

Tuning in to Teens: Improving Parent Emotion Socialization to Reduce Youth Internalizing Difficulties

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Abstract

Research in child development suggests that parents' emotional competence and emotion socialization practices are related to children's emotional functioning, including child internalizing difficulties. This research has not yet been translated into intervention or prevention programs targeting parents of older children and adolescents. The current study examined the efficacy of the Tuning in to Teens parenting program in improving emotion socialization practices in parents of preadolescents and reducing youth internalizing difficulties. Schools were randomized into intervention and control conditions. Data were collected from 225 parents and 224 youth during the young person's final year of elementary school (sixth grade) and again 10 months later in their first year of secondary school (seventh grade). Multilevel analyses showed significant improvements in parental emotion socialization and reductions in youth internalizing difficulties for the intervention condition. This study provides support for the efficacy of the TINT parenting program with a community sample.

Keywords: internalizing problems; emotion socialization; adolescence; parent training

Introduction

During the transition to adolescence, young people experience many biological, psychological, and social role changes, which can make this a highly emotional time. Psychological problems often arise or intensify during transition periods, particularly if several stress-inducing events (e.g., change of school, puberty, and parental divorce) occur simultaneously (Masten, 2004). In order to successfully manage emotions during this time, the young person requires adaptive emotion regulation strategies (Lougheed & Hollenstein, 2012; Rosenblum & Lewis, 2003). Emotion dysregulation is a risk factor for internalizing difficulties (e.g., anxiety and depression), and both emotion dysregulation and internalizing difficulties are common in adolescence (Bongers, Koot, van der Ende, & Verhulst, 2003). Prevention of mental health problems has been

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identified as a key public health strategy, and early adolescence may be a crucial time for targeting risk and protective factors (O'Connell, Boat, & Warner, 2009; Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Yet, despite the heavy social and economic burden associated with adolescent-onset internalizing disorders, this area of mental health prevention has received very little attention.

Several researchers have argued that emotion understanding and regulation (emotional competencies) may be important to target in prevention of internalizing disorders, and parenting processes continue to shape these aspects of adolescent development (Morris, Silk, Steinberg, Myers, & Robinson, 2007). The transition to adolescence involves significant changes for parents who have to adapt to new parenting demands. Although many parents manage this transition successfully, some experience their adolescents' striving for autonomy as rejection, and experience decreased positive affect and increased negative affect (Collins & Madsen, 2003; O'Neal & Magai, 2005; Steinberg, 2000). Family conflict is also thought to peak during early adolescence when children view their relationship with their parents less positively (Collins & Madsen, 2003; Morris et al., 2007). These difficulties are likely to impact on parents' emotion socialization practices and their mental health, especially if they experience difficulties in emotion awareness and regulation (Morris et al., 2007). Because there are so few programs that enhance parents' emotional competence and emotion socialization, we investigated the efficacy of Tuning in to Teens (TINT), a parenting program that targets parent emotion socialization to improve adolescent emotional and behavioral adjustment.

Adolescence, Emotional Competence, and Internalizing Difficulties

A central feature of internalizing problems is disordered mood or emotion, and both adults and children with internalizing difficulties have been found to have unique patterns of emotional competence related to both negative and positive emotions (Berking & Wupperman, 2012; Southam-Gerow & Kendall, 2002). Emotional competence has been defined as the ability to recognize, understand, and regulate emotional experience and expressiveness in interpersonal and intrapersonal situations (Halberstadt, Denham, & Dunsmore, 2001; Saarni, 1999). Emotional competencies are closely linked to social competence, with skills in experiencing and expressing one's own emotions and recognizing emotions in others being essential for successful communication (Halberstadt et al., 2001). During adolescence, emotional competencies continue to develop and consolidate (Rosenblum & Lewis, 2003). However, youth vary widely in their knowledge of and ability to apply emotion regulation strategies, especially if they experience deficits in other areas of emotional competence (e.g., emotion identification) or if their emotional arousal is high (Lougheed & Hollenstein, 2012; Pons, Harris, & de Rosnay, 2004). With increasing social challenges, immature emotional competence may undermine healthy adaptation to role changes and increase susceptibility to internalizing difficulties. Emotional competencies may therefore be an important target in prevention programs.

Parenting, Emotional Competence, and Adolescents' Internalizing Difficulties

Although adolescents increasingly turn to their peers for emotional support, parents remain integral to the development of emotional functioning in adolescence (Morris et al., 2007). Parental modeling of emotion expression, their reactions to children's

negative emotions, and their acceptance and coaching of emotions (emotion socialization) are related to adolescents' emotional competence and internalizing problems (Morris et al., 2007). Parents' beliefs about emotions and their own emotional competence comprise important aspects of emotion socialization and influences whether parents engage in supportive (emotion coaching) or non-supportive (emotion dismissing) parenting styles (Morris et al., 2007; Stocker, Richmond, Rhoades, & Kiang, 2007). Difficulties in aspects of emotional competence may also underlie parental internalizing difficulties (Berking & Wupperman, 2012), which have been consistently linked to the development of child and adolescent internalizing difficulties (Piche, Bergeron, Cyr, & Berthiaume, 2011).

