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THE APPLICATION OF A NEW PSYCHOTHERAPEUTIC STRATEGY FOR ENHANCING EUDAIMONIC WELL-BEING IN CHILDREN WITH MOOD AND ANXIETY DISORDERS

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ABSTRACT

The aim of the dissertation was to test the feasibility of a new psychotherapeutic protocol for treating children and adolescents with mood and anxiety disorders: Child-Well-Being Therapy (CWBT). It originates from adult Well-Being Therapy protocol (WBT) and represents a conceptual innovation for treating affective disorders. WBT is based on the multidimensional model of well-being postulated by Carol Ryff (eudaimonic perspective), in sequential combination with cognitive-behavioral therapy (CBT). Results showed that eudaimonic well-being was impaired in children with affective disorders in comparison with matched healthy students. A first open investigation aimed at exploring the feasibility of a 8-session CWBT protocol in a group of children with emotional and behavioural disorders has been implemented. Data showed how CWBT resulted associated to symptoms reduction, together with the decrease of externalizing problems, maintained at 1-year follow-up. CWBT triggered also an improvement in psychological well-being as well as an increasing flourishing trajectory over time. Subsequently, a modified and extended version of CWBT (12-sessions) has been developed and then tested in a controlled study with 34 patients (8 to 16 years) affected by mood and anxiety disorders. They were consecutively randomized into 3 different groups: CWBT, CBT, 6-month waiting list (WL). Both treatments resulted effective in decreasing distress and in improving well-being. Moreover, CWBT was associated with higher improvement in anxiety and showed a greater recovery rate (83%) than CBT (54%). Both groups maintained beneficial effects and CWBT group displayed a lower level of distress as well as a higher positive trend in well-being scores over time. Findings need to be interpret with caution, because of study limitations, however important clinical implications emerged. Further investigations should determine whether the sequential integration of well-being and symptom-oriented strategies could play an important role in children and adolescents' psychotherapeutic options, fostering a successful adaptation to adversities during the growth process.

INTRODUCTORY SECTION

CHAPTER 1

PSYCHOLOGICAL TREATMENT OF ANXIETY AND DEPRESSIVE DISORDERS IN CHILDREN AND ADOLESCENTS.

A NARRATIVE REVIEW

1.1 Mental health in developmental age

The high worldwide prevalence of mental disorders in childhood and adolescence is well documented. Anxiety disorders such as generalized anxiety disorder (GAD), separation anxiety disorder (SAD), social phobia (SOC) and other phobic disorders are estimated to represent the largest class of childhood emotional problems with prevalence rates ranging between 2 and 24% (Kessler et al. 2005; Costello et al. 2005; Merikangas et al. 2009). Depression tends to affect a smaller number of youth, wherein 1-2% of children (ages 6-12) and 4–8% of adolescents (ages 12-18) meet criteria for a depressive disorder at any point in time (Costello et al. 2006; Elmquist et al. 2010). This suggest that the prevalence of depression increases as child gets older. Nearly 20% of youth may experience a depressive disorder by the end of adolescence and depression ranks as one of the most disabling disease worldwide, as measured by its impact on quality of life (WHO, 2004).

Many affective disorders in adults have their onset on early to late childhood (Jones, 2013) and symptoms/syndromes of anxiety seem to be the earliest of all forms of psychopathology (Beesdo et al. 2010, Herpertz-Dahlmann et al. 2013).

Anxiety and depression are associated with significant, persistent and recurrent health problems influencing social, school and general functioning (Clarcke et al. 2003; Perry-Langdon et al. 2008). Longitudinal studies suggest that affective disorders during youth may have a chronic course and also predict a variety of subsequent problems in adulthood: greater risk for more severe anxiety, major depression, dystimia, substance abuse (Kendall et al. 2003; Bittner et al. 2007; Beesdo et al. 2009) and educational underachievement (Beesdo et al, 2007; Sakolsky & Birmaher, 2008). Youth depression is linked to suicide (Gould et al. 2004) which is the third most common cause of death among adolescents (Arias et al. 2003). In spite of their high prevalence in the community, affective disorders in children and adolescents are under-recognized and remain untreated, even in medical settings (Chavira et al. 2004; James et al. 2005; Watanabe et al. 2009).Moreover, inadequacy of formal diagnostic classifications (DSM

and ICD) for assessing children and adolescents' affective disorder, complicate the possibility to make a correct diagnosis or give the right attention to sub-threshold symptoms (Rutter, 2003; Angst, 2007; Bittner et al. 2007). In addition to official epidemiological data, approximately 5% of children present sub-threshold symptoms, which equally produce a significant effect on their daily life (Gerber et al. 2010). Early diagnosis and treatment are essential, but recent data suggest that there is a significant gap between the number of children who need mental health services and those who actually receive professional help (Zubrick et al. 2000; Chavira et al. 2004). Child and teenager mental disorders, more than many other illnesses, have longstanding costs to society both in terms of healthcare utilization and social services. Consequently, improvements in identification and treatment would have important public health implications (Layard, 2005, 2006; Patel et al. 2007).

