

Overcoming Perfectionism in Adolescents: The Role of Problem-Solving Model of Cognitive Behavioural Coaching

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Abstract

This study evaluated the effectiveness of cognitive behavioural coaching (CBC) on academic perfectionism of adolescents. The study also explored the influence of gender on academic perfectionism of adolescents. Seventy-nine (79) senior secondary school adolescents in class two participated in the study. A perfectionism proneness checklist was used to measure their levels of perfectionism. The study used a pretest-posttest non-equivalent control group quasi-experimental research design involving one experimental group and one control group. The CBC was conducted using a 6-weeks problem-solving coaching plan. All outcomes were measured before and after the CBC intervention. The data were analyzed using the intent-to-treat principle. Results show that in-school adolescents in the experimental had a significant reduction in their academic perfectionism after the intervention. Also, gender as a factor in the study had a non-significant influence on the academic perfectionism of in-school adolescents. Finally, there was a non-significant interaction effect of gender and CBC on in-school adolescents' academic perfectionism.

Keywords: Academic Perfectionism, Cognitive Behavioural Coaching, Adolescents

I. Introduction

Adolescence is a very sensitive developmental stage characterized by psychological upheavals which make the group highly vulnerable. According to the American Psychiatric Association (2013), secondary school settings provide a lot of situations where adolescents display their abilities and performance in the presence of others (teachers and peers) and this achievement situations make some of them worry and be concerned with how others will judge them in case of potential failure. Presumably, this could increase their vulnerability to perfectionist tendencies. Some of them hold false belief and assumptions that one cannot pass an examination without some form of assistance from others. Others use their high achievement obtained in their internal examinations with the help of others to set unrealistic high standards for themselves. Research studies

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consistently indicated that students' academic achievement is a problem at all levels of education in Nigeria (Popoola & Olarewaju, 2010; Akinsanya & Omotayo, 2013).

On the other hand, SSII students are the group at the peak of their adolescent stage when issues relating to academic achievement tend to threaten their sense of self and could lead to maladaptive perfectionism. Furthermore, they are the group that could have been predisposed to perfectionism due to prolonged experiences of academic difficulties and fluctuation in academic performances. More importantly, they constitute the next group that will be taking the next external examination to qualify them for university admission. Consequently, a good number of them in a bid to prepare for the examination may tend to engage in mal-adaptive perfectionism. It was noted that factors contributing to students low achievement include among others, personal factors which are manifested in unhelpful behaviours such as perfectionism (Duze, 2011).

Perfectionism among in-school adolescents is evident in different areas of their endeavours including academic setting thus, academic perfectionism. According to Shafran and Mansell (2001), academic perfectionism is an essentially negative construct involving setting excessively high academic standards for oneself or others. Frost, Marteen, Lahart, and Rosenblate (2000) emphasized that these high standards are accompanied by tendencies for overly critical evaluations of one's own behaviour, expressed in over concern for mistakes and uncertainty regarding actions and beliefs. In-school adolescents often engage in perfectionism as they approach academic demands. Such perfectionist behaviours could be attributable to negative academic outcomes such as a decrease in performance, negative emotions, low self-efficacy, academic adjustment problems, procrastination, and effort withdrawal (Smith, Sherry, Rnic, Saklofske, Enns, & Gralnick, 2016). Kearns and Gardiner, (2008) stated that students who are more perfectionists are less satisfied with their performance, experience higher levels of stress, prone to persistent worry and fear of failure.

Consequently, several authors have proposed models for treating academic perfectionism, but these may have not been rigorously tested. Burns (2010) proposed a variety of cognitive interventions that could be used in the treatment of perfectionism, such as identifying the advantages and disadvantages of academic perfectionism, finding other sources of pleasure or worth and identifying cognitive distortions. Antony and Swinson (2013) developed a self-help book for dealing with academic perfectionism which involved a wide range of cognitive and behavioural strategies including keeping a perfectionism diary, identifying triggers, examining standards and rigid perfectionistic beliefs, and developing goals and plans for change. Hewitt and Flett (2002) suggested psychotherapy, focusing on the motivations for and antecedents of perfectionism, as the best treatment approach. However, these researches have traditionally taken place in a pure experimental setting. To be able to provide useful and helpful recommendations for students, teachers, parents and relevant educational authorities, an intervention that could be implemented at the secondary school level could be a nonclinical adaption of cognitive-behavioural therapy (CBT) such as cognitive behavioural coaching (CBC). The cognitive behavioural approach emphasizes that how individuals react to events is largely determined by their views of them, not by the events themselves (Neenan & Dryden, 2002). Cognitive behavioural coaching does not offer any quick fixes to achieve personal change or "magic away" personal difficulties rather emphasizes that sustained effort and commitment are required for a successful outcome to life challenges. Cognitive behavioural coaching does not seek to give people the answers to their problems or difficulties, but through a collaborative process called guided discovery helps individuals to reach their own conclusions and

