, child-care, and stigma, and self-directed programs are more cost-effective than group-based programs (Breitenstein et al., 2014; Tarver et al., 2014). Therefore, self-directed programs are particularly suited to a public health approach that aims to maximise the reach of parenting programs (Tarver et al., 2014).

Effect sizes

Based on the overview of effect sizes, it appears that both group-based and self-directed parenting interventions are effective at reducing child disruptive behaviours. This suggests that both delivery formats may be cost-effective ways of providing caregivers with alternative disciplining strategies. Interestingly, there seems to be no clear pattern of one delivery format being more effective than the other. ECBI effect sizes reported for the self-directed format of the 1-2-3 Magic Effective Discipline for Children program are lower than those reported for the group-format of the program (Porzig-Drummond et al., 2015). This could be explained by the difference in program length (four hours for the self-directed format versus six hours for the group format) and the opportunity for feedback provided in the group format. Conversely, ECBI effect sizes reported for the self-directed format of Parenting Wisely are lower than those reported for the group-format of the program (Cefai et al., 2010). Program length was identical for the two formats of the program (both six hours), however, Parenting Wisely was originally designed as a self-directed program (Kacir & Gordon, 1999) and may, hence, be more suited to a self-directed delivery format.
and one program shows greater effects when delivered in a self-directed format (Parenting Wisely). Triple P is available in a group format and several self-directed formats, effect sizes for which were overall in similar ranges. A more in-depth comparison of the various formats

of the program is beyond the scope of this narrative literature review and would provide a further avenue for future research.

Limitations

A number of limitations resulted from the specific focus of this narrative literature review on programs that are evidence-based, available in group- or self-directed format, and have been evaluated in Australia. First, this narrative literature review only includes published peer-reviewed studies and, therefore, provides no information on findings presented, for example, at conferences or in theses. Second, as programs suitable for a public health approach need to have the highest possible level of evidence, Australian studies of group- and self-directed programs were limited to those with randomised controlled trial designs. Hence, information from Australian longitudinal studies, quasi-experimental, or intervention-group only designs is not included. Third, due to the more general focus on the reduction of child disruptive behaviours and the provision of alternative disciplining strategies, this narrative literature review did not separate studies examining preventative interventions from those investigating treatment interventions.

Implications for future research

In order to provide an optimal match between client and program, it has been suggested to widen the choice of evidence-based programs in Australia (Martin, 2013). The RACP (2013), in its position statement against the physical punishment of children, also recommends a choice of parenting programs in order to match clients to the most suitable program. One of the RACP-recommended programs is Incredible Years, a parenting program with a large international evidence base, including evidence for its group formats (Menting et al., 2013, McGilloway et al., 2012). Surprisingly, it appears that to date there are no published results from Australian evaluations of any format of the Incredible Years program. Future studies could address this gap in the research and build on the promising findings from

a recent New Zealand pilot study investigating the effectiveness of the Incredible Years program (Fergusson, Stanley, & Horwood, 2009). Of the three identified group programs that appear to not have been evaluated in Australia, the Incredible Years program seems to be more suitable than STEP or PCIT for further investigation. STEP (Dinkmeyer et al., 1997) has a comparatively small international evidence base in terms of child behaviour outcomes, with most outcome studies focusing on parental attitudes (California Evidence Based Clearinghouse, 2014), and the current format of Group PCIT (Eyberg, 1988) allows for only up to five parent-child dyads per group (Nieter et al., 2013), the smallest participant number of any of the group programs.

Given the benefits of self-directed programs, and the relative scarcity of evidence-based self-directed parenting programs in Australia, this area of research is particularly important. Future studies could further examine whether self-directed programs that have already been evaluated in Australia (such as 1-2-3 Magic: Effective Discipline for Children 2-12 and the self-directed formats of Triple-P) maintain their intervention effects over longer follow-up periods. Future research could also evaluate self-directed formats of the Incredible Years program in Australia, based on results obtained for the self-directed formats of the program (Webster-Stratton, 1981, 1992, 2001, 2005) in international trials (Lavigne et al., 2008; Webster-Stratton et al., 1989). Finally, one important line of enquiry for future research would be to compare programs in terms of implementation costs and long-term effectiveness in reducing disruptive child behaviours and dysfunctional parenting (see Charles, Bywater, & Edwards, 2011; NICE, 2006; Stevens, 2012).

Conclusions

Group-based and self-directed parenting programs present a cost-effective way to provide caregivers with alternative disciplining strategies (NICE, 2006; Tarver et al., 2014). Therefore, these program formats are especially well placed to halt the downward spiral of

dysfunctional parenting. Given the increase in accessibility and reduction in cost associated with self-directed programs, the potential for this format in a public health approach is particularly high (Breitenstein et al., 2014; Tarver et al., 2014). Although the pool of parenting programs is increasing overall, only a limited number of programs that target child disruptive behaviours and have been evaluated in group- or self-directed formats. This narrative literature review identified ten group- and five self-directed programs, however, only five and three of these, respectively, have been evaluated in Australia. In order to provide an optimal match between client and program, it is important to widen the choice of evidence-based programs in Australia (Martin, 2103). Furthermore, for a public health approach, it is crucial to compare parenting programs in terms of their effectiveness in reducing disruptive child behaviours and dysfunctional parenting as well their cost-effectiveness (NICE, 2006; Sanders, 2010).

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PAPER THREE

The 1-2-3 Magic Parenting Program and its Effect on Child Problem Behaviours and Dysfunctional Parenting: A Randomised Controlled Trial

Paper published

Reference:

Porzig-Drummond, R., Stevenson, R.J., & Stevenson, C. (2014). The 1-2-3 Magic parenting program and its effect on child problem behaviours and dysfunctional parenting: A randomized controlled trial. *Behaviour Research and Therapy, 58*, 52-64. doi: 10.1016/j.brat.2014.05.004

Abstract

This study investigated the effectiveness of the 1-2-3 Magic parenting program, a brief cognitive-behavioural program, when delivered to large groups of caregivers. The effectiveness of two versions of the programs in reducing child problem behaviours and dysfunctional parenting, and the effect on emotion-related parenting style, were examined. Ninety-two participants with 2-12-year-old children were randomly assigned to one of three groups: DVD (n = 31); Emotion-coaching (EC) (n = 31); or Waitlist-control (n = 30). Both intervention groups reported significantly decreased child problem behaviours, dysfunctional parenting, parental depression and parental stress at post intervention as compared to the control group. Additionally, the DVD group reported decreased parental anxiety, and the EC group reported a decrease in emotion-dismissing parenting style. Emotion-coaching parenting style remained unchanged for all groups at post-intervention. The results were maintained after three months. After two years, all intervention effects were maintained for the DVD group. For the EC group, effects were maintained on the main outcome variables. The results suggest that both 1-2-3 Magic programs are effective at reducing child problem behaviour and dysfunctional parenting when delivered to large groups of caregivers, and that both programs are suitable for a broad delivery approach.

Introduction

Twenty-three percent of caregivers in Australia report problem behaviours in their child, such as yelling, arguing, fighting, hitting and temper tantrums, in the clinically elevated range (Sanders et al., 2005; Sanders, 2008). Child problem behaviours are reported across all income groups and are associated with harsh and inconsistent parenting (Scott, 2008), which can have significant negative impacts on the child and their caregivers (Flaherty, Sterling, & The Committee on Child Abuse and Neglect, 2010). For the child, if problem behaviours persist, this increases the risk for later mental disorders, unemployment, antisocial behaviour and criminality (Bayer et al., 2011; Stevenson, 2001). For caregivers, those unable to cope with childhood problem behaviours are more likely to suffer high levels of stress (Sanders et al., 2005). In addition, caregivers who cannot manage childhood problem behaviours are more likely to use physical punishment, including slapping, hitting, and punching children (Flaherty et al., 2010; Gershoff, 2010). This may compound the poor outlook for children with such behaviours as physical punishment may in the longer term promote further conduct problems (Odgers et al., 2008). Finally, caregivers who use corporal punishment are three times more likely to increase the intensity of punishment to a level that may equate to child abuse (Gershoff, 2010; Zolotor, Theodore, Chang, Berkoff, & Runyan, 2008). For all of these reasons, improving parenting skills that act to reduce child problem behaviours, has important long-term social consequences in reducing conduct problems, mental disorders, unemployment, anti-social behaviours, criminality, and child abuse (Bayer et al., 2011; Sanders & Pidgeon, 2011).

Dysfunctional parenting, such as physically punishing children, is associated with several factors, including: parental stress relating to the parenting role, child characteristics, situational factors, and unreasonable parental beliefs about parenting (Abidin, 1976). Supporting Abidin's (1976) model of the determinants of dysfunctional parenting, numerous

studies have shown that dysfunctional parenting, including physical disciplining strategies, are associated with high levels of parenting-related stress (Mash, Johnston, & Kovitz, 1983; Morgan, Robinson, & Aldridge, 2002). Accordingly, parenting programs aim to reduce parental stress by addressing irrational parental beliefs and potentially stressful parent-child interactions, such as discipline.

Several key elements are associated with successful parenting interventions: parental emotion regulation and communication skills, positive parent-child interaction skills, correct use of time-out, responding consistently to a child, and addressing problematic parental thinking patterns (Centers for Disease Control and Prevention [CDC], 2009; Tully, 2008). Additionally, parenting strategies focusing on behavioural control are associated with a decrease in children's externalizing problem behaviours, such as temper tantrums (Aunola & Nurmi, 2005). Parenting interventions that focus on the above key elements include: 1-2-3 Magic Effective Discipline for Children (Phelan, 2010b); 1-2-3 Magic & Emotion Coaching (Hawton & Martin, 2011); Helping the Noncompliant Child (McMahon & Foreman, 2003); Incredible Years (Webster-Stratton, 1984); Parent Child Interaction Therapy (PCIT; Eyberg, 1988); Strengthening Families (Kupfer, Greene, Bates, Cofrin, & Whiteside, 2007); Triple P – Positive Parenting Program (Sanders, 1999); and Systematic Training for Effective Parenting (STEP; Dinkmeyer & McKay, 1976).

Furthermore, given the prevalence of problem behaviours in children and the prevalence of ineffective discipline strategies used by caregivers, and given that the consequences of these are extensive and long-term, a broad delivery approach for parenting interventions is needed (Sanders, 2008; Sanders & Kirby, 2011). Brief parenting interventions (3-4 sessions) that can be provided for large groups of caregivers are particularly suitable because interventions that are brief and can be delivered to large groups are up to six times more cost-effective than programs that are longer and delivered

individually or to small groups (Cunningham, Bremner, & Boyle, 1995; Tully, 2008). Brief parenting interventions also lower the time-investment barrier that longer programs might present for caregivers (Flaherty & Cooper, 2010), and manualised programs are preferable as they increase treatment fidelity (Wade et al., 2012). Additionally, in order to address externalizing problem behaviours in children, programs with a focus on behavioural components are desirable (Aunola & Nurmi, 2005). Of the above-mentioned interventions, which focus on the key elements associated with successful parenting interventions, only three are brief, behavioural and manualised interventions delivered in a group setting: 1-2-3 Magic Effective Discipline for Children 2-12 (three 2-hour group sessions; Phelan, 2010b); 1-2-3 Magic & Emotion Coaching (three 2-hour group sessions; Hawton & Martin, 2011), and Group Triple P (four group sessions and four phone sessions; Wade et al., 2012). The current study focuses on the two 1-2-3 Magic programs for two reasons: First, because the 1-2-3 Magic program (in both versions) is the shortest identified group program; and second, to investigate a parenting program that is being widely used but until now had comparatively small evidence base.

Phelan's (2010b) 1-2-3 Magic Effective Discipline for Children parenting program is a behavioural program that uses components from operant learning theory (positive reinforcement, such as praise, for desirable behaviour; punishment, such as time-out, for disruptive behaviour), as well as cognitive-behavioural theory (cognitive restructuring of erroneous beliefs) and social learning theory (modelling effective behaviour). The key elements of the program are: (i) letting go of the belief that children respond to logical reasoning; (ii) modelling emotion self-regulation through non-argumentative communication; (iii) clearly stating expectations; (iv) consistently using the 1-2-3 counting system as a gentle warning signal to stop disruptive behaviours; (v) consistently using time-out or a time-out alternative, such as withdrawal of privileges, as a consequence if disruptive behaviour

persists; (vi) encouraging desirable behaviours, such as getting ready, through the use of incentives; and (vii) enhancing the parent-child relationship through removal of anger from disciplining (Phelan, 2010a). Hawton & Martin's (2011) 1-2-3 Magic & Emotion Coaching program includes the elements outlined above and also focuses on emotion coaching.

Surprisingly, few studies have tested the effectiveness of either of the 1-2-3 Magic parenting programs. (1) A pilot study (intervention group, n = 5; control group, n = 4), using Phelan's (2010b) 3-session manualised program, provides preliminary support for the effectiveness of 1-2-3 Magic as a brief parenting program (Bailey, van der Zwan, Phelan & Brooks, 2012). (2) In a randomised controlled trial, Bradley and colleagues (2003) employed Phelan's (1991) 2-hour 123-Magic video as part of an early intervention program for caregivers with children aged 3-4. Participants who attend the 4-session intervention program, which consisted of viewing the video and six hours of group discussion, reported an increase in the quality of their parenting practices and a decrease in child problem behaviours at post-intervention as compared to the control group, and the effect was maintained after one year (Bradley et al., 2003). This study provided support for the effectiveness of the 1-2-3 Magic parenting program, however, the restriction of children's age range to age 3-4 reduces the generalizability of the results, and the presentation of the program to small groups of caregivers (7-8 at a time) does not indicate whether the program would be effective when delivered to larger groups. (3) Flaherty and Cooper (2010) tested the effectiveness of Hawton and Martin's (2006) 1-2-3 Magic program with caregivers of children who had a history of or were at risk of abuse. Participants attending the 3-session manualised intervention program reported an increase in parenting satisfaction and a decrease in child problem behaviours at post-intervention whereas the control group did not (Flaherty & Cooper, 2010). The important contribution of this study is that its findings provide support for the effectiveness of the 1-2-3 Magic parenting program for caregivers with children who

have a history of or who are at risk of abuse. At the same time, the use of a specific population reduces the generalizability of the findings. Further, presentation of the program to small groups of caregivers (6-13 at a time) does not indicate whether the program would be effective when delivered to larger groups. Given the published results of controlled trials to-date, it appears that a 1-2-3 Magic parenting program has only been evaluated either as an early intervention program (children aged 3-4), or for a specific population (children with a history of or at risk of abuse), or when delivered to a small group of caregivers.

Despite the limited evidence base, both 1-2-3 Magic programs are used widely. In the US, 2,300 professionals and over 200,000 caregivers have been trained in the 1-2-3 Magic Effective Discipline for Children 2-12 parenting program; 1.5 million 1-2-3 Magic books have been sold; and 280,000 1-2-3 Magic VHS/DVD copies have been sold to date (T.W. Phelan & N. Roe, personal communication, May 1-7, 2013). In Australia, more than 4,600 professionals and 71,000 caregivers have been trained in the 1-2-3 Magic & Emotion Coaching program (M. Hawton, personal communication, May 9, 2013). Considering that both 1-2-3 Magic parenting programs are widely used but their evidence base is limited, an evaluation of both programs for a non-specific population and children spanning the full program-recommended age range of 2-12 is crucial. Additionally, in order to test the suitability of the programs for cost-effective mass delivery, it is important to evaluate the effectiveness of the programs when delivered to large groups of caregivers.

Consequently, the main aim of the present study was to investigate whether both the 1-2-3 Magic Effective Discipline for Children parenting program (Phelan, 2010b) and the 1-2-3 Magic & Emotion Coaching parenting program (Hawton & Martin, 2011) would be effective in reducing dysfunctional parenting and child problem behaviours, particularly when delivered to large groups of caregivers with children spanning the program-recommended age-range of 2-12. Based on the evidence for the programs to-date, we

predicted that both 1-2-3 Magic programs would be effective in decreasing dysfunctional parenting and child problem behaviour as compared to a control group. The second aim was to investigate whether the two programs differ in terms of their effect on emotion-related parenting style. Due to the 1-2-3 Magic & Emotion Coaching (Hawton & Martin, 2011) program's focus on emotion coaching, we predicted that this program would increase an emotion-coaching parenting style and reduce an emotion-dismissing parenting style, whereas the 1-2-3 Magic Effective Discipline for Children (Phelan, 2010b) program and the control group would not.

Method

Sampling Procedure

We recruited participants from within a 20 km radius of Macquarie University in Sydney, Australia, via advertisements in local newspapers, posters at paediatricians, child-care centres and primary schools, and online newsletters. Inclusion criteria were that participants were the caregivers of a child aged 2-12 years, living with the child, and viewing the child to be displaying disruptive behaviour. Type or severity of the disruptive behaviour was not a criterion. Exclusion criteria were caregivers not being able to read and write in English, or not being able to attend the information session or at least two of three intervention sessions on designated evenings. The intended sample size was 120 (40 per group). This sample size was derived from a power analysis based upon the ECBI measures (Intensity Scale and Problem Scale; Eyberg & Pincus, 1999), as these have been widely used in similar intervention studies before. In addition, we also took into account a probable attrition rate of around 40% (see Assemany & McIntosh, 2002). The first author carried out Excel-generated randomization and allocated eligible participants sequentially in order of initial contact. Participants were unaware of group allocation.

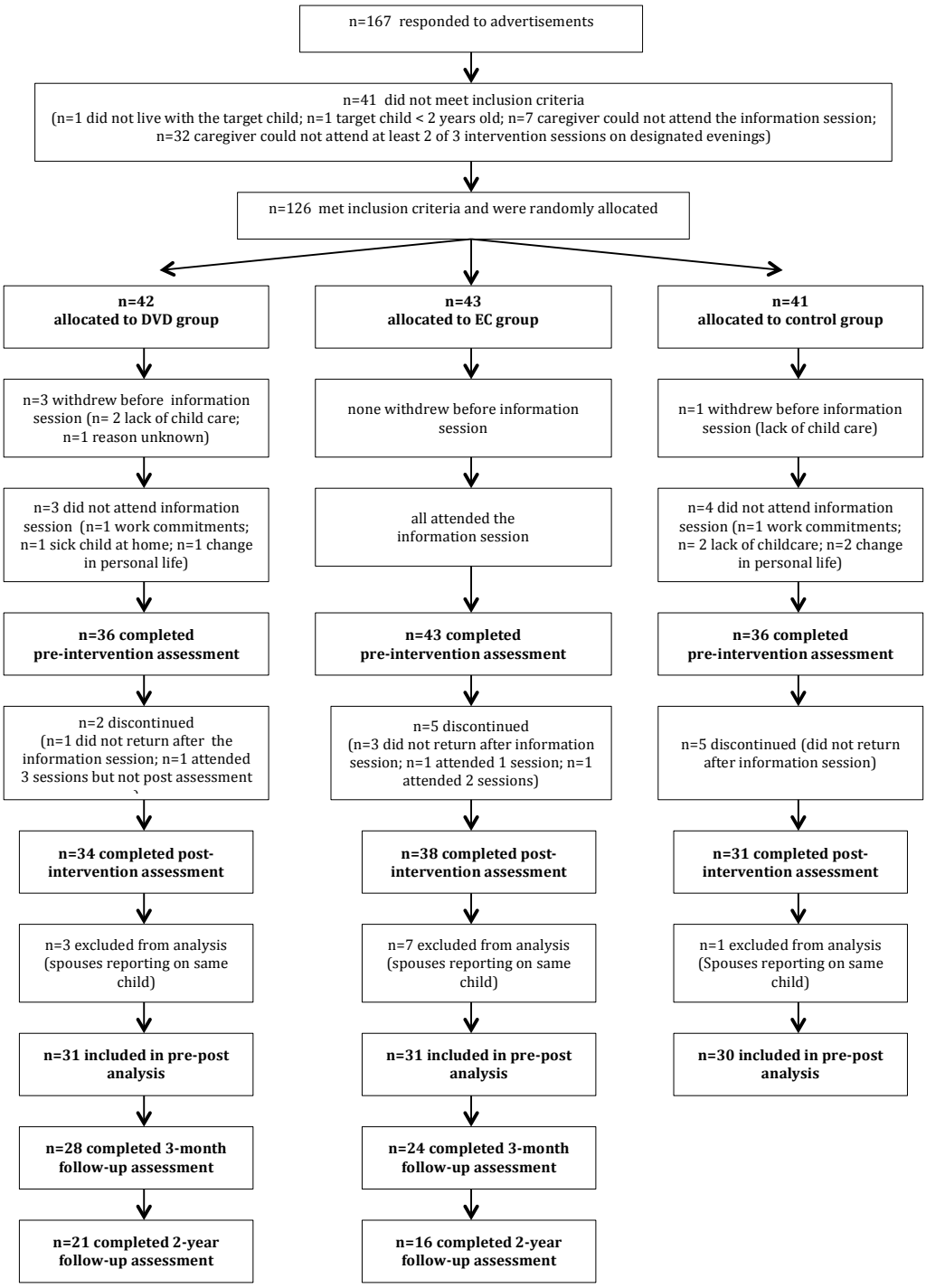


Figure 1. Flow of participants through the study. DVD group = 1-2-3 Magic DVD-based group; EC group = 1-2-3 Magic & Emotion Coaching group. Diagram adapted from Consolidated Standards of Reporting Trials (CONSORT; Altman et al., 2001).

Participant Characteristics

A summary of participant flow and study design is represented in Figure 1. Of 167 respondents, 41 did not meet inclusion criteria. We randomly allocated 126 to one of three groups: (1) the DVD group, based on Phelan's (2010b) 1-2-3-Magic Effective Discipline for Children program; (2) the Emotion Coaching (EC group), based on Hawton and Martin's (2011) 1-2-3-Magic & Emotion Coaching program; or (3) the Waitlist-control group (Control). Four participants (3.1%) withdrew before the information session and 7 (5.5%) did not attend the information session. We excluded these 7 participants from the study, as baseline data collection took place at the information session. Of the 115 participants who attended the information session, 12 (10.4%) discontinued during the course of the program and 103 (81.7%) completed post-intervention assessment. Of these 103, the spouses or partners within 11 sets of participants had reported observations for the same child. In order to limit observations to one per child, we included only the main caregiver from each of the 11 couples in primary data analysis. Data analysis with a swapped set of 11 caregivers (excluding main caregivers and including their spouses or partners) did not alter the study conclusions. The 11 spouses and partners who were excluded from primary data analysis continued to attend the program. Primary data analysis was based on 92 participants (DVD group, n = 31; EC group, n = 31; Control, n = 30. Of these, 89 participants (96.7%) completed post-intervention measures: DVD group, 29 (93.6%); EC group, 30 (96.8%); Control, 30 (100%). At 3-month follow up, 52 participants (83.9%) from the two intervention groups completed assessment (DVD group, 28 [90.3%]; EC group, 24 [70%]). At 2-year follow-up, 37 participants (59.7%) from the two intervention groups completed assessment (DVD group, 21 [67.7%]; EC group, 16 [51.6%]).

The ages of the 92 participants ranged from 29 to 57 (M = 38.9). Most participants were female (83.7%), tertiary educated (88%), and employed (72.9% in total, 44.6% part-

time, 28.3% full-time). For 89.1 % of households, English was the main language spoken at home and the household income was above the Australian mean of US$67,382 (A$64,168; Australian Bureau of Statistics, 2011). Most participants (91.3%) lived in two-caregiver households and had on average two children. We asked participants with more than one child to complete assessment in relation to the child whose behaviour they were most concerned about. Fifty-one percent of participants reported parenting stress levels above the clinical cut-off score of 90 on the Parent Stress Index – Short Form (PSI-SF; Abidin, 1995). In terms of parental adjustment, as measured by the short form of the Depression Anxiety and Stress Scale – 21 Items (DASS-21; Lovibond and Lovibond, 1995), 44.6 % of participants reported stress levels, 27.2% depression levels, and 25 % anxiety levels outside the functional range.

The target children were between 2 and 12 years old (M = 5.5), 58.7 % male. Twenty-two participants (19.1%) reported that their child had been diagnosed with either a learning difficulty (n = 10; 8.7%), ADHD (n = 8; 7%), Anxiety (n = 2; 1.7%), or Oppositional Defiant Disorder (ODD; n = 2; 1.7%). Sixty-one percent of participants reported frequency of disruptive behaviour for the target child above the recommended clinical cut-off score of 134 on the Intensity Scale of the Eyberg Child Behavior Inventory (see ECBI; Eyberg & Pincus, 1999), and 56 % of participants reported levels of problematic disruptive behaviours for the target child above the recommended clinical cut-off score of 16 on the Problem Scale of the ECBI.

Table 1

Demographic characteristics of the intervention groups and the control group

Characteristic	DVD Group (n=31)		EC Group (n=31)		Control Group (n=30)			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F (df)*	*p*
Child's age (years)	6.00	2.66	5.06	2.52	5.4	2.43	1.08(2)	.344
Caregiver's age (years)	39.19	4.67	38.61	5.10	38.8	5.41	.106(2)	.900
Number of children at home	2.03	.41	2.06	.57	1.97	.18	.43 (2)	.655
	n	***%***	***n***	***%***	***n***	***%***	X^2	***p***
Child gender								
Male	19	61.3	21	67.7	14	46.7	2.92	.232
Female	12	38.7	10	32.3	16	53.3		
Caregiver's gender								
Male	5	16.1	6	19.4	4	13.3	.41	.816
Female	26	83.9	25	80.6	26	86.7		
Family Composition								
Two caregivers	29	93.5	28	90.3	27	90.0	.30	.861
Sole caregiver	2	6.4	3	9.7	3	10.0		
Main language at home								
English	27	87.1	28	90.3	27	90.0	.20	.904
Other	4	12.9	3	9.7	3	10.0		
Caregiver's Education								
School Certificate	3	9.7	1	3.2	1	3.3	1.64	.801
High School Certificate	2	6.5	2	6.5	2	6.7		
Tertiary	26	83.8	28	90.3	27	90.0		
Caregiver's Employment								
Full time	8	25.8	9	29.0	9	30.0	2.30	.681
Part-time	17	54.8	12	38.7	12	40.0		
Not employed	6	19.4	10	32.3	9	30.0		
Annual household income								
Up to A$64,168	3	9.6	3	9.7	4	13.3	.28	.870
A$64,168 and over	28	90.4	28	90.3	26	86.7		
Child diagnosed with Learning Difficulties, AD/HD, Anxiety or ODD								
Caregiver-reported diagnoses	10	32.3	5	16.1	6	22.0	2.5	.288
No reported diagnosis	21	67.7	26	83.9	24	80.0		

F = univariate ANOVA condition effect; X^2 = Pearson's Chi Square (where expected frequencies are too low for Chi-Square, Fisher's exact test is reported).

