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Online compassion focused therapy for social anxiety disorder in adolescence (CFT@TeenSAD): Preliminary data on efficacy throughout treatment

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Abstract

This work investigated the efficacy of Compassion Focused Therapy (CFT) on symptoms of social anxiety disorder (SAD) in adolescence, based on data collected throughout treatment. CFT has contributed to the psychological well-being of various populations, but limited evidence exists on its therapeutic gains for SAD in adolescence. Twenty-one adolescents (57.1% girls; 15-18 years old) presenting with SAD received online treatment. The CFT@TeenSAD intervention was organized into four modules: Our mind according to

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CFT, Developing the compassionate self and the skills of a compassionate mind, Practicing compassionate behavior, and Last remarks and continuing a compassionate journey. Before each session, adolescents reported on perceived change in symptom severity. At the end of each session, clinicians rated overtime change in that severity. Self-reports (F(1,540) = 32.271, p < .0005, $\eta p^2 = .63$) and clinician's reports (F(1,528) = 24.783, p < .0005, $\eta p^2 = .57$) showed that improvement was significantly heightened during treatment, with significant changes across all four intervention modules. Trajectories of change were similar across gender. Though preliminary, findings point to online CFT being a promising approach to treat SAD in adolescent boys and girls, given that it contributes to continuous decrease in severity of social anxiety symptoms.

Keywords: Compassion Focused Therapy, social anxiety disorder, adolescence, therapeutic change.

Terapia focada na compaixão online para a perturbação de ansiedade social na adolescência (CFT@TeenSAD): Dados preliminares de eficácia ao longo do tratamento

Resumo

Este trabalho investigou a eficácia da Terapia Focada na Compaixão (TFC) nos sintomas da perturbação de ansiedade social (PAS) na adolescência, com base em dados recolhidos ao longo da intervenção. A TFC contribuiu para o bem-estar psicológico em várias populações, mas é escassa a evidência sobre a sua eficácia no tratamento da PAS em adolescentes. Vinte e um adolescentes (57.1% raparigas; 15-18 anos) com PAS receberam tratamento online. A intervenção CFT@TeenSAD foi organizada em quatro módulos sequenciais: A mente de acordo com a TFC, Promoção do eu-compassivo e de competências para uma mente compassiva, Prática de comportamento compassivo, Últimas notas e continuar numa viagem compassiva. Antes de cada sessão, os adolescentes reportaram mudança percebida na gravidade dos sintomas e os clínicos fizeram essa avaliação no final de cada sessão. Tanto os adolescentes (F(1.540) = 32.271, p<0.0005, $\eta p2 = 0.63$) como os clínicos $(F(1.528) = 24.783, p < 0.0005, \eta p = 0.57)$ relataram melhoria continuada ao longo do tratamento, com mudança significativa ao longo dos quatro módulos. As trajetórias de mudança foram semelhantes para rapazes e raparigas. A TFC surge como uma abordagem promissora na PAS em adolescentes, contribuindo para a diminuição contínua da gravidade dos sintomas.

Palavras-chave: Terapia focada na Compaixão, perturbação de ansiedade social, adolescência, mudança terapêutica.

INTRODUCTION

Social anxiety disorder (SAD) is characterized by a marked and persistent fear of social and/or performance situations in which one may be exposed to the scrutiny of others. Individuals with SAD fear acting in ways that might embarrass themselves and that such action may result in criticism by others, humiliation, or social rejection (American Psychological Association [APA], 2013).

Research shows that SAD typically emerges in adolescence (Stein et al., 2017), with estimated prevalence rates during that life stage varying greatly [e.g., from 1.29% in Norway (Jystad et al., 2021) to 9.1% in the USA (Merikangas et al., 2010); a recent exploratory study in Portugal using a school-based sample of adolescents aged 15 to 18 years old places that prevalence at 8.04% (Vagos, et al., 2021)]. SAD has been consistently found to be more prevalent in adolescent girls than boys (e.g., Jystad et al., 2021; Merikangas et al., 2010; for a review on gender difference including studies pertaining to adolescent samples see Asher et al., 2017). Difficulties in interpersonal interactions during adolescence often result in severe functional impairments across multiple domains of life (Rao et al., 2007), such as school (Burstein et al., 2011), romantic relationships (Hebert et al., 2013), and friendships (Erath et al., 2007). Moreover, SAD is associated with an increased vulnerability to other anxiety and mood disorders (Jystad et al., 2021; Mohammadi et al., 2020), behavioral disorders (Mohammadi et al., 2020), and substance abuse (Burstein et al., 2011; Jystad et al., 2021). If left untreated, SAD tends to persist throughout adulthood (Keller, 2006), with a chronic, unremitting course (Stein et al., 2017); if treated with traditional Cognitive Behavioral Therapy, its recovery rate is substantially lower in comparison with other anxiety disorders (Evans et al., 2021). Therefore, it seems paramount to continue to explore psychotherapeutic ways of effectively changing the course of SAD in adolescence.

