

## Longitudinal effects of an intervention on perfectionism in adolescents

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### Abstract

Perfectionism is a personality disposition characterized by a person's striving for flawlessness and the setting of excessively high performance standards. This trait has been associated with a broad range of psychopathological conditions. Consequently, prevention of its harmful effects must start early. **Objective:** To investigate if one group session to manage perfectionism has the effect of reducing the levels of this trait, two and six months later. **Method:** A community-based sample of 978 Portuguese adolescents from three different high schools completed a self-reporting questionnaire including the Child and Adolescent Perfectionism Scale, before and after one skill session. Three groups were formed: the intervention group received a skill session aimed at reducing perfectionism; control group 1 received a skill session aimed at healthy habits, and control group 2 received no intervention. **Results:** At baseline, no significant mean differences were found by gender or by school in Total Perfectionism or its dimensions. After one session to manage Perfectionism, the intervention group showed significant reduction in self-oriented perfectionism (SOP) scores, two months ( $p = .001$ ) and six months later ( $p = .02$ ). No significant reductions were observed in the control groups. **Discussion:** Our findings suggest that adolescents are sensitive to short interventions aimed at reducing perfectionism.

**Keywords:** Adolescents, personality, perfectionism.

### Resumen

*Efectos a largo plazo de una intervención sobre el perfeccionismo en adolescentes.* Perfeccionismo es un rasgo de la personalidad caracterizado por la lucha por la perfección y la fijación de normas de rendimiento excesivamente altas. Se ha asociado con una amplia gama de condiciones psicopatológicas. En consecuencia, la prevención de sus efectos nocivos debe comenzar temprano. **Objetivo:** investigar si una sesión para manejar el perfeccionismo puede reducir los niveles de este rasgo, dos y seis meses más tarde. **Método:** una muestra comunitaria de 978 adolescentes, de tres secundarias, respondió a un cuestionario de auto-reporte incluyendo la Escala de Perfeccionismo Infantil y Adolescente antes y después de una sesión. El grupo de Intervención recibió una sesión orientada a reducir el perfeccionismo. El grupo control 1 una sesión sobre hábitos saludables y el grupo control 2 no recibió intervención. **Resultados:** al inicio, no se encontraron diferencias significativas de medias por género y por escuela. Después de una sesión para manejar el Perfeccionismo, el grupo de intervención mostró una reducción significativa en las puntuaciones del perfeccionismo auto-orientado, dos meses ( $p = .001$ ) y seis meses después ( $p = .02$ ). Sin reducciones significativas en los controles. **Discusión:** nuestros hallazgos sugieren que los adolescentes son sensibles a intervenciones cortas para reducir el perfeccionismo.

**Palabras clave:** adolescentes, personalidad, perfeccionismo.

The perfectionism construct has a long history in personality and clinical psychology. In the last two decades, research has stressed its multidimensional nature (Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991; Stoeber, 1998). One of the most widely used multidimensional model of perfectionism is Hewitt and Flett's (1991) model, which distinguishes three dimensions of this trait. Those that have been more studied in terms of their relationship with psychological distress (PD) are self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP). SOP is characterized by the setting of excessively high standards for oneself, accompanied by a morbid fear of failure and an excessive self-critical attitude. SPP comprises beliefs that others have high standards for oneself and that acceptance by others is conditional

on fulfilling these standards (Campbell & Di Paula, 2002; Enns & Cox, 2002; Hewitt & Flett, 1991). In general, perfectionism is considered to represent a personality trait that plays a relevant role in cognitive, affective and behavioural functioning, and has been long considered a significant determinant of various domains of human functioning (Ayearst, Flett, & Hewitt, 2012; Gotwals, Stoeber, Dunn, & Stroll, 2012.). Over the past 15 years, research has made great progress in understanding the nature, correlations and consequences of perfectionism (Enns & Cox, 2002). In fact, there is increasing evidence that Perfectionism (P) is associated with PD in clinical and non-clinical populations and in a wide range of age distributions (Hewitt & Flett, 2002). For instance, several studies have proved the relationship between Perfectionism and psychological health in children and adolescents (Bottesi et al., 2016; Castro et al., 2004; Huggins, Davis, Rooney, & Kane, 2008; O'Connor, Dixon, & Rasmussen, 2009; Stoeber, Madigan, Damian, Esposito, & Lombardo, 2016; Stornelli, Flett, & Hewitt, 2009). Perfectionists try to protect themselves from embarrassment, criticism, anger, and the withdrawal of love or approval by controlling their own responses, as well as other's