Measures

Child behaviour. The Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) consists of two 36-item parent-report scales: (1) the Intensity Scale, a 7-point scale (1 = never to 7 = always), measuring frequency of child disruptive behaviour (for example, 'has temper tantrums'), and (2) the Problem Scale, asking caregivers to report whether or not they perceive the child's disruptive behaviour to be problematic (yes/no). Both scales have high internal consistency (Intensity Scale α = .95, Problem Scale α = .94) and good test-retest reliability (Intensity Scale r = .80, Problem Scale r = .85; Eyberg and Pincus, 1999). In the current sample, both ECBI scales had good internal consistency (Intensity Scale, α = .89; Problem Scale α = .87).

Parent stress and dysfunctional parenting. The Parent Stress Index – Short Form (PSI-SF; Abidin, 1995) assesses caregivers' stress levels relating to their parenting role, in order to identify the characteristics of caregivers who are at risk of dysfunctional parenting (Abidin, 1976, 1995). Dysfunctional parenting, including physical punishment of children, has been shown to be associated with high stress levels that are related to parenting (Mash, Johnston, & Kovitz, 1983; Morgan, Robinson, & Aldridge, 2002). The PSI-SF is a 36-item 5-point (1 = strongly agree to 5 = strongly disagree) parent-report measure that generates a Total Stress score, reflecting a parent's overall stress level as a result of their role as a parent (Abidin, 1995). The Total Stress score is based on scores from three subscales: the Parental Distress subscale, the Dysfunctional Parent-Child Interaction subscale, and the Difficult Child subscale. The Parental Distress subscale measures the distress a parent experiences as a result of being a parent, such as perceived low parenting competence and perceived restrictions on the parent's life (for example, 'I feel trapped by my responsibilities as a parent'). The Parent-child dysfunctional interaction subscale reflects a parent's perception of their interaction with their child and whether these interactions meet their expectations (for

example, ‘My child is not able to do as much as I expected’). The Difficult Child subscale reflects a parent’s perception of their child’s behaviour, such as defiance and non-compliance (for example, ‘My child makes more demands on me than most children’). The PSI-SF has good test-retest reliability (Total Stress, r = .84; Parental Distress, r = .85; Parent-Child Dysfunctional Interaction, r = .68; and Difficult Child, r = .78) and good internal consistency (α = .80 to .91; Abidin, 1995).). In the current study, all PSI-SF scales had good internal consistency (Total Stress, α = .91; Parental Distress subscale, α = .81; Parent-Child Dysfunctional Interaction subscale, α =.86; and Difficult Child subscale, α = .87).

Parental adjustment. The Depression Anxiety and Stress Scale – 21 Items (DASS-21; Lovibond & Lovibond, 1995) is a 21-item 4-point (0 = did not apply to me at all to 3 = applied to me very much) self-report measure that consists of three 7-item scales assessing adult depression, anxiety and personal stress during the respondent’s previous week. Sample items for the three scales include: ‘I couldn’t seem to experience any positive feelings at al’ (depression); ‘I felt I was close to panic’ (anxiety); and ‘I felt that I was using a lot of nervous energy’ (stress). The DASS-21 is based on the 42-item full-scale DASS and has good internal consistency (α = .73 to .81) and test-retest reliability (r = .71 to .81; Lovibond & Lovibond, 1995). DASS scores represent ranges of severity of symptoms (normal, moderate, severe, extremely severe; Lovibond & Lovibond, 1995). Based on scores on the full-scale DASS, the normal range (normal severity of symptoms and suggesting normal functioning) is 0-9 for the Depression scale, 0-7 for the Anxiety scale, and 0-14 for the Stress scale (Lovibond & Lovibond, 1995). In the current sample, the Cronbach alpha coefficients for the DASS-21 subscales were: .90 for the Depression subscale; .76 for the Anxiety subscale; and .83 for the Stress subscale.

Emotion-related parenting style. The Emotion-Related Parenting Styles Self-Test (ERPS-ST; Hakim-Larson, Parker, Lee, Goodwin, & Voelker, 2006) is an 81-item 5-point (1

= *always false* to 5 = *always true*) parent-report measure that consists of four scales. In order to reduce the assessment burden on participants, only the 25-item Emotion-coaching and the 23-item Emotion-dismissing scales were used in this study. These two scales were selected because they relate specifically to the emotion-coaching component of the emotion-coaching parenting program. High scores on the Emotion-coaching scale indicate caregivers' tendency to accept and validate their child's emotions (such as sadness, anxiety or anger) and to help their child to understand these emotions. High scores on the Emotion-dismissing scale indicate caregivers' tendency to dismiss or ignore their children's emotions. Samples items include: 'Anger is an emotion worth exploring' (Emotion-coaching scale); and 'Children have very little to be sad about' (Emotion-dismissing scale). The ERPS-ST scales have good internal consistency and moderate test-retest-reliability (Emotion-coaching scale, α = .82, r = 43; Emotion-dismissing scale, α = .72, r = 87; Hakim-Larson et al., 2006). In the current study, the Cronbach alpha coefficients for the ERPS-ST subscales were .78 for the Emotion-coaching subscale; and .75 for the Emotion-dismissing subscale.

Client satisfaction. The Therapy Attitude Inventory (Breston, Jacobs, Rayfield, & Eyberg, 1999) is a 10-item 5-point (range 10-50) validated consumer satisfaction measure specific to child-behaviour intervention programs. It measures participants' satisfaction with the program (for example, 'My general feeling about the program I participate in, is') on a 5-point scale (for example, in relation to the above sample item, 1 = 'I disliked it very much' to 5 = 'I liked it very much'.

Procedure

The Macquarie University Human Research Ethics Committee approved the study. We conducted recruitment of participants, delivery of the program, and data-collection, including follow-up data, from August 2011 to October 2013. We randomly allocated participants to one of three groups (DVD group, EC group, or Control), which participants were unaware of.

Participants allocated to a particular group attended sessions together. Each group attended the 1-hour information session, three 2-hour intervention sessions and a 1-hour Question and Answer (Q&A) session.

At the beginning of the information session, participants completed the Information and Consent Form, the demographic questionnaire and all outcome measures. Participants in the two intervention groups then attended one of the two intervention programs (starting the following week and held over three consecutive weeks) and the program-specific Q&A session, held one month after the last intervention session. Post-intervention data collection (all outcome measures and satisfaction measure) took place at the beginning of the Q&A session so that participants had time to implement the new techniques before giving feedback but results were not influenced by the Q&A session. In the week the intervention groups' Q&A sessions took place, control-group participants completed all outcome measures prior to starting their program. All sessions were held at seminar rooms at a residential college near Macquarie University. There were no costs associated for participants with attendance and no incentives other than free program attendance. Participants from the two intervention groups completed all outcome measures online at 3-months and 2-year follow-up.

Intervention

The three 2-hour sessions of the DVD group program consisted of viewing the first five parts of the DVD *1-2-3 Magic: Managing Difficult Behavior in children 2-12* (Booth & Phelan, 2004a) and the first two parts of the DVD *More 1-2-3 Magic: Encouraging Good Behavior, Independence and Self-Esteem* (Booth & Phelan, 2004b), verbal summaries of the topics covered in the DVDs, and several question and answer periods. Total DVD time was 163 mins. A registered psychologist with 18 years clinical practice, and 5 years (part-time) experience with the 1-2-3-Magic program, facilitated all sessions. The day after each session, participants received brief written summaries of the main topics by email. The program

delivery format for the DVD group was based on the *speed service delivery* training format, which is one of several delivery options outlined in the *1-2-3 Magic: Effective Discipline for Children 2-12 Presentation Package* (Phelan, 2010b).

The three 2-hour sessions of the EC group program was based on the Power Point presentation of the *Emotion Coaching Parenting Program 2011* (Hawton & Martin, 2011), which includes the topics that are covered in the 1-2-3 Magic DVDs, a 23-min excerpt from Booth and Phelan's (2004a) DVD *1-2-3 Magic: Managing Difficult Behavior in children 2-12,* and also a 75-min emotion-coaching component that encourages participants to not dismiss children's emotions but to coach children in emotion self-regulation. Participants in this group received a 52-page parent workbook with worksheets, tips sheets, and summaries of all main topics. A registered psychologist with 20 years clinical practice and 3 years (full-time) experience as a licenced presenter of the program facilitated all sessions. Participants in the control group attended the *1-2-3 Magic & Emotion Coaching Parenting Program 2011* (Hawton & Martin, 2011) in the same format as the EC group did.

Data Analysis

Missing data was minimal and completely at random as it occurred from participants missing individual questions on otherwise completed questionnaires. When missing data occurred, we imputed data according to the recommendations given by the scale developer. Reported results are based on analyses of the scores of participants who had completed pre and post-measures. Data were screened to ensure they were suitable for parametic analysis. A type I error rate of .05 was adopted for all primary analyses and Bonferroni correction was used for post-hoc comparisons.

Analysis of covariance (ANCOVA) was conducted on each outcome measure, with group (DVD, EC, Control) as between-subject factor, the post-intervention score as dependent variable and the pre-intervention score as covariate. This method was adopted as it

is generally considered more powerful than including the pre-intervention score as a further repeated measure (see Rausch, Maxwell, & Kelley, 2003). Post-hoc contrasts were then conducted following any significant effect of Group, using a Bonferroni adjusted alpha of .017. For 3-month follow-up data, ANCOVA was conducted on each outcome measure, with group (DVD, EC) as between-subject factor, the 3-month follow-up score as dependent variable, and the pre-intervention score as covariate (see Rausch et al., 2003). To ascertain the effect of time, paired t-tests were conducted on the pre-intervention and 3-month follow-up scores of all outcome variables. Similarly, for 2-year follow-up data, ANCOVA was conducted on each outcome measure, with group (DVD, EC) as between-subject factor, the 2-year follow-up score as dependent variable, and the pre-intervention score as covariate. To ascertain the effect of time, paired t-tests were conducted on the pre-intervention and 2-year follow-up scores of all outcome variables.

Equivalence testing was conducted on both scales of the ECBI. Calculation of the equivalency interval, which is the difference between the outcome scores of two interventions (on a particular variable) that is unlikely to be due to sampling error, was based upon half of the average effect size obtained in similar studies (see Temple & Ellenberg, 2000). A two one-sided test (TOST) procedure, which is akin to performing two one-sided tests (one for each distribution) and hence uses a 90% confidence interval, was adopted (see Walker & Nowacki, 2010).

Clinical significance of change was analysed using chi-square analyses, comparing the proportion of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention (see Kendall, 1999).

The Reliable Change Index (RCI; see Jacobson & Truax, 1991), which indicates whether individual participants' scores changed from pre-assessment to post-assessment, was calculated for every participant's difference score on the main outcome variables. The RCI is

calculated by subtracting an individual's pre-assessment score from their post-assessment score, and by then dividing the result by the standard error of the difference between the pre-assessment and post-assessment scores (Jacobson & Truax, 1991).

Intent-to-treat (ITT) analyses for all outcome variables were conducted in order to take participants into account who withdrew after randomisation and, hence, did not complete post-intervention assessment. For those participants, pre-intervention scores were used as post-intervention scores in ITT analyses (see Gupta, 2011).

Results

Participant Characteristics

There were no significant differences between groups on demographic characteristics (see Table 1). Pre-intervention mean scores on outcome measures are illustrated in Figure 2. ANOVA revealed no significant differences at baseline between the three groups on the outcome measures of child behaviour (ECBI Intensity scale and ECBI Problem scale); parenting stress (PSI-SF Total Stress score and scores on the three subscales); parental adjustment in terms of overall stress and anxiety (DASS Stress scale and Anxiety scale); and emotion-related parenting style (ERPS-ST Dismissive Parenting Style and Emotion Coaching Parenting Style scales (all $Fs < 2.27$, $ps > .111$). However, participants in the DVD group were overall more depressed at the beginning of the program when compared to the EC group ($p = .024$) and the control group ($p = .022$).

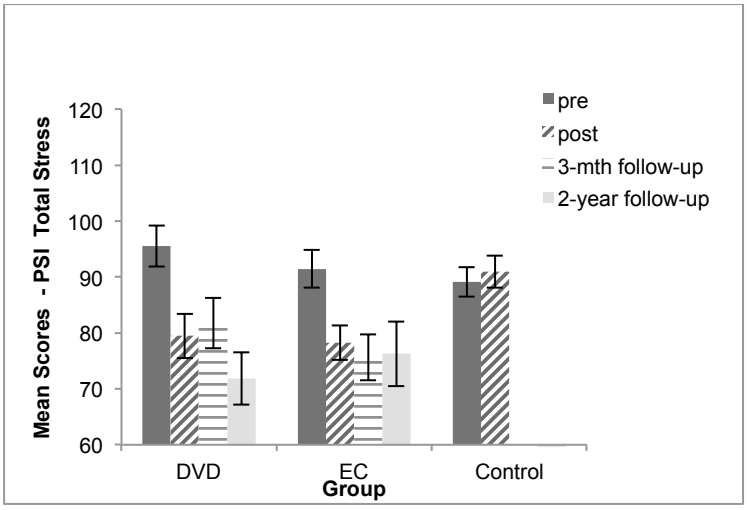
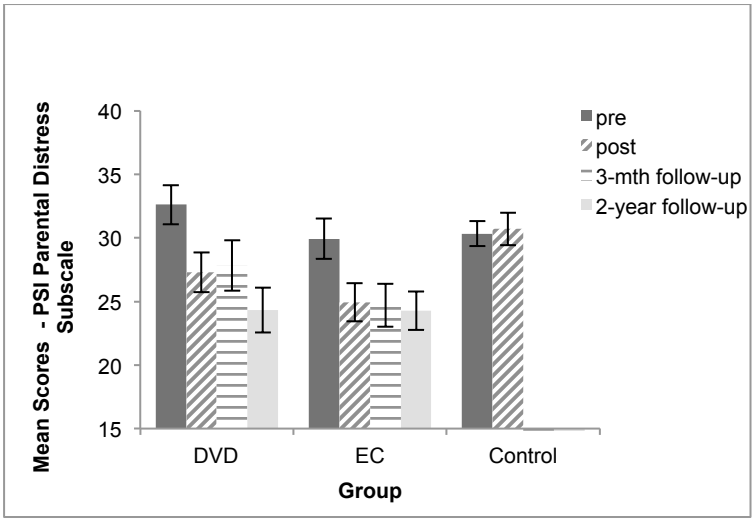
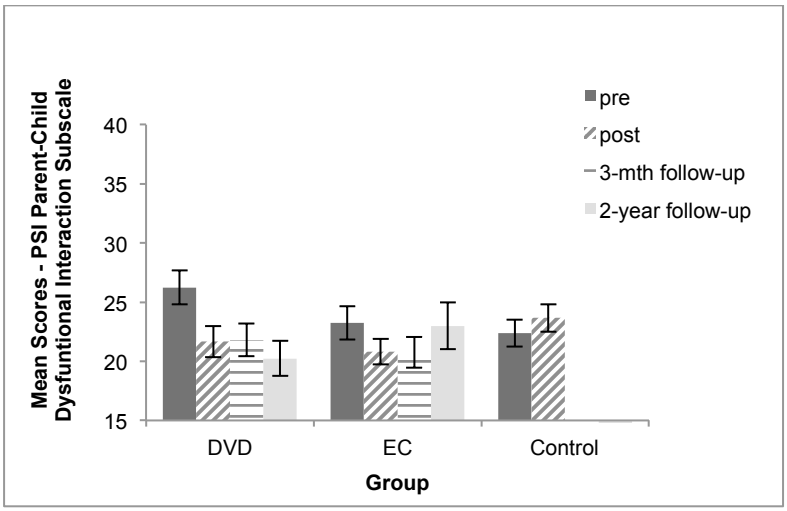


Figure 2(a). Mean scores on the PSI Total Stress measure. Higher scores indicate greater parental stress.

Note: All Figure 2 graphs represent scores at pre-, post-, 3-month, and 2-year follow-up for each group (DVD, EC, Control). Standard errors are represented in all Figure 2 graphs by error bars attached to each column.





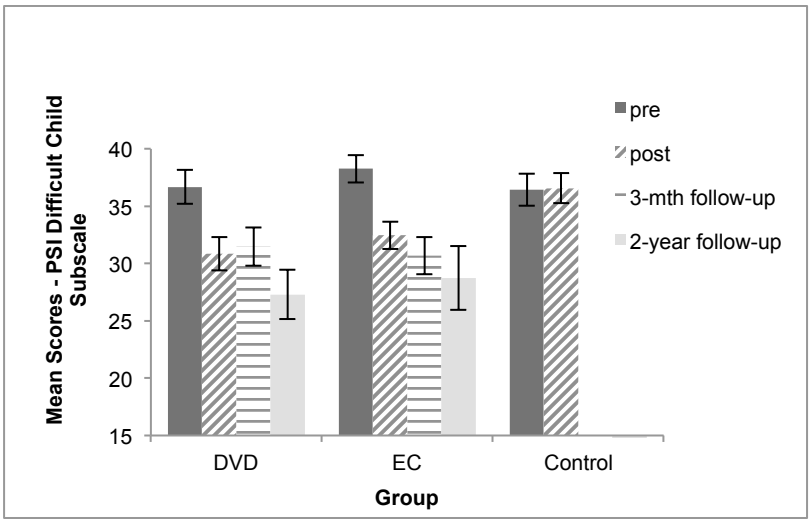


Figure 2(b). Mean scores on the three subscales of the PSI (Parental Distress, Parent-Child Dysfunctional Interaction, Difficult Child). Higher scores indicate, respectively, greater parental distress, more dysfunctional parent-child interaction, and the caregiver rating the child as more difficult.

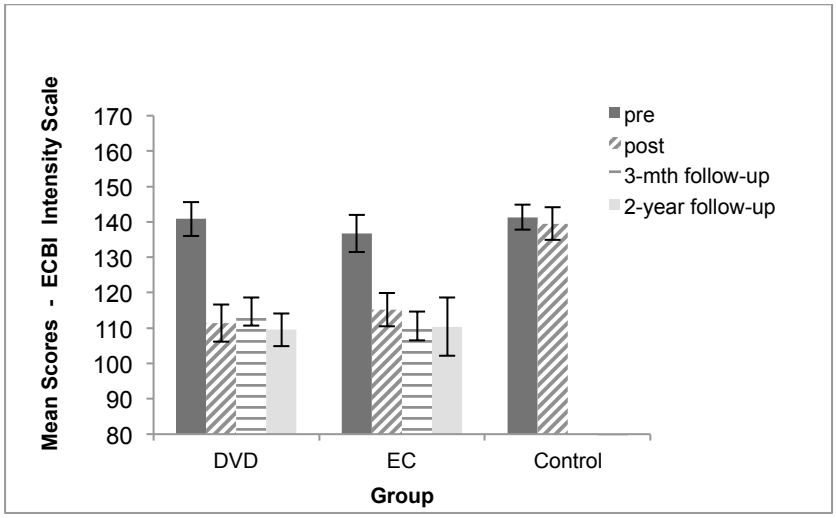


Figure 2(c). Mean scores on the ECBI Intensity Scale. Higher scores indicate greater caregiver-reported frequency of child problem behaviours.

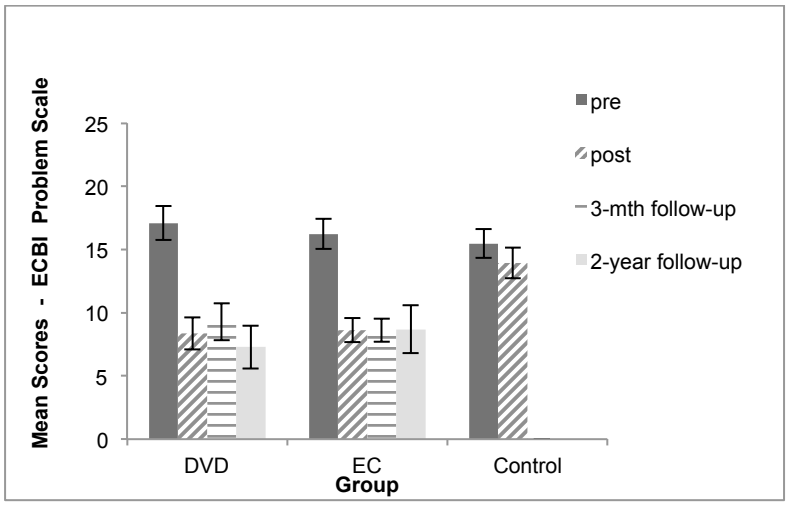
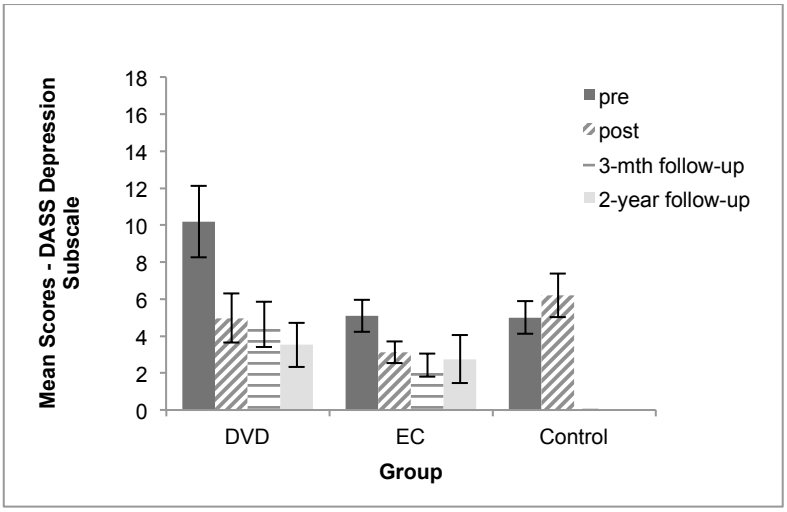
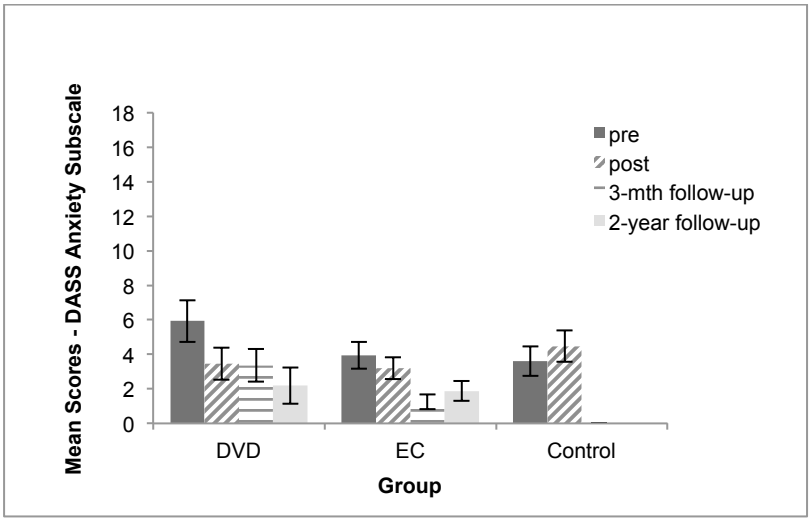


Figure 2(d). Mean scores on the ECBI Problem Scale. Higher scores indicate caregivers rating more child problem behaviours as problematic.





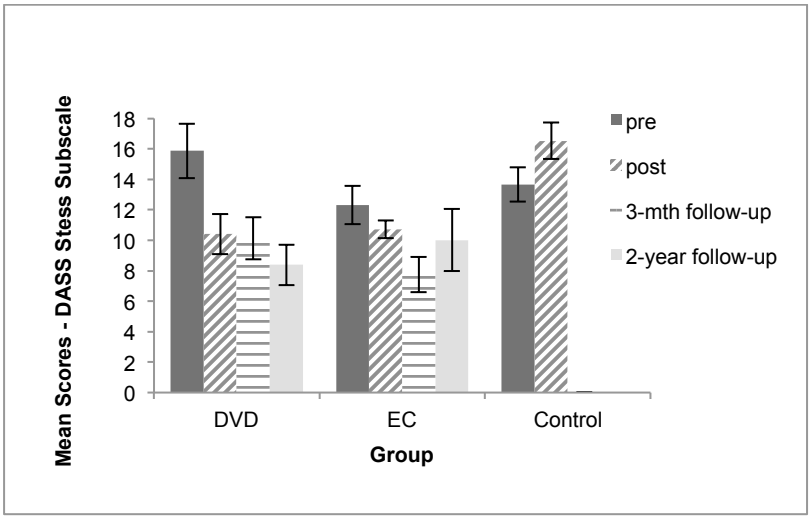
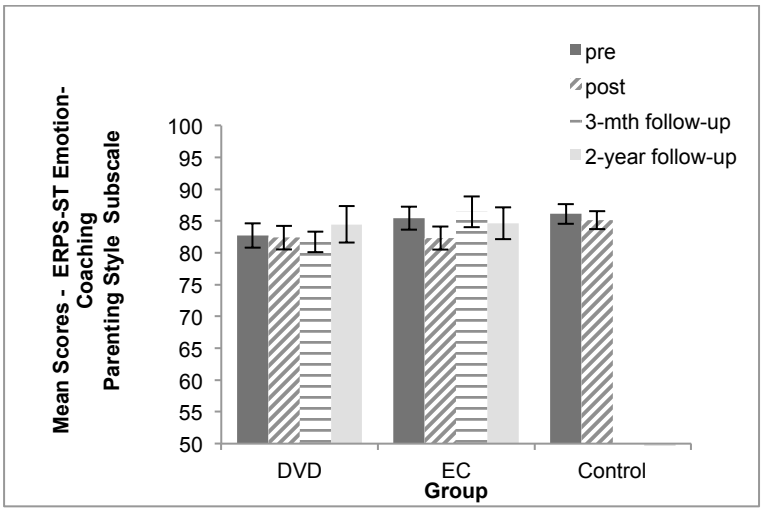


Figure 2(e). Mean scores on the three subscales of the DASS (Depression, Anxiety and Stress). Higher scores indicate greater caregiver depression, anxiety and stress.