When parents are unable to manage their own emotions effectively, they are likely to have difficulty accessing strategies to work through emotional problems with their children (Eisenberg, Cumberland, & Spinrad, 1998; Gottman, Katz, & Hooven, 1997). Parents accessing maladaptive emotion-regulation strategies (e.g., suppression), may result in heightened arousal (Gross & John, 2003) and a greater likelihood of expressing negative emotions in a dysregulated manner (Rueger, Katz, Risser, & Lovejoy, 2011) or engage in emotion dismissing practices (Gottman et al., 1997; Perlman, Camras, & Pelphrey, 2008). Dismissing the young persons' emotional experience, such as when the parent ignores, trivializes, matches, or punishes negative emotional expression, may in turn exacerbate adolescents' emotional reactivity (Shenk & Fruzzetti, 2011) and contribute to a family climate that is less supportive and more conflictual or disengaged (Morris et al., 2007). Furthermore, the young persons' reactivity and maladaptive parent–youth interactions may exacerbate both parents' and adolescents' internalizing difficulties (Steinberg, 2000). Teaching parents how to better manage their own emotional reactivity, as well as how to respond to adolescents' emotions in an accepting and supportive manner may be important for preventing and reducing parent and youth internalizing difficulties.

Parenting Interventions and Youth Internalizing Difficulties

Few studies have evaluated interventions that target parent emotion socialization to reduce internalizing difficulties in youth. Instead, parenting programs typically target adolescent externalizing behaviors and focus on increasing parental monitoring, positive reinforcement, limit setting, communication, and problem solving (see Burke, Brennan, & Roney, 2010 for a review). For the most part, efforts aimed at the prevention of youth internalizing difficulties in community samples have been school based, targeting the young person, and have not consistently found that adding a parent component strengthens outcomes over and above the adolescent intervention (Cartwright-Hatton & Murray, 2008; Neil & Christensen, 2007). Few studies have examined whether parenting programs reduce youth internalizing difficulties when offered as a preventive intervention in the general population (Neil & Christensen, 2007). In addition, studies that have evaluated the effect of parenting programs on internalizing difficulties have not consistently found evidence of efficacy (Toumbourou & Gregg, 2002; Trudeau, Spoth, Randall, & Azevedo, 2007). Further, parenting programs targeting parents of adolescents have shown high attrition and low retention (Burke et al., 2010).

A recent review of prevention programs for emotional difficulties suggests acceptance-based interventions, which focus on teaching people to acknowledge, accept, and regulate emotions (e.g., anxiety), may be especially relevant when working

with parents of adolescents to prevent internalizing difficulties (O'Connell et al., 2009). Interventions with a focus on emotion acceptance and regulation have been found to be successful in improving parents' emotion-related parenting practices and preschool-aged children's emotional competence (Havighurst, Wilson, Harley, Prior, & Kehoe, 2010). A pilot study with at-risk youth (aged 10–14 years) also provided preliminary evidence that teaching children and parents mindfulness (e.g., awareness and acceptance of emotions) was effective in increasing parents' emotion awareness and regulation, and enhancing parent–youth relationships (Coatsworth, Duncan, Greenberg, & Nix, 2010). In addition, evaluation of a 10-session attachment-based parenting intervention, which included a focus on parental empathy, emotion regulation, and parent–child connection, found significant reductions in parent-reported youth internalizing difficulties in a sample of parents of young people (age 12–16 years) identified as at risk for aggressive behavior (Moretti & Obsuth, 2009). However, further research is required to determine whether this approach would be efficacious in preventing youth internalizing difficulties in a community sample.

TINT Parenting Program

The TINT program (Havighurst, Harley, Kehoe & Pizarro 2012) teaches parents skills in responding to emotions in ways that foster closer parent–adolescent connection and enhance emotional competence in both parents and youth. The program was adapted from the Tuning in to Kids (TIK) program (see Havighurst, Wilson, Harley, & Prior, 2009 for a description of the program including theoretical underpinnings). Like TIK, TINT was designed as a brief (six two-hour sessions) universal prevention program based on the theory that emotional competence and parent–child emotional communication are intricately linked to children's emotional and behavioral functioning. The central focus is on teaching parents an adaptive emotion socialization style called 'emotion coaching'. The emotion coaching style was identified by Gottman et al. (1997) and involves five steps (Gottman & DeClaire, 1997). These are (1) become aware of the child's emotion, especially if it is at a lower intensity; (2) view the child's emotion as an opportunity for intimacy and teaching; (3) communicate understanding and acceptance of emotions with empathy; (4) help the child to use words to describe how they feel; and (5) if necessary, assist them with problem solving. The program focuses on skills that increase emotion coaching, including understanding one's beliefs about emotions (e.g., stemming from family of origin experience) and how they influence attitudes and responses to emotions (Gottman et al., 1997).

TINT targets parents' skills in emotion awareness, identification, and regulation, and aims to increase parents' empathy for their teen. Considerable overlap exists between TINT and dialectic behavior therapy (Linehan, 1993). To reduce parental vulnerability to emotional reactivity, TINT incorporates mindfulness skills (meditation, mindful awareness and acceptance, and non-reactivity) and explores self-care activities that may help the parent emotionally 'refuel'. TINT also focuses on teaching parents to respond to adolescents' emotional reactions in ways that validate and acknowledge the young person's experience. This is thought to help lower the frequency, intensity, and duration of emotional arousal, and foster a sense of feeling accepted (Gottman & DeClaire, 1997; Linehan, 1993). In addition, a scaffolding approach to problem solving is used to facilitate a shift in parenting from being the child's 'manager' (more typical in the younger years) to being a 'consultant and guide' (Gottman & DeClaire, 1997). This helps to encourage emotional autonomy and reduce youth reactivity.

Parents also learn about normal adolescent emotional development and how to manage and respond to rejections by the young person.