reactions. Perfectionists tend to become highly anxious when they make mistakes, have a chronic fear of embarrassment or humiliation, and their self-esteem is based upon being a perfect person with a perfect performance (Mitchell, Newall, Broeren, & Hudson, 2013). The circumstance of not attaining a particularly high and often unrealistic goal can lead the person to severe disappointment and negative affect (Papadomarkaki & Portinou, 2012). Previous perfectionism research in Portuguese samples focused both in adolescent and adult subjects. Results from these studies showed that this personality trait is simultaneously a correlate and a risk factor for diverse psychopathological conditions and health problems, in adolescents and adults (Bento et al., 2010; Macedo et al., 2007; Maia et al., 2009; Soares et al., 2007).

The aim of the present study was to investigate, in a non-clinical sample of adolescents, if one session to manage perfectionism has the effect of reducing the levels of this trait, two and six months later. Adolescence is the period of life in which personality and identity are in development, making it the most suitable period of life to study changes in personality characteristics and implement preventive strategies that may induce positive and durable dispositional changes (Steinberg, 2008).

#### Method

##### Participants

The voluntary nature and general format of the research was explained and the informed consent was obtained from the parents of the participants. Confidentiality was ensured following the guidelines of the Portuguese law (Law 67/98; 26 October).

Nine hundred and seventy-eight adolescents from three secondary schools (7<sup>th</sup> to 12<sup>th</sup> grades), in the urban area of Coimbra, Portugal, participated in the study. The schools were randomly selected, in order to have all social and cultural backgrounds represented. The adolescents completed questionnaires assessing socio-demographic questions and the Portuguese version of the Child and Adolescent Perfectionism Scale.

##### Instrument

*The Child and Adolescent Perfectionism Scale (CAPS: Flett, Hewitt, Boucher, Davidson, & Munro, 1997).* The Portuguese version (Bento, Pereira, Saraiva, & Macedo, 2014) is a self-report questionnaire composed by 22 items based on a multidimensional conceptualization of perfectionism. It assesses the *Self-Oriented Perfectionism* -SOP; using questions such as: “*I want to be the best at everything I do*” or “*I get upset if there is even one mistake in my work*”; and the *Socially-Prescribed Perfectionism* - SPP “*Other people always expect me to be perfect*” or “*My teachers expect my work to be perfect*”. The subject is asked to rate each item on a 5-point Likert scale ranging from “*False – Not at all true of me*” (score 1) to “*Very true of me*” (score 5). The total possible score is of 110. Items 3: “*My parents don’t always expect me to be perfect in everything I do*”, 9: “*I don’t always try to be the best*”, and 18: “*I do not have to be the best at everything I do*” from the CAPS were reversed to ensure that a higher score indicated greater Perfectionism for all items. If required, the authors will provide the Portuguese Version of the Child and Adolescents Perfectionism Scale by e-mail.

##### Procedure

After the first evaluation (baseline - T0) three groups were formed: intervention group school (IGS) which received one skill session oriented to reduce perfectionism; control group school 1 (CGS1) received one skill session oriented to healthy behaviours and control group school 2 (CGS2) without any intervention.

The session oriented to reduce perfectionism applied to the IGS was prepared based on the self-guide to reduce Perfectionism “*When Perfect isn’t Good Enough. Strategies for Coping with Perfectionism*” (Antony & Swinson, 2009). The concepts and coping strategies of the module followed the general principles of cognitive behaviour therapy approach for perfectionism adapted to adolescents. According to the cognitive behaviour therapy model, perfectionism is the result of dysfunctional cognitions and behaviours. After the explanation of Perfectionism’s definitions and concepts, some examples of perfectionist actions/thoughts used by adolescents were shown. These examples related to habits at home and school, body image, etc. Subsequently, some advice was presented using practical examples. After the coping strategies session, posters with these instructions to manage perfectionism were placed on the courtyard walls of the school (Table 1).

The coping session oriented to healthy habits (applied to the CGS 1) was prepared based on general concepts of healthy habits during adolescence, like healthy food choices, importance of good sleep habits, the benefits of general sport practice, and the refusal of risk behaviours like use of drugs, tobacco and alcohol. After the session, posters with advice on healthy habits were placed on courtyard walls of the school.

After the baseline sessions, two months later (Time 1 - T1) and six months later (Time 2 -T2), the adolescents answered the same questionnaire.