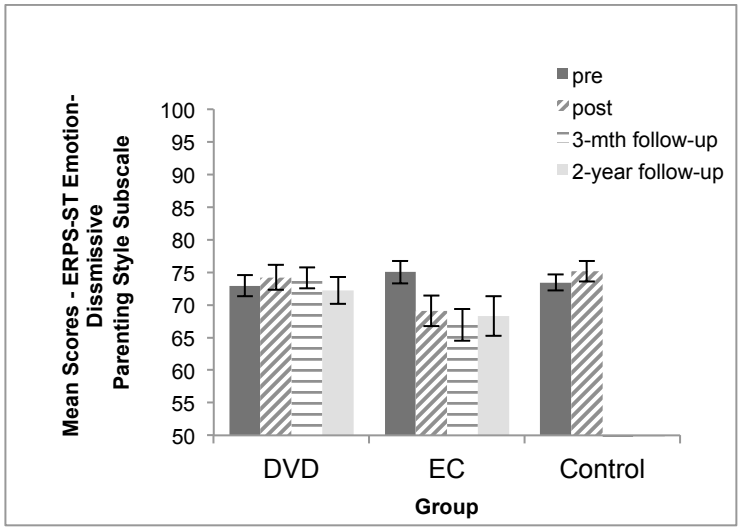


Figure 2(f). Mean scores on two subscales of the ERPS-ST (Emotion-coaching and Emotion-dismissing). Higher scores indicate, respectively, a more emotion-coaching parenting style or a more emotion-dismissing parenting style.

Table 2

Short-term intervention effects: intervention conditions and Control at pre- and post intervention

	ANCOVA Condition Effect across 3 groups			Post-hoc Contrasts comparing		
				DVD vs Control	EC vs Control	DVD vs EC
Measure	*F (df)*	*p*	η^2_p	*p*	*p*	*P*
ECBI						
Intensity scale	18.67(2,85)	< .001	.31	< .001	< .001	.516
Problem scale	15.49(2,84)	< .001	.27	< .001	< .001	1.000
PSI-SF						
Total Stress	15.55(2,84)	< .001	.27	< .001	< .001	1.000
Parental Distress subscale	8.87(2,84)	< .001	.17	.005	.001	1.000
Parent-Child Dysfunctional Interaction subscale	6.98(2,85)	.002	.14	.003	.012	1.000
Difficult Child subscale	12.66(2,85)	< .001	.23	< .001	< .001	1.000
DASS						
Depression scale	4.96(2,85)	.009	.11	.020	.030	1.000
Anxiety scale	3.15(2,85)	.048	.07	.048	.311	1.000
Stress scale	9.34(2,85)	< .001	.18	< .001	.007	.982
ERPS-ST						
Emotion-coaching subscale	.67(2,85)	.514	.02	1.000	.836	1.000
Emotion-dismissing subscale	7.13(2,85)	.001	.14	1.000	.003	.009

F = univariate effect for condition; η^2_p (p*artial eta squared)* = effect size;

Post-hoc contrasts: Bonferroni adjusted alpha less than .017

Short-term Intervention Outcomes

As can be seen from the means for pre- and post scores on the outcome measures (see Figure 2) and from results obtained from ANCOVA and post-hoc contrasts (see Table 2), participants in the DVD-group as well as the EC-group reported significantly less frequency and severity of child problem behaviours, less parenting stress, and less parental depression and overall stress at post-intervention (one month after completing the program) than control-group participants did. In addition, DVD-group participants reported significantly less parental anxiety than control-group participants; and EC-group participants reported a significantly reduced emotion-dismissing parenting style post-intervention as compared to DVD-group and control-group participants. Emotion-coaching parenting style did not differ significantly among the three groups.

ANCOVA revealed a group effect at post-intervention on all outcome measures, except emotion-coaching parenting style. This indicates a significant difference between the three groups (DVD, EC, Control) at post-intervention in terms of child problem behaviours, parenting stress, parental depression, anxiety, overall stress, and emotion-dismissing parenting style (see Table 2). Post-hoc contrasts, conducted to examine the source of post-intervention differences between the three groups, revealed differences between the intervention groups and the control group (see Table 2). On the child behaviour measure (ECBI), DVD-group as well as EC-group participants reported significantly less frequency of child disruptive behaviours (ECBI Intensity scale) and rated significantly fewer child disruptive behaviours as problematic (ECBI Problem scale) at post–intervention than control-group participants did (all ps $< .001$). On the parenting stress measure (PSI-SF), DVD-group as well as EC-group participants reported significantly less overall stress in relation to parenting (PSI-SF Total Stress; ps $< .001$) and less parental distress (PSI-SF Parental Distress Scale; ps $\leq .005$). They also rated their child's behavioural characteristics (PSI-SF Difficult

Child subscale; *p*s < .001) and the interaction with their child (PSI-SF Parent Child Dysfunctional Interaction subscale; *p*s ≤ .012) as significantly less difficult post–intervention than control-group participants did. Further, DVD-group as well as EC-group participants showed a significant post-intervention decrease in levels of parental depression (DASS Depression scale; *p*s ≤ .030) and overall stress (DASS Stress scale; *p*s ≤ .007) as compared to the control group. In terms of parental anxiety, DVD-group participants reported significantly less anxiety than control-group participants (DASS anxiety scale; $p = .048$), but there was no significant difference between the EC group and the control group in levels of parental anxiety at post-intervention. On the parenting-style measure (ERPS-ST), EC-group participants reported a significantly less emotion-dismissing parenting style post-intervention than DVD-group and control-group participants (*p*s ≤ .009). There was no significant difference in terms of emotion-coaching parenting style.

Table 3

Long-term intervention effects: intervention conditions at pre-intervention and 3-month follow-up

	ANCOVA Condition effect for the two intervention groups			Comparison (t-statistic) Time effect			
				DVD Group		EC Group	
Measure	*F (df)*	*p*	η^2_p	*t(df)*	*p*	*t(df)*	*p*
ECBI							
Intensity scale	1.02(1,49)	.317	.02	5.98(27)	< .001	6.15(23)	< .001
Problem scale	.32(1,49)	.575	.01	6.77(26)	< .001	6.80(23)	< .001
PSI-SF							
Total Stress	.87(1,47)	.356	.02	4.88(26)	< .001	6.09(22)	< .001
Parental Distress subscale	.45(1,47)	.504	.01	4.03(26)	< .001	4.54(22)	< .001
Parent-Child Dysfunctional Interaction subscale	.10(1,49)	.750	.00	3.77(27)	.001	2.45(23)	.022
Difficult Child subscale	2.9(1,49)	.092	.06	4.55(27)	< .001	6.26(23)	< .001
DASS							
Depression scale	.00(1,49)	.966	.00	4.10(27)	< .001	3.21(23)	.004
Anxiety scale	1.35(1,49)	.252	.03	2.41(27)	.023	2.77(23)	.011
Stress scale	.36(1,49)	.550	.01	3.17(27)	.004	3.45(23)	.002
ERPS-SR							
Emotion- coaching subscale	3.01(1,49)	.089	.06	.73(27)	.475	-1.02(23)	.317
Emotion- dismissive subscale	19.00(1,49)	< .001	.28	-1.53(27)	.137	.034(23)	< .001

F = univariate ANCOVA effect for condition; η^2_p (p*artial eta squared)* = effect size.

Long-term Intervention Outcomes

Three-month follow-up. As can be seen from the means for pre- and 3-month follow-up scores on the outcome measures (see Figure 2) and from the results obtained from ANCOVA and t-tests (see Table 3), intervention effects were maintained after three months on all outcome variables, except for anxiety scores (DASS Anxiety scale). Anxiety scores had not decreased from pre- to post-intervention for the EC group but did decrease for this

group from pre-intervention to follow-up.

ANCOVA revealed no significant differences between the two intervention groups at 3-month follow-up on any of the outcome measures, except emotion-coaching parenting style. The two intervention groups had differed on this variable at post-intervention as well. Paired t-tests, conducted to examine the effect of time from pre-intervention to 3-month follow-up for each of the intervention groups, revealed that intervention effects were maintained on all outcome variables, except for anxiety scores (DASS Anxiety scale). Anxiety scores had not decreased from pre- to post-intervention for the EC group but did decrease for this group from pre-intervention to 3-month follow-up (see Table 3).

Significant differences were found for the DVD group as well as for the EC group when comparing pre-intervention to 3-month follow-up scores on both scales of the behaviour measure (ECBI Intensity and Problem scales; all *p*s < .001), on all scales of the parenting stress measure (PSI-SF Total Stress, *p*s < .001; Parental Distress subscale, *p*s < .001; Difficult Child subscale, *p*s < .001; and Parent Child Dysfunctional Interaction subscale, *p*s ≤ .022), and on all three measures of parental psychosocial adjustment (DASS Depression, Anxiety and Stress scales; *p*s ≤ .022). On the parenting-style measure (ERPS-ST), the EC group showed a significantly reduced emotion-dismissing parenting style at follow-up as compared to pre-intervention ($p < .001$), whereas the DVD group showed no difference in emotion-dismissing parenting style from pre-intervention to 3-month follow-up. There was no significant difference found in terms of emotion-coaching parenting style for either group. The similarities between post-intervention and 3-month follow-up patterns of results suggest that intervention effects were maintained on all outcome variables, except for anxiety scores (DASS Anxiety scale), which had not decreased from pre- to post-intervention for the EC group but did decrease for this group from pre-intervention to follow-up ($p = .011$).

Table 4

Long-term intervention effects: intervention conditions at pre-intervention and 2-year follow-up

	ANCOVA Condition effect for the two intervention groups			Comparison (t-statistic) Time effect			
				DVD Group		EC Group	
Measure	*F (df)*	*p*	η^2_p	*t(df)*	*p*	*t(df)*	*p*
ECBI							
Intensity scale	.09(1,34)	.770	.00	5.49(20)	< .001	3.30(15)	.005
Problem scale	1.31(1,34)	.261	.04	8.21(20)	< .001	3.89(15)	.001
PSI-SF							
Total Stress	.34(1,33)	.567	.01	6.37(20)	< .001	4.20(14)	.001
Parental Distress subscale	.01(1,33)	.915	.00	3.69(20)	.001	3.49(14)	.004
Parent-Child Dysfunctional Interaction subscale	3.55(1,33)	.068	.09	4.90(20)	< .001	.72(15)	.048
Difficult Child subscale	.39(1,34)	.537	.01	6.90(20)	< .001	4.88(15)	< .001
DASS							
Depression scale	.24(1,34)	.626	.01	3.71(20)	.001	1.29(15)	.216
Anxiety scale	1.55(1,34)	.222	.04	4.42(20)	< .001	1.85(15)	.084
Stress scale	2.73(1,34)	.108	.74	4.05(20)	.001	.78(15)	.449
ERPS-SR							
Emotion- coaching subscale	.00(1,34)	.974	.00	.25(20)	.804	-.16(15)	.874
Emotion- dismissive subscale	9.00(1,34)	.005	.21	-1.03(20)	.315	3.54(15)	.003

F = univariate ANCOVA effect for condition; η^2_p (p*artial eta squared)* = effect size.

Two-year follow-up. As can be seen from the means for pre- and 2-year follow-up scores on the outcome measures (see Figure 2) and from the results obtained from ANCOVA and t-tests (see Table 4), intervention effects were maintained after two years on all outcome variables for the DVD group. For the EC group, effects were maintained on all main outcome variables, however, this group no longer showed a decrease in parental depression, parental stress, and dysfunctional parent-child interaction.

To ascertain whether intervention effects were maintained for the two intervention groups after two years, ANCOVA was conducted on each outcome measure, with group (DVD, EC) as between-subject factor, the 2-year follow-up score as dependent variable, and the pre-intervention score as covariate. ANCOVA revealed no significant differences between the two intervention groups at 2-year follow-up on any of the outcome measures, except emotion-coaching parenting style. The two intervention groups had differed on this variable at post-intervention and at 3-month follow-up as well. Paired t-tests, conducted to examine the effect of time from pre-intervention to 2-year follow-up for each of the intervention groups, revealed that intervention effects were maintained on all outcome variables for the DVD group. For the EC group, effects were maintained on the main outcome variables, however, depression scores (DASS Depression scale), stress scores (DASS Stress scale), and dysfunctional parent-child interaction (PSI Parent-child Dysfunctional Interaction subscale). These scores had decreased for the EC group from pre-intervention to post-intervention, as well as to 3-month follow-up, but did not decrease for this group from pre-intervention to 2-year follow-up (see Table 4).

Significant differences were found for the DVD group as well as for the EC group when comparing pre-intervention to 2-year follow-up scores on both scales of the behaviour measure (ECBI Intensity and Problem scales; all *p*s ≤ .005), and on three scales of the parenting stress measure (PSI-SF Total Stress, *p*s ≤ .001; PSI Parental Distress subscale, *p*s ≤ .004; and PSI Difficult Child subscale, *p*s < .001). For the DVD group, significant differences were also found from pre-intervention to 2-year follow-up on the fourth scale of the parenting stress measure (PSI Parent Child Dysfunctional Interaction subscale, $p = .001$), and on all three measures of parental psychosocial adjustment (DASS Depression, Anxiety and Stress scales; *p*s ≤ .001), whereas the EC group showed no difference on these measures from pre-intervention to 2-year follow-up. On the parenting-style measure (ERPS-ST), the

EC group showed a significantly reduced emotion-dismissing parenting style at 2-year follow-up as compared to pre-intervention (p = .003), whereas the DVD group showed no difference in emotion-dismissing parenting style from pre-intervention to 2-year follow-up. There was no significant difference found in terms of emotion-coaching parenting style for either group. The similarities between post-intervention and 2-year follow-up patterns of results suggest that intervention effects were maintained after two years on all outcome variables, except for the EC group on measures of dysfunctional parent-child interaction and parental psychological adjustment (DASS Depression, Anxiety, and Stress scales).

Equivalence Testing

Equivalence testing was performed for the ECBI Problem and Intensity scales as the most data was available on the ECBI and, thus, a suitable equivalency interval could be specified based upon the extant literature. A two one-sided test procedure, with an effect size of 0.4 for both the ECBI scales, revealed that, at least for the ECBI scales, the two interventions (DVD and EC) cannot be considered equivalent. The results indicate that procedure used in the DVD group may be more effective, if a suitably powered test were conducted.

Table 5

Clinical and reliable change at post intervention

Measure and clinical cut-off	Intervention Groups n/n (%)		Control n/n (%)		Clinical Change (significance)		Reliable Change (significance)	
	Clinically changed	Reliably changed	Clinically changed	Reliably changed	X^2	*p*	X^2	*p*
ECBI Intensity Scale ≥134	22/59(37.3)	17/58(29.3)	7/30(23.3)	2/30 (6.7)	1.76	.184	5.99	.014
ECBI Problem Scale ≥16	29/59(49.2)	29/59(49.2)	5/29(17.2)	6/29(20.7)	4.33	0.40	6.58	.010
PSI-SF Total Stress ≥90	16/58(27.6)	14/48(24.1)	2/30(6/7)	2/28 (6.7)	5.32	.021	4.06	.044

Intervention groups = combined DVD group and EC group; n/n = number of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention / number of participants whose scores were in the clinical range at pre-intervention; % = percentage of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention; Clinically changed = participants whose scores moved from the clinical range at pre-intervention to the non-clinical range post-intervention; Reliably changed = Reliable Change Index > 1.96; X^2 = Pearson's Chi Square.

Clinical and Reliable Change

First, clinical significance of change was examined by comparing the proportion of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention. Chi-Square analyses of the three outcome measures that have recommended cut-off scores (PSI-SF Total Stress, ECBI Intensity scale and ECBI Problem scale) did not reveal significant differences between the three groups (two intervention groups, one control group) or between the two intervention groups. Therefore, the two intervention groups were collapsed and their average compared to the control group. As can be seen from the frequency and percentage of participants, and from the chi square values and significance levels for the chi-square analyses (see Table 4), a significantly greater number of participants in the combined intervention group as compared to the control group

moved from the clinical range at pre-intervention to the non-clinical range at post-intervention on the PSI-SF Total Stress measure and on the ECBI Problem scale but not on the ECBI Intensity scale. Second, the RCI was calculated for every participant's difference score on the main outcome variables. As can be seen from the frequency and percentage of participants whose scores showed reliable positive change, and from the chi square values and significance levels for the RCI analyses, there was significantly greater reliable change in the intervention groups as compared to the control group on scores of all three main outcome variables.

Intent to Treat

ITT analyses revealed overall comparable results to those found when analysing only scores of those participants who completed pre and post-measures. There were only two exceptions: for the ITT sample, DASS Anxiety scores did decrease significantly from pre- to post intervention for the EC group when compared to the control group, which was not the case when analysing only participants who completed pre- and post measures; and, for the ITT sample, the number of participants who moved from the clinical range at pre-intervention to the non-clinical range at post-intervention on the PSI-SF Total Stress measure was not significantly different for the intervention groups as compared to the control group.

Participant Satisfaction

The mean rating on the Therapy Attitude Inventory was 42.68 (SD = 4.23) for the DVD group and 41.76, (SD = 4.41) for the EC group (range of 34-50 for both groups). There was no significant difference between groups, $F(1,55) = .65$, $p = .425$, suggesting that participants in both intervention groups were satisfied with the program they attended.

Discussion

We found that both the 1-2-3 Magic Effective Discipline for Children parenting program (Phelan, 2010b) and the 1-2-3 Magic & Emotion Coaching parenting program (Hawton & Martin, 2011) were effective at reducing dysfunctional parenting and child problem behaviours as compared to a waitlist control. Importantly, the current study demonstrated for the first time: (i) that both 1-2-3 Magic programs are effective for caregivers with children from non-specific populations and spanning the program-recommended age range of 2-12; and crucially, (ii) that both 1-2-3 Magic programs are effective when delivered to large groups of caregivers. These findings support the first hypothesis.

Participants in both intervention groups reported less frequency of child disruptive behaviours and rated the disruptive behaviours as less problematic (ECBI Intensity and Problem scales) at post-intervention as compared to the control group. They also reported lower ratings on all scales relating to parental stress and dysfunctional parenting at post-intervention (as measured by the PSI Total Stress score, and Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child subscales) as compared to the control group. Although the main data analysis suggests that there were overall no significant difference between the two interventions on the above variables, it cannot be deducted from this that the two interventions are equivalent (see Walker & Nowacki, 2010). Equivalence testing, conducted on both scales of the ECBI, indicates that the two interventions are not equivalent. However, due to the difficulty in specifying a suitable equivalency interval for all outcome measures, it is not currently possible to determine whether the two interventions are equivalent on other measures.

The change in scores was reliable, that is unlikely to be due to measurement error, for all main outcome variables. On the measure of parental adjustment (DASS Depression,

Anxiety and Stress subscales), the DVD group reported significantly less parental depression, anxiety, and stress than the control group at post intervention, whereas the EC group reported significantly less parental depression and stress but not less parental anxiety at post-intervention. These results were maintained after three months, except that the EC group also reported significantly less parental anxiety after three months. After two years, all intervention effects were maintained for the DVD group. For the EC group, effects were maintained on the main outcome variables (ECBI Intensity and Problem scales; PSI Total Stress score, and Parental Distress, and Difficult Child subscales), however, this group no longer showed a decrease in parental adjustment (DASS Depression, Anxiety, and Stress scales) and dysfunctional parent-child interaction (Parent-Child Dysfunctional Interaction) after two years.

On the three measures with a clinical cut-off score (ECBI Intensity and Problem scales and PSI), the results showed clinical significance for both intervention groups on the ECBI Problem scale and on the PSI as compared to the control group. Of the participants who were in the clinical range at pre-intervention in terms of parental stress and in terms of their ratings of their children's problematic behaviours, significantly more participants from the intervention groups had moved from the clinical range at pre-intervention to the non-clinical range at post-intervention when compared to the control group. The reduction in frequency of child problem behaviour (ECBI Intensity scale), although statistically significant for both intervention groups, was not clinically significant for either group. The reason for this could be that the sample was not a clinical sample and that scores on the ECBI Intensity scale were comparatively low at pre-intervention for all groups.

Causal effects in the aetiology of parental stress and dysfunctional parenting, child problem behaviours, and parental adjustment cannot be assumed, as parental stress and dysfunctional parenting could have been the reason for child disruptive behaviours or vice

versa, and parental adjustment could have been the reason for or the result of either (see Scott, Doolan, Beckett, Harry, & Cartwright, 2010). In terms of the outcome variables of parental stress and dysfunctional parenting, child problem behaviour, and parental adjustment in the current study, it is possible that the implementation of new parenting strategies contributed to children displaying disruptive behaviours less often, which in turn could have contributed to participants reporting less parental stress and less depression and reporting their children's disruptive behaviours as less problematic. It is also possible that learning about new parenting strategies boosted participants' sense of parental efficacy, and thus reduced participants' parental stress and depression, and changed their perception of how problematic their children's behaviours were. This in turn could have contributed to reducing the frequency of their children's disruptive behaviours. Although causal effects cannot be clearly attributed, it would be reasonable to suggest that the current results support the association between the 1-2-3 Magic parenting interventions and a reduction in parental stress and depression and child problem behaviours.

Both 1-2-3 Magic parenting programs are brief, manualised behavioural parenting interventions that include the key elements associated with successful parenting interventions (see CDC, 2009). As compared to other brief behavioural parenting interventions, both 1-2-3 Magic programs have the added benefit of being briefer than most other programs (only 3 sessions) and, as shown for the first time in the current study, to be effective when delivered to large groups of caregivers and, hence, well suited for mass delivery. To be included in a public health approach that attempts to reduce the physical punishment of children, parenting programs need to provide alternative disciplining strategies, be cost-effective, and have been evaluated in Australia (Sanders & Pidgeon, 2011). Both 1-2-3 Magic parenting programs fulfill these requirements.

The second hypothesis, that the 1-2-3 Magic & Emotion Coaching parenting program

(Hawton & Martin, 2011) would increase an emotion-coaching parenting style and reduce an emotion-dismissing parenting style, whereas the 1-2-3 Magic Effective Discipline for Children program (Phelan, 2010a) and the control group would not have an effect on emotion-related parenting style, was only partly supported. As expected, participants in the EC group reported a significantly less emotion-dismissing parenting style at post-intervention than participants in the 123-Magic DVD group and in the control group, and the effect was maintained at 3-month and 2-year follow-up. However, there was no change from pre- to post-intervention, nor from pre-intervention to 3-month or 2-year follow-up, on the emotion-coaching parenting style measure for any of the three groups. This unexpected result could be due to chance or that the emotion-coaching component occupied only 75 mins of the 330-min program. Another explanation could be that participants found it comparatively easy to not dismiss children's emotions but found it more difficult to actively coach their children in emotion regulation.

One strength of the current study was high treatment fidelity, which was due to: the manualised 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2011) in the EC group; the large proportion of time allocated to viewing DVDs in the DVD group; and that the programs were delivered to large groups of caregivers (more than 30) rather than small groups. Another strength was the high retention rate of participants, particularly given the absence of incentives other than that attendance was free. The use of a community sample in the current study was a strength in so far that the interventions were shown to be effective even though only 55 % of the sample, on average, had scores above the clinical or functional cut-off on the respective scales at pre-intervention, which would have made detection of change more difficult. Generally, a community and largely tertiary educated sample with above average income could be seen as a limitation in terms of generalizability to populations with different education and socio-economic characteristics. However, clinical, lower

education and lower income populations were not the focus of the current study, as the effectiveness of the 1-2-3 Magic parenting program with these populations had previously been shown by Flaherty and Cooper (2010). Based on the results reported by Flaherty and Cooper (2010), and given the simple strategies used in both programs, it is suggested that 1-2-3 Magic parenting interventions are likely to benefit a broad spectrum of caregivers. One limitation of the current study was that, although only validated and widely used measures were employed, all measures were self-report. Although some measures are particularly suited to self-report, such as measures of parental stress, depression and anxiety, or measures of frequency of child disruptive behaviour, future studies would benefit from adding child behaviour assessments by a second caregiver and third-party observational measures of child behaviour, such as teacher reports. Another limitation of the current study is the use of a waitlist control. This design does not take into account the role that nonspecific factors common to all group parenting programs, such as the opportunity to discuss parenting issues in a group setting, may play in the improved intervention-group scores. One alternative to a waitlist control in a parenting program study could be an attention control, where participants would attend group discussion sessions that do not focus on any particular parenting strategies (see Gallin & Ognibene, 2012). Another alternative would be to compare the new intervention to a comparable evidence-based intervention (see Spring & Neville, 2011; and Price, 2012). A further focus of future research could be to investigate the effectiveness of the 1-2-3 Magic programs specifically for parents with children who have learning difficulties, or a diagnosis of ADHD or ODD. Additionally, it would be of interest to investigate the effectiveness of the 1-2-3 Magic programs using a larger sample, in order to determine whether child characteristics such as age and gender may moderate the treatment outcome.

In summary, 1-2-3 Magic Effective Discipline for Children (Phelan, 2010b) and 1-2-3

Magic & Emotion Coaching (Hawton & Martin, 2011) are two behavioural parenting programs that are brief, manualised and include the key elements associated with successful parenting interventions. Results from the current study suggest that both programs are effective in reducing dysfunctional parenting and child problem behaviours for caregivers with children 2-12 and that, additionally, 1-2-3 Magic & Emotion Coaching (Hawton & Martin, 2011) is effective in reducing an emotion-dismissing parenting style. Crucially, as shown here for the first time, both programs are effective when delivered to large groups of caregivers (30-40). Consequently, it is suggested that both 1-2-3 Magic parenting programs are cost-effective, brief interventions that are particularly well suited for a broad delivery approach.

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PAPER FOUR

Preliminary Evaluation of a Self-directed Video-based 1-2-3 Magic Parenting Program: A Randomised Controlled Trial

Paper Published

Reference:

Porzig-Drummond, R., Stevenson, R.J., & Stevenson, C. (2015). Preliminary evaluation of a self-directed video-based 1-2-3 Magic parenting program: A randomized controlled trial. *Behaviour Research and Therapy, 66*, 32-42. doi: 10.1016/j.brat.2015.01.003

Abstract

The current study examined the effectiveness of a self-directed video-based format of the 1-2-3 Magic parenting program in reducing dysfunctional parenting and child problem behaviours. Eighty-four parents of children aged 2-10 were randomly assigned to either the intervention group (n = 43) or the waitlist control group (n = 41). Participants in the intervention group reported significantly less problem behaviours for their children, and significantly less dysfunctional parenting, at post-intervention when compared to the control group. The results were maintained at 6-month follow-up. There was no significant change on measures of parental adjustment for either group. The current results provide preliminary support for the conclusion that the video-based self-directed format of the 1-2-3 Magic parenting program is suitable as an initial intervention in a multi-level intervention model and is suitable for inclusion in a population approach to parenting program delivery.