Research has been highlighting the potential benefits of compassion-based interventions on a range of mental health problems (Kirby et al., 2017) and these interventions have also been proposed to be suitable for adolescents (Carona et al., 2017). Compassion Focused Therapy (CFT) considers that the human mind has evolved to help individuals adapt to their environments, by regulating their emotions and motivating their behaviors based on the joint action of three basic systems: the threat and protection system that focuses on early detection of threats (including social threats) and elicits negative emotions (e.g., anxiety and anger) in an attempt to keep the individual safe from harm; the drive system that prompts the individual to act to obtain relevant rewards and resources for survival (e.g., food, sexual partner, social status), through positive activating emotions (e.g., excitement and pleasure); and the soothing system that is activated when individuals do not

have to deal with threats or look for resources, triggering feelings of contentment, safeness, calmness, connection and affiliation with others (Gilbert, 2010, 2017a). Each system plays an evolved function and is linked to specific emotions and physiological correlates (Depue & Morrone-Strupinsky, 2005). However, when the threat or drive systems get overactivated, mental health issues may arise. Specifically, when the threat system is overly sensitive, maladaptive self-to-self relating (e.g., self-criticism and shame) and self-to-other strategies (e.g., subordination) may arise. The soothing system has an important regulation function, allowing for a deactivation of alertness to threats or to imperatives to achieve (Gilbert, 2009).

Shame and self-criticism are core constructs to understand psychopathology according to CFT and have also been associated with social anxiety. Findings on adult non-clinical samples point to social anxiety being associated with higher levels of internal shame (Matos et al., 2013), self-criticism (Iancu et al., 2015) and self-blame specifically (Gilbert & Miles, 2000); moreover, it seems that shame and self-criticism are significant predictors of social anxiety symptoms (Shahar et al., 2015). Social anxiety also seems to be associated with lower levels of compassion one gives oneself, in non-clinical samples of both adults (Makadi & Koszycki, 2020; Werner et al., 2012) and adolescents (Gill et al., 2018; Ştefan, 2019). Shame has likewise been shown to predict social anxiety symptoms in a clinical sample of adolescents diagnosed with SAD, directly and indirectly via self-judgment and safety-seeking behaviors (Vagos et al., 2020).

As a therapeutic approach, CFT aims to help people switch from a shame-based self-critical attitude towards the self (and others) to a more compassionate and caring attitude (Gilbert, 2017b). It intends to stimulate the soothing system and to cultivate compassion, by promoting engagement with suffering and developing the skills to practice wise actions (Gilbert, 2017a). To do so, CFT relies on Compassionate Mind Training (CMT). CMT intends to develop and sustain a sensitive, caring, and tolerant way of relating to ones' suffering and engage with it in a courageous, wise, committed, and non-judgmental way. Along with these attributes, CMT aims to develop compassion skills to prevent and alleviate suffering (i.e., compassionate attention, imagery, reasoning, feelings, sensations, and behavior; Gilbert, 2010).

CFT has proven effective in reducing mental health symptomatology among various populations (Craig et al., 2020; Kirby et al., 2017), but particularly for those who present psychological difficulties associated with high levels of shame and self-criticism (Leaviss & Uttley, 2015). Concerning SAD in particular, preliminary evidence on individual CFT delivered to adults pose it as a promising approach, which led to less shame and self-criticism and to individuals giving more compassion to themselves (Boersma et al., 2015). Also, a randomized controlled trial conducted with adults diagnosed with SAD has shown CFT to be effective in

reducing social anxiety symptoms and self-criticism, in increasing quality of life, and in promoting a more flexible and compassionate perspective towards the self (Gharraee et al., 2018). Still, to our knowledge, no study to date has investigated the efficacy of CFT on adolescent with SAD. Given that SAD has its most probable onset during adolescence (Lijster et al., 2017) and is highly impairing (Mesa et al., 2014), and considering that CFT seems to be an understandable and feasible intervention with adolescents (Carona et al., 2017), we propose that research on the effectiveness of CFT with adolescents with SAD is highly needed. Additionally, investigating change of symptoms over the course of psychotherapy has not yet been applied to SAD in adolescents, nor to CFT.