##### Data analysis

SPSS 20.0 for Windows was used. Descriptive statistics were used to describe demographics and means/frequencies. One-way ANOVA, Student *t*-Test for paired samples and the Wilcoxon

Table 1  
Coping Session oriented to reduce Perfectionism

1. The Concept of Perfectionism.
2. The effects of Perfectionism in daily life and in academic achievements.
3. The adaptive/positive Perfectionist characteristics.
4. The maladaptive / negative Perfectionist characteristics.
5. Asking about self Perfectionism (concerns over mistakes, self criticism, fear of embarrassment, feelings of failure) for example:  
“Do you feel that even those who like you are always judging and criticizing your appearance?”;  
“Do you think you should always do everything right?”;  
“Do you do things you do not like to be accepted by others?”;
6. Advices to reduce Perfectionism, for example:  
“If you weigh daily, try to do it once a month, or once a week”  
“If you have a impeccable hairstyle try to stay Slightly dishevelled”
7. Identification of the situations related with Perfectionism (body, self-presentation, study, work).
8. Advices to reduce Procrastination, for example:  
“Write a list of the tasks you have to do, Classifies each task in order of importance and start and complete each task before starting the next task”.

Based to: Antony, M., & Swinson, R. (2009). *When perfect isn't good enough: strategies for coping with perfectionism*

Signed ranks test was used as appropriate. The Effect Size of the mean values was evaluated using the Cohen *d* criteria (Cohen, 1988) and corrected with the Morris and DeShon's equation (Morris & DeShon, 2002).

Results

At Baseline

**Gender:** Nine hundred and seventy-eight adolescents (576 girls – 58.9% and 402 boys – 41.1%) participated in the research. The comparison of the Total CAPS and their dimensions mean scores were not statistically different by gender (Table 2). For this reason, we decided to describe the results using Total Sample.

**Age:** The mean age was of 15.80 years (*SD*=1.510; range: 11-18). Three age groups were formed: 11-13 years, 14-16 years and 17-18 years. The comparison of the Total CAPS and their dimensions mean scores were not statistically different between age groups (Table 2).

**Schools:** Three schools accepted to participate in the study. The intervention-group school (*n*= 612; 62.8%); control-group school 1 (*n*= 110; 11.3%) and control-group school 2 (*n*= 252; 25.9%). The comparison of the Total CAPS and their dimensions mean scores were not statistically different between schools (Table 2).

**School Grade:** Three groups were also formed: 7<sup>th</sup>-9<sup>th</sup>, 10<sup>th</sup>-11<sup>th</sup> and 12<sup>th</sup>. The comparison of the Total CAPS and SPP dimension mean scores were not statistically different between the school grades. In which respects SOP, we found statistically different

mean scores between the younger group and the older group (*p* = .049) (Table 2).

Longitudinal Study

**Intervention Group School:** After the session, no significant reductions were observed in Total CAPS, or in SPP at T1 - two months later. Significant reductions were observed in SOP: *p* <.05 (Cohen's *d*: .171). After six months - T2: significant reductions remained in SOP: *p*<.05 (Cohen's *d*: .140) (Table 3).

**Control Group School 1:** After the healthy habits session, no significant reductions were observed in: Total CAPS (*p*= .469), SPP (*p*= .111) and SOP (*p*= .534) at T1 (two months later) and or after six months (T2): Total CAPS (*p*= .889), SPP (*p*= .850) and SOP (*p*= .750).

**Control Group School 2:** No significant reductions were observed in Total CAPS (*p* = .940), SPP (*p* = .178) and SOP (*p*= .061) two months later (T1). At T2 (six months later) a significant reduction was observed in SOP if compared with T0 (40.48 ± 8.998 vs. 38.59 ± 7.769; *t*(125) = 3.069, *p* = .003 (Cohen's *d*: .309). No significant reduction was observed in SOP when comparing T1 with T2(*p* = .149).

Follow up - Six months later

The comparison of the Total CAPS and their dimensions (SPP and SOP) showed that, mean scores were not statistically different between schools: CAPS (*p*= .874), SPP: (*p* = .678) and SOP: (*p* = .996).