Aims of the Study

The aim of this study was to evaluate whether the TINT parenting program was efficacious in improving parent emotion socialization and reducing youth internalizing problems across the transition to secondary school. The key research questions were: Does TINT reduce parents' internalizing difficulties and parents' difficulties in emotion awareness and regulation? Does the program improve parents' emotion socialization? Does the program reduce youth internalizing difficulties?

Method

Participants

Participants were from schools in metropolitan Melbourne, Australia, and included 225 grade 6 students (final year of elementary school) aged 10–13 years [mean (M) = 12.01, standard deviation (SD) = .42; 49% boys] and their primary caregiver (200 mothers, 25 fathers; $M_{\text{age}} = 44.1$, $SD = 5.13$). One parent withdrew consent for their child to participate in the study prior to their young person's completion of the questionnaire. Consequently, 225 primary caregivers and 224 youth comprised the final sample. Fathers selected themselves into the study as 'primary caregivers' and did not differ from mothers on any of the variables apart from rating themselves as more emotionally dismissive ($M = 2.28$, $SD = .30$) compared with mothers [$M = 2.02$, $SD = .38$; $t(219) = 4.01$, $p < .001$, 95% confidence interval (CI): .13, .39]. We retained fathers in the study because (1) fathers were primary caregivers, (2) fathers in each condition did not differ in levels of emotion dismissing, and (3) fathers have generally been found to be more dismissing of emotion with their children, but fathers' responses to their adolescents' emotions have been found to be important for healthy development of emotional competence (Brand & Klimes-Dougan, 2010).

Participants' education, employment, and income levels were consistent with the normal distribution for Australia (Australian Bureau of Statistics, 2011). Parents were mostly married/*de facto* (82.7%), 28 parents (12.4%) had remarried, 5 (2.2%) were sole parents, and 5 (2.7%) did not report their marital status. The majority of parents (75.6%) had completed high school, 38.2% had completed a non-university qualification, and 43.5% had completed a bachelor degree or higher. Most parents were White (89.7%) and spoke English as their first language (81.3%), and the remainder spoke European (8.4%), Asian (8.1%), and African (2.2%) languages. Participating parents were mostly in paid employment (80.4%). Of those who were in the workforce, the mean number of hours worked per week was 29.5 ($SD = 11.0$). Parents reported gross annual combined family incomes of less than \$40 000 (9.8%), \$40 000–59 999 (15.1%), \$60 000–99 999 (32.0%), and \$100 000 or more (38.7%). Ten parents declined to report their income (4.4%).

Parents' internalizing difficulties were representative of the normal population, with 7.11% scoring in the clinical range for anxiety and 3.11% scoring in clinical range for depression (Aylard, Gooding, McKenna, & Snaith, 1987). Youth internalizing difficulties were also representative of the normal population, with 8.9% of youth reporting anxiety levels in the clinical range, 8% of youth reporting depressive symptoms in the clinical range (intervention: $N = 12$; 10.0%; control: $N = 6$, 4.8%), and mean

parent-reported child anxiety comparable with normal population means of the scale developers (Nauta et al., 2004; Spence, Barrett, & Turner, 2003).

Procedure

The study was conducted during 2008–2010 and targeted parents of grade 6 students. Schools rather than participants were selected as the unit of random assignment. Group randomization is preferable when investigating the effects of an intervention delivered to identifiable groups (Murray, 1998) and minimizes contamination if all participants at a school are in the same condition. One hundred twenty schools were chosen from lower- to middle-class socioeconomic regions of Melbourne and randomized (allocation ratio 1:1, using a computer randomizer) into either intervention (TINT) or control conditions. Schools were approached after randomization, and 55 schools (45%; 28 intervention; 27 control) agreed to participate. Reasons for non-participation of schools included the predominance of non-English speaking students at the school, commitment to other research projects, and preexisting parenting/transition programs. Information and consent forms were attached to school newsletters and given to all grade 6 students ($N = 3359$). Parents and youth in intervention schools were invited to take part in a research project where parents could attend a free parenting program and youth would receive a \$30 CD voucher on completion of follow-up questionnaires. Parents and youth in control schools were invited to take part in a research project where youth would receive a \$30 CD voucher on completion of follow-up questionnaires. Due to funding limitations, no incentive was offered to parents, and we were unable to offer control parents the intervention.

For both conditions information letters explained, we were interested in examining factors that impact on young people's socioemotional functioning during the transition to adolescence/secondary school. For the intervention condition only, they were also invited to participate in a parenting program with a focus on helping youth develop emotional intelligence. Consent forms were signed by 323 parent–youth dyads (171 intervention), translating to a 9.25% response rate. This constitutes a comparable response rate to mail-out surveys (Gibson, Koepsell, Hale, & Diehr, 1999) and other universal parenting program recruitment efforts for parents of adolescents that typically recruit in schools (Ralph & Sanders, 2006). The survey package sent to interested families included instructions for parents and youth to complete their questionnaires separately, and youth were provided with separate envelopes to ensure their privacy. A total of 229 (70.9%) parent–youth dyads (125 intervention) returned completed baseline questionnaires and were assessed for eligibility. Baseline data collection occurred in waves, corresponding to four school terms during the final year of elementary school (sixth grade). Follow-up was conducted on average 10.5 months ($SD = .74$; range 10–12 months) postbaseline when youth were at secondary school (seventh grade). The study conformed to all ethical requirements for research.

