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Impact of the Resilient Families intervention on adolescent antisocial behavior: 14-month follow-up within a randomized trial

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ABSTRACT

Antisocial behaviors are common in adolescence. Family centred school-based interventions are attractive models for assisting adolescent populations. This study evaluated the impact of a universal family intervention implemented in Australian schools, on adolescent antisocial behavior. Year 7 students (57% female; M = 12.3 years, the first year of secondary school) in 12 randomly assigned schools, completed a survey in 2004 and were longitudinally followed in 2005 (n = 2042). Multivariate regression analysis revealed that exposure to the intervention did not significantly predict reductions in antisocial behavior across the whole-school population. However, significantly lower increases were evident for the sub-group of adolescents whose parents attended the parent-education activities. Given that 13% of intervention families attended the parent education events, future research should aim to increase parent attendance in school-based interventions.

Antisocial behavior is an umbrella term for actions that breach the rights of others. These behaviors include violence, delinquency and crime (Cook, Pflieger, Connell, & Connell, 2015; Viner et al., 2012) and may cause harm, injury and detriment to others (Roberts & Indermaur, 2009; Squires, 2008). Engaging in antisocial behavior can have negative impacts on an individual, as well as their families and communities (McAtamney & Morgan, 2009) causing problems such as social exclusion, school failure and criminal justice system consequences (McAtamney & Morgan, 2009).

Involvement in antisocial behavior commonly arises during childhood or adolescence (Smart, Vassallo, Sanson, & Dussuyer, 2004). Adolescent onset antisocial behavior has antecedents that arise during the transition to secondary school (Smart et al., 2004). Several risk factors have been suggested to increase an individual's likelihood of engaging in adolescent antisocial behavior (Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997; Toumbourou, 2016). These risk factors include parenting and family problems (Harland, Reijneveld, Brugman, Verloove-Vanhorick, & Verhulst, 2002), childhood behavior problems involving violent or antisocial behavior (Tyler & Melander, 2012; Young, Sweeting, & West, 2008), and poverty and disadvantage (Garmezy, 1991; Mossakowski, 2008). Parenting and family factors that can increase antisocial behavior include abuse and neglect and family conflict and coercive discipline (Harland et al., 2002; Milaniak & Widom, 2015). Stress related to socioeconomic disadvantage indicated by low parental educational attainment and lack of family income increases the likelihood of antisocial behavior (Kazdin et al., 1997; Simons, Burt, & Simons, 2008).

Not all children that experience behavior problems and family disadvantage develop adolescent antisocial behavior. When children who are experiencing problems are exposed to protective factors such as positive school environments and parental support and care, their risk of antisocial behavior is reduced (Fergus & Zimmerman, 2005; Fosco, Frank, Stormshak, & Dishion, 2013; Toumbourou & Gregg, 2002).

Protective factors are conditions or individual attributes such as strengths, resources, skills, coping strategies and social support that may reduce the likelihood of high risk individuals engaging in antisocial behavior (Child Welfare Information Gateway, 2014; Kim, Gilman, Hill, & Hawkins, 2016). Interventions that improve protective factors reduce the likelihood of adolescents engaging in antisocial behaviors (Fosco et al., 2013; Kim et al., 2016; McAtamney & Morgan, 2009).

The diverse range of predictors suggests that interventions aimed at preventing adolescent antisocial behavior should use a multifaceted approach targeting a range of family, school and community factors (McAtamney & Morgan, 2009). Given that family risk and protective factors have been shown to influence antisocial behavior, interventions

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that focus on families might play a key role in reducing antisocial behaviors (Ryzin, Fishbein, & Biglan, 2018). For example, studies suggest that children with more family resources, such as having stronger connection to their parents and being rewarded for prosocial behavior, are less likely to engage in antisocial behavior (Kazdin et al., 1997; Marshall & Marshall, 2011; Spoth, Redmond, & Shin, 1998; Toumbourou & Gregg, 2002).

In Australia entry to secondary school occurs on average at 12 years of age around the start of puberty. Hence, early secondary school provides opportunities for universal family interventions that focus on reducing adolescent onset problems. Family centered school-based interventions have been proposed as a means of promoting protective factors and reducing risk factors for large adolescent populations (Fosco et al., 2013; Toumbourou & Gregg, 2002). There is growing evidence that family centered interventions implemented in the school context may be effective in reducing early adolescent antisocial behaviors (Kim et al., 2016; Shortt, Hutchinson, Chapman, & Toumbourou, 2007; Toumbourou & Gregg, 2002).

Although a number of family intervention programs have been developed for child populations, there are relatively few that aim to reduce adolescent onset antisocial behaviors (Viner et al., 2012). Findings from studies that have implemented family-based intervention programs have suggested that large adolescent populations could benefit from universal programs that build protective factors (Fosco et al., 2013; Kazdin et al., 1997; Minaie, Hui, Leung, Toumbourou, & King, 2015; Toumbourou et al., 2007; Toumbourou & Gregg, 2002; Toumbourou, Gregg, Shortt, Hutchinson, & Slaviero, 2013), while those adolescents with high levels of risk factors (due to child onset problems) may also benefit (Fosco et al., 2013; Kazdin et al., 1997; Toumbourou & Gregg, 2002). Thus, family interventions implemented in the early secondary school age period could universally improve protective factors and play an important role in supporting those groups that enter adolescence with high levels of risk factors (Fosco et al., 2013; Shortt et al., 2007; Toumbourou et al., 2013; Viner et al., 2012).