solutions to a given problem or threat. In other words, whenever possible, it helps people's brains take the strain of problem-solving. Guided discovery is based on Socratic questioning whereby the coach asks the person a series of questions to bring information into his awareness: 'therefore, Socratic questions are designed to promote insight and better rational decision making (Beck, 1993). Thus, we aimed to evaluate the effectiveness of cognitive behavioural coaching (CBC) on academic perfectionism among in-school adolescents. We also investigated whether the intervention could reduce academic perfectionism tendencies among a particular gender.

II. Method

Ethical Considerations

Ethical approval to conduct this study was provided by the Faculty of Education Research Ethics Committee, University of Nigeria, Nsukka, Nigeria. This study also complied with the research ethical standard as specified by the American Psychological Association (2016), and the World Medical Association (2014). Informed written consent was also obtained from the study participants. Further, wait-listed participants received coaching intervention after the active study as in previous studies (e.g. Cunningham et al. 2013). This was meant to provide all the participants with the opportunity for improvement since all of them are found to be at-risk.

Study Participants and eligibility

Participants were 79 in-school adolescents (male: $n = 36$) and (female: $n = 43$) from secondary schools in Edo State, Nigeria. For further demographic data see Table 1. The specific inclusion criteria were: (1) A participant must score up to 3–5 in the Single-Item Measure of Perfectionism symptoms, showing moderate to a high level of proneness to perfectionism; (2) should submit a written declaration of interest and availability to participate in the program; (3) Participants must be in senior secondary 11. Participants who did not meet all the inclusion criteria were excluded.

Procedure

Before the treatment, the researchers applied and received written approval for the study from the state ministry of Education. The researchers further visited the 10 public secondary schools in the study area to notify the school Principals about the study from March

2019 to May 2019. A total of 966 (526 males, 470 females) in-school adolescents in Edo state, Nigeria were screened for eligibility by the researchers using the academic perfectionism proneness checklist After the proneness checklist was administered, a total of 79 in-school adolescents who met all the inclusion criteria were randomly assigned to experimental intervention ($n = 40$) and control conditions ($n = 39$) using a random allocation sequence by the researchers. The researchers utilized a container that was filled with cut-off paper cards. The cards were majorly categorized into 'EG' (Experimental Group) and 'CG' (Control Group). The sequence was concealed throughout the intervention process as it kept the participants blinded. The sampled in-school adolescents (36 males and 43 females) were drawn from four (4) coeducational public secondary schools in Edo state, Nigeria through multistage sampling procedure. Coeducational secondary schools were used to

take care of the gender variable. The researchers, as well as the research assistants, utilized academic perfectionism scale (APS) to ascertain the baseline data (Time 1) from participants. A total of 40 (21 males & 19 females) participants received group problem-solving model of CBC intervention. The intervention lasted for 6 weeks. During the 6 weeks, a total of 6 sessions were held. Each session lasted for 80 minutes (normal double period lesson time) once in a week. In order to further secure the maximum cooperation from the participants, the researchers reinforced participants by providing each participant with a free notebook and a pen and also the provision of snacks after each coaching exercise. At the end of each session, the participants were evaluated based on what they have been taught and were allowed to share experiences. Immediately after the allocation exercise, baseline data were collected from both the experimental group (EG) and the control group (CG). Thereafter, the EG participated in group Problem-solving model CBC training programme and participants in the control group received a placebo counselling program for 9 weeks. Post-test (Time 2 data) evaluation was conducted in both the EG and CG 2 weeks after the EG training. Follow-up evaluation (time 3 data) was conducted 3 months after the post-test for both the EG and CG. Thus, participants in both groups completed and returned the outcome measures (Time 1, Time 2 and Time 3). On the follow-up evaluation day, the researchers and the participants in CG scheduled a date for their own intervention programme in order to offer the participants who received only the placebo counselling program the opportunity to benefit from the CBC intervention, since they are equally at-risk.