Measures

Parent Internalizing Difficulties (Parent Report Only). Parents' internalizing difficulties were evaluated using the anxiety and depression subscales (7 items each; rated 0–3) of the general health questionnaire (GHQ 28; Goldberg, 1981). Higher scores indicate greater difficulties. The GHQ 28 has been widely used as a general screening measure of depression and anxiety, and has shown good internal consistency, validity,

and test–retest reliability (Andersen, Sestoft, Lillebaek, Gabrielsen, & Hemmingsen, 2002; Aylard et al., 1987). The two subscales were strongly correlated (baseline $r = .53$; follow-up $r = .57$) and were combined to create one measure of parents' internalizing problems (Vickers, 2004). Cronbach's alpha was .88 at baseline and .90 at follow-up.

Difficulties in Emotion Regulation (Parent Report Only). The difficulties in emotion regulation scale (DERS; Gratz & Roemer, 2004) was used to assess parents' own difficulties with emotion awareness and regulation. The scale is a 36-item self-report questionnaire rated from 1 (almost never) to 5 (almost always) and measures difficulties in: acceptance of emotions, ability to engage in goal-directed behavior when distressed, impulse control, awareness of emotions, access to strategies for regulation, and clarity of emotions. The total scale was used in the current study in order to reduce multiple comparisons. Higher scores indicate greater difficulties in emotion regulation. The DERS has demonstrated very good internal consistency and good test–retest reliability and predictive validity (Gratz & Roemer, 2004). In the current study, Cronbach's alpha coefficients for the total scale were .94 (baseline) and .93 (follow-up).

Parent Emotion Socialization Practices (Parent and Youth Report). The 45-item emotions as a child scale (EAC; Magai, 1996; Magai & O'Neal, 1997) was used to measure parent emotion socialization practices for anger, sadness and anxiety (15 items for each emotion). Parent and youth report forms are identical, varying only according to the phrasing of questions from the parent or the youth's perspective. The EAC generates five subscales of emotion socialization (nine items each): parental encouragement of the young person's emotion expression (e.g., 'When my child was angry/sad/fearful, I asked my child what made her/him mad/sad/fearful'.); parental punishing responses (e.g., 'When my child was angry/sad/fearful, I told my child that s/he was acting younger than his/her age'.); parental neglect (e.g., 'When my child was angry/sad/fearful, I did not pay attention to her/his being angry/sad/fearful'.); parental matching/magnifying the child's emotion (e.g., 'When my child was angry/sad/fearful, I got very angry/sad/fearful'.); and parental overriding of the young person's emotions (e.g., 'When my child was angry/sad/fearful, I told her/him to cheer up'.). To reduce multiple comparisons and remedy problems of multi-collinearity between these subscales of emotion socialization (several correlated $>.60$), the total emotion dismissing response variable was used. For the total scale, the nine encouragement of emotions items were reverse scored so that high scores reflect lower encouragement of anger, sadness, and anxiety. Items from all five subscales were combined to measure parental responses on a continuum from emotion coaching to emotion dismissing. Scores were averaged and ranged from 1 (never) to 5 (very often), with higher scores indicating higher levels of emotion dismissing. Acceptable internal consistency, test–retest reliability, and validity statistics for various versions of the EAC with both adolescent and adult samples have been found (Garside & Klimes-Dougan, 2002; O'Neal & Magai, 2005; Silk et al., 2011). In the current study, Cronbach's alpha for the total emotion dismissing scale were .87 and .88 at baseline, and .80 and .85 at follow-up for parent and youth versions, respectively. Further evidence of validity was indicated by moderate correlations between parent and youth report versions of the total EAC ($r = .40$; see Table 1).

Youth Internalizing Difficulties (Parent and Youth Report). Youth anxiety symptoms were measured with the Spence children's anxiety scale (SCAS; Spence, 1998) and the Spence child anxiety scale for parents (SCAS-P; Nauta et al., 2004). The SCAS and the

Table 1. Correlations Between Parents' Internalizing Difficulties, Parents' Difficulties in Emotion Awareness and Regulation, Parents' Emotion Dismissing Practices, and Youth Internalizing Difficulties at Baseline

	Parent variables					Youth variables	
	1	2	3	4	5	6	7
1. Parents' internalizing difficulties (P)	—						
2. Parents' difficulties in AW and ER (P)	.57***	—					
3. Parent emotion dismissing (P)	.21**	.36***	—				
4. Youth anxiety (P)	.30***	.33***	.26***	—			
5. Youth depressive symptoms (P)	.43***	.43***	.23**	.56***	—		
6. Parent emotion dismissing (Y)	.10	.20**	.40***	.17*	.24***	—	
7. Youth anxiety (Y)	.05	.18**	.15*	.52***	.33***	.34***	—
8. Youth depressive symptoms (Y)	.21***	.23***	.19**	.36***	.41***	.36***	.62***

Note: AW = emotion awareness; ER = emotion regulation; P = parent rated; Y = youth rated.
* $p < .05$, ** $p < .01$, *** $p < .001$.

SCAS-P total scales are widely used and have shown excellent internal reliability, satisfactory test–retest reliability, and adequate convergent and divergent validity (Nauta et al., 2004; Spence et al., 2003). In the current study, the total scale was used to reduce multiple comparisons. Cronbach's alphas were .91 and .90 at baseline, and .93 and .92 at follow-up for parent and youth versions, respectively. Inter-rater agreement between parent–youth dyads was moderate (see Table 1). A cut-off score of > 42 on the SCAS was used to identify youth within the clinical range of anxiety, as recommended by the scale authors.