1.2 Main characteristics of psychological treatments for anxiety and depression in children and adolescents.

There are several clinical reasons to examine anxiety, depression, and their respective treatments together. A high degree of co-occurrence between these disorders has been established in both community and clinical samples. Up to 69% of youth with primary anxiety have been diagnosed with depression and up to 75% of depressed youth have been diagnosed with an anxiety disorder, particularly in females (Costello et al. 2005; Chu et al. 2007). Of course, anxiety and depression are not completely overlapping phenomena; cognitive and affective processes distinguish the disorders, but many commonalities exist (Chu et al. 2007). Furthermore, cross-sectional and longitudinal studies have suggested a developmental relationship between the disorders, in which anxiety problems tend to precede depression (Kessler et al. 1996; Fergusson & Woodward 2002; Beesdo et al. 2010; Kessler et al. 2005).

Randomized controlled trials on the treatment of affective disorders in youth are relatively limited compared to studies on adult samples, but a growing number of meta-analyses and

systematic reviews consider CBT the recommended treatment for many childhood problems, including emotional problems (Reynolds et al. 2012; Compton et al. 2004; James et al. 2005; Weisz et al. 2006; In-Albon & Schneider, 2007; Watanabe et al. 2009; Benjamin et al. 2011). A number of individual CBT programs for affective disorders meet criteria as "probably efficacious" using APA guidelines (Kendall and Hedtke, 2006; Ollendick and King, 2004; David-Ferdon and Kaslow, 2008). Although CBT is often referred to as a unitary treatment, it is actually a diverse collection of complex and targeted interventions, that share common ingredients which aim to modify dysfunctional cognitions and attitudes, increasing new coping skills strategies and changing unrewarding or avoidant behavioral patterns. Most anxiety and depression treatments include similar ingredients both cognitive and behavioral. The specific target of cognitive restructuring may vary across disorders but replacing maladaptive thoughts with more functional thinking is a common goal (Kendall and Pimental, 2003; Clarke et al. 2003). Thus, successful CBT would be expected to engender positive change in cognitive processing including the decrease of negative automatic thoughts, maladaptive attitudes and assumptions, and threat interpretations. Finally, relapse prevention is another important ingredient, which ended the treatment, in order to promote the generalization of reached goals to different situations, encouraging to continue with self-observation, exposure and auto-therapy (Silverman et al. 2008).

1.3 The definition of recovery from affective disorder in children

A neglected area in the research on children psychopathology is the concept of remission and recovery. A commonly considered index of outcome in randomized controlled trials (RCTs) in adult populations with affective disorders is the response rate, defined as a meaningful improvement in symptoms (Frank et al. 1991). Remission is considered a more stringent criterion than response: it is a relatively brief period during which an improvement of sufficient magnitude is observed and the individual no longer meets syndromal criteria for the

disorder (Frank et al. 1991). Identifying remission rates in RCTs is thus an important index of treatment outcome.

Up to date, there is no consensus on an operational definition of remission for affective disorders in youth, nor on its difference with response rate. Frank and colleagues' (1991) criteria for recovery, which distinguish response, remission and recovery on a basis of the number and severity of symptoms and their temporal criterion only, may be critical in developmental settings, since it does not take into account some specific developmental age features. For instance, clinicians need to distinguish between normal, developmentally appropriate worries, fears, and shyness from anxiety disorders, that significantly impair child's functioning, in terms of severity, intensity and duration of symptoms, rather than their presence (Silk et al. 2000). Moreover, the clinical impact of these symptoms in a certain developmental stage may be significant even if full criteria are not met (Spence et al. 2001). A persistent fear of darkness or a significant separation anxiety in a 3-to-5 year old child has a slight clinical value; the same symptoms in a 10-13 year old kid may entail a different severity and may be associated with other symptoms of anxiety disorders or hamper normal progression toward autonomy. As Fava and Kellner (1993) suggested, a longitudinal consideration of the development of disorders (staging method) may be more suitable also in developmental settings. It includes a full temporal consideration of symptom progression, the link between prodromal and residual symptoms, their subjective variability and their different response to treatment strategies (Fava, 1996; Fava et al. 2007). According to this conceptualization, not all residual symptoms are equally important in the road to recovery (e.g., the persistence of depressed mood is different from lack of concentration in an improved depressed patient) and need to be carefully assessed considering their longitudinal development.

1.4 The role of well-being in recovery

Traditional psychotherapeutic perspectives aim to alleviate distress, treat illness and repair weakness. As a consequence, the majority of clinical trials accounts for the effect of interventions in reducing symptoms. Conversely, the effect of treatment in terms of improvement in quality of life and well-being is less well documented. Over the past decades several studies on adult samples reframed the concept of "recovery from mental illness", considering increase of well-being as important as the symptom reduction (Fava, 1996). Therefore, the absence of mental illness does not imply the presence of mental health. Keyes (2002) suggested specific criteria for defining positive mental health that combine the presence of emotional psychological and social well-being. Keyes measured these constructs in a sample of around 1200 American teenagers (between the ages of 12 and 18) and suggested that only a small proportion of American youth possess optimal functioning (according to Keyes' cited criteria) and the level of mental health declined with age, with a 10% loss of flourishing (a global health status which combines high levels of emotional, psychological and social well-being) between middle school and high school (Keyes, 2006).