Introduction

The link between dysfunctional parenting and child problem behaviour, and child abuse and children's social adjustment and mental health, have been well documented (Bayer et al., 2011; Gershoff, 2010; Odgers et al., 2008; Saul et al., 2014; Scott, Doolan, Beckett, Harry, & Cartwright, 2011). These findings suggest that an early intervention public health approach targeting parenting skills and a reduction in child problem behaviour would be worthwhile (Kirp, 2011; Sanders, 2010; Saul et al., 2014; Webster-Stratton & Taylor, 2001). "Dysfunctional parenting includes harsh parenting practices, such as physical punishment of children, and is linked to caregiver stress relating to the parenting role, children's characteristics, social factors, and irrational parental beliefs about parenting (Abidin, 1976). Several studies have shown that parenting-related stress is associated with dysfunctional parenting, including the physical punishment of children (Mash, Johnston, & Kovitz, 1983; Morgan, Robinson, & Aldridge, 2002). Hence, it is the goal of parenting programs to reduce parental stress by changing unhelpful parental beliefs about parenting and by providing parents with strategies for stressful parent-child interactions, such as disciplining." Parenting interventions that effectively reduce child problem behaviours and dysfunctional parenting are based on a combination of cognitive, social learning, and behavioural models. Their key components include: (1) psycho-education about underlying maladaptive parental thinking patterns; (2) parental emotional self-regulation; (3) adaptive parental communication styles in interactions with their child; and (4) an emphasis on controlling children's externalizing behaviours. It is thought that the latter, such as temper tantrums, can be better managed through consistency in responding and correctly applied time-out (Aunola & Nurmi, 2005; Centers for Disease Control and Prevention [CDC], 2009; Tully, 2008; Wade, Macvean, Falkiner, Devine, & Mildon, 2012). All of these together should, in the longer term, improve outcomes for parent and child.

Several evidence-based early-intervention parenting programs that address the above parenting skills are available for parents with children aged 2-12. These programs include *1-2-3 Magic Effective Discipline for Children* (Phelan, 2014, 2010b); *Communication Method* (*Comet*; Kling, Forster, Sundell, & Melin, 2010); *Helping the Noncompliant Child* (McMahon & Forehand, 2003); *Incredible Years* (*IY*; Webster-Stratton, 1984); *Parent Management Training - Oregon Model* (*PMTO*; Forgatch & Patterson, 2010); *Parent Child Interaction Therapy* (*PCIT*; Eyberg, 1988); *Systematic Training for Effective Parenting* (*STEP*; Dinkmeyer & McKay, 1976); and the *Triple P – Positive Parenting Program* (*Triple-P*; Sanders, 1999). Despite this choice, engagement in parenting programs is generally low (Koerting et al., 2013; Nix, Bierman, McMahon, & the Conduct Problems Prevention Research Group, 2009; Thornton & Calam, 2011).

A number of barriers to accessing therapist-assisted parenting programs have been identified. There are practical barriers, such as distance, cost, conflicting work schedules, and lack of child care (Flaherty & Cooper, 2010; Mytton, Ingram, Manns, & Thomas, 2014; O'Brien & Daley, 2011) as well as service availability barriers, such as a limited amount of low-cost programs offered in community settings, long waiting lists, and insufficient referrals (Koerting et al., 2013). In addition, there are also psychological barriers, such as concerns about confidentiality and stigma (Koerting et al., 2013; O'Brien & Daley, 2011) and parental preference for self-administered programs (Metzler, Sanders, Rusby, & Crowley, 2012).

Parenting programs that are entirely self-directed - without any help from a therapist – can overcome most of these barriers and are, therefore, well suited to reach parents who might otherwise not engage in a parenting program. This makes parenting programs that are entirely self-directed particularly well placed for inclusion in a public health delivery approach. In addition, parenting programs that are entirely self-directed can function as the entry-level intervention in a multi-level delivery approach, providing the lowest level of

intervention in terms of intensity and cost (Enebrink, Högström, Forster, & Ghaderi, 2012; Sanders, Baker, & Turner, 2012). Phelan (2010b) states that only 50% of parents need to move on to a more intensive level of intervention, making self-directed parenting programs a cost-effective component in a multi-level intervention model. Finally, self-directed parenting programs may be helpful for caregivers who are waitlisted to participate in a therapist-assisted parenting program in a community setting but who may need help more urgently (Phelan, 2010b). For all of theses reasons, self-directed parenting programs are well suited for integration into multi-level intervention models and a public-health approach to parenting program delivery, with the aim to increase effective parenting skills, reduce child problem behaviour, and prevent child abuse.

Self-directed programs come in many delivery formats - print-media (books, manuals, or workbooks), audio (CD or downloadable), video (DVD or TV-program) as well as online internet-based programs (Montgomery, Bjornstad, & Dennis, 2006). Several of the parenting programs mentioned above are available in such self-directed formats. A number of parenting programs that are entirely self-directed have been evaluated: (1) the 7-session, internet-based Comet (Enebrink et al., 2012); (2) the 10-session, video-based IY (Webster-Stratton, 1990) and workbook-based IY (Lavigne et al., 2008); (3) the 10-session, workbook-based Self-directed Triple-P (Markie-Dadds & Sanders, 2006) and Self-help Triple-P (Sanders, Dittman, Farrugia, & Keown, 2014); (4) the 6-episode, TV-based Triple-P (Calam, Sanders, Miller, Sadhnani, & Carmont, 2008); and (5) the 8-module internet-based Triple-P Online (Sanders et al., 2012). All of these have shown to be effective in reducing child problem behaviours and dysfunctional parenting.

The self-directed video-based format of the 1-2-3 Magic parenting program, which consists of two videos (Booth & Phelan, 2004a, 2004b), has not been evaluated as yet. This is surprising because, with a combined viewing time of less than four hours, it is one of the

shortest self-directed parenting programs available and is well suited for parents who would not engage in therapist-assisted parenting programs, or in longer self-directed parenting programs. The parenting strategies illustrated in the two videos (Booth & Phelan, 2004a, 2004b) are based on cognitive, social learning, and behavioural models. The programs contain psycho-education about children's cognitive developmental stages and parental erroneous beliefs, as well as parental modelling of emotion self-regulation. They also teach parents how to enable their child to self-regulate emotions (through observing their parents and through having time to adjust while parents use the 1-2-3 counting system). In addition, the program helps parents to use praise and other incentives to encourage desirable behaviours and time-out or time-out alternatives to stop persistent problem behaviours (Phelan, 2014). The 1-2-3 Magic videos (Booth & Phelan, 2004a, 2004b), or excerpts from them, have been used in a range of evidence-based therapist-assisted delivery formats of the 1-2-3 Magic parenting program. In small-group formats, this has included using video material and discussion (Bradley et al., 2003) and using excerpts of the videos and a manualised presentation based on the Australian version of the program (Flaherty & Cooper, 2010; based on Hawton & Martin, 2006). In large-group formats, we have previously used video material and discussion based on the speed-delivery format of the program (Porzig-Drummond, Stevenson, & Stevenson, 2014; based on Phelan, 2010b) as well as using video excerpts and manualised presentation (Porzig-Drummond et al., 2014; based on Hawton & Martin (2011). However, the 1-2-3 Magic videos (Booth & Phelan, 2004a, 2004b) are not only shown during therapist-assisted program delivery. They are also widely used as a basis for independent self-instruction (Phelan, 2014, 2010b), with almost 300,000 copies of the videos sold (T.W. Phelan, personal communication, July 2014). Despite the extensive use of the 1-2-3 Magic videos as a self-directed program, their effectiveness in reducing child problem behaviours and dysfunctional parenting has not been evaluated.

In summary, there are several reasons for evaluating the self-administered video-based 1-2-3 Magic parenting program. First, the program is considerably shorter than other self-directed parenting programs that target child problem behaviour and dysfunctional parenting. The combined viewing time for both videos is less than four hours, which compares favorably with 6-10 hours required for completion of the self-directed programs outlined earlier. Its brevity makes the self-directed video-based 1-2-3 Magic program particularly suited for parents who would not engage in longer programs and, because of this, it would be beneficial to include the self-directed program as an option in a public health delivery approach. Second, the self-directed video-based program is suitable as an entry-level intervention in a multi-level intervention model. Third, the self-directed video-based 1-2-3 Magic program can serve as an 'emergency intervention' for caregivers who are waiting to attend a therapy-assisted 1-2-3 Magic program but who urgently need help with children displaying problem behaviours. Finally, the self-directed video-based 1-2-3 Magic program is commercially available and widely used without input from a therapist, but its effectiveness has not been evaluated.

Thus the aim of this study was to investigate whether the brief and entirely self-directed video-based format of the 1-2-3 Magic parenting program (Booth & Phelan, 2004a, 2004b) would reduce problem behaviours in children aged 2-12 and dysfunctional parenting. There is currently favorable evidence for both self-directed parenting programs, and for therapist-assisted formats of the 1-2-3 Magic parenting program. Consequently, we hypothesised that the self-directed video-based 1-2-3 Magic parenting program would be effective in decreasing both dysfunctional parenting and child problem behaviour relative to a waitlist control group.

Method

Sampling procedure

Recruitment from metropolitan and rural areas of New South Wales (NSW), Australia, was conducted via advertisements on parenting websites, and emails to NSW child-care centres and primary schools. To be eligible for participation, caregivers had to live with a 2-12 year-old child, and consider their child to be behaving disruptively. As the 1-2-3 Magic program is already being used within the community and would be suitable for inclusion in a public health delivery approach, this study aimed to assess it in a cross-section of the caregiver population, regardless of the level of parental psychological adjustment or level of child disruptive behaviour. Therefore, exclusion criteria were limited to practical considerations: (1) caregivers not having access to a DVD player or high-speed internet; (2) not being able to express their interest by email in English; (3) not being able to view four hours of video material over a period of two weeks; and (4) an unwillingness for just one partner or spouse to report on their child's behaviour. No respondents met these initial exclusion criteria.

The intended sample size of 80 (40 per group) was based on a power analysis using changes in the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999). This sample size also allowed for a 30% attrition rate, based on participant loss in similar studies (Baker, Arnold & Meagher, 2011; Montgomery et al., 2006).

In numerical order of initial contact with the study, the first author assigned eligible participants randomly to either the intervention or control group, based on an Excel-generated randomization schedule. Participants were not aware of group allocation but were alerted in the Information and Consent Form that they might be allocated to a wait-list control group. Participant flow and study design are illustrated in Fig. 1.

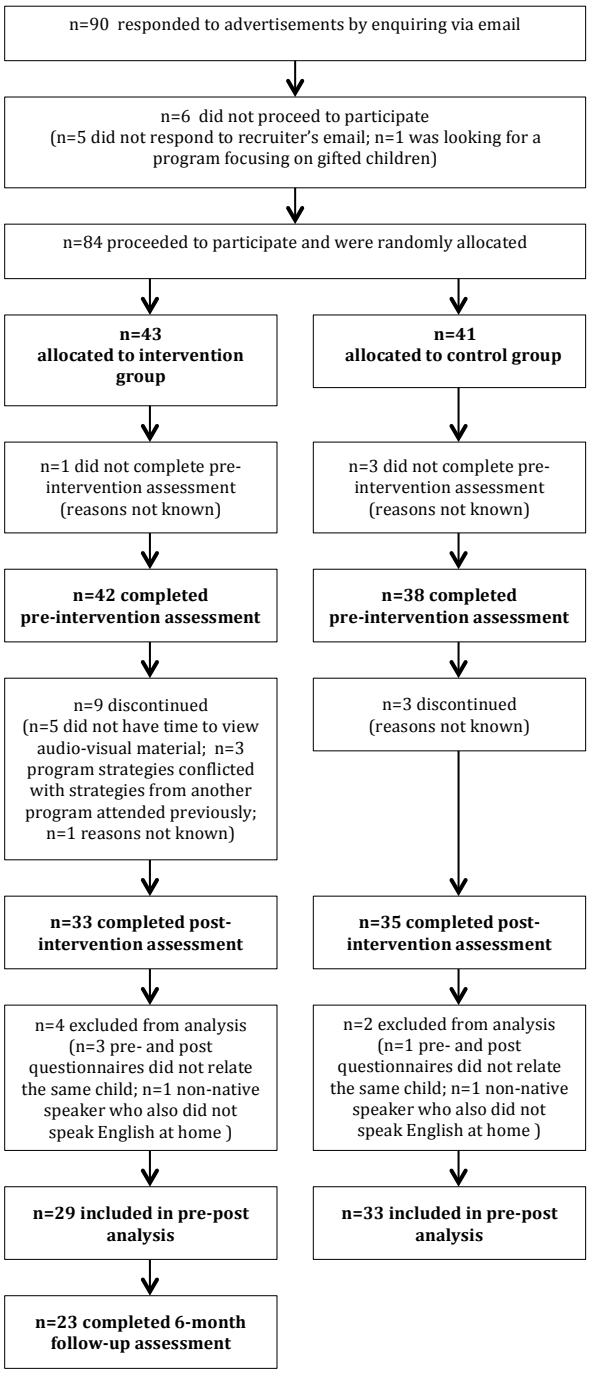


Fig. 1. Diagram adapted from Consolidated Standards of Reporting Trials (CONSORT; Altman et al., 2001), illustrating the flow of participants through the study.

Allocation and attrition

Ninety caregivers initially responded to advertisements, however, six respondents did not proceed with participation after being informed of the study requirements. We assigned 84 participants randomly to the intervention group (n=43) or the waitlist-control group (n=41), 80 participants (95.2%) completed assessment at pre-intervention (intervention group, n=42; control group, n=38), and four participants (4.7%) did not. Of the 80 participants who completed pre-intervention assessment, 12 participants (15%) withdrew from the study during the intervention phase: 9 (21.4%) from the intervention group and 3 (7.9%) from the control group. Reasons for attrition from pre- to post-intervention assessment included withdrawal due to lack of time (intervention group, n=5) and withdrawal due to 1-2-3 Magic parenting strategies conflicting with strategies learned in other parenting programs (intervention group, n=3). As control-group participants did not have access to materials until after post-intervention assessment, there were no withdrawals in the control group due to these reasons. Four participants withdrew without giving a reason (intervention group, n=1; control group, n=3). Overall, the proportion of participants who withdrew did not differ significantly between groups ($X^2 = 3.21$, $p = .114$).

Of the 68 participants (85%) who completed pre- and post-intervention assessment, six participants (8.8%) were excluded from the main analysis, either due to concerns about English language skills or due to participants reporting on a different child at pre-intervention and post-intervention. At post-intervention, participants were asked to report on the same child as at pre-intervention. Of the 68 participants who completed post-intervention assessment, four participants reported on the behaviour of different children at pre- and post-intervention. As analysis needed to be conducted in relation to the same child for each caregiver, these four participants (intervention group, n=3; control group, n=1) were excluded from analysis. Of the remaining 64 participants, 43 exclusively spoke English at home, 19

spoke English and another language at home, and two were identified (via the demographic questionnaire) as both not speaking English as their primary language and not speaking English at home. Considering that the intervention relied on viewing four hours of video material requiring at least moderate English skills, we were concerned that these participants may not have fully understood the material. For this reason, we excluded these two participants (intervention group, n=1; control group, n=1) from analysis, raising the total number of exclusions to six. We note that excluding these six participants from the analysis does not affect the outcome of child behaviour or parental adjustment measures but improves the outcome of the dysfunctional parenting measures.

Primary data analysis was based on 62 participants (intervention group, n = 29; control group, n = 33). Of the 29 intervention-group participants, 23 (79.3%) completed assessment at 6-month follow-up. The overall attrition rate from pre- to post-intervention assessment was 22.5% (intervention group 30.9%, control group 13.1%), and from post- to follow-up assessment 20.7%. These attrition rates are within the range of those reported by comparable studies investigating self-directed parenting programs (Assemany & McIntosh, 2002; Markie-Dadds & Sanders, 2006; Montgomery et al., 2006).

Participant characteristics

Participants ranged in age from 32 to 47 years (M = 38.3, SD = 3.80) and were mostly female (88.7%), tertiary educated (93.5%) and employed (46.8% part-time, 27.4% full-time, 74.2% in total). Most participants' (83.9%) household income was above the Australian average of US$60,318 (A$64,168; Australian Bureau of Statistics, 2011). Each participant had on average 2.2 children, and most lived in a two-caregiver household (93.5%).

Forty-five percent of participants reported dysfunctional parenting levels in the clinical range, as measured by the Parent Stress Index – Short Form (PSI-SF; Abidin, 1995). On the Depression Anxiety and Stress Scale short form (DASS-21; Lovibond & Lovibond,

1995), 27.4% of participants reported depression levels, 11.3% anxiety levels, and 32.2% general stress levels in the non-functional range.

The age of the target children was between 2 and 10 years (M = 5.27, SD = 2.03) and half were male. In terms of children's problem behaviours, 54% percent of participants reported a frequency of disruptive behaviours in the clinical range, as measured by the Intensity Scale of the ECBI (Eyberg & Pincus, 1999), and 69% reported the child's disruptive behaviour as being in the clinical range, as measured by the Problem Scale of the ECBI.

Measures

Child behaviour. The caregiver-report Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) consists of two scales; a measure of frequency of child disruptive behaviour (Intensity Scale; 36 items, range 1-7) and a measure of whether parents consider their child's behaviour to be problematic (Problem Scale; 36 items, yes/no). Both scales have shown to be reliable (Intensity Scale r = .80, Problem Scale r = .85) and to have good internal consistency (α = .93 to .95; Eyberg and Pincus, 1999). Internal consistency in an online sample was moderate to good (.75 to .81; Sanders et al., 2012). In the current study, both ECBI scales had good internal consistency (Intensity Scale, α = .88; Problem Scale α = .95).

Dysfunctional parenting. The caregiver-report Parent Stress Index – Short Form (PSI-SF; Abidin, 1995) is derived from the full-length test (120-item PSI) and measures caregivers' stress levels relating to their role as a parent (Abidin, 1976, 1995). Dysfunctional parenting, which includes harsh parenting practices such as the physical punishment of children, is associated with elevated stress levels as a result of parenting (Mash, Johnston, & Kovitz, 1983; Morgan, Robinson, & Aldridge, 2002). The PSI-SF identifies characteristics associated with dysfunctional parenting, such as parental stress, parent-child dysfunctional interaction, and viewing the child as being difficult (Abidin, 1995).) The overall measure of dysfunctional parenting (PSI-SF Total Stress score), as well as the three 12-item subscales of

the 36-item PSI-SF (range of 1-5 for all scales), have shown to be reliable (Total Stress, r = .84; Parental Distress subscale, r = .85; Parent-Child Dysfunctional Interaction subscale, r = .68; and Difficult Child subscale, r = .78) and to have good internal consistency (α = .80 to .91; Abidin, 1995). A recent evaluation of the PSI-SF suggests that the electronic version and the paper-and-pencil version of the PSI-SF obtain similar results (Aiello, da Silva, and Ferrari, 2014). In the current sample, all PSI-SF scales had good internal consistency (Total Stress, α = .91; Parental Distress subscale and Difficult Child subscale, α = .85; and Parent-Child Dysfunctional Interaction subscale, α =.82).

Parental adjustment. The self-report Depression Anxiety and Stress Scale – 21 Items (DASS-21) is derived from the full-length (42-item) DASS (Lovibond & Lovibond, 1995). It consists of three 7-item scales (range 0-3), screening for signs of adult depression and anxiety, and for signs of personal stress relating to the individual's life overall. DASS-21 scores represent ranges of functionality. The functional range of scores for the Depression scale is 0-9, for the Anxiety scale 0-7, and for the Stress scale 0-14. The DASS-21 has good reliability (r = .71 to .81) and good internal consistency (α = .73 to .81; Lovibond & Lovibond, 1995). Internal consistency in an online sample was moderate to good (.69 to .85; Sanders et al., 2012). In the current study, the Cronbach alpha coefficient was .91 for the Depression subscale, .49 for the Anxiety subscale, and .76 for the Stress subscale.

Client satisfaction. The 10-item Therapy Attitude Inventory (TAI), developed by Breston, Jacobs, Rayfield and Eyberg (1999), is a 10-item validated measure (range 1-5), rating consumer satisfaction with child-behaviour programs. The TAI (Breston et al., 1999) measures whether participants considered the program satisfactory. Items, such a 'I feel that the type of program that was used to help me improve the behaviour of my child was', are rated on a 5-point scale (for example, in relation to the sample item, 1 = 'very poor' to 5 = 'very good'.

Procedure

The Macquarie University Human Research Ethics Committee granted approval for the study. From July 2013 to April 2014, we recruited and randomly allocated participants to either the intervention or control group. We provided access to program material for six months after program completion, and conducted all data-collection, including follow-up data collection, online. Participants incurred no costs by taking part in the program, and the only incentives offered were either free online access to the program for a period of seven months or access via DVDs, which participants who chose this delivery method could keep after completion of the study.

Pre-intervention assessment phase: After recruitment, all participants were asked to email their completed Information and Consent Form, and to fill in their demographic questionnaire and all outcome measures (ECBI, PSI-SF, and DASS) online. Any participants who did not adhere to this procedure within one week, were emailed up to two reminders over the following two weeks.

Intervention phase: Intervention-group participants could choose to view the program's video material in DVD format (and receive two DVDs by post), or to access the video material online via a secure link (with continued access until completion of the study). Participants were asked by email to view both videos over a period of two weeks, and to start implementing the parenting strategies over a further period of two weeks. They were also emailed a set of tip-sheets that summarised the main points of the program, and were given the option to email questions about the program. Only two participants emailed questions and both enquiries related to topics that had already been covered in the tip-sheets. After two weeks, intervention-group participants were prompted by email to complete viewing the videos and to start implementing the strategies. Control-group participants did not receive any program materials and were not contacted during this part of the wait-list period.

Phelan (2010a) suggests that 1-2-3 Magic parenting strategies decrease disruptive behaviours within a few days of implementation for about half of target children, and within 7-10 days of implementation for the other half of children. Therefore, post-intervention data collection was conducted four weeks after intervention-group participants received the program material, allowing two weeks for viewing the material and two weeks for implementation of parenting strategies.

Post-intervention phase: All participants, including intervention-group participants who had not adhered to the program, and control-group participants, were prompted by email to complete the following post-intervention measures online: five basic demographic questions (to enable matching of pre- and post-intervention data from participants who did not remember the participant user-name they had chosen; and to ascertain whether participants were reporting on the same child they had reported on at pre-intervention), questions about usage of the program (to ascertain the level of compliance for intervention-group participants, and to ascertain whether control-group participants had viewed the program elsewhere during the waiting time), and all outcome measures (ECBI, PSI-SF, and DASS). Intervention-group participants also completed a program satisfaction measure. Participants who did not complete post-intervention assessment within one week, received up to two reminder emails. Following completion of post-intervention assessment, control-group participants were offered the same program options as the intervention group had been given, but had no further obligations.

Six-month follow-up assessment: Intervention-group participants completed five basic demographic questions and all outcome measures, again online.

Intervention

Program materials. The intervention program consisted of two videos: (1) *1-2-3 Magic: Managing Difficult Behavior in Children 2-12* (Booth & Phelan, 2004a), and (2)

More 1-2-3 Magic: Encouraging Good Behavior, Independence and Self-Esteem (Booth & Phelan, 2004b). Each video includes lecture components by the author, explaining the program's parenting strategies and their application in home and public settings. Additionally, each video features numerous role-played video vignettes, demonstrating maladaptive parent-child interactions, and the more adaptive parenting techniques taught through the program. Total viewing time for both videos is 3 hours 46 minutes. The first video (1 hour 50 mins) addresses stop-behaviours: Part 1 *Straight Thinking*, Part 2 *Controlling Obnoxious Behavior,* Part 3 *Real World Applications*, Part 4 *Testing and Manipulation*, and Part 5 *Counting in Action* (Booth & Phelan, 2004a). The second video (1 hour 56 mins) addresses start-behaviours: Part 1 *Seven Tactics for Encouraging Good Behavior*, Part 2 *Specific Application*, Part 3 *The Family Meeting,* Part 4 *Ten Strategies for Building Self-Esteem* (Booth & Phelan, 2004b). The tip sheets, which summarised the main points of the program, were based on the book: *1-2-3 Magic: Effective Discipline for Children 2-12* (Phelan, 2010a).

Program delivery and fidelity. The program's video material was accessible in two formats: either as two DVDs, or online (via a secure link). The DVD content was identical to the online content. There was no restriction on how often participants could view the videos, and participants who chose online access could view the material until 6-months follow-up data collection was completed. Fifty-eight percent of intervention-group participants chose DVD format, 42% chose to view the videos online, indicating that the two delivery options were comparable in popularity ($X^2 = 1.62$, $p = .309$). No significant differences were found at post-intervention between the two types of delivery format on any of the outcome measures (all $Fs \leq .19$, $ps \geq .660$).

Program adherence. At post-intervention, participants were asked to report how much they had viewed of the first and of the second video ('not viewed at all', 'viewed half',

‘viewed the entire video once’, ‘viewed the entire video once and parts twice’, ‘viewed the entire video twice or more’). They were also asked to report whether they had started to implement the strategies relating to each video (‘not yet started’, ‘just started’, ‘started a few days ago’, ‘started one week ago’, ‘started two weeks ago’). At post-intervention, 28 of 29 intervention-group participants had viewed the entire first video (about stop behaviours) at least once: 19 participants (65.5%) had viewed the entire first video once, and nine participants (31%) had viewed the entire first video once and parts twice. Only one participant (3.4%) had viewed only half of the first video. At post-intervention, all participants had used the strategies from the first video (relating to stop-behaviours) for at least several days: four participants (13.8%) for several days, five participants (17.2%) for one week, and 20 participants (69%) for two weeks.

Regarding the second video (about start-behaviours): Two participants (6.9%) had not viewed the second video at post-intervention, seven participants (24.1%) had viewed half, 13 (44.8%) had viewed the entire second video, and seven participants (24.1%) had viewed the entire second video once and parts twice. Regarding implementation of strategies relating to start-behaviours, seven participants (24.1%) had not used the strategies from the second video at post-intervention but 22 (75.9%) had used the strategies: five participants (17.3%) had used the strategies for several days, nine participants (31%) for one week, and eight participants (27.6%) for two weeks.