Youth depressive symptoms (parent and youth report) were measured with the child depression inventory short-form child self-report (CDI : S; Kovács, 1981; Kovács & Beck, 1977) and the parent report (CDI : P; Garber, 1984). The CDI : S (10 items) is rated on a 3-point scale (0 = absence, 1 = mild symptoms, or 2 = definite symptoms; range 0–20), and the CDI : P (17 items) uses a 4-point scale (0 = not at all, 1 = some of the time, 2 = often, or 3 = much or most of the time; range 0–51). The psychometric properties of both versions of the CDI have been well established. In the current study, Cronbach's alphas were .84 and .84 at baseline, and .83 and .87 at follow-up for the parent and youth versions, respectively. Parent–youth inter-rater agreement was moderate (see Table 1).

Intervention

A total of 12 TINT parenting groups were conducted at local community centers during four school terms (autumn, winter, spring, and summer) in the first two years of the study. The program was delivered in a group format (between 6–13 parents) for two hours a week (1915 h–2115 h), for a total of six weeks with two facilitators (one of whom was the first or third author). Co-leaders were volunteers who were mental health professionals or psychology graduates and had taken part in the TIK training at

Melbourne University. A structured manual was used (Havighurst, Harley, Kehoe, & Pizarro, 2012), and fidelity checklists were completed by the facilitators immediately after each session, showing that 100% of the compulsory content was delivered in each of the 12 parenting groups. Of the 121 parents in the intervention condition, 84% completed four or more sessions. Four parents only attended one session due to: work commitments ($N = 2$), child care issues ($N = 1$), and a family crisis ($N = 1$). If parents missed sessions, they were sent the materials and received a phone call.

Results

Preliminary Analyses

Data were examined for missing values, normality, and outliers. Pearson-mean imputation was used to replace missing items with mean values, providing that at least 80% of the data were available. This approach keeps accurate estimates of variances and covariances, and was used given that missing data were minimal and considered missing at random (Bono, Ried, Kimberlin, & Vogel, 2007). The variables of parent internalizing, parent difficulties in emotion awareness and regulation, and youth anxiety and depressive symptoms (parent and youth rated) were positively skewed and were transformed using square root and log transformations. For ease of interpretation, untransformed means are presented, but statistics given are for analyses conducted with transformed variables, unless analyses produced equal results. To determine covariates (Pocock, Assmann, Enos, & Kasten, 2002), t tests, chi-squared analyses, and Pearson's correlations were conducted to examine baseline differences and relationships between demographic and outcome variables. Pearson correlations between the parenting scales and youth outcomes at time 1 are presented in Table 1. Overall, the pattern of correlations were in the expected direction and showed that higher levels of parental internalizing difficulties, higher levels of emotion awareness and regulation difficulties, and higher levels of dismissing practices were related to greater youth anxiety and depressive symptoms as reported by parents. The same correlations were revealed for youth-reported variables; however, parents' own internalizing difficulties were unrelated to youth self-reported anxiety.

Group comparison of demographic characteristics showed significant differences on two variables: youth in the intervention condition were slightly younger, $t(223) = -6.24, p < .001$ (mean difference in months = $-.36$), and there were more boys ($N = 67, 55.4\%$) in the intervention condition compared with the control condition, ($N = 42, 40.4\%$), $\chi^2(1, N = 225) = 4.48, p = .035, \phi = .15$. It is possible that age differed due to significantly more baseline data being collected for control participants in the second half (term 2, 3 & 4) of the grade 6 school year whereas data were collected throughout the year (term 1–4) for the intervention participants, $\chi^2(3, N = 225) = 57.34, p < .001, \phi = .51$. When follow-up data were collected, participants enrolled in the study in term 1 ($N = 31$) were followed up slightly later ($M_{\text{months}} = 12.00, SD = .00$) when compared with participants enrolled in the study in term 2, 3, or 4 ($M_{\text{months}} = 10.3, SD = .46; t(179) = 50.06, p < .001, 95\% \text{ CI: } 1.6, 1.8$). Hence, gender, the young person's age, and baseline term of enrollment were all considered as covariates. Gender and baseline term of enrollment were also considered as moderators; however, interactions were not significant.

Between-group comparisons of baseline data found no statistically significant differences in the scores for any of the youth-reported variables under study. However, baseline parent data showed intervention parents rated their youth significantly higher