The present work sought to explore preliminary efficacy data concerning the course of social anxiety symptoms throughout an online 10-session manualized CFT program (CFT@TeenSAD) applied to adolescents diagnosed with SAD, considering self and clinician's reports as outcomes. As a secondary goal, this work intended to investigate if change over the course of treatment would be similar for girls and boys. We expected both self-reported and clinician ratings of severity of social anxiety symptoms to decrease over the course of treatment. This expectation is sustained in previous research showing the efficacy of CFT in adults with several mental health difficulties (Craig et al., 2020), particularly, its efficacy on SAD symptoms (Boersma et al., 2015; Gharraee et al., 2018), and on theoretical considerations that change in CFT is sequential, with subsequent stages of change being nested in previous ones (Gilbert, 2010). Moreover, because the presentation of SAD and its associated impairment does not differ by gender (Dahl & Dahl, 2010), even if SAD is more prevalent in girls (Burstein et al., 2011; Merikangas et al., 2010), we expected boys and girls to present similar trajectories of change over the course of CFT.

METHOD

Participant recruitment

This work refers to data collected within the procedures defined for the research project *TeenSAD*: *Changing the Course of Social Anxiety in Adolescence* (Clinical Trials. gov Identifier: NCT04979676). This project refers to a superiority randomized clinical trial comparing diverse intervention conditions with a waiting-list control group and

was approved by the Ethics Committee of the host institution prior to any participant recruitment procedure being implemented.

Schools were selected across the country based on direct contacts with schools known to the research team and indirect contacts within online groups of school psychologists. Each school was contacted by the research team to present the study and inquire about their interest/availability to collaborate with the current research throughout its threeyear duration. Schools were contacted if they taught students attending the 10th and 11th grade, regardless of geographic location, type of funding (i.e., public or private) or type of teaching (secondary or professional). Schools were provided with a detailed methodological note upon which to decide on their participation and the research team was available to answer any questions. Schools that agreed to decide on their participation then sent out informed consent forms to parents/legal guardians of students attending the 10th and 11th grades. The informed consent form detailed all phases of the research and provided with a direct contact to the lead investigator who was available to answer any questions that parents/legal guardians could have. Adolescents presenting with parental consent were additionally asked for their assent via an online form, before answering the Portuguese version of the Social Anxiety Scale for Adolescents (Cunha et al., 2004). The ones scoring one standard deviation above the mean found for a large normative sample (i.e., n = 522 adolescents aged between 12 to 18 years of age of which 57.3% were female) on that instruments' total scale were invited for further assessment using a structured clinical interview. Interviews were conducted by an experienced clinical psychologist using the Portuguese version of the Mini International Neuropsychiatric Interview for Children and Adolescents - MINI-KID (Sheehan et al., 2010; Portuguese authorized version by Rijo et al., 2016 - see instruments section). Interviews served to assess for inclusion and exclusion criteria for the intervention phase of participant selection. Inclusion criteria were being aged between 15 and 18 years at the moment of the interview and receiving a primary diagnosis of SAD (DSM-5; APA, 2013). Exclusion criteria were the indication of educational specific needs, psychotic symptoms, or suicidal risk. Again, informed consent was obtained from parents/legal guardians and verbal assent was obtained from adolescents themselves to take part of the intervention. Adolescents who were authorized and willing to participate were then allocated by the principal investigator to a control group or one of three intervention conditions. Only the CFT@TeenSAD intervention will be considered in this work.

The CFT@TeenSAD Intervention

The CFT@TeenSAD (Salvador et al., 2020) intervention manual was developed within the research project *TeenSAD*: Changing the Course of Social Anxiety in

Adolescence (ClinicalTrials.gov Identifier: NCT04979676). The intervention consisted of ten individual sessions lasting 75 minutes each, delivered online following a CFT-based manualized intervention and intending to foster compassionate feelings towards oneself. Two booster sessions, the data of which were not included in this work, occurred at one and two-months after treatment completion. The intervention followed a progressive strategy of change, in as much as it was expected that throughout the intervention the adolescent would learn and start to apply actions with a more compassionate stance. The progress was made throughout four interdependent modules, each one with a specific primary focus: (a) Our mind according to CFT, (b) Developing the compassionate self and the skills of a compassionate mind, (c) Practicing compassionate behavior, and (d) Last remarks and continuing a compassionate journey. See Table A in the Supplementary Material for a detailed information on the structure of the intervention.