Data analysis approach

There were no missing data points as only complete questionnaires could be submitted online. Reported results are based on analyses of the scores of 62 participants who had completed pre- and post-intervention assessment. As outlined earlier, six of 68 participants who had completed pre- and post-intervention assessment were excluded from analysis: four because they reported on the behaviour of different children at pre- and post-

intervention assessment, and two because of concerns that they may not have fully understood the material due to insufficient English language proficiency. Data were screened and found to be suitable for parametric analysis. A type I error rate of .05 was adopted for all primary analyses.

Comparison of all pre-intervention scores by Group (intervention vs. control) was conducted using one-way ANOVA, to determine if there were any pre-existing differences. The main analyses utilised ANCOVA with Group (intervention vs. control) as the between-subject factor, post-intervention scores as dependent variable and pre-intervention scores as covariate (see Rausch, Maxwell, & Kelley, 2003). To examine whether intervention effects were maintained after six months, paired t-tests were conducted on the pre-intervention and 6-month follow-up scores of all outcome measures in the intervention group.

Cohen's *d* effect size values (see Cohen, 1988) were calculated for the pre- and post-intervention difference scores on the main outcome measures for the intervention group and the control group. Additionally, we examined clinical significance of change, using chi-square analyses, (see Kendall, 1999), and calculated the Reliable Change Index (RCI) for each participant on main outcome measures (see Jacobson & Truax, 1991). We also conducted intent-to-treat (ITT) analyses for all outcome measures, substituting post-intervention scores with pre-intervention scores for participants who were lost to post-intervention assessment (see Gupta, 2011). Finally, we calculated correlation coefficient values to examine (i) the relationship between the degree of video viewing and strategy implementation (dosage), and the pre-post difference scores on main outcome variables; and (ii) the relationship between child and parent variables, and pre-post difference scores on main outcome variables.

Results

Participant characteristics

Pre-intervention mean scores on demographic variables are represented in Table 1. One-way ANOVA and chi-square analyses indicated that there were no significant differences between groups on demographic characteristics at baseline.

Table 1

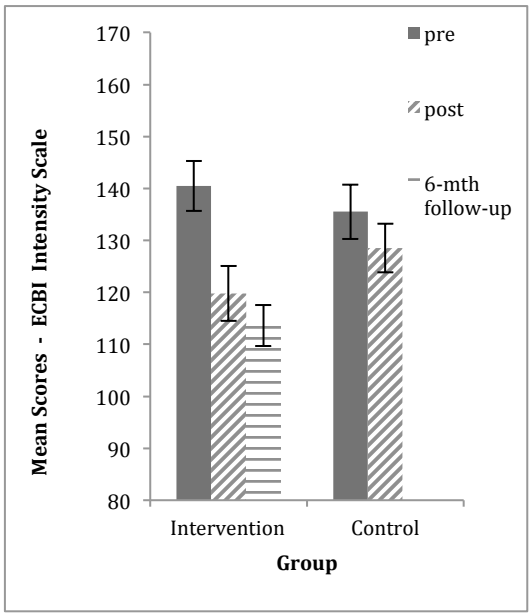
Demographic characteristics of the intervention group and the control group at pre-intervention assessment

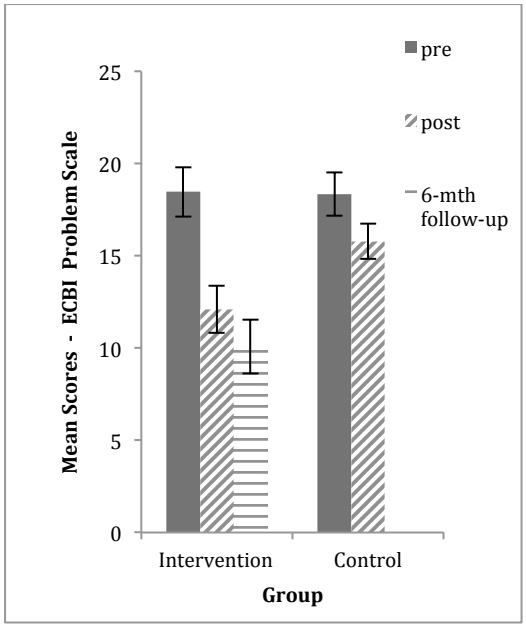
Characteristic	Intervention Group (n=29)		Control Group (n=33)			
	M	*SD*	*M*	*SD*	***F* (*df*)**	***p***
Child's age (years)	5.21	1.74	5.33	2.27	.06(1)	.809
Caregiver's age (years)	37.08	3.11	38.61	4.34	.53(1)	.468
Number of children at	2.31	.47	2.09	.77	1.79(1)	.186
	n	***%***	***n***	***%***	X^2	***P***
Child gender						
Male	18	62.1	13	39.4	3.18	.075
Female	11	37.9	20	60.6		
Caregiver's gender						
Male	4	13.8	3	9.1	.34	.696
Female	25	86.2	30	90.9		
Family Composition						
Two caregivers	28	96.6	30	90.9	1.18	.403
Sole caregiver	1	3.4	3	9.1		
Main language at home						
English	26	89.7	31	93.9	.52	**.**773
Other	3	10.3	2	6.1		
Caregiver's Education						
High School Certificate	1	3.4	3	9.1	.81	.616
Tertiary	28	96.6	30	90.9		
Caregiver's Employment						
Full time	9	31.0	8	24.2	3.33	**.**505
Part-time	13	44.8	16	48.5		
Not employed	7	24.1	9	27.3		
Annual household income						
Up to A$64,168	7	24.1	3	9.1	2.58	**.**167
A$64,168 and over	22	75.9	30	90.9		

F = univariate ANOVA condition effect;
X^2 = Pearson's Chi Square (where expected frequencies are too low for Chi-Square, Fisher's exact test is reported).

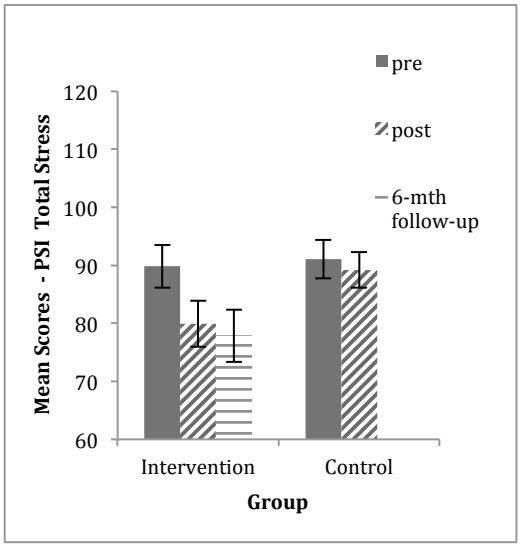
Pre-intervention mean scores on outcome measures are illustrated in Figure 2 below. One-way ANOVA indicated that there were no significant differences at baseline between the intervention and control group on any of these variables (all Fs $\leq$ 1.81, ps $\geq$ .183).

a)

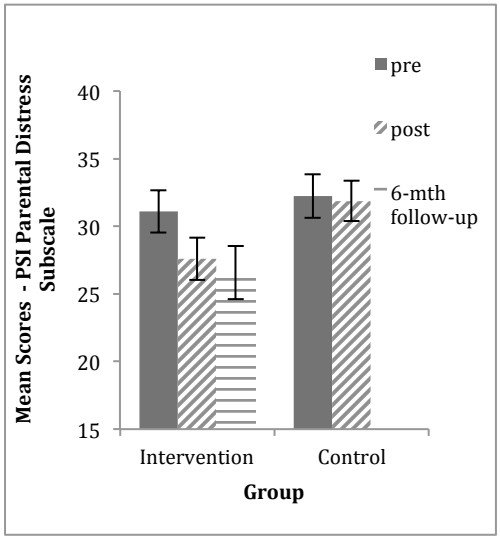

Mean Scores - ECBI Intensity Scale
170
160
150
140
130
120
110
100
90
80
pre
post
6-mth follow-up
Intervention
Control
Group

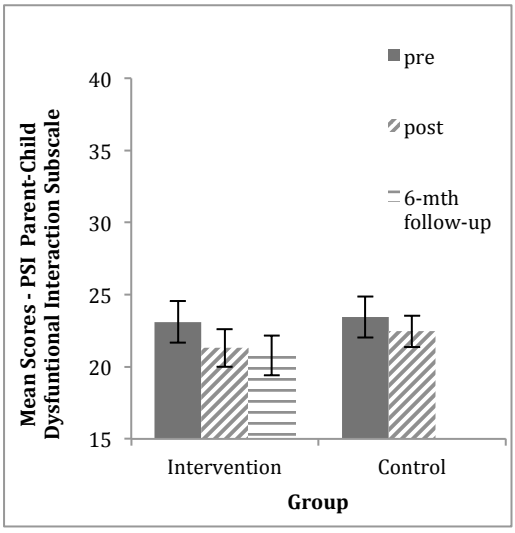

Mean Scores - ECBI Problem Scale
25
20
15
10
5
0
pre
post
6-mth follow-up
Intervention
Control
Group

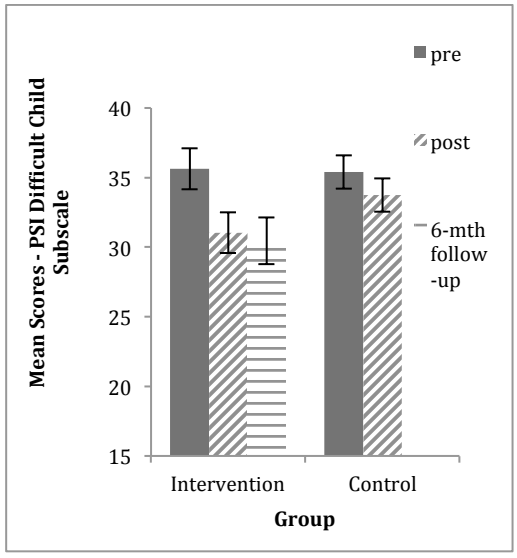
b)


Mean Scores - PSI Total Stress
120
110
100
90
80
70
60
pre
post
6-mth follow-up
Intervention
Control
Group

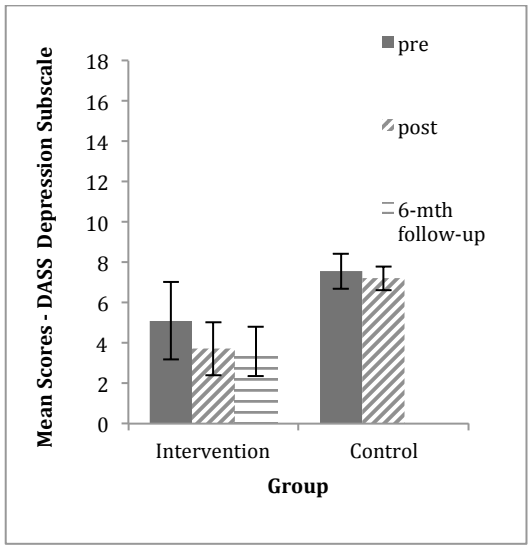
c)

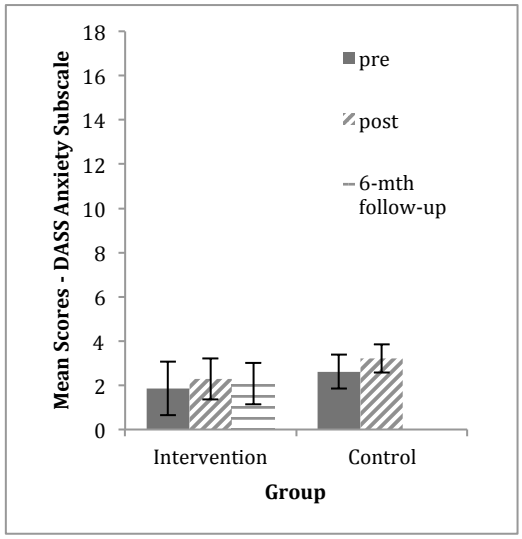

Mean Scores - PSI Parental Distress Subscale
40
35
30
25
20
15
pre
post
6-mth follow-up
Intervention
Control
Group


Mean Scores - PSI Parent-Child Dysfuntional Interaction Subscale
40
35
30
25
20
15
pre
post
6-mth follow-up
Intervention
Control
Group


Mean Scores - PSI Difficult Child Subscale
40
35
30
25
20
15
pre
post
6-mth follow -up
Intervention
Control
Group

d)





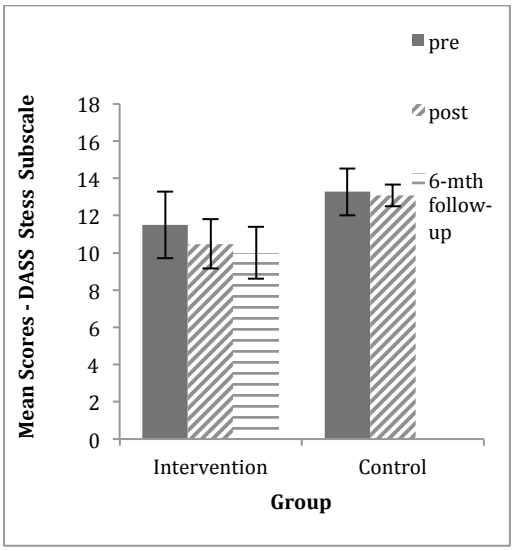


Fig. 2. *(a).* Mean scores on the ECBI Intensity Scale and ECBI Problem Scale. Higher scores indicate, respectively, greater caregiver-reported frequency of child problem behaviours, and caregivers rating more child problem behaviours as problematic. (b). Mean scores on the PSI-SF Total Stress measure. Higher scores indicate greater dysfunctional parenting. (c) Mean scores on the three subscales of the PSI-SF (Parental Distress, Parent-Child Dysfunctional Interaction, Difficult Child). Higher scores indicate, respectively, greater parental distress, more dysfunctional parent-child interaction, and the caregiver rating the child as more difficult. (d.) Mean scores on the three subscales of the DASS (Depression, Anxiety and Stress). Higher scores indicate greater caregiver depression, anxiety and stress. Note: All Fig. 2 graphs represent scores at pre--, post-, and 6-month follow-up for the intervention group; and scores at pre- and post- for the control group. Standard errors are represented in all Fig. 2 graphs by error bars attached to each column.

Short-term intervention outcomes

Pre- and post scores on the various outcome measures, collected four weeks apart (allowing two weeks for viewing the DVDs and two weeks for implementing the strategies), are illustrated in Fig. 2 and the associated test results are presented in Table 2. ANCOVA revealed significant differences between groups at post-intervention on the child behaviour measure (ECBI), where participants in the intervention group reported a significantly reduced frequency of child disruptive behaviours (ECBI Intensity scale) and rated significantly fewer child behaviours as problematic (ECBI Problem scale) at post–intervention than controls (all $ps \leq .001$).

On the measure of dysfunctional parenting (PSI-SF), participants in the intervention-group reported significantly reduced dysfunctional parenting (PSI-SF Total Stress; $p = .012$). On the subscales of the PSI-SF, participants in the intervention group reported significantly reduced levels of parental distress (PSI-SF Parental Distress subscale; $p = .025$), and significantly reduced levels of viewing their child as being difficult at post–intervention than controls (PSI-SF Difficult Child subscale; $p = .014$). No significant differences were found between groups at post-intervention in terms of parent-child interaction (PSI-SF Parent Child Dysfunctional Interaction subscale) and parental psychological adjustment (DASS Depression, Anxiety, and Stress scales).

Table 2

Intervention effects: intervention condition and control condition at pre- and post-intervention; and intervention condition at pre-intervention and 6-month follow-up

Measure	ANCOVA Condition effect for the intervention group and the control group at post-intervention			Comparison (t-statistic) Time effect for the intervention group at 6-month follow-up	
	F (df)	*p*	η^2_p	*t(df)*	***P***
ECBI					
Intensity scale	17.28(1,59)	< .001	.23	6.83(22)	< .001
Problem scale	12.30(1,59)	.001	.17	6.93(22)	< .001
PSI-SF					
Total Stress	6.68(1,59)	.012	.11	3.83(22)	.001
Parental Distress subscale	5.31(1,59)	.025	.09	3.18(22)	.004
Parent-Child Dysfunctional Interaction subscale	.67(1,59)	.417	.01	1.77(22)	.091
Difficult Child subscale	6.48(1,59)	.014	.10	3.88(22)	.001
DASS					
Depression scale	2.25(1,59)	.139	.04	1.38(22)	.182
Anxiety scale	0.01(1,59)	.918	.00	1.01(22)	.323
Stress scale	0.43(1,59)	.514	.01	.90(22)	.378

F = univariate ANCOVA effect for condition; η^2_p (p*artial eta squared)* = effect size.

Six-month follow-up

As the means for pre- and 6-month follow-up scores on outcome measures (Fig. 2) and *t*-test results (Table 2) indicate, intervention effects were maintained for the intervention group at six-month follow-up. Paired *t*-tests revealed a significant effect of Time from pre-intervention to 6-month follow-up for the intervention group on both scales of the child behaviour measure (ECBI Intensity and Problem scales; all *p*s < .001), as well as on the

dysfunctional parenting measure (PSI-SF Total Stress, $p = .001$), and two subscales of the dysfunctional parenting measure (PSI-SF Parental Distress subscale, $p = .004$; and PSI-SF Difficult Child subscale, $p = .001$). No significant effect of Time was found at 6-month follow-up in terms of parent-child interaction (PSI-SF Parent Child Dysfunctional Interaction subscale) or parental psychological adjustment (DASS Depression, Anxiety, and Stress scales). These results indicate that any effects obtained through the intervention were maintained after six months.

Effect sizes

Effect sizes were calculated for the pre- and post-intervention difference scores on all significant outcome measures, taking both the intervention group and the control group into account over the four-week intervention period. Cohen's *d* effect values suggest overall moderate practical significance of results obtained on the main outcome measures (see Cohen, 1988). Effect sizes were medium to large for reduction in the frequency of child problem behaviour (ECBI Intensity Scale, $d = .74$) and parents' rating of child problem behaviours (ECBI Problem Scale, $d = .70$). Effect sizes were small to medium in terms of overall dysfunctional parenting (PSI-SF Total, $d = .43$), parenting-related distress (PSI-SF Parental Distress subscale, $d = .39$), and parents rating their child as difficult (PSI-SF Difficult Child subscale, $d = .36$).

Clinical and reliable change

We conducted chi-square analyses on the three outcome measures with recommended cut-off scores (PSI-SF Total Stress, ECBI Intensity scale and ECBI Problem scale) to examine clinical change significance. As frequency and percentage of participants, and the chi-square values and significance levels indicate (Table 3), a significantly greater number of intervention-group participants than control-group participants moved from the clinical range at pre-intervention to the non-clinical range at post-intervention on the ECBI Problem scale.

No significant clinical change was found for the scores obtained on the ECBI Intensity scale or the dysfunctional parenting measure (PSI-SF).

The reliable change index (RCI) for participant's difference scores on the main outcome measures was calculated and the frequency and percentage of participants whose scores showed reliable positive change are represented in Table 3, including chi square values and significance levels for the RCI analyses. Significantly greater reliable change from pre- to post-intervention was found for the intervention group as compared to the control group on both scales of the child behaviour measure (ECBI Intensity scale and ECBI Problem scale) but not on the dysfunctional parenting measure (PSI–SF).

Table 3

Clinical and reliable change at post-intervention

	Intervention Group n/n (%)		Control Group n/n (%)		Clinical Change (significance)		Reliable Change (significance)	
Measure and clinical cut-off	Clinically changed	Reliably changed	Clinically Changed	Reliably changed	X^2	*p*	X^2	*p*
ECBI Intensity Scale ≥134	10/29(34.3)	11/29(37.9)	7/33(21.2)	3/33 (9.1)	1.37	.243	7.34	.007
ECBI Problem Scale ≥16	15/29(51.7)	11/29(37.9)	6/33(18.2)	4/33(12.1)	7.75	.005	5.61	.018
PSI-SF Total Stress ≥90	6/29(20.7)	5/29(17.2)	3/33(9.7)	1/33 (3.2)	1.43	.292	3.27	.098

n/n = number of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention / number of participants; % = percentage of participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention; Clinically changed = participants whose scores moved from the clinical range at pre-intervention to the non-clinical range at post-intervention; Reliably changed = Reliable Change Index > 1.96; X^2 = Pearson's Chi Square (where expected frequencies are too low for Chi-Square, Fisher's exact test is reported).

Intent to treat

For the intent to treat (ITT) analysis, pre-intervention scores were used as post-intervention scores for the twelve participants who did not complete post-intervention assessment, and for the six participants who were excluded from the main analysis (four participants who completed post-intervention assessment for a different child, and two participants who spoke limited English). ANCOVA results obtained from ITT analyses revealed significant between-group effects on the ECBI Intensity scale (F [1,77] = 5.08, p = .027) and the ECBI Problem scale (F [1,77] = 5.34, p = .024). In addition, ITT Chi-square analysis revealed a significant between-group effect in clinical change on the ECBI Problem scale (X^2 = 4.09, p = .037). These results were comparable to those obtained from the main analyses. However, between-group differences on Parent Stress scores were no longer significant in ITT analysis (PSI-SF; all $Fs \leq 1.32$; $ps \geq .254$). In terms of reliable change, chi-square analyses suggest a significant between-group effect on the ECBI Intensity scale (X^2 = 4.06, p = .044) but not on the ECBI Problem scale.

Participant satisfaction

The mean of 40.37 (SD = 4.72) obtained on the Therapy Attitude Inventory (range 10-50) for the intervention group indicates that caregivers were satisfied with the intervention program.

Effects of child and parent variables

There was no significant relationship between pre-post difference scores on the main outcome variables and: the age of participants or age of target children (all Pearson's rs $\leq$ .28, $ps \geq .147$); the gender of participants or target children (all Spearman's $\rho s \leq .21$; $ps \geq$ .268); and whether target children were in the clinical range of child problem behaviour (ECBI scales) at baseline (all Spearman's $\rho s \leq .22$; $ps \geq .257$). These results suggest that program effectiveness did not differ according to the age or gender of parents or target

children, and that children whose problem behaviour was in the clinical range at baseline responded to the intervention to the same degree as those children whose problem behaviour was not in the clinical range.

Dosage effects

There were no significant relationships between dosage (how much of each video participants had viewed and when they had started to implement strategies) and pre-post difference scores on main outcome variables (all Spearman's ρs $\leq$ .16; ps $\geq$ .420). When interpreting these results, it is important to keep in mind that, at post-intervention assessment, 28 of 29 participants had viewed the entire first video at least once (one had viewed half) and that all participants had started to implement the parenting strategies conveyed in the first video. As there were no participants who did not view any of the video material or who had not started to implement strategies, the correlation results indicate that there were no additional benefits from viewing the first video more than once, or from viewing the second video, and that there were no additional benefits from having implemented strategies for more than a few days.

Discussion

This study examined for the first time whether a brief self-directed 1-2-3 Magic parenting program, consisting of the two 1-2-3 Magic videos (Booth & Phelan, 2004a, 2004b) without therapist assistance, would be an effective intervention to improve parenting. In line with our hypotheses, we found that the program was effective at reducing child problem behaviours and dysfunctional parenting when compared to a waitlist control group. At post-intervention, participants in the intervention group reported fewer disruptive behaviours for their children (ECBI Intensity scale), and also viewed their children's disruptive behaviours as less problematic (ECBI Problem scale), when compared to reports

from control-group participants. In addition, intervention-group participants reported less dysfunctional parenting at post-intervention (with reduced scores on three of four PSI-SF scales) when compared to control-group participants. These results were maintained after six months.

Score changes from pre- to post-intervention were reliable for intervention-group participants on both scales of the child behaviour measure (ECBI) but not on the dysfunctional parenting measure (PSI-SF). Regarding clinical change, scores on one of the child problem behaviour measures (ECBI Problem scale) moved from the clinical range at pre-intervention to the non-clinical range at post-intervention for a significant number of intervention-group participants as compared to the control group. Although the reduction in frequency of child problem behaviour (ECBI Intensity scale) and the reduction in dysfunctional parenting (PSI-SF) were statistically significant for the intervention group, they were not clinically significant. The reason for this could be that the scores on the frequency measure of child problem behaviour (ECBI Intensity scale) and dysfunctional parenting (PSI-SF) were low at pre-intervention due to the community-based nature of the sample.

Effect sizes for the main outcome variables (ECBI and PSI-SF) ranged from small/medium to medium/large. These results are comparable to published effect sizes for the same or similar variables obtained for other self-directed parenting programs (Enebrink et al., 2012; Morawska & Sanders, 2006; Sanders et al., 2012). The effect sizes observed for the main outcome variables in the current study were somewhat lower than the effect sizes reported for the same variables for the therapist-assisted group-format delivery of 1-2-3 Magic programs (Porzig-Drummond et al., 2014). Although a direct comparison between these studies cannot be made due to their different program designs, the pattern of difference in effect sizes across the outcome variables points to the possibility that delivery format might affect the degree to which 1-2-3 Magic programs reduce child problem behaviours and

dysfunctional parenting. This would not be surprising, given the difference in program length (four hours for the self-directed 1-2-3 Magic program and six hours for the therapist-assisted group-format) and that the group programs were therapist-assisted and provided the opportunity for feedback from the therapist and other participants. A delivery-format and outcome relationship would also correspond to published results for other behaviour-based parenting programs, which found larger effect sizes for therapist-assisted group-format delivery as compared to individual self-directed delivery formats (Cotter, Bacallao, Smokowski, & Robertson, 2013; Sanders, Markie-Dadds, Tully, & Bor, 2000). It is important to note, however, that not all studies comparing therapist-assisted and self-directed parenting programs have found therapist-assisted programs to be more effective (Lundahl, Risser, & Lovejoy, 2006).

Neither the intervention group nor the control group reported change on the measure of parental adjustment (DASS) in the current study. This could be due parental adjustment being comparatively high at the outset and the measure not being sensitive enough to detect an effect. This reason would be in line with suggestions made in previous research (Markie-Dadds & Sanders, 2006; Morawska & Sanders, 2006). On the other hand, improvements in parental adjustment were reported for therapist-assisted group-format delivery of the 1-2-3 Magic program (Porzig-Drummond et al., 2014). In light of this, another reason for not observing change in parental adjustment in the current study could be that an improvement in parental adjustment is more closely related to support from other parents in the group or therapist assistance, rather than the program itself.