III. Measures

Demographic Questionnaire

The demographic Questionnaire was meant to obtain information about the demographic variables including gender, school, class, and of the participants.

The Academic Perfectionism Questionnaire (APQ)

Three versions of Academic Perfectionism Questionnaire were developed by the researchers, were versions 2 and 3 were reshufflements of the original instruments which was version 1 of the instruments. Versions 1 APQ was used as proneness checklists while versions 2 and 3 were used to collect data during pre-test and post-test evaluations. The instruments were developed by the researchers with a guide from the multidimensional perfectionism scale (Kearns, Forbes and Gardiner, 2007). The Academic Perfectionism Questionnaire (APQ) contains 37 items which were used to seek information on the perfectionist behaviours of the students towards achievement in school. The APQ contains negative and positively skewed items to enable participants to describe their level of perfectionism and how they regulate themselves about school work. The negatively skewed items were asterisked (*). The items of APQ were rated on a four-point scale of Always (4), Often (3), Rarely (2) and Never (1) for positively skewed items. The negatively skewed items had the scores reversed (1, 2, 3, and 4). Students with mean scores from 2.50 and above were regarded as having high academic perfectionism and vulnerable, while those with scores less than 2.50 were regarded as having low academic perfectionism and not at-risk. When the instrument was trial- tested among 30 in-school adolescents outside the study area in Nigeria by the researchers, the internal reliability consistency was 0.81. After an

interval of two weeks, the APQ was re-administered to the students and the coefficient of stability was obtained using Pearson's product-moment correlation coefficient. A Cronbach Alpha reliability index of 0.84 was obtained.

Intervention

Problem-solving model CBC manual developed by the researchers was used during the intervention. The group Problem-solving model CBC manual aimed at changing irrational beliefs that indirectly cause academic perfectionism tendencies and consequently, poor academic achievement among in-school adolescents to rational ideas. The manual lasted for 9 weeks, one session per week. Each session lasted for 80 min. During the first and second sessions, topics like pre-testing; establishing rapport and developing an action plan were delivered to the participants. At these points, participants introduced themselves and got familiarized with rules of conduct, set goals, and identified perceived academic perfectionism tendencies. The participants were guided to monitor themselves through CBC problem-solving model by identifying and explaining every perfectionist tendency in line with the CBC Problem-solving diagram and accompanying questions and also focused on introduction and explanation of CBC Acronym- Cognitive (C); Behavioural (B), Coaching (C) as well as the presentation of CBC problem-solving model diagram as in Coutts, Sheridan, Kwon and Semke (2012). From session four to nine, participants were taught how to develop coaching skills and how to use it to defeat challenges after which practice exercise was given to them. Cognitive behavioural therapy/REBT skills or content covered were drawn and centred around the 6 basic steps of the problem-solving model: defining the problem, determining the root cause(s), developing alternative solution, selecting the solution, implementing the solution and evaluating the solution. During the development of the manual, earlier studies were reviewed (e.g. Beck 1976; Ellis 1994; Gyllensten & Palmer 2005; Palmer & Szymanska 2007; Williams & Palmer 2009). The researchers took account of CBC problem-solving model developed by Wasik (1984) involving problem identification, goal selection, generation of alternatives, and consideration of consequences, decision making, implementation and evaluation. These techniques and steps were built into the coaching program to counter academic perfectionism during the intervention.

Recruitment, Response Rates, and Attrition

Informed consent was obtained from all the 79 participants who responded to researchers' call and attended the first meeting. All the 79 who indicated interest to participate in the study (100%) were participated for meeting the inclusion criteria hence, all (100%) of the participants who took part in the pre-test complied through all the study sessions. The 100% level of compliance could be attributed to the reinforcements attached to participation.

