Reducing the onset of negative affect in adolescents: Evaluation of a perfectionism program in a universal prevention setting

Thomas J. Nehmy[*], Tracey D. Wade

School of Psychology, Flinders University, GPO Box 2100, Adelaide, SA 5001, Australia

A B S T R A C T

Objective: The aim of the current study was to evaluate a prevention program targeting unhelpful perfectionism and self-compassion, designed to prevent growth of negative affect (NA).
Method: Four schools participated in the research, where grade levels were allocated to either the intervention ("*Healthy Minds*") or the control condition (N = 688 individuals; mean age 14.90 years), and assessments occurred at baseline, post-intervention, and 6- and 12-month follow-up.
Results: There were no significant between group differences at post-intervention but at 6-month follow-up the intervention group had significantly lower unhelpful perfectionism, self-criticism and NA than the controls. Only significant between-group differences in unhelpful perfectionism were retained at 12-month follow-up (Cohen's $d = .24$). Examination of the sub-group lower in NA at baseline showed the intervention group was significantly less likely to have elevated NA at 6-month follow-up than controls, indicating a prevention effect.
Discussion: The effects obtained in the current study provide support for the utility of a perfectionism intervention for reducing transdiagnostic outcomes, including unhelpful perfectionism, self-judgment, and NA, and preventing the growth of NA. Ways of producing longer terms effects for NA need to be further investigated, as does the impact of the intervention on different types of psychopathology.
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Mental and substance use disorders are associated with the highest number of years lived with disability (YLD) in the developed world (Whiteford et al., 2013; WHO, 2008), higher than musculoskeletal disorders, cardiovascular and circulatory diseases, diabetes and cancer. Anxiety, depressive and eating disorders account for the majority of this burden and are highly prevalent (Hudson, Hiripi, Pope Jr., & Kessler, 2007; Kessler, Berglund, Demler, Jin, & Walters, 2005), costly (Kazdin & Blase, 2011) and associated with increased mortality (Arcelus, Mitchell, Wales, & Nielsen, 2011; Nock, Hwang, Sampson, & Kessler, 2010). Yet despite the high prevalence and costs of these disorders, and the development of efficacious treatments such as cognitive-behaviour therapy (Butler, Chapman, Forman, & Beck, 2006), the majority of sufferers do not receive appropriate treatment (Sawyer, Miller-Lewis, & Clark, 2007; Wang et al., 2007) and those who do remain vulnerable to later problems through the mechanism of heterotypic prediction (the occurrence of one disorder conferring risk for a later, different

disorder) and sequential comorbidity i.e., the occurrence of one disorder conferring risk of that disorder later recurring (Angold, Costello, & Erkanli, 1999; Costello, Copeland, & Angold, 2011). Such problems may include (but are not limited to) subsequent depressive symptoms, major depression, eating disorders, anxiety disorders, suicidal ideation, and suicide attempts (Fergusson, Horwood, Ridder, & Beautrais, 2005). These considerations render the development of effective prevention programs a global public health priority (Patel, Flisher, Hetrick, & McGorry, 2007).

Programs aimed at children and adolescents have been a focus in the prevention literature given that adolescence represents a period of increased vulnerability to a range of psychopathology (Calkins, 2010; Santonastaso et al., 1999). The majority of prevention programs have included participants who are either identified as being at risk (selective) or who are exhibiting symptoms yet may not meet criteria for a diagnosis (indicated), rather than universal programs in which all students participate regardless of current symptoms or risk status. While the higher effect sizes commonly associated with selective or indicated interventions (Stice, Shaw, Bohon, Marti, & Rohde, 2009; Stice,

* Corresponding author.
  E-mail address: tomnehmy@gmail.com (T.J. Nehmy).

Shaw, & Marti, 2007) has been cited as a reason to focus resources on these in preference to universal approaches (Gladstone & Beardslee, 2009), these latter prevention approaches remain an important endeavor as they preclude the stigmatization of participants, reduce the likelihood of detecting effects due to regression toward the mean, and include participants who may not be symptomatic or high risk but nevertheless may later develop psychopathology.

As recently described by Nehmy and Wade (2014), working in the context of a universal prevention approach requires several considerations. First, it has been suggested that a transdiagnostic approach to preventing psychological disorders would enhance the efficacy, generalizability, and cost-effectiveness of prevention programs (Dozois, Seeds, & Collins, 2009) by targeting the factors that influence the onset of multiple problems rather than a focus on maintenance factors specified in different treatment protocols. Second, use of a transdiagnostic approach requires a primary outcome variable of relevance across different psychopathologies. Studies of non-specific treatment effects (Newman, Przeworski, Fisher, & Borkovec, 2010; Tsao, Mystkowski, Zucker, & Craske, 2005) and comorbidity (Krueger, 2002) suggest a broad, underlying continuum of psychopathology best defined by a general negative affect (NA). The tripartite model proposed by Clark and Watson (1991) emphasises NA as a construct common to both depression and anxiety, a potentially useful marker given anxious and depressive symptoms may be less differentiated in adolescent populations (Patrick, Dyck, & Bramston, 2010; Tully, Zajac, & Venning, 2009). In addition, eating disorders share common genetic risk with depression and anxiety in female adolescents (Silberg & Bulik, 2005). Thus NA presents as a useful primary target in universal prevention in an adolescent population. A third important consideration of universal prevention is that the aim should not only be a reduction in symptoms, better conceptualised as a treatment effect, but also a prevention effect. This latter concept can be defined as *a lower rate of onset of symptoms over time* (Gillham, Shatté, & Freres, 2000) where: (i) analyses should be conducted on participants who were 'healthy' at baseline; (ii) a control group must exhibit an expected increase in symptoms or cases over time; and (iii) there must be significant group differences in favour of the intervention group at follow-up assessment.