There were no additional benefits from viewing the first video more than once, or from viewing the second video, and there were no additional benefits from having implemented strategies for more than several days. Almost all participants had viewed the entire first video (relating to stop-behaviours), and all participants had implemented strategies

from the first video at post-intervention assessment. However, not all participants had viewed the second video (relating to start behaviours) or implemented strategies from the second video at post-intervention assessment. It is surprising that there was no dosage effect beyond viewing and implementing strategies from the first video. One explanation could be that the sample size was too small to detect a dosage effect. Another explanation could be that implementing strategies from the first video, which aimed to reduce stop behaviours and dysfunctional parenting, also contributed to children being largely compliant in terms of start behaviours. Thus, the absence of a video-viewing dosage effect (beyond viewing of the first video) may reflect the greater importance of the first video of the 1-2-3 Magic parenting program over the second. To investigate whether the absence of a video-viewing dosage effect is due to the content of the first video, or whether it is simply due to an order effect, future trials could counterbalance the order in which treatment-group participants view the two videos. The absence of a dosage effect relating to duration of implementation (beyond a few days) supports Phelan's (2010a) suggestion that the 1-2-3 Magic parenting strategies decrease disruptive behaviours within a few days of implementation.

As discussed previously, causal effects in the aetiology of child problem behaviours and dysfunctional parenting cannot be assumed. A parenting intervention could be affecting both child problem behaviour and dysfunctional parenting directly, or it could be reducing dysfunctional parenting as a result of reducing disruptive child behaviours, or vice versa (Porzig-Drummond et al., 2014). In either case, it would be reasonable to interpret the results of the current study as being indicative of a relationship between the 1-2-3 Magic program intervention and a reduction in dysfunctional parenting and child problem behaviour.

When compared to the therapist-assisted group-format of the 1-2-3 Magic program, the self-directed video-based 1-2-3 Magic program has the added benefit of (1) being more cost-effective; (2) having 100 percent treatment fidelity; and (3) being able to overcome the

common barriers to engagement in parenting interventions, therefore, reaching caregivers who might not otherwise engage in a parenting program. Some of the common barriers to engagement in parenting interventions that self-directed programs can overcome are: practical barriers, such as accessibility (Flaherty & Cooper, 2010; Mytton et al., 2014; O'Brien & Daley, 2011); psychological barriers, such as stigma (Koerting et al., 2013; O'Brien & Daley, 2011); and parental preference for self-directed programs (Metzler et al., 2012). When aiming to maximise the engagement of parents who use physical punishment, an additional important point to consider is whether these parents will engage in a self-directed parenting program. A recent large-scale European study showed that parents who physically punish their children are, on average, younger, less educated and less likely to be employed (duRivage et al., 2015). Hence, parents with these characteristics may need to be targeted in particular (selective prevention approach) when parental attitudes regarding physical punishment are addressed through public awareness campaigns (universal prevention approach) (Committee on the Rights of the Child [CRC], 2012; Modig, 2014).

Drawbacks, when compared to the therapist-assisted group format of the 1-2-3 Magic program, could be somewhat reduced effect sizes on the main outcome variables and unchanged parental adjustment. When compared to other self-directed parenting programs, the self-directed video-based 1-2-3 Magic program has the added benefit of being briefer than most other programs (under 4 hours), which could be an additional factor in achieving parent engagement and reducing drop-out rates.

Taking all of these characteristics into account, these results suggest that the self-directed video-based 1-2-3 Magic parenting program may be suitable: (1) as a commercially available self-help program; (2) as support for caregivers who are waitlisted for a therapist-assisted program; (3) as an entry-level intervention in a multi-level intervention model, with up to 50 percent of caregivers not needing to attend a therapist-assisted parenting program

after completing the self-directed program (see Phelan, 2010b); and (4) for inclusion in a population approach to parenting program delivery with the aim to prevent child abuse.

Strengths and limitations

Major strengths of the current study were online data collection, which overcame geographical boundaries and potential missing data points, and high treatment fidelity due to video format. The use of a community sample is a further strength, as significant changes in parent or child behaviour are more difficult to detect here given their more positive initial profile. On the other hand, a community sample is a potential limitation in terms of generalizability to clinical populations. Another limitation of the current study is that the sample was largely tertiary educated, married, and had an above-average household income. This limits generalizability of the results to populations with lower education and socio-economic characteristics, and single-parent families. However, these limitations are mitigated by published results on the effectiveness of a therapist-assisted group-based 123-Magic program with clinical, lower-income and lower-education populations (Flaherty & Cooper, 2010), and by published findings that self-directed internet-based parenting intervention are effective when used with lower income lower-education populations (Radey & Randolph, 2009). A further limitation of the current study is its reliance on self-referred families because self-referral suggests motivation to engage in the program, which, in turn, limits generalizability to agency-referred populations.

Another limitation is the exclusive use of self-report report measures. Although these are well suited as measures of dysfunctional parenting, parental stress, and parental adjustment, frequency of child disruptive behaviour would benefit from independent third-party observational measures. The use of self-report measures to assess program adherence could also have encouraged demand characteristics. On the other hand, over-reporting of video viewing and strategy implementation is unlikely to have occurred in the current study

because participants used a code name when completing questionnaires (providing anonymity for participants) and, hence, would have had little gain from over-reporting. Nevertheless, future studies would benefit from implementing additional measures assessing program adherence. The use of individual login codes for participants viewing online material, would enable monitoring the duration participants spend viewing video material. Participants could also be asked at post-intervention assessment to complete an online quiz relating to video content. Login duration and quiz scores could not only be correlated with participants' scores on outcome measures but could also confirm or disconfirm participants' self-report responses regarding program adherence.

One final limitation of the current study is the use of a waitlist control, as this did not allow accounting for factors inherent to all self-directed parenting programs, such engaging with the topic of parenting. An alternative to a waitlist control could be the use of an attention-control group who view material on general aspects of parenting without being given specific parenting strategies (see Gallin & Ognibene, 2012). Future research would also benefit from using a larger sample, as this would enable further investigation of any influence of child characteristics, such as age and gender, on treatment outcomes. Due to these limitations, the current results are preliminary in nature.

Conclusions

This study has shown for the first time that the video-based 1-2-3 Magic parenting program (Booth & Phelan, 2004a, 2004b), which is brief (under four hours viewing time) and entirely self-directed, is effective at reducing dysfunctional parenting and child problem behaviours for caregivers with children aged 2-10 for a period of six months. In addition to being very brief, the program is cost-effective, has 100 percent treatment fidelity (video-based), and overcomes the common barriers to engagement in parenting interventions, such as difficulty or concerns about accessing therapist-assisted programs. The current results

provide preliminary support for the conclusion that the self-directed video-based 1-2-3 Magic parenting program is suitable: (1) as a commercially available self-help program; (2) as support for parents waitlisted for a therapy-assisted program; (3) as a cost-effective, entry-level intervention in a multi-level intervention model; and (4) for inclusion in a population approach to parenting program delivery with the aim to increase effective parenting skills, and reduce child problem behaviours and their consequences.

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PAPER FIVE

From Controlled Trial to 'Real-world' Community Setting -

The 1-2-3 Magic Parenting Program

A modified version of this paper has been accepted for publication

Reference:

Porzig-Drummond, R., Stevenson, R.J., & Stevenson, C. (2015). A Preliminary Evaluation of the 1-2-3-Magic Parenting-Program in an Australian Community-Services Setting. *Australian Social Work* (2015). doi: 10.1080/0312407X.2015.1086010

Abstract

This study investigated the use and the effectiveness of the 1-2-3 Magic parenting-program in 'real-world' community settings in Australia. First, a survey of 153 NSW 1-2-3 Magic facilitators revealed (1) that the program is used predominately by family support workers and social workers, and (2) that more than 80% of respondents rate the program as beneficial for caregivers with 3-12-year-old children. Second, the three-session group-format of *1-2-3 Magic & Emotion Coaching* was investigated for the first time in a typical metropolitan community-service setting. The 50 participants (caregivers of 2-6-year-old children) reported a significant decrease in disruptive child behaviour (ECBI), permissive parenting (PS), and parental depression and stress (DASS) from pre- to post-intervention, and results were maintained at 3-month follow-up. These results provide preliminary evidence for the effectiveness of a brief 1-2-3 Magic group-program in reducing dysfunctional parenting in a typical metropolitan community-service setting.

Introduction

Child problem behaviours are highly prevalent in Australia, with 20-25% of parents reporting disruptive behaviours for their children at clinically elevated levels (Sanders, 2008; Smart, 2010). The potential negative long-term effects of persistent child problem behaviours include poor academic performance and diminished social adjustment for the children (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004; Smart 2010), increased stress for their parents (Zubrick et al., 2005), and decreased employability and increased mental health problems and criminality for the children as adolescents and adults (Bayer et al., 2011; Bor, McGee, & Fagan, 2004; Colman et al., 2009; Stevenson, 2001). A lack of effective disciplining strategies exacerbates child problem behaviours and, furthermore, can lead to a downward spiral of disruptive child behaviour, parental stress, and dysfunctional parenting (Gershoff, 2013; Odgers et al., 2008). Dysfunctional parenting includes harsh parenting practices, such as physically disciplining children, and has been shown to increase the risk of child physical abuse (Gershoff, 2013). For all these reasons, it is vital to provide parents with alternative strategies to manage child problem behaviours (Gershoff, 2013; National Association for Prevention of Child Abuse and Neglect, 2013; Royal Australasian College of Physicians, Paediatric & Child Health Division, 2013).

Given the prevalence of child problem behaviours in Australia (Sanders, 2008; Smart, 2010), the pervasiveness of dysfunctional parenting (Godfrey, 2011; Tucci, Mitchell, & Goddard, 2006), and the detrimental short-term and long-term effects of these (Bayer et al., 2011; Gershoff, 2013; Reid et al, 2004), a population approach to the delivery of parenting programs in Australia has been advocated (Committee on the Rights of the Child [CRC], 2012; Porzig-Drummond, 2015; Sanders & Kirby, 2014; Saunders, 2013). To be suitable for a public health approach, programs need to: (1) provide strategies for parents to address child disruptive behaviours; (2) be evidence-based in Australia (to ensure their effectiveness in the

Australian cultural context); (3) be available in a manualised format (to maximise treatment fidelity); (4) be available in a group format or self-directed format (to be cost-effective); (5) have flexible delivery options in terms of time, distance, and self-direction (to maximise caregiver engagement); and (6) be brief (to increase caregiver engagement and reduce cost) (Breitenstein et al., 2010; Furlong et al., 2012; Hindman, Brooks, & van der Zwan, 2012; Koerting et al., 2013; Mytton, Ingram, Manns, & Thomas, 2014; O'Brien & Daley, 2011; O'Neill, McGilloway, Donnelly, Bywater, & Kelly, 2013; Tarver, Daley, Lockwood, & Sayal, 2014; Wade, Macvean, Falkiner, Devine, & Mildon, 2012; Voisine & Baker, 2012).

Parenting programs based on cognitive-behavioural and social learning theory have been identified as particularly effective at addressing child disruptive behaviours (Centers for Disease Control and Prevention, 2009; Furlong et al., 2012; Kaminski, Valle, Filene, & Boyle, 2009; Tully, 2009). Parenting programs that focus on strategies based on cognitive-behavioural and social learning principals to reduce child disruptive behaviours, and that have a large empirical evidence base, include: *The Incredible Years* (Webster-Stratton, 1984); *Parent Management Training - Oregon Model* (Forgatch, 1994); *Parent-Child Interaction Therapy* (*PCIT*; Eyberg, 1988); the *Triple P-Positive Parenting Program* (*Triple-P*; Sanders, 1999); and the *1-2-3 Magic* parenting-program (*1-2-3 Magic*; Phelan, 1984).

Of these programs, to the best of our knowledge, published results from Australian outcome studies are only available for *PCIT*, *Triple-P* and *1-2-3 Magic* (Nixon, Sweeney, Erickson, & Touyz, 2003; Sanders, Kirby, Tellegen, & Day, 2014; Porzig-Drummond, Stevenson, & Stevenson, 2014), and only Triple-P and 1-2-3 Magic appear to have been evaluated in a group format in Australia (Gallart & Matthey, 2005; Porzig-Drummond et al., 2014). The Australian Government expresses support for positive parenting programs in the *National Framework for Protecting Australia's Children* (Australian Government, 2009) and Triple-P has the largest evidence base of any parenting program in an Australian context

(Wade et al., 2012). In addition, the New South Wales Government selected Triple-P for dissemination throughout the state (Department of Family & Community Services, 2011; Gaven & Schorer, 2013). Nevertheless, Australian community-based organisations stress the importance of having a choice of programs at their disposal so that an optimal match between program and client can be achieved (Martin, 2013). Perceptions from community service workers reported by Horin (2009) support this view. Community service workers interviewed by Horin (2009) further suggest that the 1-2-3 Magic parenting-program is widely used and has been useful in community-service environments. However, little is known about who uses the program and with which client groups. Given this, the overall aim of this study was to further investigate the use and effectiveness of the 1-2-3 Magic program in a 'real-world' community setting.

The 1-2-3 Magic parenting-program is available in two versions: First, the American (US) program, *1-2-3 Magic Effective Discipline for Children* (Phelan, 1984, 2014), which has been available over the last three decades in several English- and Spanish-speaking countries, including Australia; and second, the Australian version of the program, *1-2-3 Magic & Emotion Coaching* program (Hawton & Martin, 2006, 2011), which has been disseminated for the last eight years in Australia. The American *1-2-3 Magic Effective Discipline for Children* (Phelan, 2014) draws on the principles of social learning and cognitive-behavioural theories. Behavioural theory proposes that behaviour is shaped through reinforcement in the form of reward or punishment (operant conditioning) (Skinner, 1953). In addition, social learning theory suggests that individuals also learn from observing others (observational learning) (Bandura, 1977). As a further factor influencing behaviour, cognitive theory posits that an individual's perception of and thoughts about a situation influence their emotional state as well as their behaviour (Beck, 1979). Program components of *1-2-3 Magic Effective Discipline for Children* (Phelan, 2014) that are based on these three theories include: (1)

behaviour theory (setting clear expectations, consistently using rewards to increase desirable child behaviours, consistently using the counting system and time-out or time-out alternatives to reduce child problem behaviours); (2) cognitive theory (addressing mistaken beliefs about child behaviours and developmental stages); and (3) social learning theory (parental modelling of emotion regulation) (see Phelan, 2014). While keeping its focus on cognitive and social learning strategies, the Australian 1-2-3 Magic & Emotion Coaching parenting-program (Hawton & Martin, 2011) provides an additional emotion-coaching component that helps caregivers understand children's emotions and encourages an emotion-coaching parenting style that assists children in assuming better self-control. Both 1-2-3 Magic programs are manualised and include video segments that illustrate 1-2-3 Magic parenting techniques (Booth & Phelan, 2004). In addition, both programs are brief (three 2-hour sessions) and can be delivered in a group format (Hawton & Martin, 2011, Phelan 2010).

The efficacy of both 1-2-3 Magic parenting-programs in reducing child problem behaviours has been demonstrated in a variety of settings. The American 1-2-3 Magic Effective Discipline for Children program (Phelan, 1984, 2014) has been shown to be effective as: (1) a video-based program presented to small groups of caregivers with children aged 3-4 in a Canadian community-service setting (Bradley et al., 2003); (2) a video-based face-to-face program presented to a large group of Australian caregivers with children aged 2-12 (Porzig-Drummond et al., 2014); (3) a video-based self-directed program used by Australian caregivers with children aged 2-10 (Porzig-Drummond, Stevenson, & Stevenson, 2015); and (4) a manual-based program presented to a small group of Australian caregivers with children aged 6-12 (Bailey, van der Zwan, Phelan, & Brooks, 2012). The Australian 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2006, 2011) has been shown to be effective at reducing child problem behaviours: (1) when presented to a large group of Australian caregivers with children aged 2-12 (Porzig-Drummond et al., 2014); and (2) when

presented in a rural Australian community-service setting to small groups of caregivers with children aged 2-16 (Flaherty & Cooper, 2010).

In addition to being evaluated in controlled trials, or in specific contexts, it is crucial to evaluate parenting programs in 'real-world' community settings (Forgatch, Patterson, & Gewirtz, 2013; Hayes, Giallo, & Richardson, 2010; Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). Several recent studies have investigated the effectiveness of evidence-based and widely used parenting programs in community-service settings, and have replicated findings from clinical trials (Hutchings et al., 2007; McGilloway et al., 2012; Prinz et al., 2009), suggesting that research evidence obtained in controlled conditions does translate to 'real-world' settings (Lindsay & Strand, 2013; Michelson, Davenport, Dretzke, Barlow, & Day, 2013). Flaherty and Cooper (2010) conducted an important investigation of the 1-2-3 Magic & Emotion Coaching program in a specific community-services setting, showing that the program is effective in reducing problem behaviours of children who had a history of or were at risk of abuse. However, as the study focused on a specific at-risk population, its findings cannot be generalised to regular community-service settings.

Aims

The overall aim of this study was to examine the use and efficacy of the *1-2-3 Magic & Emotion Coaching* program (Hawton & Martin, 2010) in an Australian 'real-world' settings. Specifically, the first aim was to ascertain which community settings 1-2-3 Magic & Emotion Coaching program is predominantly delivered in; and whether, based on their professional experience, practitioners rated the program as beneficial when working with caregivers whose children exhibited disruptive behaviours.

The second, and principal, aim of this study was to empirically investigate the effectiveness of the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2010) when the program is delivered in a brief manualised group-format (three 2-hour sessions) in

an Australian typical metropolitan community-services setting. Based on the available research, we predicted that the program would be effective at reducing child disruptive behaviours and dysfunctional parenting, while improving parental psychological adjustment.

1. Survey

More than 5,000 practitioners have been trained in facilitating the 1-2-3 Magic & Emotion Coaching parenting-program (Hawton & Martin, 2006, 2011) in Australia, and the program has been disseminated to almost 90,000 caregivers (M. Hawton, personal communication, January 16, 2015). However, little is known about which settings the program is used in predominantly, or about practitioners' use and perceptions of the program. The aim of this survey was to explore which professions are represented among the facilitators of the 1-2-3 Magic & Emotion Coaching parenting-program in Australia; and how they rate the usefulness of the program for their client group.

Method

Sampling procedure. The Macquarie University Human Research Ethics Committee approved the study. We recruited participants from the pool of 810 practitioners who had completed 1-2-3 Magic & Emotion Coaching training in NSW over the previous three years. Due to confidentiality requirements, we could not approach practitioners directly. Hence, the 1-2-3 Magic & Emotion Coaching Australian training provider, Parentshop Pty Ltd., posted our questionnaires and cover letters. To guarantee anonymity, we asked participants to return completed questionnaires anonymously, via reply-paid mail, to the second author's university address. One hundred and fifty-three practitioners (18.9%) completed the survey.

Participants. Of the 153 respondents, 92 (60.1%) had facilitated the program since completing training. There were no differences in characteristics between the 61 respondents who had not facilitated the program and the 92 who had. Of the 92 respondents who had

facilitated the program, 85 (92.4%) were female and 7 (7.6%) were male. Six participants (6.5%) were under 30 years old; 22 (23.9%) were between 30 and 39; 33 (35.9%) were between 40 and 49; 23 (25%) were between 50 and 59; and 8 (8.7%) were 60 or above. Forty-eight participants (52.2%) lived in NSW metropolitan areas (population above 100,000); 31 (33.7%) in rural areas (population 10,000-100,000); and 13 (14.1%) in remote areas (population under 10,000). Participants had worked with families an average of 14.0 years (*SD* = 9.72; range 1-40).

Measures. Participants completed a demographic questionnaire, and questions about: when they had completed training; whether they had delivered the program since their training; and the age range of the children (3-5 years, 6-8 years, 9-12 years) the program was aimed at. Practitioners were also asked to rate the usefulness of the program for each of the three children's age groups on a five-point scale (1 = *not at all beneficial* to 5 = *very beneficial*).

Results and Discussion

Response rate. The response rate of 18.9% was low compared with the 49.6% average response rate for counsellors and psychologists reported in a meta-analysis by Van Horn, Green and Martinussen (2009). One likely factor contributing to this result is that, due to the anonymous nature of the survey, we could not use incentives. The effectiveness of this response-facilitation technique in increasing survey responses has been well documented (Newby, Watson, & Woodliff, 2003). Other reasons could be that non-responders had not yet facilitated the program and hence did not view their participation in the survey as important; did not approve of the program; were time poor; or were experiencing survey fatigue.

Facilitation rate. Of 153 respondents, 92 (60.1%) had facilitated the program since completing training. This proportion is in line with reports from other parenting training programs. Gaven and Schorer (2013), for example, report that of 1,100 practitioners trained

in *Triple-P* between 2008 and 2010, 60% had delivered the program when surveyed at the end of that period (Gaven & Schorer, 2013).

Professions. Table 1 shows the professions represented among all 153 respondents and among those 92 who had facilitated the program since completing training.

Table 1

Professions of respondents who completed 1-2-3 Magic & Emotion Coaching training, and of respondents who completed training and facilitated the program

Profession	n (%) of 153 respondents who completed training	n (%) of 92 respondents who facilitated the program
Family support worker	45 (29.4)	33 (35.9)
Social worker	27 (17.7)	16 (17.4)
Psychologist	25 (16.3)	12 (13.0)
Counsellor	17 (11.1)	11 (11.9)
Early childhood educator	14 (9.2)	9 (9.8)
School teacher	11 (7.2)	6 (6.5)
Child development worker	5 (3.7)	3 (3.7)
Nurse	4 (2.6)	1 (1.1)
Minister	2 (1.3)	1 (1.1)
Occupational therapist	2 (1.3)	-
Speech pathologist	1 (0.7)	-

The majority of respondents in either group were family support workers, followed by social workers, psychologists, counsellors, and education professionals. These findings provide an indication that the 1-2-3 Magic & Emotion Coaching parenting-program is delivered predominantly in community-services settings, followed by educational settings.

Practitioner ratings. Table 2 shows the number of respondents who delivered the 1-2-3 Magic & Emotion Coaching program to caregivers with children aged 3-5 years, 6-8 years, and 9-12 years.

Table 2

Practitioner ratings of the usefulness of the 1-2-3 Magic & Emotion Coaching parenting-program for caregivers with children aged 3-5, 6-8, and 9-12

Child age range	*n*	*Mean* (SD)	Number of practitioners who rated the program in each category				
			not at all beneficial	not beneficial	neutral	beneficial	very beneficial
3-5	89	4.42 (.72)	-	2 (2.3%)	6 (6.7%)	34 (38.2%)	46 (52.7%)
6-8	80	4.35 (.84)	1 (1.3%)	1 (1.3%)	9 (11.3%)	27 (33.8%)	43 (53.6%)
9-12	53	4.21 (.93)	1 (1.8%)	1 (1.8%)	9 (17%)	16 (30.2%)	28 (52.8%)

n = number of practitioners who had delivered the program to caregivers with target children in this age range; *Mean* = practitioners' mean rating of the program for each age range.

The vast majority of respondents who had facilitated the program had delivered it to caregivers with children aged 3-5 (96.7%) and children aged 6-8 (87%), and rated the program as beneficial or very beneficial for caregivers with children in these age groups. More than half of respondents who had facilitated the program, had delivered it to caregivers with children aged 9-12, and the vast majority of those rated the program as beneficial or very beneficial. Based on the responses to this survey, it appears that practitioners find the program useful across the developer-recommended age range of target children (2-12 years). The practitioner views obtained in this survey reflect findings from controlled studies that showed no correlation between results obtained on outcome variables and the age of target children (Porzig-Drummond et al., 2014). However, future surveys would benefit from collecting additional information from practitioners about drawbacks of the program, such as barriers to implementation.

2. Evaluation study

This study examined the effectiveness of the 1-2-3 Magic & Emotion Coaching parenting-program (Hawton & Martin, 2010) in reducing child disruptive behaviour and

dysfunctional parenting styles, and in improving parental adjustment, when the program is delivered in a brief manualised group-format (three 2-hour sessions) to caregivers in a typical metropolitan community-services setting in Australia. We predicted that dysfunctional parenting styles (permissive or authoritarian) would decrease, that parental psychological adjustment (depression, anxiety, and stress) would improve, and that the frequency and intensity of the target children's disruptive behaviours would decrease at post-intervention when compared to pre-intervention assessment, and that these results would be maintained at 3-months follow-up.

Method

Study design. This study was conducted over a 15-month period at a CatholicCare Sydney office in the inner west of Sydney. CatholicCare Sydney is an Australian community-based organisation that provides family services to clients from diverse socio-economic and cultural backgrounds and also to clients referred from government agencies. Due to duty of care to families who requested or who were required to attend the 1-2-3 Magic & Emotion Coaching program as soon as possible, a randomised controlled trial design, using a waitlist-group or a comparison-group, was not possible. Consequently, we employed an intervention-only study design with pre-intervention, post-intervention, and follow-up assessment.

Sampling procedure and attrition. CatholicCare Sydney offer the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2011) as part of their Parent Education Program. CatholicCare Sydney advertise their parenting programs each school term in their calendars, newsletters, on their website and on other parenting websites. Caregivers self-refer; are referred through CatholicCare Sydney staff; are referred from other community-based organisations; or are referred from government agencies, including child-protective services. Data regarding the referral source was not available.

Facilitators from the CatholicCare Sydney Parent Education Program presented the

1-2-3 Magic & Emotion Coaching program and invited caregivers at the beginning of the first session of the program to participate in the study. In order to conduct the study as closely as possible under 'real world' conditions, the only inclusion criteria were that the target child was within the program-prescribed age range of 2-12, and that the caregiver who attended the program lived with the target child. The latter inclusion criterion was necessary because the child behaviour measure relied on caregiver-report of the target child's behaviour. Caregivers who did not meet study inclusion criteria still completed the program but were not required to complete assessment. Of 65 caregivers who attended the program over the 12-month period, 11 (16.9%) did not live with the target child, two caregivers (3.1%) declined to participate, and two caregivers (3.1%) had target children who were less than 2-years old.

Of the 50 participants (76.9%) who met inclusion criteria and completed pre-intervention assessment, twelve participants (24%) did not attend the last session of the program, at which post-intervention assessment was conducted. Therefore, post-intervention data could not be obtained for these participants. The reasons for not completing the program could not be obtained. There was no significant difference between study completers and non-completers on any of the participant or target-child characteristic variables (demographic variables, and outcome variables at pre-intervention). Primary data analysis was conducted on the 38 participants (76%) who completed pre- and post-intervention assessment. Of these, 16 participants (42.1%) completed assessment again after three months.