As early as 1996, Fava suggested a new set of criteria for defining recovery from affective disorders, that specified the quality of residual symptoms and encompassed the presence of psychological well-being. In fact, the absence of well-being creates conditions of vulnerability, therefore the route to recovery lies not exclusively in the absence of symptomatology, but also in the presence of specific well-being dimensions (Fava et al. 1998a; 1998b; 2007; Fava, 1999). Nevertheless, we may assume that, as for adults, psychological well-being is impaired in children and adolescents with affective disorders who remitted upon standard treatment (Fava, 2012). Impaired school performance, the absence or paucity of positive interpersonal relationships and low self-esteem are some of the most common residual symptoms (Tao et al. 2010) and can be considered as factors predicting absence of full recovery or risk factors for future relapses (Emslie et al. 2008). Mental health includes also components of hedonic well-being (positive affects, life satisfaction, happiness), as well as components of eudaimonic well-

being (self-acceptance, positive relations, autonomy, purpose in life, personal growth, environmental mastery) (Ryff, 1989; Ryff & Singer, 1996), however traditionally in developmental settings, positive functioning was investigated referring to the concept of resilience, as a positive adaptation in a context of risk and the capacity to "*bounce back*". In other words, resilience is inferred when individuals experience a significant threat to development or adaptation, but continue to "do well" despite the threat (Luthar et al. 2003). Therefore, resilience is a product of buffering processes that do not eliminate adverse condition in life, but allow the individual to deal with them effectively. From this perspective, resilience implies to remain healthy, conversely, the concept of recovery implies the restore of mental health after the elimination of the ill-condition (beside the improvement of well-being). Even though both concepts share the dynamic nature and the fact that resilient characteristics are under our control and can be developed then ,as well as in the process of recovery, they are far from being considered the same thing, particularly in clinical practice. Rutter (2006) found that resilience may derive from physiological or psychological coping processes, rather than external risk or protective factors. In fact, people may be resilient in relation to some sort of environmental risk but not to others or at one period in life but not at others, thus becoming prone to potentially develop a mental illness and therefore in need to find a way of recovery. Literature has demonstrated powerful effects on distal adult development outcomes by building competence in early childhood (Campbell et al. 2008). Therefore, promoting optimal human and social functioning with children and adolescents could be particularly feasible and may entail long term benefits, but to date, the majority of investigations deals with resilience and prevention and neglect the restoration of well-being in the process of recovery from mental diseases.

Aims

The aim of the present work is a narrative review of the literature over the last 17 years on the effectiveness of psychological interventions for the treatment of depression and anxiety in children and adolescents, with special attention to those programs which consider not only the abatement of symptomatology, but also the improvement of psychological well-being, according to the proposed criteria for establishing recovery from affective disorder in young populations.

1.5 METHODS

Considering anxiety disorders, this review doesn't address Obsessive-Compulsive Disorder (OCD) and Post-Traumatic Stress Disorder (PTSD), which have peculiar features and for which several specific reviews are available (Franklin et al. 2012;Dorsey et al. 2011; Kircanski et al. 2011; Kirsch et al. 2011; O'Kearney et al. 2006).

Selection of studies

A search for relevant literature (peer-reviewed journals, books and edited chapters) was performed via *Medline PsychInfo* and *Web of Science;* a basic search was conducted, considering title, keywords and abstracts using the following search terms: *outcome studies; affective disorders in youth; anxiety; depression, cognitive therapy; behavior therapy; psychological intervention; effective psychotherapy; children; adolescents; youth*. Additionally, to be included, studies must have met the following criteria: published in English, between 1995 and 2012; included children/adolescents between the age of 8 and 18; a follow-up assessment was preferred, but not required. Articles concerning the treatment of specific phobias, social phobias, over-anxious disorder/generalized anxiety disorder, separation anxiety, major depression and dysthymia were included. Excluded from consideration were articles concerning the treatment of OCD, PTSD or bipolar disorders. Further we also excluded articles reporting preventive interventions, since we were interested in evaluating remission and recovery in

clinical populations.

In a second stage, additional search terms were included (maintaining previous inclusion/exclusion criteria), in order to consider literature on positive interventions;. the following additional terms were then used: *psychological well-being; positive therapy; increase well-being; recovery; relapse prevention.*

The final stage involved hand searching for the references of included papers to identify other relevant studies. To organize the material and prevent redundancy, all the references obtained in the searches were checked, in order to avoid overlaps.

1.6 RESULTS

Results are listed in Table 1.1. We separately summarize the literature pertaining anxiety disorders, depressive disorders, pharmachotherapy and positive interventions.

1.6.1 *PSYCHOTHERAPY FOR ANXIETY DISORDERS*

Meta-analysis and systematic reviews on anxiety disorders in pediatric samples mostly consider together Generalized Anxiety Disorder (GAD), Social Anxiety (SA), Separation Anxiety Disorder (SAD) and Simple Phobias, because of their high prevalence in youth and overlapping symptomatology, so considering their treatment together makes sense not only in research settings, but also from a clinical point of view.