The aim of the current study was to evaluate a prevention program that has the potential to prevent a broad range of psychopathology, including symptoms of depression, anxiety, and disordered eating. The transdiagnostic process we chose to target was unhelpful perfectionism, given increasing evidence that elevated levels of this type of perfectionism are associated with depression, anxiety and disordered eating (Egan, Wade, & Shafran, 2011), as well as increased comorbidity (Bieling, Summerfeldt, Israeli, & Antony, 2004). Self-critical perfectionism has also been shown to predict the growth of depression and associated impairment over four years (Dunkley, Sanislow, Grilo, & McGlashan, 2009), as well as the growth of disordered eating (Boone, Soenens, & Luyten, 2014). Accordingly, psychological interventions targeting perfectionism in clinical populations have been shown to be associated with large effect size decreases in perfectionism and moderate effect size decreases in anxiety and depression (Lloyd, Schmidt, Khondoker, & Tchanturia, 2014). However less work has been conducted with non-clinical populations. Of the three studies that exist, two focused on selective groups in a university population (Kearns, Forbes, & Gardiner, 2007; Kutlesa & Arthur, 2008). The third study was conducted in a universal prevention setting with adolescents, finding small effect size differences in unhelpful perfectionism compared to the control condition at 3-month follow-up (Wilksch, Durbridge, & Wade,

2008). However the latter study did not investigate the impact on NA and neither did it examine prevention effects. Therefore the transdiagnostic prevention potential of targeting perfectionism has yet to be addressed empirically.

The model of unhelpful perfectionism guiding content development of the intervention used in the current study was that of clinical perfectionism (Shafran, Cooper, & Fairburn, 2002). This model delineates mechanisms that mediate the relationship between perfectionism and NA, including self-criticism, dichotomous evaluation of performance, selective attention to failure, hypervigilant monitoring of performance, avoidance of situations where performance is tested, and dismissal of achievements. In order to reduce respondent burden in this population, we only examined only one potential mediator variable, self-criticism. We hypothesised that an intervention based on protecting adolescents against the growth of unhelpful perfectionism would reduce our primary proximal target variable, unhelpful perfectionism, as well as the postulated mediator, self-criticism (indicated by the Self-Judgement subscale of the Self-Compassion Scale [SCS; Neff, 2003]) and our distal primary outcome variable, NA. Our second hypothesis related to the sub-group lower in NA at baseline, where we expected to find a prevention effect for NA at both 6- and 12-month follow-up. Our third hypothesis was that, in longitudinal analyses controlling for baseline observations, changes in self-criticism between post-intervention and 6-month follow-up would mediate changes in NA between post-intervention and 12-month follow-up.

Method

Participants

All participating students (N = 688; 67.9% girls) from one Catholic and three independent or private schools in Adelaide, South Australia (mean age 14.90 years, SD = 1.01; range 11.82–18.02) were included. The sample was predominantly Caucasian, reflecting South Australian demographics. Socioeconomic status was obtained from the Australian government's Index of Community Socio-Educational Advantage (ICSEA) whereby 1000 represents the mean, with a standard deviation of 100 (ACARA, 2011). The four participating schools had ICSEA ratings between 1155 and 1181, indicating above average socio-economic advantage. Fig. 1 presents the recruitment and retention of participants over the four waves of data collection: baseline, post-intervention, 6- and 12-month follow-up.

Condition allocation

Allocation was non-random and based upon convenience where the assignment of participants to either intervention or control condition was done by cohort (i.e., grade or year level) to ensure groups were matched on age and gender variables. The age range in the Year 8 group was 11–14 years, and 12–16 years and 14–18 years in the Year 9 and 10 groups respectively. School 1 was a girls' school, where their Year 9 girls received the intervention (*Healthy Minds Program*) in their regular health lesson times. This school also provided their Year 8 girls as an assessment-only control group. School 2 was also a girls' school, where the Year 8 cohort received the intervention and the Year 9 cohort participated as controls. School 3 was a co-educational school where the entire Year 9 cohort received the intervention, with their Year 10 students acting as controls. The fourth school was a Catholic co-educational school where the Year 10 students received the intervention, and their Year 9 cohort participated as controls.