Participant characteristics. Participants ranged in age from 28 to 49 years (M = 38.36, SD = 5.59). The majority were female (76%), lived in two-caregiver households (72%), were tertiary educated (72%), and spoke English as their main language at home (78%). Almost half of participants were not employed (48%), 36% worked part-time, and 16% worked full-time. The household income was above the Australian average (AU$64,168; Australian Bureau of Statistics, 2011) for 52% of participants. Regarding

psychological adjustment, 32 % of caregivers reported levels of depression, 28.6% levels of anxiety, and 37.1% levels of stress in the non-functional range on the *Depression Anxiety and Stress Scale – 21 Items* (*DASS-21*; Lovibond & Lovibond, 1995).

Participants had on average 1.85 children (*SD* = .82; range 1-4). The target children ranged from 2 to 6 years of age (*M* = 3.02, *SD* = 1.40) and just over half were boys (52.6%). At pre-intervention assessment, 36.8% percent of caregivers reported a frequency level of disruptive behaviours for the target child in the clinical range (134 or above on the Intensity Scale of the *Eyberg Child Behavior Inventory* [*ECBI*; Eyberg & Pincus, 1999]), and 33.4% of caregivers rated the severity of the disruptive behaviours to be in the clinical range (16 or above on the Problem Scale of the ECBI).

Measures.

Child behaviour. The Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) contains two 36-item scales on which caregivers rate their child's problem behaviours. The Intensity Scale is a 7-point scale, measuring the frequency of child disruptive behaviour (1 = *never* to 7 = *always*). The Problem Scale requires caregivers to report whether they perceive the child's disruptive behaviour as problematic (*yes/no*). Internal consistency (Intensity Scale α = .93, Problem Scale α = .95) and test-retest reliability (Intensity Scale *r* = .80, Problem Scale *r* = .85) have shown to be high for both scales (Eyberg and Pincus, 1999).

Dysfunctional parenting. The original *Parenting Scale* (*PS*; Arnold, O'Leary, Wolff, & Acker, 1993) is a 30-item 7-point self-report measure that assesses permissive, authoritarian, and verbose parenting styles (Laxness, Over-reactivity, and Verbosity). In this study, we employed Reitman and colleagues' (2001) briefer 2-factor version of the PS, which consists of two 5-item scales that assess permissive and authoritarian parenting styles. Both brief scales have shown to have moderate to good internal consistency (Laxness Scale α = .70-85; Over-reactivity Scale α = .74-.80) and test-retest reliability (Laxness Scale *r* = .70;

Over-reactivity Scale r = .73; Reitman et al., 2001), similar to the original PS (Arnold et al., 1993).

Parental adjustment. The Depression Anxiety and Stress Scale – 21 Items (DASS-21), which is derived from the Depression Anxiety and Stress Scale – 42 Items (DASS-42; Lovibond & Lovibond, 1995), is a 21-item self-report measure that requires participants to answer questions relating to feeling depressed, anxious or stressed on a 4-point scale (0 = *did not apply to me at all* to 3 = *applied to me very much*). Symptom severity ratings obtained on the three DASS-21 subscales identify functional/non-functional ranges in terms of depression, anxiety and stress. Scores suggesting a functional range are 0-9 for the Depression scale, 0-7 for the Anxiety scale, and 0-14 for the Stress scale. All three subscales of the DASS-21 have shown to have good internal consistency (α = .73 to .81) and test-retest reliability (r = .71 to .81; Lovibond & Lovibond, 1995).

Client satisfaction. The *Therapy Attitude Inventory* (Breston, Jacobs, Rayfield and Eyberg; 1999), is a 10-item validated measure rating consumer satisfaction with child-behaviour programs on a 5-point scale.

Procedure. The Macquarie University Human Research Ethics Committee approved the study. Participants attended the program at CatholicCare Sydney's office in Sydney's Inner West, where the 1-2-3 Magic & Emotion Coaching group-program (Hawton & Martin, 2010) was delivered twelve times over a 12-month period during this study. Participants paid a fee of AU$30-45 to attend to the program at CatholicCare Sydney. The program is offered without charge to concession-card holders. As an incentive to participate in the study, CatholicCare Sydney provided every study participant with a free copy of the *1-2-3 Magic & Emotion Coaching Workboo*k (Hawton, 2010), which is usually $10. In addition, participants received an AU$10 groceries voucher (provided by the researchers) at 3-month follow-up assessment. No other incentives were offered.

Each delivery of the program consisted of three 2-hour sessions presented over three weeks (6 hours in total). The average group size across the twelve groups was 5.5 (range 2-10). At the beginning of the first session (pre-intervention assessment), participants who met inclusion criteria, and agreed to participate in the study, completed the Information and Consent Form, the demographic questionnaire and all outcome measures (ECBI, PS, and DASS). Participants completed all outcome measures and the client satisfaction measure at the end of the third session (post-intervention assessment), and all outcome measures again after three months. To maintain client confidentiality, CatholicCare Sydney staff posted the three-month follow-up questionnaires and gift vouchers, and participants returned questionnaires via reply-paid mail to the second author's university address. Participants were asked to invent a code name and note it on all questionnaires, so that pre-, post-, and follow-up data could be matched for data analysis.

Intervention. The three 2-hour sessions were based on the manualised Power Point presentation package *1-2-3 Magic & Emotion Coaching Parenting-Program 2010* (Hawton & Martin, 2010). The Power Point presentation includes segments on: approaches to parenting, child development, child behaviour, how to encourage desirable child behaviours, and how to address disruptive child behaviours. In addition, it includes a 75-minute emotion-coaching component that encourages participants to not dismiss children's emotions and provides strategies to coach children in emotion self-regulation (Hawton & Martin, 2010). As part of the standardised program delivery, a 23-minute excerpt from Booth and Phelan's (2004) DVD *1-2-3 Magic: Managing Difficult Behaviour in Children 2-12* was shown, and caregivers were encouraged to use Hawton's (2010) 1-2-3 Magic & Emotion Coaching Workbook. The 52-page workbook contains copies of the program's Power Point slides, summaries of all main topics, additional visual representations of the main points, answers to FAQs, tips sheets, and work sheets. The program developer (Hawton & Martin, 2010)

prescribes strict guidelines on: the length of time that facilitators are to spend on each section of the presentation; which part of the DVD to show; which questions to pose for discussion; and which homework tasks to assign. In addition, program presenters need to have completed a one-day training course in the facilitation of 1-2-3 Magic & Emotion Coaching and need to hold a license to conduct the program. The detailed facilitation guidelines and mandatory training for program facilitators contribute substantially to the program's treatment fidelity (Hawton & Martin, 2010).

A licensed 1-2-3 Magic & Emotion Coaching presenter from the CatholicCare Sydney Parent Education Program facilitated each series of three sessions. All facilitators had completed the one-day 1-2-3 Magic & Emotion Coaching training program and adhered to the prescribed delivery format. Facilitators had between six months and two years' experience in delivering the 1-2-3 Magic & Emotion Coaching program, and between six months and 15 years' experience in facilitating group programs in general. All facilitators, bar one, held tertiary qualifications from the social sciences sector, and included psychologists, social workers, family therapists, and adult education professionals.

Data Analysis. Missing data was minimal and random as it occurred from participants missing questions on questionnaires. When individual items were missing, we imputed these data points according to the recommendations given by the scale developer. Prorating was generally based on the average score that a participant, who had missed a question on a questionnaire, had obtained on the respective subscale of the measure. As only few data points were missing, prorating was below the maximum allowable number of imputed data points. Data were screened to ensure they were suitable for parametic analysis.

The main analyses focused on the comparison of pre-intervention and post-intervention scores. Reported results are based on analyses of the scores obtained for participants who completed both pre- and post-intervention assessment (n = 38). To ascertain

the effect of the intervention, paired t-tests were conducted on the pre-intervention and post-intervention scores of all outcome variables. To ascertain whether intervention effects were maintained over time, paired t-tests were conducted on the post-intervention and follow-up scores of all outcome variables. Reported results are based on analyses of the scores obtained for participants who completed post-intervention assessment and follow-up assessment (n = 16).

Cohen's *d* effect size values (see Cohen, 1988) were calculated for the pre- and post-intervention difference scores of all outcome measures. We also conducted intent-to-treat (ITT) analyses for all outcome variables, taking into account participants who did not complete post-intervention assessment by using pre-intervention scores as post-intervention scores (see Gupta, 2011).

Results

Participant characteristics. Independent-sample t-tests for continuous demographic variables, and chi-square analysis for categorical demographic variables, revealed no significant differences at pre-intervention assessment between those participants who completed the program and post-intervention assessment and those who did not. Similarly, independent-sample t-tests conducted on pre-intervention scores of all outcome variables, showed no difference between program completers and non-completers.

Post-intervention outcomes. As can be seen from the means for pre- and post-intervention scores on the outcome variables and from results obtained from paired sample t-tests (see Table 3), participants reported significantly less frequent child problem behaviours, a less permissive parenting style, less parental depression, and less overall stress at post-intervention (immediately after the last session) as compared to pre-intervention.

Table 3

Means and standard deviations at pre-intervention, post-intervention, and 3-month follow-up; and intervention effects at post-intervention and 3-month follow-up

Measure	Pre-intervention		Post-intervention		3-month follow-up		Pre vs post comparison (Paired *t*-test)			Post vs follow-up comparison (Paired *t*-tests)	
							n = 38			n = 16	
	M	*SD*	*M*	*SD*	*M*	*SD*	*t* (df)	*p*	*d*	*t* (df)	*p*
ECBI											
Intensity scale	126.63	25.11	116.71	26.59	113.00	25.19	2.73(37)	.010	.38	1.38(15)	.188
Problem scale	14.18	7.24	13.3	9.24	9.86	8.57	0.70(37)	.488	.11	.87(15)	.401
PS											
Laxness scale	14.16	4.23	12.44	4.55	10.86	3.70	2.47(37)	.019	.39	.37(15)	.718
Over-reactivity scale	18.03	5.57	16.42	4.43	15.42	5.35	1.87(37)	.071	.32	.48(15)	.638
DASS											
Depression scale	7.06	8.59	4.35	5.40	6.00	7.27	2.05(37)	.048	.38	1.78(15)	.097
Anxiety scale	4.06	4.86	2.88	4.07	3.38	6.88	1.38(37)	.175	.26	.42(15)	.678
Stress scale	13.03	9.40	9.54	6.91	11.75	10.58	2.54(37)	.016	.42	.88(15)	.395

d = Cohen's *d* effect values

Participants' ratings of the severity of their target child's problem behaviour, participants' authoritarian parenting style, and participants' levels of anxiety did not change significantly from pre- to post-intervention assessment.

We calculated effect sizes for the pre- and post-intervention difference scores on all outcome variables (see Table 4). Cohen's *d* effect values (see Cohen, 1988) suggest overall small practical significance of results: ECBI Intensity Scale (frequency of child problem behaviours), *d* = .38; PS Laxness scale (permissive parenting style), *d* = .39; PS Over-reactivity scale (authoritarian parenting style), *d* = .32; DASS Depression scale (parental

depression), d = .38; DASS Anxiety scale (parental anxiety), d = .26; and DASS Stress scale (parental stress), d = .42.

Three-month follow-up outcomes. As can be seen from the means for post- and 3-month follow-up scores on the outcome variables and from the results obtained from paired-sample t-tests (see Table 3), intervention effects were maintained after three months.

Intent to treat. For the intent to treat (ITT) analyses, pre-intervention scores were used as post-intervention scores for the twelve participants who did not attend the last session and assessment at post-intervention. Results from ITT analyses were overall comparable to those obtained when only analysing scores from study completers: ECBI Intensity scale, t (49) = 2.32, p = .025; PS Laxness scale, t (49) = 2.36, p = .023; DASS Stress scale, t (49) = 2.39, p = .021. The only exception was that the effect of time was no longer significant for parental depression levels at post-intervention.

Participant satisfaction. The mean obtained on the Therapy Attitude Inventory (range 10-50) was 38.95 (SD = 3.88; range 31-49), suggesting that participants were satisfied with the intervention program.

Discussion

Intervention effects. This study examined for the first time the effectiveness of the 1-2-3 Magic & Emotion Coaching parenting-program (Hawton & Martin, 2010) when the program is delivered as a brief manualised group-program (three 2-hour sessions) in an Australian typical metropolitan community-services setting. As expected, caregivers reported significantly fewer disruptive child behaviours (ECBI Intensity scale), a significantly less permissive parenting style (PS Laxness scale), and significantly less parental depression and stress (DASS Depression and Stress subscales), at post-intervention as compared to pre-intervention assessment, and these results were maintained after three months. Effect sizes

were in the small range on all significant outcome variables and, hence, smaller than those obtained when the 1-2-3 Magic & Emotion Coaching program was delivered as part of a randomised controlled trial (Porzig-Drummond et al., 2014), and in a rural community-service setting (Flaherty & Cooper, 2010). One reason for this could be that caregivers did not have sufficient time to implement the strategies. Post-intervention assessment was conducted at the end of session three (the last session of the program), giving caregivers only enough time to implement strategies learned in session one and two. Interestingly, when comparing pre-intervention scores to scores obtained at 3-month follow-up assessment, caregivers' rating of their child's behaviour as problematic had decreased significantly (t[15] = 2.81, p = .015), and caregivers' authoritarian parenting style had also decreased significantly (t[15] = 2.6, p = .025).

Intervention effects of the *1-2-3 Magic & Emotion Coaching* program on child behaviour, dysfunctional parenting, and parental adjustment obtained in the current study are, overall, lower than those reported for the same program in a recent randomised controlled trial (Porzig-Drummond et al., 2014). A direct comparison between the two studies cannot be made due to different study designs and different measures of dysfunctional parenting. However, the pattern of difference in effect sizes across outcome variables suggest the possibility that intervention effects may be reduced when the program is translated from a controlled setting to a 'real life' setting. On the other hand, the difference in magnitude between intervention effects obtained in the current study and those reported by Porzig-Drummond and colleagues (2014) could also be due to the time span participants had to implement strategies. In the current study, participants had two weeks or less before post-assessment to implement the program's strategies, as compared to four to six weeks reported by Porzig-Drummond and colleagues (2014).

Causal effects of the intervention on child problem behaviours, parental adjustment,

and dysfunctional parenting cannot be presumed. A parenting intervention could be affecting outcomes on all three variables directly or a reduction in scores on one variable could be mediated by a reduction in scores on one or both of the other two variables. Whichever the case, it would be reasonable to interpret results obtained in the current study as being indicative of a relationship between the 1-2-3 Magic & Emotion Coaching parenting-program intervention and reductions in child problem behaviour, dysfunctional parenting, and parental adjustment.

Strengths. A major strength of the current study is its high treatment fidelity due to program delivery by trained facilitators who strictly adhered to the program's manualised format. A further strength is that this study was conducted in Australia and, hence, expands the pool of parenting programs that have been evaluated in Australia. A third strength is the use of a typical metropolitan community-service sample, as significant changes in parent or child behaviour observed in this setting can be expected in the general metropolitan parent population. One drawback using a community-service sample is that findings cannot be generalised to clinical populations.

Limitations. The main limitation of the current study is the absence of a comparison group. Without a comparison, it is possible that changes in child behaviour, parenting style and parental adjustment could have been due to factors inherent to parenting programs in general, such as the support experienced in a group setting or the interest generated by engaging with the topic of parenting. Waitlist-control groups or attention-control groups are not suitable in a community-service setting, as they would not provide the required care, but future studies could employ a comparison-group design using a comparable evidence-based parenting intervention program (see Spring & Neville, 2011).

Another potential limitation of the current study is that more than half the sample was tertiary educated, married, and had an above-average household income; hence, findings

cannot be generalised to populations with overall lower education levels, lower income, or more single-parent families. On the other hand, the effectiveness of the 1-2-3 Magic & Emotion Coaching parenting-program with clinical, lower-income and lower-education populations has been shown previously (Flaherty and Cooper; 2010). A further limitation of the current study is the exclusive use of caregiver-report measures. The risk of demand characteristics was somewhat mitigated through the anonymous nature of data collection, with participants using a code name when completing questionnaires. Nevertheless, future research would benefit from using additional measures, such as observational, partner-report or teacher-report measures. Furthermore, the small sample size poses a limitation, as it does not allow meaningful investigation of the influence of parent or child demographic variables, such as gender and age, on intervention outcomes. Given the above limitations, results from the current study are preliminary in nature. As outlined above, conducting post-intervention assessment at the end of the last session may have reduced the magnitude of effect sizes in this study. Therefore, in addition to addressing above limitations, future studies could consider conducting post-intervention assessment at least one week after program completion so that participants have sufficient time to implement strategies from all three sessions.

General Discussion

The aim of this study was to examine the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2010) in an Australian 'real-world' community setting. The survey ascertained for the first time who uses the program and with which client groups. Findings from our survey of 153 practitioners who had completed training for the program suggest that the 1-2-3 Magic & Emotion Coaching parenting-program is delivered predominantly in community-services settings, followed by educational settings. Survey results also revealed that practitioners deliver the program to caregivers with children spanning the developer-

recommended age range of 2-12 years, and that practitioners view the program as being useful across this age group.

The evaluation study examined for the first time the effectiveness of the 1-2-3 Magic & Emotion Coaching parenting-program as a brief manualised group-program (three 2-hour sessions) in a typical metropolitan community-services setting in Australia. Results provide preliminary evidence that the 1-2-3 Magic & Emotion Coaching group parenting-program (Hawton & Martin, 2010) is effective at reducing child problem behaviour and dysfunctional parenting styles, and at improving parental adjustment, when delivered in this setting.

In conclusion, the 1-2-3 Magic & Emotion Coaching parenting-program provides strategies for parents to reduce child problem behaviours (an essential component of effective parenting programs), is brief and available in a manualised group-format (increasing caregiver engagement and decreasing delivery costs), and has shown to be effective at decreasing child problem behaviours and dysfunctional parenting in a variety of Australian settings (controlled as well as 'real world'). This study has contributed to the evidence base of parenting programs in an Australian context, and has provided preliminary evidence that results obtained from a previous study, which was conducted in a typical university research setting with largely self-motivated parents (Porzig-Drummond et al., 2014), translates to the 'real world' setting of a typical Metropolitan community-services setting.

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SUMMARY AND CONCLUSIONS

Over the past decades an increasing body of evidence has shown that the physical punishment of children is associated with long-term adverse psychological and social outcomes for these children and, moreover, that physical punishment increases the risk of child physical abuse (Gershoff, 2013). Accordingly, the Committee on the Rights of the Child (CRC), the monitoring body of the *United Nations Convention on the Rights of the Child* (*UNCRC*; United Nations, 1989), has urged the Australian Government, who ratified the UNCRC in 1990, to follow the lead of the 85 countries who have implemented or are committed to implement legislation against physical punishment of children (CRC, 1997, 2012; Global Initiative to End All Corporal Punishment of Children, 2014). In tandem, the CRC has urged the Australian Government to raise public awareness about the detrimental effects of physically punishing children and to promote alternative strategies in order to curb harsh parenting practices (CRC, 2012). Australian professional associations, such as the Royal Australasian College of Physicians – Paediatric & Child Health Division (RACP, 2013), support this view and promote the use of alternative disciplining strategies to caregivers. Nevertheless, the Australian Federal Government does not consider law reform regarding parental physical punishment of children (Attorney-General's Department, 2012) and, thus, children – who are arguably among the most vulnerable sector of the population - remain the only people in Australia who can be legally assaulted (New South Wales Department of Justice and Attorney General, 2010; Oates, 2010; Saunders, 2013). In line with this, most Australian caregivers condone the parental physical punishment of children (Tucci, Mitchell, Goddard, 2006), based on beliefs that the physical punishment of children is a parent's right, is harmless, effective, and a practice without viable alternatives (Durrant & Ensom, 2012; Taylor, Hamvas, Rice, Newman, & De Jong, 2011).

The overarching aim of this thesis was to contribute to the body of knowledge that

supports the reduction and eventual cessation of parental physical punishment of children in Australia. The specific aims of this thesis were: (1) to review the current findings on the effects of physical punishment of children, and to review and discuss related Australian public opinion and policies in the context of international directions; (2) to review the Australian evidence base of parenting programs that provide alternative disciplining strategies, are effective at reducing child disruptive behaviours and dysfunctional parenting, and are suitable for a public health approach; and (3) to assess the effectiveness of one such program, the 1-2-3 Magic parenting program, in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in formats that are suitable for a public health approach.

Aim 1: Review the current findings on the effects of physical punishment of children, and review and discuss related Australian public opinion and policies in the context of international directions (Paper One).

Paper One reviewed current findings on: (1) the psychological and physical risks of physical punishment of children; (2) the effectiveness of physical punishment as a disciplining strategy; (3) current legislation and public opinion surrounding the parental physical punishment of children in Australia; and (4) findings from countries that successfully changed their policies and helped caregivers move on from the physical punishment of children. First, there are numerous long-term detrimental effects associated with the physical punishment of children: an increase in disruptive behaviours in children and an increase of antisocial behaviours in these children as adults; mental illness including anxiety, depression, addiction, and personality disorders; aggressive response patterns in conflict situations; and, for parents, losing control and escalating physical punishment to child physical abuse (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Anoula & Nurmi, 2005; Gershoff, 2010; Gershoff, Lansford, Sexton, Davis-Kean, & Sameroff, 2012). Second,

physical punishment is not an effective long-term parenting strategy (Australian Psychological Association, 2014; RACP, 2013), as it increases rather than reduces disruptive behaviour over the long-term (Gershoff, 2010). By contrast, cognitive-behavioural disciplining strategies are equally effective as physical punishment in obtaining children's immediate compliance, and more effective in achieving long-term behaviour change (Centers for Disease Control and Prevention [CDC], 2009; Furlong et al., 2012; Tully, 2008). Third, the defence of lawful correction, which is available to parents in all Australian states and territories, contravenes several articles of the UNCRC (United Nations, 1989; CRC, 2011, 2006). Moreover, the current lack of definitions in legislation and common law in all Australian states and territories leave Australian children vulnerable to child physical abuse (Naylor & Saunders, 2009; Tucci et al., 2006).

Public opinion in Australia is in favour of parental rights to physically punish children and most Australian caregivers consider physical punishment to be an effective disciplining strategy (Godfrey, 2011; Tucci et al., 2006). Caregivers' views are based on perceived social norms, the mistaken belief that physical punishment is harmless, a perceived absence of alternative disciplining strategies, and a fear of prosecution if physical punishment were to be prohibited (Bell & Romano, 2012; Modig, 2014; Taylor et al., 2011). Findings from New Zealand and several European countries that have successfully changed public opinion and caregivers' disciplining practices have shown that all of the parental concerns and perceptions outlined above need to be addressed in order to achieve lasting change (Boyson, 2012; Lawrence & Smith, 2009; Modig, 2014). The key strategies identified to facilitate this change process are: (i) law reform with the intention to introduce a new standard rather than prosecute (Modig, 2104; Saunders, 2013); (ii) raising public awareness about the adverse effects of physical punishment and the effectiveness of alternative disciplining strategies (Boyson, 2012; CRC, 2012); and, crucially, (iii) a public health approach to the dissemination

of easily accessible evidence-based parenting programs that provide caregivers with alternative disciplining strategies (Bussmann, Erthal, & Schroth, 2010; CRC, 2012; Shmueli, 2010).

Aim 2: Review the Australian evidence base of parenting programs that provide alternative disciplining strategies, are effective at reducing child disruptive behaviours and dysfunctional parenting, and are suitable for a public health approach (Paper Two).

To be suitable for a public health approach, parenting programs need to be cost-effective in terms of delivery (by being brief and available in group- and self-directed formats), manualised (to increase treatment fidelity), easily accessible (for example, through self-administration), and evidence-based in the cultural context in which they will be used (National Institute of Clinical Excellence and Social Care [NICE], 2006; Breitenstein, Gross, Garvey, Hill, Fogg, & Resnick, 2010; Hindman, Brooks, & van der Zwan, 2012; Jacobs, Jones, Gabella, Spring, & Brownson, 2012; O'Brien & Daley, 2011). Based on these criteria, this narrative literature review (Paper Two) identified and discussed for the first time the parenting programs that: are manualised; provide alternative disciplining strategies; are effective at reducing child disruptive behaviour and dysfunctional parenting; are available in group- or self-directed formats; and have been evaluated in these formats in Australia.

The literature search conducted at the beginning of this research project identified only four group-based programs that fitted the above criteria (*1-2-3 Magic & Emotion Coaching* [Hawton & Martin, 2006]; *Parenting Wisely* [Gordon, 2000]; *Group Triple P* [Sanders, 1999]; and *Tuning into Kids* [Havighurst & Harley, 2007]) and self-directed formats based on only two programs (*Self-directed Triple P* [Markie-Dadds & Sanders, 2006] and *Parenting Wisely* [Gordon, 2000]). Considering that Parenting Wisely targets an older age bracket of children (9-18) (Kacir & Gordon, 1999), and that results for 1-2-3 Magic &

Emotion Coaching were preliminary in nature (Flaherty & Cooper, 2010), the choice of evidence-based group programs in Australia was limited to Group Triple P (Sanders, 1999) and Tuning into Kids (Havighurst, Wilson, Harley, & Prior, 2009), and the choice of evidence-based self-directed programs was limited to Triple P (Markie-Dadds & Sanders, 2006).

Triple P (Sanders, 1999) has the largest evidence base of any parenting program in Australia when taking evidence for the five levels and different versions of the program into account (Wade, Macvean, Falkiner, Devine, & Mildon, 2012) and the New South Wales (NSW) Government took an important step towards providing caregivers with parenting strategies by funding dissemination of Triple P in NSW (Gaven & Schorer, 2013; Horin, 2009). Nevertheless, according to community service and social workers, it is also important for those working with families to be able to choose the most suitable program for their client group and to not be restricted to a single program (Horin, 2009; Martin, 2013). Consequently, the next step taken in this research project was to expand the evidence base of parenting programs in Australia that provide alternative disciplining strategies, are effective at reducing child disruptive behaviours, and are suited to a population-level delivery approach.

Aim 3: Assess the effectiveness of one such program, the 1-2-3 Magic parenting program, in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in formats that are suitable to a public health approach (Papers Three, Four, and Five).