The first module included sessions 1 and 2 and was mainly focused on helping adolescents to understand the evolutionary roots of human's basic needs, emotions, and motives, including those referring to social events, and to grasp the nature and function of the three-basic emotional systems and how they interact with each other. The second module included sessions 3, 4 and 5 and mostly intended to help adolescents understand what compassion is, and how to deal with potential idiosyncratic fears and resistances to compassion. Still within this module, the adolescent was guided in developing compassion specific skills (i.e., compassionate attention, imagery, reasoning, thinking, sensory focusing, and feelings) that would sustain compassionate behavior. The third module included session 6 through 9 and consisted of prompting the practice of compassionate behavior. Adolescents were encouraged to act compassionately, to take responsibility, and to tolerate and cope in healthy compassionate ways with their own distress, while exposing themselves to feared social and performance situations relevant to SAD, inside and outside therapy. The fourth and last module was comprised of session 10 when key learnings were revisited, and adolescents were invited to develop an intention on how to continue to nurture and nourish their compassionate mind, even if setbacks would occur.

All sessions followed the same structure. They began with adolescents engaging in a soothing rhythm breathing and focusing on their own compassionate intention, followed by revisiting and discussing how contents of the previous sessions were integrated into the adolescents' daily life. Then, the core theme of the session was addressed through experiential exercises, and a compassionate practice was also offered. The session ended with a summary of key-messages of the session and the assignment of an activity that the adolescent was encouraged to undertake between sessions as practice of the key-learning points covered in each session.

Across all sessions, the therapists' role was focused on developing a warm and secure therapeutic relationship through which adolescents would be helped to continuously develop the motivation to pursue compassion towards the self and care for well-being. Therapists were two clinical psychologists who had extensive knowledge, practice, and training in CFT, and received at least biweekly supervision by a senior psychologist with proficiency and expertise in CFT.

Instruments

Eligibility assessment

Mini International Neuropsychiatric Interview for Children and Adolescents - Mini-KID (Sheehan et al., 2010; Portuguese version by Rijo et al., 2016). The Mini-KID is a structure diagnostic interview that assesses a broad range of Axis I diagnoses in children and adolescents as described in the DSM-5 (APA, 2013). It offers the clinician with yes/no questions to assess for the presence of specific diagnostic criteria for each clinical diagnosis, and helps the clinician decide on a primary diagnosis, considering the symptoms identified, their level of impairment, and time of onset. Interrater reliability was excellent across diagnoses except for dysthymia for its original version (Sheehan et al., 2010); its Portuguese version resulted from a careful translation and backtranslation process and has been previously used as a method for diagnoses (Rijo et al., 2016). To apply this interview autonomously, the evaluator receives specific training, including role-play exercises, and undergoes an initial observation phase of experienced evaluators using the interview. The Mini-KID was used in the recruitment phase of the current work, specifically to assess for the presence of inclusion criteria and absence of exclusion criteria (see Participant recruitment procedures).

Outcome measures

Social Anxiety Session Change Index (Hayes et al., 2008). The Social Anxiety Session Change Index (SASCI) includes four items designed to evaluate how individuals attending therapy for SAD perceive to have changed since the beginning of treatment in level of anxiety in social/performance situations, in avoidance of those situations, in concerns about being embarrassed or humili-

ated, and in social anxiety-related daily interference. Items are scored using a 7-point scale ranging from 1 (i.e., *much less than at the start of treatment*) to 7 (i.e., *much more than at the start of treatment*). Considering the four items as a single measure, it has shown adequate internal consistency (i.e., $\alpha \ge .84$), validity in relation to perceived change in fear of negative evaluation, and validity in relation to social anxiety, severity of symptoms and improvement as reported by the clinician. It has also shown to be sensitive to treatment changes expressed qualitatively by the individual (Hayes et al., 2008). Items were translated to the European Portuguese language and were presented to participants at the beginning of sessions 2 through 10. Cronbach alpha values within the current sample ranged from .21 for the first intervention module (i.e., four items⁹; see Intervention Approach below and Supplementary Material) and .95 for the third intervention module (i.e., 16 items).