Considering meta-analysis, Reynolds et al. (2012) provided a comprehensive quantitative review of high quality RCTs of psychological therapies for anxiety disorders in children and young people. The eligible studies resulted 55 with variable quality: many studies were underpowered and adverse effects were rarely assessed. Most trials evaluated cognitive behavior therapy or behavior therapy and most recruited both children and adolescents. Psychological therapy for anxiety in children and young people was moderately effective overall, but effect sizes were small to medium when psychological therapy was compared to an active

control condition. The effect size for non-CBT interventions was not significant. Parental involvement in therapy was not associated with differential effectiveness. Treatment targeted at specific anxiety disorders, individual psychotherapy, and psychotherapy with older children and adolescents had effect sizes which were larger than effect sizes for treatments targeting a range of anxiety disorders, group psychotherapy, and psychotherapy with younger children. Only few studies included an effective follow-up. In 2008 Muñoz-Solomando et al. (2008) summarized evidence from the National Institute for Health and Clinical Excellence clinical guidelines and high-quality systematic reviews for the use of cognitive behavioural therapy to treat children and adolescents with affective disorders. Results confirmed the superiority of CBT in comparison to waiting-list, non-directive supportive therapy, clinical management or other active treatment. Similar data were found in the meta-analysis conducted by In-Albon & Schneider (2007) which compared the efficacy of psychotherapy for youth anxiety analyzing 24 studies, where the active treatment was CBT. Effect-sizes and percentage of recovery during post-treatment and follow-up showed that the overall mean effect-size was large (0.86 versus 0.13 in the control condition); no differences were found between treatments format (individual, group or family-focused) and the gains were maintained for several years after treatment, concerning not only primary anxiety, but also subsequent depressive symptoms. However authors underline that, although these findings provide evidence for the utility of CBT in treating anxiety disorders in youth, RCTs investigating treatments other than CBT are still missing.

Recent systematic reviews about treatment of childhood (>6 years) and adolescence (<19 years) anxiety disorders suggest that cognitive and behavioral approaches are effective compared to waiting list (WL) or attention-placebo (AP) controls (Cartwright-Hatton et al. 2004; Compton et al. 2004; James et al. 2005; Silverman et al. 2008). Cartwright-Hatton and colleagues (2004) summarized the results of 10 RCTs, compared CBT and no treatment control group: the 56,8% of youth treated with CBT no longer met the criteria for anxiety disorder,

obtaining a remission rate higher than that in the control groups (34.8%). A review based on a rigorous methodology is the Compton and colleagues' evidence-based medicine review (2004), where 21 RCTs were considered; all studies compared active treatment (CBT) to supportive therapy, WL, or AP controlled condition and examined both immediate and three months to six years follow-up outcomes. Results showed that most studies find significant post-treatment effects, which are maintained or even improved over the time. James et al. (2005) reviews 13 studies involving mild to moderate anxious children and adolescents, who received CBT versus WL or AP; they found that the majority of the CBT treated patients (56%) was in remission from any anxiety diagnosis, compared to the 28,2% of controls. Recently, Silverman et al. (2008) updated previews findings, considering 32 studies which confirmed the superiority of CBT compared with supportive treatment and control conditions. All the cited reviews didn't find significant differences between different CBT format (individual, group or family therapy).
To date, the manualized evidence-based CBT protocol for the treatment of anxiety disorders in youth result the following:

- The Coping Cat Program (Kendall, 1990; 2006) an individual program of CBT for children (ages 8-13) and its version for adolescents (the C.A.T.) (Kendall et al. 2002). Controlled studies showed the superiority of this protocol compared to WL and supportive therapy (Kendall et al. 1997; 2004; 2008). Different formats have also been adapted: group (Flannery-Schroeder & Kendall, 2000); family based therapy (Kendall et al. 2008; 2010) and the Camp Cope-A-Lot, the computerized version of the Coping Cat Program (Khanna & Kendall, 2007). Positive outcomes also for depressive comorbidity are well-documented (Kendall et al. 2001);
- The FRIENDS for Life Program for Children (Barrett, 2004) and for Youth (Barrett, 2005) a family-based group CBT, resulted effective in reducing anxiety both at post treatment and 12-month follow-up (Shortt et al. 2001).

– The Social Effectiveness Therapy for Children (SET-C) (Beidel et al. 2000) a structured behavioral therapy for the treatment of social anxiety. SET-C showed significant

improvement in functioning and decrease in symptoms (remission rate 67%) compared to an active non-specific intervention (remission rate 5%) (Beidel et al. 2000). Treatment gain were maintained at 6 month follow-up.

- - In the European context (Dutch in particular) the TDD (Thinking + Doing = Daring) a manualized CBT protocol has been developed by Bögels (2008). The program addresses children from 8 to 12 years. TDD peculiarity is the integration of parents involvement by teaching them how to communicate with their child about anxious situations and how to motivate and support their child in overcoming his fears. Also the parent's own fears and anxieties are being discussed. The treatment consists of twelve weekly sessions with the child and three sessions with the parents. The effectiveness of the TDD-treatment was tested with a randomized controlled trial (Bodden et al. 2008) reporting large effect-size. Although TDD is an individual CBT with little parental involvement, it seems to be more beneficial than a family CBT and now a larger RCT is under evaluation (Jansen et al. 2012) with the future aim to implement TDD in European community mental health care agencies.