Design and Data analysis

This open-label non-clinical intervention was performed in a school setting. The study adopted a group randomized controlled trial design with pre-test, post-test and follow-up assessments (Desveaux et al. 2016; Duncan et al. 2012; Zernicke et al. 2014). This design has been found to guide researchers to assess the effectiveness of an intervention when introduced into real-life conditions such as school settings. A proneness checklist was used to determine participants that are at-risk to academic perfectionism. The at-risk in-school adolescents were randomized into two groups; one served as the experimental group and the other served as the

control group. We analyzed baseline data using independent sample *t*-test with bootstrap at a 95% confidence interval to establish the initial difference in academic perfectionism level of the participants in the experimental and control groups. A 2-way analysis of variance (ANOVA) with repeated measures was used to establish the effects of the baseline data, postintervention and follow-up data. Partial eta squared was used to report the effect size of the intervention on the dependent measures (Academic Perfectionism Questionnaire-APQ). Paired sample *t*-test was used to determine the difference in participants' ratings across Time 1 and 2; and Time 2 and 3. Further, 2×3 Analysis of Variance (ANOVA) statistics was conducted to find out the interaction effects of group \times Time on Academic self-handicapping Questionnaire (APQ). Post Hoc analysis was conducted using Bonferroni-Holm correction to analyze changes in the participant ratings in the three measures over time. The analysis was done using computer software Statistical Package for Social Sciences (SPSS) version 18.0.

IV. Results

Table 1: Frequency Table for the study sample by demographic variables

Gender	Experimental		Control Group		Total	
	Frequencies	Percentage	Frequencies	Percentage	Frequencies	Percentage
Males	21	52.5	15	38.5	36	45.6
Females	19	47.5	24	61.5	43	54.4
Total	40	100	39	100	79	100

Table 1 shows the distribution of the study participants based on treatment and gender. Out of the 79 participants, 36 (45.6%) were males while 43 (54.4%) were females. The experimental group who participated in CBC intervention were 40 (21 males and 19 females) while the control group was made up of 39 (15 males and 24 female) in-school adolescents.

Research question 1: What is the effect of cognitive behavioural coaching on mean academic perfectionism scores among in-school adolescents?

Table 2: Mean scores of students' academic Perfectionism by treatment

		Mean	N	Std. Deviation	Mean Loss (Pretest – Posttest)
EG	Academic_Perfectionism_Pre	3.5899	40	.26741	
	Academic_Perfectionism_Post	1.4008	40	.19512	2.1891

CG	Academic_Perfectionism_Pre	3.5308	39	.15470	
	Academic_Perfectionism_Post	3.2959	39	.23987	.2349

Data in Table 2 show that the baseline (pre-test) academic perfectionism was high for both CBC group (M=3.5899; SD=.26741), and control group (M=3.5308; SD=.15470). This shows that before the CBC intervention, both participants in the experimental and control groups had high academic perfectionism. At Post-test, the academic perfectionism of the CBC (Experimental) group reduced appreciably (M=1.4008; SD=.19512) over the control group (M=3.2959; SD=.23987). The mean losses of 2.1891 and 0.2349 for experimental and control groups respectively indicated that CBC is effective in reducing academic perfectionism over conventional counselling. To further address this research question, hypothesis 1 was tested.

Hypothesis 1: There is no significant difference in the mean academic perfectionism scores of in-school adolescents exposed to cognitive behavioural coaching and those not exposed to cognitive behavioural coaching.

Table 3: t-test Table showing the significant difference in pre and post-tests mean academic perfectionism scores of in-school adolescents by treatment

		Mean Diff.	Std. Deviation	Std. Error Mean	t	Sig. (2-tailed)
EG	Academic_Perfectionism_Pre -					
	Academic_Perfectionism_Post	2.19	.34	.05	40.73	.000
CG	Academic_Perfectionism_Pre -					
	Academic_Perfectionism_Post	.23	.24	.03	6.01	.101

EG=Experimental Group, CG=Control Group

Data in Table 3 reveal that in-school adolescents in the experimental had a significant reduction in their academic perfectionism after the intervention. This was shown by t- cal 40.73 which is significant at .000 level of significance. A significant difference in the pretest and post-test academic perfectionism of the students indicated that the CBC intervention was effective in reducing academic perfectionism. On the other hand, the students in the control group also had a non-significant difference in the pretest and post-test mean academic perfectionism. This was shown by t-value of 6.016 with P = 0.101 showing a non-significant difference.

Research Question 3: What is the influence of gender on academic perfectionism among in-school adolescents?