Clinical Global Impression Scale – Social Anxiety (Zaider et al., 2003). The Clinical Global Impression Scale – Social Anxiety (CGI-SA) was designed to be answered by clinicians/therapists in relation to patients presenting with SAD. It considers two measures: one intends to assess overall severity of symptoms within the past week and the other reflects how symptoms may have changed in relation to a baseline moment. The current work considered solely the latter. The CGI-SA considers seven response categories that refer specifically to symptoms and impairment caused by social anxiety (i.e., $1 = No\ social\ anxiety\ in\ excess\ of\ normal\ (...)$ to $7 = (...)\ disabled\ in\ social\ and\ work\ functions)$. It has shown construct validity in as much as its scores associated with and were predicted by self-reported and other clinician administered measures of social anxiety and impairment (Zaider et al., 2003). Items were translated to the European Portuguese language by experts in SAD assessment and treatment and the clinician filled them at the end of each intervention session.

Statistical methods em minúsculas e itálico

To understand clinical improvement over the course of treatment, we used adolescents' weekly self-reported perception of change assessed by SASCI (adapted from Hayes et al., 2008) total score and the weekly impression of improvement in the adolescent's symptoms provided by the therapists (adapted from Zaider et al.,

⁹ For adolescents, data for the first intervention module considered only session 2, given that the instrument asks adolescents to report on their symptoms in comparison to before starting treatment.

2003). Data from both sources were merged considering the focus of intervention modules, as described above. So, sessions 1 through 2 centered on familiarizing the adolescent with how the human mind works according to CFT; sessions 3 through 5 focused on developing compassionate skills; sessions 6 through 9 revolved around compassionate behavior, and the last session intended to highlight the continuous use of compassion.

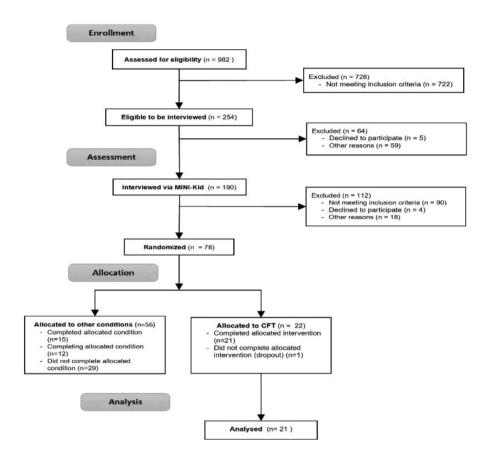
To assess the perception of clinical improvement by adolescents and therapists across modules and to observe the effect of gender on that perception across modules, we conducted two repeated measures mixed ANOVAs with intervention modules as within-subject factor with four levels (module 1, module 2, module 3 and module 4) and gender as between subject factor (boys and girls). Greenhouse-Geisser correction was applied when the sphericity assumption was not fulfilled according to Mauchly's Test. To identify statistically significant differences between improvement means across modules, we conducted post hoc comparisons (Bonferroni corrected with the statistical significance level accepted at p < .05). We conducted the analysis using SPSS Statistics for Mac, v.25 (IBM Corp., Armonk, N. Y., USA).

RESULTS

Participant flow and characterization

Eighteen schools were selected across the country and twelve agreed to collaborate with this research. Of the students attending the 10th and 11th school year at those schools, 982 adolescents had parental consent and assented to take part of the screening phase of this research. Of those, 255 adolescents scored one standard deviation above the mean on the Social Anxiety Scale for Adolescents (Cunha et al., 2004) and were contacted to take part of the clinical interview; five declined to participate further in this research and 59 were unreachable through the contacts they had provided. Thus, 190 participants were interviewed, of which 79 fulfilled criteria to be offered intervention for SAD. Twenty-two adolescents accepted and took part of the CFT@TeenSAD intervention; one adolescent dropped out at session 2. The remaining 56 participants were allocated to other conditions not considered in the current work (see Figure 1).