The 1-2-3 Magic parenting program (Phelan, 2010; Hawton & Martin, 2010) was selected based on a number of factors, including the program's: focus on disciplining strategies based on cognitive, behavioural and social learning theories; effectiveness in reducing child disruptive behaviours and dysfunctional parenting (Bradley et al., 2003; Flaherty & Cooper, 2010); manualisation; brevity (three 2-hour sessions); and availability in

group- as well as self-directed formats.

Paper Three (group-based program delivery)

The first experimental study (Paper Three) compared two group formats of the 1-2-3 Magic program (DVD-based and presentation-based). At the same time, two versions of the program were examined, as the DVD-based program was based on the American version of 1-2-3 Magic (Phelan, 2010; Booth & Phelan, 2004a, 2004b) and the presentation-based version was based on the Australian version of 1-2-3 Magic, which includes an additional emotion-coaching component (Hawton & Martin, 2010). Importantly, both formats were delivered for the first time to large groups of 30 caregivers. As parenting programs are generally limited to groups of up to 16 caregivers, this element of the study was crucial when considering cost-effectiveness (see NICE, 2006).

Both program formats, the DVD-based version of the *1-2-3 Magic Effective Discipline for Children* parenting program (Phelan, 2010b) and the presentation-based *1-2-3 Magic & Emotion Coaching* parenting program (Hawton & Martin, 2010), were found to be effective at reducing dysfunctional parenting and child problem behaviours when compared to a waitlist control. Caregivers in both intervention groups reported significantly fewer and less severe disruptive behaviours by their children (ECBI Intensity and Problem scales) at post-intervention as compared to the control group. Caregivers in both intervention groups also reported significantly less dysfunctional parenting (PSI-SF) and an improvement in parental adjustment (DASS) at post-intervention, when compared to the control group. In addition, caregivers in the 1-2-3 Magic & Emotion Coaching group reported a significantly less emotion-dismissing parenting style (but not an increase in emotion-coaching parenting style) at post-intervention than caregivers in the 123-Magic DVD group and the control group. All intervention effects were maintained at 3-month and 2-year follow-up.

Crucially, this study showed for the first time that a brief (three 2-hour session)

parenting program is effective at reducing child disruptive behaviours and dysfunctional parenting when delivered to large groups of caregivers. Based on these findings, both the DVD-based and the presentation-based group formats of the 1-2-3 Magic parenting program are considered to be well suited for inclusion in a public health approach to the dissemination of parenting programs, with the aim to provide caregivers with alternative disciplining strategies and to halt the use of harsh parenting practices.

Paper Four (self-directed program delivery)

The second experimental study (Paper Four) investigated for the first time a brief self-directed version of the 1-2-3 Magic parenting program, consisting of caregivers viewing two 1-2-3 Magic videos (Booth & Phelan, 2004a, 2004b) without therapist assistance. Caregivers in the intervention group reported significantly fewer and less severe disruptive behaviours by their children (ECBI) at post-intervention when compared to control-group participants. In addition, caregivers in the intervention group reported overall significantly less dysfunctional parenting (PSI-SF) at post-intervention when compared to control-group participants. All results were maintained after six months. The self-directed program did not impact parental adjustment (as measured by the DASS), whereas the group-format of the program improved caregivers' scores on parental adjustment measures (DASS). One reason for this could be that improvements in parental adjustment are related to the interaction with other parents in the group, or therapist assistance, rather than the program itself.

Effect sizes obtained for the main outcome variables (ECBI and PSI-SF) were comparable to effect sizes reported for similar variables in other studies of self-administered parenting programs (Enebrink, Högström, Forster, & Ghaderi, 2012; Morawska & Sanders, 2006; Sanders, Baker, & Turner, 2012). However, these effect sizes were smaller than those obtained for the same outcome variables when the program was delivered in group-format (see Paper Three). Although effect sizes obtained in the two studies cannot be compared

directly due to the studies' different methodologies, the difference in effect size could indicate that delivery format affects the degree to which 1-2-3 Magic programs reduce child problem behaviours and dysfunctional parenting. Greater effectiveness of the program when delivered in group-format could be due to feedback from the therapist or other participants. Such a delivery-format and outcome relationship would be in line with published results for comparable parenting programs (Cotter, Bacallao, Smokowski, & Robertson, 2013; Sanders, Markie-Dadds, Tully, & Bor, 2000). On the other hand, the difference in effect size between the two delivery formats could also simply be due to the difference in program length (4 hours for the self-administered program and 6 hours for the group-based program).

As compared to the group-format, the self-directed video-based format also has several benefits. The self-administered format is more cost-effective (no therapist assistance), has increased treatment fidelity (based only on DVD), and can overcome the common barriers to engagement in parenting interventions. Such barriers include: work commitments; travel cost, time and distance; child care cost and availability; perceived stigma; and concerns about confidentiality (Forgatch, Patterson, & Gewirtz, 2013; Koerting et al., 2013; O'Brien & Daley, 2011; Tarver, Daley, Lockwood, & Sayal, 2014). The role of self-administered parenting programs in a public health approach to program delivery may be increasing over the coming decade, as self-administered programs are potentially the most cost-effective form of delivery (Enebrink et al., 2012; Sampaio & Feldman, 2014) and can reach caregivers who might not otherwise engage in a parenting program (Forgatch et al., 2013; Tarver et al., 2014).

In summary, this study showed for the first time that a self-directed video-based format of the 1-2-3 Magic parenting program is effective at reducing child disruptive behaviours and dysfunctional parenting. Due to the comparatively small sample size (n=62), these findings are considered preliminary in nature. Nevertheless, based on the results

obtained in the current study, and given the program's brevity and low delivery cost, it is suggested that the self-directed format of the 1-2-3 Magic parenting program is potentially suitable for inclusion in a public health approach to program delivery, with the aim to provide caregivers with alternative disciplining strategies and halt harsh parenting practices.

Paper Five ('real world' application)

The real world application of the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2010) was explored through a survey and an evaluation study. The survey identified for the first time the professional groups that use the program and the client groups who attended the program. Responses from 153 licensed NSW program facilitators indicated that the 1-2-3 Magic & Emotion Coaching program: is used predominantly in community-service settings and educational settings; is used with a diverse population of caregivers with children aged 2-12 years; and is viewed as beneficial across this age group.

The evaluation study investigated for the first time the effectiveness of the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2010) in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in group-format in a typical metropolitan community-services setting in Australia. Caregivers reported significantly fewer disruptive behaviours by their children (ECBI Intensity scale), a significant reduction in permissive parenting style (PS Laxness scale), and significantly less parental depression and stress symptoms (DASS Depression and Stress subscales), at post-intervention as compared to pre-intervention assessment. These results were maintained after three months. Effect sizes for improvements in child behaviour, dysfunctional parenting, and parental adjustment obtained in this study were, overall, smaller than those obtained when the program was delivered to caregivers in a controlled setting (Paper Three). Although a direct comparison between the two studies cannot be made due to the studies' different designs and use of different measures of dysfunctional parenting, the difference in effect sizes could

indicate that the program may be less effective when delivered in a community service setting. Another reason for the smaller effect sizes obtained in this study could be that caregivers had less time to implement strategies (two weeks or less in the current study as compared to six weeks in the controlled study).

This study showed for the first time that the 1-2-3 Magic & Emotion Coaching program (Hawton & Martin, 2010) is effective in reducing child disruptive behaviours and dysfunctional parenting when the program is delivered in a group-format in a typical metropolitan community-services setting in Australia. Due to the intervention-group only design of this study, and due to the comparatively short time caregivers had to implement strategies between pre and post assessment, the findings of this study are considered preliminary in nature.

Strengths and Limitations

The outcome studies have a number of strengths and limitations. The first strength was treatment fidelity, which was high in all three studies due to manualised program materials (presentation package or DVD). Another strength was the large group size (more than 30) that was employed in the first experimental study (Paper Three). This group size was a strength because group size impacts directly on cost-effectiveness and delivery to groups this size had not been investigated previously in an Australian context. In the self-directed study, digital program delivery (online or DVD) and online data collection were strengths, as these overcame geographical boundaries and potential missing data points.

A limitation that applied to all studies was that the majority of participants were tertiary educated, married, and had an above-average household income. This limits generalizability of the results to single-parent families and populations with lower education and socio-economic characteristics. However, this limitation is mitigated as the effectiveness of the group-based 123 Magic program with clinical, lower-income and lower-education

populations had been shown previously (Flaherty & Cooper, 2010). Another limitation in all three studies was the exclusive use of self-report measures for child behaviour variables. Although ECBI scores have been shown to correlate highly with behavioural validation reports (Rosanbalm & Christopoulos, 2011), future studies would benefit from adding third-party observational measures of child behaviour. Add In the two controlled studies (Papers Three and Four), the use of a waitlist control was a limitation, as nonspecific factors common to all group programs, such as discussions in a group setting, could have inflated intervention effects. Future studies could use an attention control group, where participants attend group discussion sessions that do not include parenting strategies (see Gallin & Ognibene, 2012). A limitation of the study conducted in the community service setting was the absence of a control group, as improvements in outcome variables could have been due to unknown events occurring in that community at the time. Waitlist- or attention-control groups are not feasible in community-service settings due to duty of care, but future studies could use an alternative evidence-based parenting program as a comparison group (see Spring & Neville, 2011). Finally, larger sample sizes would have allowed the researcher to explore whether the age and gender of children and caregivers moderate intervention outcomes.

Future Directions

With a view to providing Australian caregivers with alternative disciplining strategies and prevent or halt the use of harsh disciplining practices, there are several directions to consider for future research. First, the 1-2-3 Magic parenting program could be examined with specific populations in Australia, such as caregivers with children with Attention Deficit Hyperactivity Disorder (ADHD). The 1-2-3 Magic program has been shown to be effective in improving parental disciplining strategies when the program was incorporated into an 8-week behavioural and social skills training program for 100 children diagnosed with ADHD and their caregivers (Tutty, Gephart, & Wurzbacher, 2003). Second, the choice of evidence-

based parenting programs in Australia could be further expanded, for example, by investigating the Incredible Years parenting program (Webster-Stratton, 2005). The group-format of the Incredible Years program has a large international evidence base (McGilloway et al., 2013), but appears to not have been evaluated in Australia to date. Future studies could build on findings from a New Zealand pilot study of the Incredible Years Basic Parent Program (IYBPP; Webster-Stratton, 2005), which found that IYBPP was effective at reducing child disruptive behaviours (Fergusson, Stanley, & Horwood, 2009). Given the benefits of self-directed programs, particularly cost-effectiveness and overcoming barriers to program delivery, and given the relative scarcity of evidence-based self-directed parenting programs in Australia, self-directed delivery format is an important avenue of enquiry (Breitenstein, Gross, & Christopheren, 2014). A third, important direction for future research is to assess strategies for the promotion and implementation of parenting programs at a population level, as well as to caregivers who have been identified to be at risk of physically punishing their children (Mistry et al., 2012). Results from large-scale dissemination trials of parenting programs in community settings in the UK have shown the effectiveness of parenting programs in improving parenting skills and reducing child disruptive behaviours (Lindsay et al., 2011; O'Neill, McGilloway, Donnelly, Bywater, & Kelly, 2013). Finally, it will be crucial to investigate which parenting programs from the pool of evidence-based programs in Australia, and which delivery format, maximise improvements in non-physical disciplining strategies for caregivers who are at higher risk of physically punishing their children (for example, younger caregivers or caregivers with lower education and income levels).

Concluding Comments

The overarching aim of this thesis was to contribute to the body of knowledge that supports the reduction and eventual cessation of parental physical punishment of children in Australia.

A summary of the issues surrounding the abolition of physical punishment of children identified the provision of alternative disciplining strategies to caregivers as a key component in effecting lasting parental attitudinal and behavioural change (CDC, 2009; CRC, 2012). A narrative literature review of the literature revealed a limited choice of parenting programs that provide alternative disciplining strategies, are suitable for a public health approach, and have been evaluated in Australia. Consequently, the 1-2-3 Magic parenting program was selected to be investigated in two formats that are suitable to a public health approach, and the program's effectiveness in reducing child disruptive behaviours and dysfunctional parenting was examined. The main findings from three outcome studies were that the program is effective: (1) when delivered in a brief (three 2-hour sessions) group-format to large groups of 30 caregivers; (2) when delivered in a brief (two 2-hour DVDs) video-based self-directed format; and (3) when delivered in group-format in an Australian metropolitan community service setting. Results from the community service sample were preliminary in nature.

In sum, a key factor in reducing and eventually halting the physical punishment of children in Australia is to change parental attitudes and behaviour regarding harsh disciplining practices. Essential components towards achieving this change are awareness campaigns and providing caregivers with alternative disciplining strategies. This thesis has contributed in two ways to the body of evidence that supports the cessation of physical punishment of children in Australia. First, it identified that there is a limited evidence base of parenting programs in Australia that provide alternative discipline strategies and are available in formats suitable to a public health approach. Second, it expanded this evidence base through the evaluation of group-based and self-directed formats of the 1-2-3 Magic parenting program.

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APPENDIX A

Ethics Approvals

MACQUARIE UNIVERSITY

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22 May 2009

Ms Renate Porzig-Drummond
120 Clyde St
North Bondi
NSW 2026

Reference: HE29MAY2009-M06582HS

Dear Ms Porzig-Drummond,

Title of project: 1-2-3 Magic Professional User Survey

The above application was reviewed by The Faculty of Human Sciences Sub-Committee of the Ethics Review Committee (Human Research). The Sub-Committee wishes to thank you for a thorough and well prepared application. Approval of the above application is granted, effective 15th May 2009 and you may now proceed with your research.

STANDARD REQUIREMENTS ATTACHED TO APPROVAL:

1. Approval will be for a period of twelve (12) months. At the end of this period, if the project has been completed, abandoned, discontinued or not commenced for any reason, you are required to submit a Final Report on the project. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. The Final Report is available at: http://www.research.mq.edu.au/researchers/ethics/human_ethics/forms

2. However, at the end of the 12 month period if the project is still current you should instead submit an application for renewal of the approval if the project has run for less than five (5) years. This form is available at http://www.research.mq.edu.au/researchers/ethics/human_ethics/forms. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report (see Point 1 above) and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

3. Please remember the Sub-Committee must be notified of any alteration to the project.

4. You must notify the Sub-Committee immediately in the event of any adverse effects on participants or of any unforeseen events that might affect continued ethical acceptability of the project.

MACQUARIE UNIVERSITY

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Ethics
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31 March 2010

Professor Richard Stevenson
C3A 321

Reference: 5200903518

Dear Professor Stevenson

FINAL APPROVAL

Title of project: ***1-2-3 Magic evaluation study***

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research. The following personnel are authorised to conduct this research:

Professor Richard Stevenson- Chief Investigator/Supervisor
Dr Caroline Stevenson, Ms Renate Porzig-Drummond - Co-Investigators

Please note the following standard requirements of approval:

1. The approval of this project is **conditional** upon your continuing compliance with the *National Statement on Ethical Conduct in Human Research (2007)*.

2. Approval will be for a period of five (5 years) subject to the provision of annual reports. **Your first progress report is due on 31/03/2011.**

   If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report on the project.

   Progress Reports and Final Reports are available at the following website:
   http://www.research.mq.edu.au/researchers/ethics/human_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

Subject: Final Approval- Ethics application reference-5201100254
Date: Thursday, 9 June 2011 3:39:19 PM Australian Eastern Standard Time
From: Ethics Secretariat
To: Professor Richard Stevenson
CC: renata@ozemail.com.au

Dear Professor Stevenson

Re: "1-2-3 Magic Evaluation Study II" (Ethics Ref: 5201100254)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Professor Richard Stevenson- Chief Investigator/Supervisor
Dr Caroline Stevenson & Ms Renate Porzig-Drummond- Co-Investigators

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports. Your first progress report is due on 09 June 2012.

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse

Subject: Approved- Ethics application- Stevenson (Ref No: 5201200845)
Date: Tuesday, 15 January 2013 9:11:00 AM Australian Eastern Daylight Time
From: Ethics Secretariat
To: Prof Dick Stevenson
CC: Dr Caroline Stevenson, Ms Renate Porzig-Drummond
Category: private - follow up

Dear Prof Stevenson

Re: "1-2-3 Magic Evaluation Study III" (Ethics Ref: 5201200845)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Caroline Stevenson
Ms Renate Porzig-Drummond
Prof Dick Stevenson

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 15 January 2014
Progress Report 2 Due: 15 January 2015
Progress Report 3 Due: 15 January 2016
Progress Report 4 Due: 15 January 2017
Final Report Due: 15 January 2018

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew

APPENDIX B

Published Papers

Paper One

'Help, not punishment': Moving on from physical punishment of children

Renata Porzig-Drummond

Children Australia / Volume 40 / Issue 01 / March 2015, pp 43 - 57
DOI: 10.1017/cha.2014.47, Published online: 14 April 2015

Link to this article: http://journals.cambridge.org/abstract_S1035077214000479

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Volume 40 | Number 1 | pp. 43–57 | © The Author(s) 2015 | doi:10.1017/cha.2014.47

'Help, not punishment': Moving on from physical punishment of children

Renata Porzig-Drummond
Macquarie University (PhD Candidate)

Although the physical punishment of children is overall an ineffective disciplining strategy, has adverse long-term psychological effects, and carries the risk of physical punishment escalating into child abuse, parental physical punishment is lawful in all Australian states and territories within the bounds of lawful correction or reasonable chastisement. What is considered to be reasonable is open to considerable interpretation, which further increases the risk of physical harm to children. Physical punishment of children also contravenes the United Nations *Convention on the Rights of the Child*, which Australia has ratified. Although more effective disciplining strategies, such as cognitive-behavioural parenting strategies, are available and have been advocated by professional organisations, the vast majority of Australian parents condone parental physical punishment of children and are opposed to its prohibition. Predictors for this stance include perceived social norms, the belief that physically punishing children is an effective disciplining strategy and a parent's right, a perceived absence of alternative parenting strategies, and fear of prosecution if physical punishment were to be banned. Countries that have phased out the physical punishment of children have demonstrated that, to encourage a shift in parental attitudes and behaviours, public awareness about the detrimental effects of physical punishment and the effectiveness of alternative disciplining strategies needs to be raised. Additionally, parents require support through free and convenient access to evidence-based parenting programmes that promote alternative disciplining strategies; and the defence of lawful correction needs to be repealed, with the aim of setting a new standard, as well as education rather than prosecution.

■ **Keywords:** corporal punishment, physical punishment, parenting programs, child discipline

Introduction

Physical punishment of children by their parents remains a contentious issue in many parts of the community, including parents, psychologists, medical and legal practitioners, and policy makers. Physical punishment is 'the use of physical force with the intention of causing a child to experience bodily pain or discomfort so as to correct or punish the child's behavior' (Gershoff, 2008, p. 9). This includes hitting, slapping, smacking and spanking a child (Australian Institute for Family Studies (AIFS), 2014; Holzer & Lamont, 2010). Those in favour of physical punishment of children maintain that it is an effective and harmless strategy to immediately stop children's aggressive behaviours (Baumrind, 2008; Larzelere & Kuhn, 2005). Opponents of physical punishment argue that physical punishment carries the risk of inflicting physical and psychological harm on children, and that it models aggressive responses to conflict (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Australian Psychological Society (APS), 2014; Oates, 2010). Moreover, non-physical disciplining strategies, particularly cognitive-behavioural strategies, are as effective in obtaining immediate compliance and more effective in achieving lasting behaviour change (Durrant & Ensom, 2012; Furlong et al., 2012; Gershoff, 2010, 2013).

Australian state and territory legislation or common law distinguish between child physical abuse, which is prohibited, and parental physical punishment, which is permitted as a parental disciplinary measure as long as 'reasonable' force is used for the purpose of *lawful correction* or *reasonable chastisement* (Alexander, Naylor, & Saunders, 2011; Australian Institute of Family Studies, 2014). Whereas some believe that the defence of lawful correction does not interfere with protecting children from excessive physical

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Paper Three

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The 1-2-3 Magic parenting program and its effect on child problem behaviors and dysfunctional parenting: A randomized controlled trial

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ABSTRACT

This study investigated the effectiveness of the 1-2-3 Magic parenting program, a brief cognitive-behavioral program, when delivered to large groups of caregivers. The effectiveness of two versions of the programs in reducing child problem behaviors and dysfunctional parenting, and the effect on emotion-related parenting style, were examined. Ninety-two participants with 2–12-year-old children were randomly assigned to one of three groups: DVD (n = 31); Emotion-coaching (EC) (n = 31); or Waitlist-control (n = 30). Both intervention groups reported significantly decreased child problem behaviors, dysfunctional parenting, parental depression and parental stress at post-intervention as compared to the control group. Additionally, the DVD group reported decreased parental anxiety, and the EC group reported a decrease in emotion-dismissing parenting style. Emotion-coaching parenting style remained unchanged for all groups at post-intervention. The results were maintained after three months. After two years, all intervention effects were maintained for the DVD group. For the EC group, effects were maintained on the main outcome variables. The results suggest that both 1-2-3 Magic programs are effective at reducing child problem behavior and dysfunctional parenting when delivered to large groups of caregivers, and that both programs are suitable for a broad delivery approach.

Introduction

Twenty-three percent of caregivers in Australia report problem behaviors in their child, such as yelling, arguing, fighting, hitting and temper tantrums, in the clinically elevated range (Sanders, 2008; Sanders et al., 2005). Child problem behaviors are reported across all income groups and are associated with harsh and inconsistent parenting (Scott, 2008), which can have significant negative impacts on the child and their caregivers (Flaherty, Sterling, & The Committee on Child Abuse and Neglect, 2010). For the child, if problem behaviors persist, this increases the risk for later mental disorders, unemployment, antisocial behavior and criminality (Bayer et al., 2011; Stevenson, 2001). For caregivers, those unable to cope with childhood problem behaviors are more likely to suffer high levels of stress (Sanders et al., 2005). In addition, caregivers who cannot manage childhood problem behaviors are more likely to use physical punishment (Flaherty et al., 2010; Gershoff, 2010). This may compound the poor outlook for children with such behaviors as physical punishment may in the longer term promote further conduct problems (Odgers et al., 2008). Finally, caregivers who use corporal punishment are three times more likely to increase the intensity of punishment to a level that may equate to child abuse (Gershoff, 2010; Zolotor, Theodore, Chang, Berkoff, & Runyan, 2008). For all of these reasons, improving parenting skills that act to reduce child problem behaviors, has important long-term social consequences in reducing conduct problems, mental disorders, unemployment, anti-social behaviors, criminality, and child abuse (Bayer et al., 2011; Sanders & Pidgeon, 2011).

Several key elements are associated with successful parenting interventions: parental emotion regulation and communication skills, positive parent-child interaction skills, correct use of time-out, responding consistently to a child, and addressing problematic parental thinking patterns (Centers for Disease Control and Prevention [CDC], 2009; Tully, 2008). Additionally, parenting strategies focusing on behavioral control are associated with a decrease in children's externalizing problem behaviors, such as temper tantrums (Aunola & Nurmi, 2005). Parenting interventions that focus on the above key elements include: 1-2-3 Magic Effective Discipline for Children (Phelan, 2010b); 1-2-3 Magic & Emotion

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Preliminary evaluation of a self-directed video-based 1-2-3 Magic parenting program: A randomized controlled trial

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ABSTRACT

The current study examined the effectiveness of a self-directed video-based format of the 1-2-3 Magic parenting program in reducing dysfunctional parenting and child problem behaviors. Eighty-four parents of children aged 2-10 were randomly assigned to either the intervention group (n = 43) or the waitlist control group (n = 41). Participants in the intervention group reported significantly less problem behaviors for their children, and significantly less dysfunctional parenting, at post-intervention when compared to the control group. The results were maintained at 6-month follow-up. There was no significant change on measures of parental adjustment for either group. The current results provide preliminary support for the conclusion that the video-based self-directed format of the 1-2-3 Magic parenting program is suitable as an entry-level intervention in a multi-level intervention model and is suitable for inclusion in a population approach to parenting program delivery.

The link between dysfunctional parenting and child problem behavior, and child abuse and children's social adjustment and mental health, have been well documented (Bayer et al., 2011; Gershoff, 2010; Odgers et al., 2008; Saul et al., 2014; Scott, Doolan, Beckett, Harry, & Cartwright, 2011). These findings suggest that an early intervention public health approach targeting parenting skills and a reduction in child problem behavior would be worthwhile (Kirp, 2011; Sanders, 2010; Saul et al., 2014; Webster-Stratton & Taylor, 2001). Parenting interventions that effectively reduce child problem behaviors and dysfunctional parenting are based on a combination of cognitive, social learning, and behavioral models. Their key components include: (1) psycho-education about underlying maladaptive parental thinking patterns; (2) parental emotional self-regulation; (3) adaptive parental communication styles in interactions with their child; and (4) an emphasis on controlling children's externalizing behaviors. It is thought that the latter, such as temper tantrums, can be better managed through consistency in responding and correctly applied time-out (Aunola & Nurmi, 2005; Centers for Disease Control and Prevention [CDC], 2009; Tully, 2008; Wade, Macvean, Falkiner, Devine, & Mildon, 2012). All of these together should, in the longer term, improve outcomes for parent and child.

Several evidence-based early-intervention parenting programs that address the above parenting skills are available for parents with children aged 2–12. These programs include *1-2-3 Magic Effective Discipline for Children* (Phelan, 2014, 2010b); *Communication Method* (*Comet*; Kling, Forster, Sundell, & Melin, 2010); *Helping the Noncompliant Child* (McMahon & Forehand, 2003); *Incredible Years* (*IY*; Webster-Stratton, 1984); *Parent Management Training - Oregon Model* (*PMTO*; Forgatch & Patterson, 2010); *Parent Child Interaction Therapy* (*PCIT*; Eyberg, 1988); *Systematic Training for Effective Parenting* (*STEP*; Dinkmeyer & McKay, 1976); and the *Triple P – Positive Parenting Program* (*Triple-P*; Sanders, 1999). Despite this choice, engagement in parenting programs is generally low (Koerting et al., 2013; Nix, Bierman, McMahon, & the Conduct Problems Prevention Research Group, 2009; Thornton & Calam, 2011). A number of barriers to accessing therapist-assisted parenting programs have been identified. There are practical barriers, such as distance, cost, conflicting work schedules, and lack of child care (Flaherty & Cooper, 2010; Mytton, Ingram, Manns, & Thomas, 2014; O'Brien & Daley, 2011) as well as service

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Paper Five

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