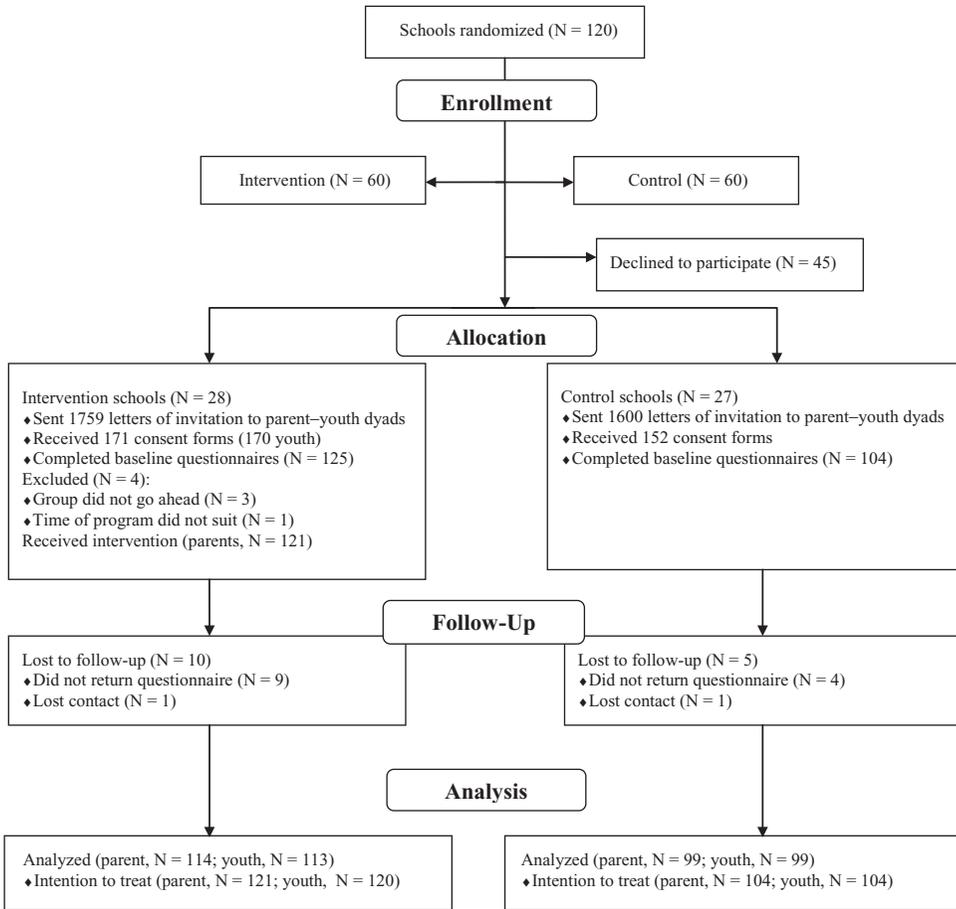


Figure 1. Participant Flow.

on anxiety [$t(222) = 3.20; p = .002$] and depressive symptoms [$t(222) = 4.88; p < .001$] compared with control parents. Therefore, we controlled for baseline levels of parent-rated youth anxiety and depressive symptoms. Additionally, moderation analyses were conducted to further investigate the impact of this baseline difference.

Of the 225 participants, 210 parent–youth dyads returned follow-up questionnaires resulting in a 93.3% response rate (see Figure 1 for participant flow). Parents failing to return questionnaires at follow-up ($N = 15$) did not significantly differ from the rest of the sample on any of the measures, and there was no significant difference in questionnaire return rate between the intervention and control group.

Multi-level Mixed-effects Modeling

Due to the multi-stage sampling strategy, in which schools were first sampled and then parent–youth dyads within these schools, intra-class correlations were computed and ranged between .000 and .087, suggesting that up to 8.7% of variance in some of the baseline outcome measures was explained by school membership (Heck, Thomas, & Tabata, 2010). Therefore, it was decided to conduct multilevel analyses using SPSS

(version 18, SPSS Inc, Chicago, IL) Mixed Models, which allowed us to examine the fixed effect of condition on outcome variables while controlling for the random effect of school (Peugh & Enders, 2005). A baseline random intercept model (i.e., youth nested within schools) was initially constructed for each outcome measure. As indicated by the smallest Akaike information criterion index, best model fit for the null model (step 1) was achieved using maximum likelihood and a variance components covariance structure, with intercept and school as a random effect and time as fixed (Heck et al., 2010). At step 2, key variables (condition and time; each dummy coded 0 and 1) were added into the model, followed by covariates (baseline time of enrollment, gender, and youth age) at step 3. For parent-reported variables, we also controlled for baseline differences of youth anxiety and depressive symptoms as part of step 3. As indicated by chi-squared statistics for the change in $-2 \log$ likelihood, adding covariates significantly improved the model ($p = .01$) for all outcomes of interest (Field, 2009). Effect sizes were calculated using the recommended formula for multi-level analysis for controlled clinical trials (Feingold, 2009). This formula uses the difference between the estimated means of the slopes (unstandardized b value) of the two groups (intervention and control over time) divided by the baseline SD of raw scores [equivalent to the square root of the mean squared error from analysis of variance (ANOVA)], obtained from a one-way ANOVA, with school as the group variable. Effect sizes (d) greater than .8 are generally considered large whereas those equal to .5 are moderate and .2 are small (Cohen, 1988).

Intervention Outcomes

Table 2 shows intervention outcomes for all variables, including significant figures for the interaction between time and condition. A significant interaction between time and condition reflects a significant difference in slopes for the two groups (i.e., the change over time varies according to condition membership). Main effects of time and condition will only be reported in text when the interaction between time and condition was not significant.

Parent Internalizing Difficulties and Difficulties in Emotion Awareness and Regulation. A significant interaction between time and condition indicated significantly greater change for intervention parents who reported lower internalizing difficulties and lower difficulties in emotion awareness and regulation at follow-up compared with control parents who reported no change.

Parent Emotion Socialization Practices. A significant interaction between time and condition indicated significantly greater change for intervention parents (as reported by parents and youth), indicating reductions in parents' emotion dismissing practices over time compared with control parent–youth dyads who reported no change.

Youth Internalizing Difficulties. Interactions between time and condition indicated significantly greater reductions in parent-reported youth anxiety and depressive symptoms for the intervention group compared with control group parents who did not report changes. Youth in the intervention condition also reported significantly greater reductions in anxiety over time compared with control youth who reported no change. Youth from both conditions reported a significant reduction in the frequency of depressive symptoms over time, as indicated by a significant main effect of time [$F(1, 209.98) = 10.50, p = .001$]. The interaction between condition and time was not significant.