Figure 1Participant flow



The sample analyzed in this work consisted of 21 adolescents aged between 15 and 18 years of age, whose sociodemographic characteristics are displayed in Table 1. Most participants were girls (i.e., 57.1%), attended the 11th grade (52.4%), came from families with a medium socioeconomic status¹⁰ (47.6%) and had not previously received psychological support (47.6%). Boys and girls had similar mean ages $[t_{(19)} = -1.52, p = .15]$, and were similarly distributed by school year $[x^2_{(2)} = 3.51, p = .17]$ and by socioeconomic level $[x^2_{(2)} = 1.72, p = .42]$. Boys and girls also had received,

¹⁰ Socioeconomic status was defined based on the profession of the parents, based on the Portuguese profession classification (Instituto Nacional de Estatística, 2011). Examples of professions in the high socioeconomic status groups are judges, higher education professors, or M.D.s; in the medium socioeconomic status group are included nurses, psychologists, or school teachers; in the low socioeconomic group are included farmers, cleaning staff, or undifferentiated workers.

on average, a similar number of diagnosis [$t_{(19)} = 1.31$, p = .21], though boys had significantly more experience of previous psychological support [$x_{(2)}^2 = 8.76$, p = .03], particularly for anxiety symptoms, including social anxiety (n = 3).

 Table 1

 Participants' socio-demographic characteristics

| | Complete sample | Girls | Boys |
|-------------------------------------|-----------------|--------------|--------------|
| Age in years (M (SD)) | 16.10 (0.94) | 15.83 (0.84) | 16.44 (1.01) |
| School Year | | | |
| 10 th grade (%) | 42.9 | 58.3 | 22.2 |
| 11 th grade (%) | 52.4 | 41.7 | 66.7 |
| 12 th grade (%) | 4.8 | 0 | 11.1 |
| Self-reported socioeconomic status | | | |
| Low (%) | 42.9 | 41.7 | 44.4 |
| Medium (%) | 47.6 | 41.7 | 55.6 |
| High (%) | 9.5 | 16.7 | 0 |
| Number of diagnosis (M (SD)) | 1.48 (1.12) | 1.75 (1.42) | 1.11(80.33) |
| Previous psychological intervention | | | |
| No (%) | 47.6 | 75.00 | 11.11 |
| Yes, for anxiety symptoms (%) | 33.3 | 16.7 | 55.55 |
| Yes, for depressive symptoms (%) | 4.8 | 0 | 11.11 |
| Yes, for unspecified symptom (%) | 14.3 | 8.3 | 22.23 |

All participants had a primary diagnosis of SAD, which was found using the Mini International Neuropsychiatric Interview for Children and Adolescents – MINI-KID (Sheehan et al., 2010; Portuguese authorized version by Rijo et al., 2016). Concerning comorbidities at the time participants enrolled in the study, 13 (61.9%) adolescents presented no other clinical diagnosis, two presented current panic disorder (9.6%), one presented specific phobia (4.8%), one presented agoraphobia (4.8%), one presented attention deficit and hyperactivity disorder (4.8%), and one presented five comorbid diagnoses besides SAD (4.8%; i.e., posttraumatic stress disorder, obsessive compulsive disorder, current panic disorder, agoraphobia and current major depressive episode).

Change in outcome measures throughout the CFT@TeenSAD intervention

Repeated measures mixed ANOVA for self-reported improvement showed no interaction between gender and intervention modules (F (1.541) = 1.297, p = .284,

 ηp^2 = .064) and no main effect of gender (F (1) = .184, p = .672, ηp^2 = .01), suggesting that the patterns of change for boys and girls were equivalent. As for the main effect of time, change was significantly different across the program with a large effect size (F (1.540) = 32.271, p < .0005, ηp^2 = .63). Posthoc pairwise comparisons showed that mean scores were significantly different across all pairs of modules, with progressive improvement towards the end of the program; see Table 2¹¹ for mean scores per gender and for the total sample across modules, and Figure 2 for differences between distinctive modules.

Table 2 *Means and standard deviations for clinical improvement across modules, per gender and for the complete sample*