Table 2  
Descriptive and mean comparisons

	Total Sample n= 998 N (%)	Perfectionism		
		CAPS M (SD)	SOP M (SD)	SPP M (SD)
<i>Gender</i>				
Girls	576 (58.9%)	65.98 (14.192)	39.43 (9.048)	26.61 (8.227)
Boys	402 (41.1%)	67.34 (13.851)	40.05 (8.508)	27.30 (8.176)
		<sup>°</sup> (df) = <i>t</i> , <i>p</i>	(970) = -1.491, <i>p</i> <sup>NS</sup>	(970) = -1.277, <i>p</i> <sup>NS</sup>
<i>Age</i>				
11-13 y.	94 (9.6%)	64.38 (12.880)	37.95 (8.155)	26.38 (8.311)
14-16 y.	504 (51.5%)	66.39 (14.457)	39.58 (8.837)	26.81 (8.518)
17-18 y.	380 (38.9%)	67.27 (13.773)	40.24 (8.949)	27.13 (7.766)
		<sup>‡</sup> (gl) = <i>F</i> , <i>p</i>	(2, 969) = 1.607, <i>p</i> <sup>NS</sup>	(2, 969) = 2.558, <i>p</i> <sup>NS</sup>
<i>School</i>				
IGS	613 (62.8%)	66.32 (14.089)	39.67 (8.763)	26.64 (8.301)
CGS1	112 (11.3%)	67.14 (13.831)	40.21 (9.271)	27.09 (7.835)
CGS2	253 (25.9%)	66.43 (14.511)	38.58 (8.147)	27.85 (8.516)
		<sup>‡</sup> (gl) = <i>F</i> , <i>p</i>	(2, 969) = .309, <i>p</i> <sup>NS</sup>	(2, 969) = 1.299, <i>p</i> <sup>NS</sup>
<i>S. Grade</i>				
7 <sup>th</sup> -9 <sup>th</sup>	156 (16%)	65.14 (13.147)	38.55 (8.533)	26.56 (8.076)
10 <sup>th</sup> -11 <sup>th</sup>	470 (48.1%)	66.38 (14.587)	39.42 (8.853)	26.95 (8.532)
12 <sup>th</sup>	352 (36%)	67.37 (13.706)	40.52 (8.886)	26.97 (7.836)
		<sup>‡</sup> (gl) = <i>F</i> , <i>p</i>	(2, 969) = 1.405, <i>p</i> <sup>NS</sup>	(2, 969) = 3.028, <i>p</i> <sup>=.049</sup>

CAPS: Child and Adolescent Perfectionism Scale; SOP: Self Oriented Perfectionism; SPP: Socially Prescribed Perfectionism; IG: Intervention School; CG1: Control Group 1; CG2: Control Group 2; M (SD): Mean (Standard Deviation); °: Independent t Sample Test; ‡: One Way ANOVA; NS: No Significant

Table 3  
Temporal Study - Perfectionism Scores (Mean±SD) - Intervention Group School (Paired Sample *t* Test)

	Intervention School			Paired Sample <i>t</i> Test (df= 2 ; 374) [ <i>t</i> ]	p
	(N= 375)				
	T0 (M±SD)	T1 (M±SD)	T2 (M±SD)		
CAPS	66.17 ± 13.670	65.37 ± 14.745	65.94±14.128	T0>T1[ <i>t</i> =1.419] T1<T2[ <i>t</i> =-.946] T0>T2[ <i>t</i> =.359]	NS NS NS
SPP	26.59 ± 8.320	26.93 ± 8.679	27.27±8.284	T0<T1[ <i>t</i> =-.969] T1<T2[ <i>t</i> =-.897] T0<T2[ <i>t</i> =-1.719]	NS NS NS
SOP	39.58 ± 8.554	38.44 ± 8.676	38.67 ± 8.375	T0>T1[ <i>t</i> =3.498] T1<T2[ <i>t</i> =-.640] T0>T2[ <i>t</i> =2.328]	.001** NS .020*

Note: CAPS: Child and Adolescents Perfectionism Scale; SPP: Socially Prescribed Perfectionism; SOP: Self Oriented Perfectionism; M: Mean; SD: Standard Deviation  
\*\**p*: .001; \* *p*: .05; NS: No Significant