Table 4: Descriptive Statistics showing the academic perfectionism of in-school adolescents by gender

Gender	M	Mean	Std Deviation	Mean difference
Males	36	2.2022	.98810	
Females	43	2.4486	.96645	-0.25
Total	79	2.3363	.97790	

Data in Table 4 show the academic perfectionism of in-school adolescents based on gender. The data considered males and females in both experimental and control groups. It showed that the total mean academic perfectionism of the male participants is 2.20 with standard deviation: .98 while the female participants had a mean academic perfectionism of 2.45 with standard deviation: .97. The Table also shows a mean difference between males and females of -0.25, showing that females had higher academic perfectionism than males.

Hypothesis 3: Gender has no significant influence on the mean academic Perfectionism scores of in-school adolescents.

Table 5: ANOVA Table for the difference in the mean academic perfectionism scores of in-school adolescents by gender

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	70.948a	3	23.649	486.902	.000	.951
Intercept	424.201	1	424.201	8733.586	.000	.991
Treatment	69.319	1	69.319	1427.169	.000	.950
Gender	.010	1	.010	.216	.644	.003
Treatment * Gender	.019	1	.019	.393	.533	.005
Error	3.643	75	.049			
Total	505.815	79				

Corrected Total	74.591	78
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a. R Squared = .951 (Adjusted R Squared = .949)

Table 5 shows that gender as a factor in the study had a non-significant influence on the academic perfectionism of in-school adolescents. This is shown by F-value of .216 with a p-value of .644 which is greater than .05 alpha level. This indicates that the mere fact of being a male or female does not influence the academic perfectionism of in-school adolescents.

Hypothesis 5: there is no significant interaction effect of cognitive behavioural coaching and gender on the posttest mean academic perfectionism scores of in-school adolescents.

Data in Table 5 show a non-significant interaction effect of gender and CBC on in-school adolescents' academic perfectionism. This was indicated by F-value of .393 with a p-value of .53 which is not significant at .05 level of significance. Thus, the null hypothesis of no significant difference is not rejected.

To further throw more light on this hypothesis, consider the figure below:

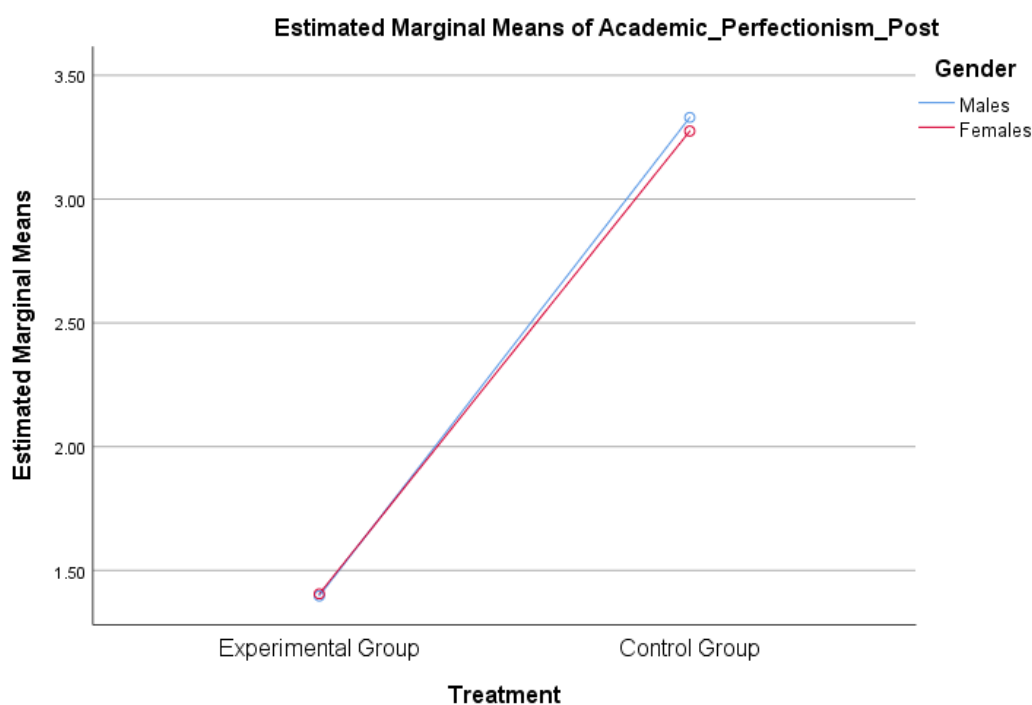


Figure 1: Plot of academic perfectionism of participants based on gender and treatment.