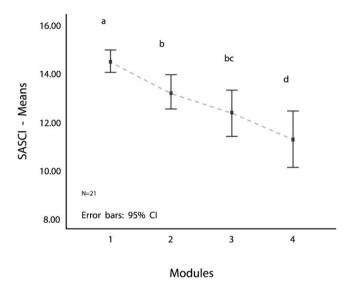
| | SASCI Mean (SD) | CGI-SA Mean (SD) |
|---|--------------------|---------------------|
| | | |
| 1: Our mind according to CFT | | |
| Boys $(n = 9)$ | 15.44 (.73) | 3.89 (.17) |
| Girls $(n = 12)$ | 15.00 (.95) | 3.94 (.13) |
| Total $(n = 21)$ | 15.19 (.87) | 3.92 (.15) |
| 2: Developing the compassionate self and the skills of a compassionate mind | | |
| Boys $(n = 9)$ | 13.67 (1.59) | 3.39 (.42) |
| Girls $(n = 12)$ | 13.47 (1.27) | 3.45 (.50) |
| Total $(n = 21)$ | 13.56 (1.38) | 3.43 (.46) |
| 3: Practicing compassionate behavior | | |
| Boys $(n = 9)$ | 12.00 (2.48) | 2.83 (.35) |
| Girls $(n = 12)$ | 12.75 (1.86) | 2.79 (.57) |
| Total $(n = 21)$ | 12.43 (2.12) | 2.80 (.48) |
| 4: Last remarks and continuing a compassionate journey | | |
| Boys $(n = 9)$ | 10.78 (3.07) | 2.88 (1.27) |
| Girls $(n = 12)$ | 11.75 (2.26) | 2.25 (.62) |
| Total $(n = 21)$ | 11.33 (2.61) | 2.52 (.98) |

Note: SASCI: Social Anxiety Session Change Index; CGI - Clinical Global Impression.

¹¹ See Table B in the Supplementary Material for further detail results on mean differences across intervention modules.

Figure 2

Mean clinical improvement across according to SASCI.



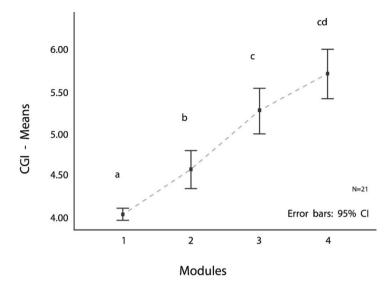
Note: On the left panel mean values are depicted by gender and on the right panel for the total sample. Means identified by distinctive letters are statistically significantly different (Bonferroni corrected; p< .05).

Similarly, the repeated measures mixed ANOVA for the clinician's perception of improvement showed no interaction between gender and intervention modules $(F(1.528) = 1.902, p = .174, \eta p^2 = .09)$ and no main effect of gender $(F(1) = .860, p = .365, \eta p^2 = .04)$, again suggesting that boys and girls progressed equally. Moreover, the main effect of time suggests that change was significantly different across the program with a large effect size $(F(1.528) = 24.783, p < .001, \eta p^2 = .57)$. Again, post hoc pairwise comparisons showed significantly different mean scores per module with change progressing positively across the program; see Table 2^{12} for mean scores per gender and for the total sample across modules and Figure 3 for differences between distinctive modules.

¹² See Table C in the Supplementary Material for further detail results on mean differences across intervention modules

Figure 3

Mean clinical improvement across according to CGI.



Note: On the left panel mean values are depicted by gender and on the right panel for the total sample. Means identified by distinctive letters are statistically significantly different (Bonferroni corrected; p< .05).

DISCUSSION

The current work set out to explore preliminary evidence on the efficacy of change over the course of a CFT individual, online, and manualized approach to SAD in adolescents, considering self-reported and clinician-reported improvement in symptoms. As such, this work tried to address several limitations of previous ones on the efficacy of CFT, namely intervention fidelity across participants by following a manualized treatment approach, application to individuals (and not groups; Craig et al., 2020), and considering change as it unfolds in therapy.

Current results based on self-reports and clinician-reports consistently point to the therapeutic efficacy of this CFT approach to treating adolescent SAD: there was a continuous improvement, reflected in decrease in symptoms severity over the course of treatment. Current findings add to previous ones that indicated the pre- to post-intervention efficacy of CFT applied to adult SAD (Boersma et al., 2015; Gharraee et al., 2018). Specifically, current findings indicate that CFT may also be

successfully applied to adolescents and contribute to a continuous improvement in symptoms. Moreover, these findings concur to the efficacy of online interventions for social anxiety, not only concerning cognitive-behavioral interventions (Boettcher et al., 2013), but also for interventions aimed at promoting compassion (Stevenson et al., 2019). In our study, despite the small number of participants, the large effect sizes found in both measures (the self-reported improvement and the clinician's reports), which are not affected by the sample size (Cohen, 1988), support the practical relevance of this intervention in adolescent SAD and its replication in future studies.