1.6.2 *PSYCHOTHERAPY FOR DEPRESSION*

Current empirically supported treatment for childhood and adolescent Major Depressive Disorder (MDD) include psychotropic medications, psychotherapy and a combination of both treatments, depending on symptom severity, but evidence of higher effectiveness of a component rather than the other remain unclear (Watanabe et al. 2009). Considering psychotherapy, according to Kaslow and Thompson (1998) there are four essential conditions that permit a therapy to be considered efficacious treatment for youth depression: a)the treatment is manual-based; b)the sample characteristics are detailed; c)the treatment has been tested in a randomized clinical trial; d)at least two different investigator teams demonstrated the intervention's effects. Based on these criteria, two evidence-based psychotherapies for

depression in pediatric age meet the efficacy standard: CBT and Interpersonal Psychotherapy for Adolescents (IPT-A) (Clark et al. 2012; Cuijpers et al. 2011; David-Ferdon & Kaslow, 2008). Data mainly pertain adult population and only a few meta-analysis of RCTs have investigated with rigorous methodology the outcomes of psychotherapy for depressed youth (Harrington et al. 1998; Clarke et al. 1999; Reinecke et al. 1998; Micheal & Crowley, 2002; Weisz et al. 2006). The majority of them conclude that good evidence support the use of CBT to treat depression in children and adolescents, with high effect-size and higher rate of remission from depressive disorder in CBT groups than in the comparison groups at the end of the treatment (Harrington et al. 1998; Clarke et al. 1999; Reinecke et al. 1998; Micheal & Crowley, 2002). On the other hand, Weisz and colleagues (2006) published a meta-analysis of 35 studies, indicating that the overall magnitude of treatment benefit was 0.34, which is lower than the effects reported in previous meta analyses. They also found that non-cognitive treatments demonstrated effects that were easily as robust as the cognitive treatments, suggesting that youth depression treatments appear to produce effects that are significant but modest in their strength, breadth, and durability (at follow-up periods of 1 year or longer, no lasting treatment effect were found). The controversial results could be due to the heterogeneity of treatment, sample size, and study design of the trials included in all these meta-analyses. Another relevant finding in the meta-analysis of Weisz (2006) concerns that depression treatment has also beneficial effects on anxiety. One of the largest RCT in this field was conducted by Brent et al. (1997). 107 depressed adolescents where randomized in individual CBT, Systemic Behavior Family Therapy (SBFT) or individual Non-directive Supportive Therapy (NST); at the end of the therapy, CBT resulted more efficacious than SBFT or NST for adolescent MDD in clinical settings, showing more rapid and complete treatment response. However, long term outcome (two years follow-up) no longer show any differences among the three psychotherapies and, although most participants eventually recovered (80%), the 30% had a recurrence and 21% were depressed during the majority of the follow-up period (Birmaher et al. 2000).

Interpersonal Psychotherapy for depressed adolescents (IPT-A) is the most recent individual psychotherapy originally developed for depressed adult outpatients and adapted for depressed, non-bipolar, non psychotic adolescents (Mufson et al. 1993). The core concept of IPT is that depression occurs in an interpersonal context and, without assuming that interpersonal problems cause depression, IPT assumes that they can maintain depressive symptoms. A large part of IPT is psychoeducation and its orientation toward interpersonal problems seems highly appropriate for teens (Harington et al. 1998). IPT-A addresses common adolescent developmental issues, e.g. separation from parents, role transitions, peer pressure, initial experience with the death of a friend or a relative. One specific area is chosen as the focus of the therapy and, after an initial phase of assessment of the patient's relationships, the therapist helps him generate problem solving strategies, providing support and direction to the adolescent. A termination date is set from the start (usually 12 sessions) and the therapy ends with the generalization of skills to future situations, in order to reduce relapse and recurrence, which are frequent in adolescent depression (Park & Goodyer, 2000). The first IPT-A open trial with 14 depressed adolescents (12–18 years of age) conducted by Mufson and colleagues (1994) found that the adolescents reported a significant decrease in depressive symptomatology and an improvement in interpersonal functioning. None of the subjects met criteria for any depressive disorder at the end of the study. In a follow-up analysis 1 year later (Mufson & Fairbanks, 1996) adolescents were found to have maintained their state of recovery from depression and only one patient was suffering from an affective disorder at that time. The majority of the subjects reported few depressive symptoms and had maintained their improvement in social functioning. Although this study was based on a small sample size, it provided preliminary support for the use of IPT-A. A subsequent controlled study (Mufson et al. 1999) has shown IPT-A to be effective in the treatment of major depressive disorders in adolescents, randomly assigned to IPT-A or clinical monitoring. Significantly more IPT-A patients completed the treatment and reported fewer depressive symptoms, improved overall

social functioning and social problem-solving skills. Comparing IPT-A, CBT and WL, Rosselló and Bernal (1999) found that 82% of the adolescents receiving IPT-A compared with 52% of the adolescents receiving CBT met recovery criteria by the end of treatment. Both IPT and CBT were significantly better than WL. IPT-A also has been adapted to a group format (IPT-AG) (Mufson et al. 2004a) and subsequently tested (Mufson et al. 2004b), resulting an effective therapy for adolescents depression, but further research are needed. Moreover IPT-A has evidence for short-term effect, but his long-term effectiveness is still under evaluation.

1.6.3 *PHARMACOTHERAPY*

Although a comprehensive review of the pharmacological treatment of affective disorders in youth is beyond the scope of this work, a short overview of this important and controversial topic is needed. Nowadays there is growing concern about not only the real efficacy of medication in the treatment of anxiety and depression in youth, but mainly about the side effects which they seem to have both in the short and long term (Vitiello and Swedo, 2004; Keeton et al. 2009).