Table 2. Multi-level Mixed-effects Modelling: Intervention Outcomes

Measures	Adjusted mean ^a											
	Baseline		Follow-up		Test of interaction							
	Mean	SE	Mean	SE	β	SE	df	t	p	95% CI	d	
Parents' internalizing difficulties ^b (P)	Intervention	6.85	.55	5.42	.54	-.30	.14	210.37	2.14	.033	-.58, -.02	.27
	Control	6.41	.57	6.08	.60							
Parents' difficulties in AW and ER ^b (P)	Intervention	69.74	1.71	65.99	1.74	-.02	.01	208.39	-2.18	.030	-.05, -.00	.19
	Control	69.76	1.87	69.53	1.89							
Parent emotion dismissing (P)	Intervention	2.04	.04	1.80	.04	-.29	.04	212.67	-6.62	<.001	-.38, -.20	.76
	Control	2.05	.04	2.10	.04							
Parent emotion dismissing (Y)	Intervention	2.18	.04	2.04	.04	-.14	.05	211.9	-2.63	.009	-.24, -.03	.42
	Control	2.17	.04	2.17	.04							
Youth anxiety (P)	Intervention	15.18	.84	10.94	.85	-4.50	.91	215.42	-4.92	<.001	-6.29, -2.69	.46
	Control	14.18	.92	14.45	.93							
Youth anxiety ^b (Y)	Intervention	21.63	1.35	17.05	1.35	-.36	.17	217.36	-2.17	.031	-.69, -.03	.26
	Control	23.49	1.45	21.79	1.45							
Youth depressive symptoms ^b (P)	Intervention	10.75	.46	9.23	.48	-.47	.12	215.46	-4.06	<.001	-.71, -.25	.46
	Control	8.05	.51	8.91	.44							
Youth depressive symptoms (Y)	Intervention	1.99	.27	1.45	.27	-.38	.32	206.97	-1.17	.244	-1.03, .26	.14
	Control	2.02	.29	1.86	.29							

Note: AW = emotion awareness; CI = confidence interval; df = degrees of freedom; ER = emotion regulation; P = parent-rated; SE = standard error; Y = youth-rated.

^a Adjusted for covariates. ^b Transformed variable.

Finally, we examined whether baseline levels of parent-rated youth anxiety or depressive symptoms moderated youth- or parent-rated changes in youth anxiety and depressive symptoms. The two moderators were dummy coded using a median split (low scores = -1, high scores = +1), and interaction terms were added to the relevant models. The three-way interaction (condition \times time \times parent-rated youth anxiety) significantly predicted parent-rated youth anxiety at follow-up, $F(3, 255.6) = 3.12, p = .026$. Intervention parents who rated their young person's baseline anxiety high [$M = 18.48$; standard error (SE) = 1.12] reported greater reductions in youth anxiety at follow-up ($M_{\text{change}} = -5.79, SE = .86, 95\% CI: -7.49, -4.08$) when compared with intervention parents who rated their young person's baseline anxiety low ($M = 13.00$; SE = 1.07; $M_{\text{change}} = -2.56, SE = .88, 95\% CI: -4.31, -.82$). For controls, both high and low anxiety groups showed no change in parent-reported youth anxiety. Moderation was not supported for any of the other outcomes of interest.

Intention to Treat. All analyses were repeated using missing participants ($N = 15$) preintervention data for their follow-up scores to take into account intention to treat. The findings reported above held for all variables.

Discussion

This study sought to establish the efficacy of the TINT parenting program, which targets emotion socialization-related parenting. Specifically, the study examined whether TINT, trialed as a universal prevention program, would reduce internalizing difficulties in young people during the transition to secondary school. Despite important changes in the parent-child relationship that occur during the transition to adolescence, few parenting programs are targeted toward parents of early adolescents. To our knowledge, this is the first study examining the efficacy of this approach with a large community sample, using a control comparison group and long term follow-up. Given that evaluations of existing programs targeting parents of older children have had difficulties engaging parents and have often had large rates of attrition (see Burke et al., 2010 for a review), high attendance and low attrition in this trial were noteworthy. In addition, this study collected both parent and youth report data. Overall, our results showed improvements on all variables, with primarily medium to large effect sizes for parent-reported outcomes, and small to medium effect sizes for youth-reported outcomes.

Parent Internalizing Difficulties and Difficulties in Emotion Awareness and Regulation

Intervention parents, but not control parents, reported significant improvements in parents' internalizing difficulties and reductions in parents' difficulties with emotion awareness and regulation at follow-up. This finding is consistent with results from an evaluation of the TIK program (on which TINT is based), which found parents of younger children who had received the TIK program reported reductions in psychological difficulties postintervention (Havighurst et al., 2009), and improved emotion awareness and regulation at six months follow-up (Havighurst et al., 2010). Parents' internalizing difficulties have been implicated in less responsive parenting and in youth internalizing difficulties (Morris et al., 2007). TINT targets parents' emotion awareness and regulation to help parents better identify emotions in themselves and

their young person, and learn ways to manage strong emotions. These changes may have contributed to reductions in internalizing difficulties (Berking & Wupperman, 2012). TINT also taught parents a communication style that was youth focused (e.g., empathic and reflective listening). This style is likely to decrease retaliation by the young person, a reaction that might usually contribute to parental anger and distress (Gottman et al., 1997). Teaching emotion regulation strategies alongside increasing parental empathy for the young person is important because empathic over-arousal may result if parents are unable to regulate their emotions (Eisenberg et al., 1998).

Parent Emotion Socialization Practices

Emotion-dismissing parenting has been related to less optimal outcomes for children, including lower emotional competence and higher levels of internalizing difficulties (Morris et al., 2007). Both parents and youth in the intervention sample reported significant reductions in parents' dismissing responses to the young person's emotions, but there was no change for control dyads. This is consistent with findings from efficacy and effectiveness trials that used an emotion coaching approach with parents of younger children (Havighurst et al., 2010). Findings are especially noteworthy given the long-term follow-up and that adolescents rated their parents significantly lower in dismissiveness at a time when they view their parents' more negatively and when family conflict is peaks (Morris et al., 2007).