Resilient Families is a manualized family centered school-based intervention developed in Australia that focuses on enhancing adolescent protective factors, at the individual, family and school levels (Toumbourou et al., 2013). The intervention was developed on the basis of resilience theory, which suggests that several modifiable personal and environmental factors can influence adolescent prosocial or antisocial behaviors (Fergus & Zimmerman, 2005; Toumbourou, 2016). The Resilient Families Intervention draws from social development theory, which proposes social interaction and bonding as important protective factors that influence adolescent behavior (Catalano & Hawkins, 1996; Vygotsky, 1978).

Prior evaluations of the Resilient Families Intervention have found significant impacts on antisocial and related behaviors across whole-school adolescent populations (Toumbourou & Gregg, 2002). A study by Toumbourou and Gregg (2002) evaluated an earlier version of Resilient Families implemented within a school trial and found the program led to short-term (3-month) significant reductions in adolescent substance use, family conflict and antisocial behavior.

The present paper uses data from the registered trial of the Resilient Families Intervention (Australian Clinical Trial Registry number: 0126060 00399594) to evaluate 14-month follow-up effects on adolescent antisocial behavior. Buttigieg et al. (2015) reported effects on the primary outcome of depressive symptoms, finding the program was associated with reduced symptoms at a 2-year follow up. However, these effects were limited to selective student populations with moderate symptoms whose families attended parent education events (Buttigieg et al., 2015).

Effects on the secondary outcome of alcohol use have also been previously reported. Toumbourou et al. (2013) found significant school-wide reductions in adolescent alcohol use were associated with the intervention at a 2-year follow up. A longitudinal study (Minaie et al., 2015) found that family management practices emphasized in the program reduced the likelihood of adolescent alcohol and drug use.

The current study used data from the registered trial to evaluate the effect of the Resilient Families Intervention (incorporating a student curriculum) on the secondary outcome of adolescent antisocial behavior across a 14-month follow-up period. Self-reports are the most common methods of measuring adolescent antisocial behavior (Fosco et al., 2013) and were used in the current study.

It was hypothesized that adolescents would report lower levels of antisocial behavior in association with participation in the Resilient Families Intervention. In line with previous evaluations of Resilient Families Intervention (Buttigieg et al., 2015; Toumbourou et al., 2013), we examined whether there were superior adolescent outcomes for families that participated in parent education within the intervention schools. Consistent with previous research examining influences on adolescent antisocial behavior, the present study controlled for the effect of family risk and protective factors (Ryzin et al., 2018), socio-economic disadvantage (Mossakowski, 2008), and cultural diversity (Child Welfare Information Gateway, 2014).

1. Method

1.1. Sampling

The evaluation design is detailed in Toumbourou et al. (2013) and summarized in what follows. A number of Catholic and Government secondary schools in Melbourne, Victoria participated in the intervention trial by invitation. Schools were stratified based on the type of school and disadvantage and randomly assigned to be approached in the intervention or to regular practice (the control condition). Of 39 schools approached, 24 schools agreed to participate (62% school participation rate). There were twelve schools in each condition. No significant differences were found in refusal rates between the control and intervention condition (Australian Clinical Trial Registry number: 0126060 00399594). The University of Melbourne's Human Research Ethics Committee and relevant education authorities granted ethics approval. Parents and students were required to provide active consent for participation. Deakin University approved the present analysis.

1.2. Resilient Families intervention

The program components are detailed in other papers (Shortt & Toumbourou, 2006; Shortt, Toumbourou, Chapman, & Power, 2006). The present report concentrated on three intervention components, which were applied in the first year: (a) 10-session student social relationships curriculum, (b) brief parent education, comprising a professionally facilitated 2-hour Parenting Adolescents Quiz (PAQ) night for parents/carers (Toumbourou, Gregg, Davies, & Carr-Gregg, 1999); and (c) extended parent education, comprising of eight professionally facilitated 2-hour group sessions for parents/carers using Parenting Adolescents: A Creative Experience program (PACE; Jenkin, Bretherton, & Haddon, 2005). The goal of these components was to encourage a positive relationship between parents and their adolescents and enhance parenting skills.

To encourage high quality implementation, teachers leading the student curriculum completed a 2-hour professional development session prior to delivery. A 1-page (13-item) integrity checklist completed by teachers indicated that the student curricula components were delivered as intended (Shortt et al., 2006). Within the intervention school sample a minority of families (13%) had one or more parents directly participate in the brief or extended parent education events. The brief parent education evenings were attended by 12% and the extended parent education sessions by 6%, while 4% attended both (Buttigieg et al., 2015).