As for the course of change across sex, it was similar for boys and girls, as expected. Men and women have been shown to present similar levels of self-compassion (Yarnell et al., 2015), and internalizing symptoms seem to be similarly predicted by shame and shame-coping strategies (Paulo et al., 2020). So, the similar expression of SAD impairment by gender (Dahl & Dahl, 2010) may generalize to the expression of compassion and how its correlates associate with social anxiety symptoms, so that SAD may be tackled by the development and practice of the same skills for boys and girls within a CFT approach.

Descriptive data from the current sample further aligns with the same data presented previously for the SASCI (Hayes et al., 2008) and for the CGI (Zaider et al., 2003) concerning adult samples and assessing change during individual cognitive-behavioral therapy and change during cognitive-behavioral group therapy alone or in combination with phenelzine, respectively. Considering self-reported improvement of symptoms, our data was very close to that obtained by session 10 in Hayes et al. (2008), both indicating improvement according to Hayes et al. (2008) definition. As for the clinician's report, our findings indicate a similar improvement at session 10 as that found by Zaider et al. (2003) by session 12: both refer to participants presenting meaningful change in functioning, though still symptomatic and/or impaired (i.e., 'definitely improved'; Zaider et al., 2003). These findings offer support for the relevance of a CFT approach in the treatment of adolescent SAD.

Current results also add further evidence to the holistic, progressive, and developmental perspective of change according to CFT, given that change was continuous throughout the intervention. Specifically, CFT proposes that individuals go through several nested stages of change concerning their motivation and psychological competencies in becoming a compassionate self and living a compassionate life (Gilbert, 2010). Initially, people recognize difficulties in their emotions and slowly begin to associate these difficulties with the way their minds work, though still feeling ruled by their emotions (i.e., module 1). Then, individuals begin to develop qualities and skills that help them understand the different parts of themselves and the feelings elicited by those parts, and that those feelings do not necessarily

need to be acted out (i.e., module 2). In the current work, alike previous works focusing on SAD (i.e., Boersma et al., 2015; Gharraee et al., 2018), individuals were then encouraged to take responsibility for acting compassionately, anchored on the previously developed qualities and skills (i.e., module 3). Although acting with a compassionate stance may not appear as fundamental to other CFT manualized approaches directed at other conditions (e.g., Ribeiro da Silva et al., 2021), its key role to therapeutic change in relation to SAD in particular should be addressed in the future. Current findings indicate that practicing compassionate behavior may be an appropriate and necessary way to fit CFT intervention to the specific needs of individuals with SAD, given that the intervention module focused on practicing compassionate behavior contributed to continuous improvement until the end of therapy.

The current work holds for some noteworthy limitations, one of them being the sample size, which did not allow comparisons to be made on session-bysession progress. Though organizing the intervention in progressive modules is a theoretically sound and a previously used approach (Ribeiro da Silva et al., 2021), considering specific sessions might be more informative on specific trajectories of change. Another limitation has to do with having no comparison group, either a psychological placebo that would point to therapeutic change trajectories being specific to active ingredients in psychotherapy (e.g., attentional placebo; Ingul et al., 2014), or another therapeutic approach that would point to change being specific to active ingredients of change for CFT. Previous evidence on therapeutic change over the course of treatment for Cognitive-Behavioral Therapy delivered to adult SAD showed a progressive reduction in social anxiety symptoms (and other related variables) over the course of treatment (Goldin et al., 2014), mirroring current findings with the CFT@TeenSAD approach to adolescent SAD. Finally, the current work considered a smaller number of sessions than was previous practiced in treating adolescent SAD (e.g., Leigh & Clark, 2016) and when applying CFT for adult SAD (Boersma et al., 2015; Gharraee et al., 2018). As such, though self-reported improvement in the current work was continuous until the last session, comparison with the descriptive data presented in the work by Hayes et al. (2008) show that further progress might have been self-reported as far as session 16. The question of how many sessions are needed to achieve clinically reliable change and recovery after treatment (Wise, 2004) should be addressed in future research.

Our work is innovative in exploring the change over the course of treatment of CFT applied to adolescent SAD. It also presents promising results on the relevance and preliminary efficacy of CTF in remitting social anxiety symptoms, thus modifying the usually chronic course of SAD in adolescence (Bruce et al., 2005). Further works on CFT therapeutic efficacy (e.g., in comparison with a control

and/or experimental group, about stability of change after treatment completion) may come to establish CFT as an evidence-based approach to adolescents SAD, by promoting a compassionate way of helping human beings live in conditions of safeness, support, connectedness and kindness, as they should (Gilbert, 2010), and as socially anxious adolescents so much need.

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