Adaptive parent-child interactions depend in part on parents' ability to recognize and be aware of emotions in themselves and their young person, especially lower intensity emotions (Gottman & DeClaire, 1997; Halberstadt et al., 2001). In TINT, parents explored the physiological, cognitive, and behavioral aspects of emotion experience, and were taught to recognize feelings behind verbal statements, behaviors, or body language. In addition, parents were asked to imagine similar adult equivalent situations to the young persons' situation and consider how they might feel in such a situation. Reappraising the young person's emotion experience in this way and viewing it as an opportunity to connect and teach youth about how to manage emotions may help parents remain calmer (Gross & John, 2003). Decreasing parents' emotional reactivity and increasing their tolerance and understanding of their young persons' experience may also decrease the frequency or intensity of parent-youth conflict. Research has highlighted that conflict is not harmful to young people's functioning or parent-youth connection if the young person feels secure and accepted and there is constructive communication (Collins & Madsen, 2003).

Youth Internalizing Difficulties

Intervention, but not control parents, reported significant reductions in youth anxiety and depressive symptoms. Further, moderation analyses found greater reductions in parent-reported youth anxiety in those rated higher at baseline compared with control participants. This suggests that the program may especially benefit youth rated by their parents as high in anxiety. However, it is also possible that the association between the pretreatment severity and the degree of change was due to those with higher baseline scores having greater scope for change. In addition, greater reductions in the high anxiety group may reflect shifts in reporting bias. Higher levels of parental internalizing difficulties have been related to parents' tendency to rate their adolescent higher in internalizing difficulties, and low levels of parental internalizing difficulties have

been related to parents' tendency to under-report their child's internalizing problems (Najman et al., 2001). Youth in the intervention as well as the control sample reported a decrease in depressive symptoms, but a reduction in youth-reported anxiety was only reported by intervention youth. This finding is notable, given that few parent training evaluations have found improvements in youth internalizing difficulties, especially when assessed via the young person's report. By responding to emotions in an accepting and validating manner, parents may not only facilitate closer and more affectionate relationships, but also create a supportive space for the young person to feel comfortable to express their feelings. This may help to lower the intensity and duration of the emotional experience, allowing the young person to process emotions by focusing on their feelings (Gottman et al., 1997; Shenk & Fruzzetti, 2011) rather than internalizing them. In addition, such conversations may also enable learning of additional strategies for regulating negative emotions (e.g., reappraisal or emotion acceptance) (Bastian et al., 2012; Gross & John, 2003) rather than trying not to think about it (i.e., suppression), which has been found to exacerbate the emotion experienced (Bastian et al., 2012).

The interaction between time and condition did not reach significance for youth-reported depressive symptoms, but an overall significant reduction was found for both groups. The onset of depressive symptoms typically occurs in mid-adolescence, not early adolescence. Therefore, it is not unexpected that although change occurred across the stressful transition for all participants regardless of condition, anxiety (which is more likely to have onset in early adolescence) was the problem that the intervention had a greater impact on. It is possible that the effect of the program on youth-reported depressive symptoms may become more noticeable only during mid-adolescence when rates of depressive symptoms typically increase (Trudeau et al., 2007). The addition of a version of TINT targeting the young person directly may strengthen outcomes.

Limitations of the Current Study

Although the study results are encouraging and show a number of positive changes, there were limitations. First, although the randomization resulted in two groups who were comparable across socioeconomic status and youth-reported variables, control group parents were not offered an intervention on a waitlist basis, and participants were not blind to condition. Thus, intervention parents, who reported greater youth internalizing problems at baseline, may have anticipated greater problems in the future compared with control parents who took part to merely support research on the transition to adolescence. Future studies should use a waitlist design and ensure that parents are blind to condition when completing baseline questionnaires. Second, the study relied on self-report measures, and parent-reported changes may have been affected by an expectancy bias; however, this possibility is somewhat tempered by their adolescents reporting similar changes. Future evaluation would benefit from using observational methods to assess parents' emotion coaching skills. Third, the low rate of uptake and that youth came from predominantly white, middle-, to higher income two-parent families may also limit generalizability of the findings. Cultural, economic, and family structure variables influence parents' emotion socialization beliefs and practices, and future studies should include a more diverse sample (Brand & Klimes-Dougan, 2010; Dunsmore & Halberstadt, 2009). Nevertheless, given that adolescents' anxiety levels were comparable with the population norms provided by the scale developers (Nauta et al., 2004), and uptake rates were comparable with other

universal prevention programs (Ralph & Sanders, 2006), it is likely that the sample represents families who may typically engage in prevention programs. Fourth, program fidelity was self-rated by facilitators, and independent observer-raters may have strengthened the reliability of this assessment. Finally, future studies should report on parents' perception of the acceptability of the interventions goals, procedures, and outcomes to establish social validity of the program.

Conclusion

This study is one of the first evaluations of a parenting program to utilize research linking parents' emotion socialization with young people's mental health, applying it in practice with a sample of parents of preadolescents. Parents in the intervention condition reported changes on all outcome variables, including reduced difficulties in emotion awareness and regulation, and internalizing difficulties for themselves, improvements in emotion socialization parenting practices, and reductions in internalizing difficulties in their youth. Young people, too, reported that their parents became less dismissing of their negative emotions and also reported significant reductions in internalizing difficulties. High program attendance and low attrition rates further strengthen results. Future research will investigate mechanisms by which this program leads to changes and will follow up the current sample when youth are in their final year of secondary school to determine if changes are maintained.

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