Concerning pharmacotherapy for anxiety disorders, no controlled evidence for the effectiveness of psychotropic medications in younger patients could be found, despite their frequent prescription for pediatric anxiety disorders (Olfson, 2002). A recent review (Strawn et al. 2012) summarized the data concerning the use of tricyclic antidepressants (TCA), selective serotonin re-uptake inhibitors (SSRI), serotonin norepinephrine reuptake inhibitors (SNRIs), atypical anxiolytics, and benzodiazepines for treating anxious children and adolescents. Data suggested that SSRI, both as monotherapy and combined with psychotherapy, resulted effective, as well as some TCA and SNRI. However, RCTs do not suggest efficacy for benzodiazepines or the atypical anxiolytic (buspirone). Moreover, several studies suggest that medication are less well tolerated than placebo, as indicated by the significant proportion of children and adolescents who dropped-out due to adverse effects during the short term trials

(James et al. 2005). Because benzodiazepine could also be very addictive, in recent years Selective Serotonin Re-uptake Inhibitors (SSRI) are becoming the drugs of first choice for the treatment of social phobia, separation anxiety and generalized anxiety disorders in children and adolescents, but again treatment with SSRI may have some side-effects (e.g. headaches, stomach aches, behavioral activation, worsening symptoms) and some trials show that SSRIs may led to a small increase in the risk for suicidal ideation and suicide attempts (Cox et al. 2012; Whittington et al. 2004). Further, medication can be considered as part of the treatment of some pediatric anxiety disorders (particularly OCD) over the short-term (Walkup et al. 2008) and to acute cases of anxiety only, but still now, long-term treatment with medication has not been well-studied or inconsistent findings have been established (Ipser et al. 2009; Dubicka et al. 2010). A multimodal approach seems to be the better choice, therefore optimal treatment should include psychotherapy (Strawn and McReynolds, 2012).

A very relevant federally-funded study, which is trying to find an answer to such important topic is the Child/Adolescent Anxiety Multimodal Study (CAMS), a six-year, multicentre, randomized placebo-controlled study with the aim to examine the relative efficacy of CBT, SSRI (sertraline) and their combination (COMB) against pill placebo (PBO) for the treatment of separation anxiety, generalized anxiety disorder and social phobia in children and adolescent (Compton et al. 2010). 488 teens (ages 7-17 years) were randomly assigned to one of the four treatment conditions. Only post-treatment outcomes are available, but the study is still in progress for the follow-up evaluation. Preliminary results showed that, at the end of 12 weeks of therapy 80,7% of participants treated with COMB were rated as “treatment responders” (according with the Clinical Global Impression-Improvement Scale) and COMB was superior to both CBT alone (59,7%) and SRT alone (54,9%), as well as PBO (23,7%). No significant differences were found between CBT and SRT (Walkup et al. 2008). Outcome remained similar in the subsequent update paper, reporting a similar pattern for remission rates (Ginsburg et al. 2011). Findings also indicated that remission rates for the entire sample were significantly

lower than response rates, revealing also that remission rates varied based on the definition and measure used. This highlights the importance of developing a consensus definition of remission (Ginsburg et al. 2011) .

Concerning the pharmacotherapy for depression in youth a recent systematic review conducted by Cox and colleagues (2012) summarized the data about the effectiveness of psychological therapies and antidepressant medication, alone and in combination for the treatment of depressed children and adolescents. Authors examined clinical outcomes including remission, clinician and self reported depression measures, and suicide-related outcomes. Studies recruited participants with different severities and variety of comorbid disorders, including anxiety and substance use disorder, therefore limiting the comparability of the results. However, outcomes confirmed a very limited evidence about the effectiveness of psychological interventions, antidepressant medication and a combination of them. There was limited evidence (based on two studies involving 220 participants) that antidepressant medication was more effective than psychotherapy on remission at post-intervention, as well as for combination therapy, where only three studies (involving 378 participants) found the superiority of antidepressant medication alone in achieving higher remission from a depressive episode immediately post-intervention. It was unclear what the effect of combination therapy was compared with either antidepressant medication alone or psychological therapy alone on rates of suicidal ideation. Data on drop-out was mostly unclear across the various comparisons, as well. On these basis, the effectiveness of the interventions for treating depressive disorders in children and adolescents cannot be established and further appropriately powered RCTs are required (Cox et al. 2012).

Considering the main studies, a large randomized control trial, the Treatment for Adolescent with Depression Study (TADS) (TADS Team, 2004) has been published. This study, focused on the effectiveness of combined CBT plus flouxetine (SSRI), in comparison with CBT alone, fluoxetine plus clinical management and pill-placebo plus clinical management.

Results have showed that adolescents treated with fluoxetine alone presented better outcomes compared to those in the placebo condition, but adolescents treated with the combination of fluoxetine and a 12-week course of CBT showed the most positive treatment response, supporting the idea that psychotherapy may complement the effects of antidepressant medication. An important additional finding was that CBT alone did not significantly outperform the placebo condition, supporting concerns that CBT alone may not be a very potent treatment. However, a deeper analysis of the results, showed that CBT effect-size generated in TADS is not characteristic of most CBT or psychotherapy effects on youth depression; other CBT programs normally showed larger effects than the TADS version of CBT, rising some questions about possible biases (Weisz et al. 2006). To assess remission rates in depressed youth participating in TADS, Kennard et al. (2006) conducted an update study, finding that overall rates of remission remained low and residual symptoms were common at the end of 12 weeks of treatment.