Figure 1 shows that academic perfectionism of in-school adolescents did not differ based on gender during the posttest. The graph showed a linear non-significant interaction effect of counselling strategies and gender on academic perfectionism of in-school adolescents. At post-test, participants in both males and females

in the CBC group had low estimated marginal mean scores in academic perfectionism (about 1.5) while those in the control group had high academic perfectionism of about 3.42- 3.44. Though there was a little difference in the academic perfectionism of participants in the control group, the use of CBC eliminated such difference in the experimental group, showing that the use of CBC reduces academic perfectionism of the participants irrespective of gender and so bridges gender gap in academic perfectionism.

V. Discussion

Findings of the study indicated that gender as a factor in the study had a non-significant influence on the academic perfectionism of the students. This finding disagrees with that of Macsinga and Dobrița (2010) who found significant gender differences regarding perfectionism, with men proving to be more concerned with mistakes than women. Variance in the findings could be that the previous study (Macsinga and Dobrița, 2010) considered only mistakes and did not take into consideration, other aspects of perfectionism like setting high and unattainable standards and negative self-judgment. The present study took into consideration, all these aspects of perfectionism and found no significant gender difference in the overall perfectionism score. This implies that the mere fact that an adolescent is a male or female does not bring about considerable variation in how they show academic perfectionist behaviours. It depends on the orientation an individual has concerning academic activities. For instance, irrespective of whether the in-school adolescent is a boy or a girl, they could hold unhelpful beliefs about academic achievement. Such beliefs and orientations could make them set an unachievable standard and trigger distorted emotional reactions peradventure the standard set was not achieved. Similarly, the findings of the present study are in discord with that of Masson, Cadot and Ansseau (2003) who examined failure effects and gender differences in perfectionism at the University of Liege, in Sart-Tilman district of Belgium. Result revealed that girls experience more of anxiety and procrastination but less on self-confidence, more subjected to society and its exigencies of studying. They also have less sense of incompetence whereas boys function more indiscriminately, maintain self-confidence but usually procrastinate more probably because failure expectancies would be particularly harmful to their self-esteem.

Result of the present study supports that of the earlier finding (Cowie, Nealis, Sherry, Hewitt & Flett, 2018) which found no gender moderation in academic perfectionism. This suggests that both males and females equally possess the tendency to equally show perfectionism. For instance, both males and females could cue into dysfunctional thoughts, leading to perfectionism behaviours. While adaptive perfectionism has been linked to good school outcomes, maladaptive perfectionism has been found to undermine it (Gnilka, Ashby & Noble, 2012; Mehr, & Adams, 2016; Seipel, & Apigian, 2005). Therefore, it is necessary to seek to reduce clinical cases of academic perfectionism. Several types of treatment programs have been introduced in controlling clinical cases of perfectionism (Craciun, 2013; Riley, Lee, Cooper, Fairburn, & Shafran, 2007). CBC intervention could allow students to identify their pitfalls with respect to academic goals and strategies, and in turn, encourage them to revise their maladaptive approaches to efforts and achievements. CBC works by changing the individuals' perceptions, beliefs and worldviews that are unhelpful to their academic development (Antony, 1999; Egan & Shafran, 2018). James and Rimes (2018) suggested that CBC training was effective in reducing maladaptive perfectionism. Shafran, Lee and Fairburn (2004) recorded similar result when they found that the cognitive-behavioural intervention for clinical perfectionism was effective in the reduction of both

clinical perfectionism and binge-eating and that improvements were maintained at five-month follow-up. Riley et al. (2007) found that 15% of participants in CBC intervention significantly improved after treatment with effect size. However, there are no clinical trials of CBC in adolescents in senior secondary schools to date. The current study will be the first to the best of our knowledge to investigate the effectiveness of CBC in reducing academic perfectionism in a sample of in-school adolescents.

VI. Conclusion

Adolescents exposed to cognitive behaviour coaching had a significant reduction in their academic perfectionism after the intervention. Also, gender had a non-significant influence on the academic perfectionism of adolescents. A non-significant interaction effect of gender and CBC on adolescents' academic perfectionism was recorded.

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