## Discussion

It is well known that childhood and adolescence are the most important periods for the development of perfectionism (Flett & Hewitt, 2002) and the manifestations of unhealthy perfectionism during childhood and adolescence have been studied for their relationship with psychopathology (Flett, Hewitt, Besser, Su, Vaillancourt et al., 2016; Morris & Lomax, 2014; Teixeira, Pereira, Marques, Saraiva, & Macedo, 2016). Previous studies have already shown the effectiveness of self-help books to cope with psychological distress or change some personality traits, for example self esteem (Fennell, 2009; Kaveh, 2014), perfectionism (Bento, Pereira, Roque, Saraiva, & Macedo, 2015; Elliott, Goldberg, & Price, 1999; Adelson & Wilson, 2009; Smith, 2013), anxiety (Butler, Fennell, & Hackmann, 2010) and depression (Gilbert, 2009). However, the study of brief intervention strategies to cope with perfectionism in large groups is sparse. For this reason, the objective of the present study was to analyse the effect of one session to cope with Perfectionism in a large, population-based sample of Portuguese adolescents. To our knowledge, this is the first time that this kind of research has been done in our country. At baseline, the mean results in SOP and SPP were in line with the results from other studies using the same instrument, in an adolescent Portuguese population (Bento et al., 2010). The absence of differences in SOP and SPP by schools, age and school grade showed the homogeneity of the adolescent sample (Reichenheim & Moraes, 1998). In accordance with other researchers, we did not find any gender differences in SOP and SPP (Kaur & Kaur, 2012; Soreni et al., 2014). Recently, Fairweather-Schmidt and Wade (2015) verified the effectiveness of CBT focusing on reducing perfectionism in a small group of pre-adolescents (N= 125). In the Fairweather-Schmidt's research, significant group differences for self-oriented perfectionism-striving were identified post-intervention and were maintained at 4-week follow-up. Other researchers have proven that Cognitive Behaviour Therapy (CBT) in perfectionism is effective in young adults (Egan et al., 2014; Riley et al., 2007). In fact, Egan et al. (2014) who investigated the efficacy of two formats of CBT for perfectionism, (face-to-face and pure online self-help), verified a significant reduction in perfectionism at the end of treatment for

the perfectionism variables and the reduction was maintained at the 6-months follow-up, compared with the waitlist. In the present study, after the session in the intervention group school (IGS), we observed significant reductions in SOP and no significant reductions were observed in the others schools groups (CGS1 and CGS2). Despite the differences, in our research, the IGS had an equivalent form of brief self-help of CBT (because the session was planned using the self-help to reduce perfectionism). Our results were quite similar with Egan's research in time too (IGS reduced significantly perfectionism after two months and the results remained after six months). Another intervention study that found results partially in line with the present study was of Kearns, Forbes and Gardiner (2007) who investigated the efficacy of a modified form of cognitive behavioral therapy, in a non-clinical population, through an intensive workshop series held over six weeks. They observed that the subscales about concern over mistakes and personal standards (related with self-oriented perfectionism) suffered changes; but the other subscales about parental expectations and parental concerns (related with socially prescribed perfectionism) did not change over the time. Considering the evaluation after six months, the three schools had no mean differences in Perfectionism dimensions, but slightly changes in the mean values were observed in all of them. These results have been observed in other longitudinal studies without interventions, which have shown small changes in perfectionism mean scores. Coughlin and Kalodner (2006) in a longitudinal research, with a prevention intervention for college women at low- or high-risk for eating disorders, found no significant reductions in scores for the perfectionism items of the Eating Disorders Inventory. The approach of the mean scores at the end of the study is a statistical effect called regression toward to the mean. In this phenomenon, a variable is extreme on its first measurement, it will tend to be closer to the average on its second measurement, and if it is extreme on its second measurement, it will tend to have been closer to the average on its first (Stigler & Stephen, 1997; Upon & Cook., 2008).

Our findings should be considered within the context of several limitations of the study. First, the study had a small number of adolescents in the CGS 1 sample. Hence, the study may have lacked the statistical power to detect smaller effects (e.g., healthy habits predicting longitudinal changes in perfectionism). Finally,

and perhaps most importantly, the present study was a short-term longitudinal study examining the effect of only one session developed to reduce perfectionism over a six-month interval. In our case, the coping skills session had a faster reduction of perfectionism when compared with the other schools, despite the small sized effect observed. Future research is necessary to study the effect of longer interventions to cope with perfectionism, not only in non-clinical samples, but also in clinical samples.

Once perfectionism plays a role in childhood and adolescence (Accordino, Accordino, & Slaney, 2000; Parker, 2002), the most significant implication of this study is that at least, SOP can be

changed by cognitive behavioral therapy within a nonclinical adolescent population. The present findings provide the evidence that CBT in school classes can be effective in adolescents with some perfectionist tendencies. Their application can be useful to reduce the risk of development of other psychopathologies associated with perfectionism.

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