Other two clinical trials tested treatments for depressed adolescent are: the Adolescent Depression and Psychotherapy Trial (ADAPT), conducted in a community clinical sample in UK (Goodyer et al. 2007), and the Treatment of Resistant Depression (TORDIA), a multisite trial focused on a second-step treatment, for adolescents who had been unsuccessfully treated with SSRI (Brent et al. 2008). Both studies compared SSRI, CBT or combined treatment and controversial findings, different also from TADS outcomes, are emerged, providing critical information about the comparative effectiveness of the treatments. In particular, ADAPT (Goodyer et al. 2009) found that for adolescents with moderate to severe major depression there was no evidence that the combination of CBT plus an SSRI contributed to an improved outcome by 28 weeks compared with an SSRI alone. Considering TORDIA (Brent et al. 2008) data suggested that at the end of the acute phase of treatment, combined intervention was superior to monotherapy in terms of responses rate (Brent et al., 2008), but at the end of continuation phase, rates and times of remission were similar for both groups (SSRI+CBT and

SSRI alone) (Emslie et al., 2010). Patients who participated in TORDIA and ADAPT presented a more severe symptomatology at the intake, due to comorbidity, suicidality, or previous treatment resistance. Not surprisingly, these studies do not lead to a univocal interpretation about the superiority of combined treatments (pharmacotherapy and psychotherapy).

Compared to adult, considerably less is known about continuation and maintenance phase treatments in pediatric depression and anxiety. Adolescents who did not receive continuation phase CBT had an eightfold greater risk for relapse than those who received CBT (Kennard et al. 2008). Results suggested that medication alone may not be sufficient in reducing relapse in adolescent depression. Moreover, data on the sequential use of different type of psychotherapy, specifically addressed to different stages of affective disorders are still missing and further studies are needed.

1.6.4 *INTERVENTIONS FOR ENHANCING WELL-BEING IN CHILDREN*

Because of the relatively recent development of Positive Psychology, only few studies analyzed the effects of PPI in youth. A recent meta-analysis (Sin & Lyubomirsky, 2009) of 51 interventions was conducted with the aim to verify if PPI could enhance well-being and ameliorate depressive symptoms. However, only 3 of them pertained to child and adolescent populations (Rashid et al. 2006; Ruini et al. 2006; Froh et al. 2008) and two of them were performed in school settings (Ruini et al. 2006; Froh et al. 2008).

Further, in an open clinical trial (Albieri et al. 2009) a modified form of Well-Being Therapy (Fava & Ruini, 2003) has been applied for the first time to children from 8 to 11 years suffering from emotional and behavioral disorders. Results were very promising, showing a decrease in affective symptoms, (including somatic complaints) and improvements in psychological well-being, which were maintained also at 1-year follow-up. As for adults, recent trends in youth psychotherapy emphasize the role of mindfulness (a non-judgmental awareness of the present moment), acceptance (the ability to view previously inacceptable thoughts, emotions and

behaviors as valid, given a particular context) and values as core ingredients of new psychotherapeutic approaches (Hayes et al. 2004). The goal of these techniques is not only the change of problematic thoughts and emotions (as in traditional CBT), but rather the acceptance of them for what they are. According to this approach, patients could improve their feelings because they may change their relation to their thoughts, balancing acceptance and change, in a dialectical way (Linehan, 1993; O'Brien et al. 2008). This new line of intervention seems to be applicable also for children and adolescents in a variety of populations and settings, in effective ways (Semple et al., 2005; Murrell and Scherbarth, 2006; 2011; Burke, 2009; Saltzman and Goldin, 2008; Liehr and Diaz, 2010). However, studies are only in their early stage and much work remain to be done in empirically evaluating the effectiveness of these new approaches with youth, particularly in clinical settings.

Therefore, a big lack in the studies about the treatment of affective disorders in youth from a positive psychology perspective has emerged.

1.4 DISCUSSION

Affective disorders in youth are among the most prevalent forms of psychological suffering during childhood and adolescence. If untreated, these problems can be predictors of more severe disorders in adulthood, however in several cases they remain undiagnosed and a high percentage of children with affective problems do not attend any agency for treatment (Chavira et al. 2004; Watanabe et al. 2009). High rates of comorbidity and overlaps among anxiety and depression, as in adults, is frequently observed and the feasibility of a common treatment has emerged. A substantial evidence base supports the efficacy of CBT intervention for a variety of childhood and adolescence anxiety and depressive disorders, but at the same time, controlled studies concerning other psychotherapeutic approaches are still missing (In-Albon & Schneider, 2007). A review of CBT programs targeting anxiety and depression reveals a number of similarities (Chu et al. 2007) such as a theoretical framework to guide practitioners through

an assessment of specific problem domains, the delivery of problem-specific treatment and well specified outcomes to monitor treatment outcomes. Meta-analyses that have pooled findings across clinical trials have documented consistent large effect sizes for CBT, suggesting that psychological treatments are likely to become an increasingly important option in treating children and adolescents with affective disorders (Benjamin et al. 2011). Beside CBT, the efficacy of IPT-A for the treatment of depression is also well-established, but future studies are needed in order to assess the efficacy of the treatment for adolescents diagnosed with other depression comorbidities, such as anxiety, and in adolescents at risk for suicidal behavior (Brunstein Klomek & Stanley, 2007). In addition, IPT-A has never been rigorously compared with medication in clinical trials, neither the efficacy of IPT-A in conjunction with antidepressant medication has been studied (Brunstein Klomek & Stanley, 2007). In spite of the common agreement about the inclusion of parents in the therapy, particularly for young children, only few studies about this topic was found and, for the majority of them, significant differences between the therapy format (individual or family therapy) have not emerged (Silverman et al. 2008). The focus on the familial component varies widely from study to study and in many cases seems to share common ingredients with different approaches (particularly systemic or psychodynamic). Therefore it isn't always easy to incorporate several strategies within one "manualized" program and this could explain the lack of controlled study other than CBT-based approaches. Most evidence-based systemic interventions have been developed within the cognitive behavioural tradition (Barrett et al. 1996; Barrett, 2005), but future research should prioritize the evaluation of systemic/integrated interventions, which are very widely used in clinical practice, for the treatment of emotional problems in young people (Carr, 2009).

In spite of the encouraging outcomes of psychotherapeutic interventions, literatures shows also other important issues: a large percentage of children treated with psychotherapy (especially depressed children) do not show improvement; concerning relapse rates, 12% within 1 year and 33% within 4 years have been reported (Lewinsohn et al. 1999; Kennard et

al. 2006; Rey et al 2011); finally, more than one third of the investigations did not include follow-up assessment and the remaining trials demonstrated the efficacy of psychotherapy only in the short term (Reynolds et al. 2012; Weisz, 2006). The paucity of clinical trials involving long-term evaluation of depressed/anxious children patients is a specific weakness in the pediatric psychopathology research.

Considering pharmacotherapy, results are even more unclear, suggesting a potential benefit basically in the acute phases of the disorder and in the short term, but concerns derive from potentially serious side-effects. Pharmacotherapy seems to be useful as a combination with psychotherapy rather than a replacement for; psychotherapy could tend to diminish dangerous side-effects like suicidality or self-harm behaviors and may boost positive and more lasting outcomes (Weisz, 2006; Vitiello, 2009). Additional researches into the optimal dose and duration of medication treatment, as well as the effects of age on the efficacy and tolerability of medication are needed (Ipser et al. 2009; Vitiello, 2009; Dubicka et al. 2010). Moreover, considering the results of the more complete and sophisticated direct comparisons of medication to psychotherapy in youth affective disorders treatment (especially for depression) (TADS; TORDIA; ADAPT and CAMS) a large placebo effect is observed. As a consequence, it may suggest that a more personalized approach to the treatment (in example matching treatment to individual characteristics and need) would enhance therapy's effectiveness and efficiency (Bridge et al. 2007; Vitiello, 2009). To this end, more precise and valid ways of subtyping depression and anxiety, as well as the stage of their evolution (like the concept of *staging* in adult mental disorders – Fava & Kellner, 1993) are needed, so that more targeted clinical trial can be designed (Nielsen et al. 2013). Data on the sequential use of different type of psychotherapy, specifically addressed to different stages of affective disorders are still missing and further studies are needed.

Referring to Positive Psychology Interventions (PPIs) for children and adolescents, studies indicate that not only do PPIs work, but they work well (Sin & Lyubomirsky, 2009). Alleviating

psychological distress is one target of efforts, but engendering a positive attitude should be the other pursuable goal in order to develop important protective factors and prevent relapses. If such a positive focus is adopted early in life it could then help develop psychological strengths and lay foundations of a healthy life in adulthood. As a consequence, practitioners should be encouraged to incorporate elements of positive psychology into their clinical work (Joseph & Linley, 2006). The successful of any strategy based on the assumption that mental illness and mental health are bipolar opposites is therefore questionable. While a strategy that focus on the alleviation of mental illness may be successful, it do not actively drive a young person towards a state of flourishing in life (Keyes et al. 2007). The main focus of intervention is to reduce symptoms, however, as the studies not include indicators of positive functioning, it is unclear whether or not levels of mental health were increased (Venning et al.2009).

These findings suggest that there is still substantial room for improvement in psychological treatments for affective disorders in youth and that the effects of cognitive therapies could benefit from further investigation (Spielmans et al. 2007). with specific assessment methods, that include positive functioning indicators (Venning et al.. 2009). The integration of approaches (CBT and PPIs) is in line with the growing trends aimed to an integration of different interventions (Karwoski et al. 2006), in different moments of the therapy (such as a sequential approach) (Fava et al. 2005b; Fava & Tomba, 2010), going over the old concept of "monotherapy", which results simplistic and insufficient to lead to a complete remission of symptoms (Fava et al. 2008).

Mental illness has to be considered and treated in a more complex (and more realistic) manner, particularly in pediatric setting, according with a bio-psycho-social (BPS) formulation, which provide a deeper understanding of the multiple factors related to the present disease (Lämmle et al. 2011).

In conclusion, although additional work is necessary to strengthen the efficacy of CBT for youth, researchers have called for a shift toward positive experiences and positive individual

traits, examining also the mediators, moderators and predictors of treatment outcomes (Benjamin et al. 2011; Jansen et al. 2012). Research trials are unlikely to address important clinical questions and in many cases don't take place in the real-world context, where co-morbidity is the rule rather than the exception (Hinshaw, 2002), therefore, rates of remission and recovery in children and adolescents with affective disorders call for a more accurate definition, taking into account also subclinical symptomatology and encompassing psychological well-being, considering a careful assessment as an essential part of successful psychological treatment, with important implications for long-term outcomes. Further studies are needed and long-term follow-up studies with adequate controls are also necessary.

Table 1.1 Articles included in the review.

ANXIETY DISORDERS			
Study	**Sample**	**Considered Studies**	**Main findings**
Cartwright-Hatton et al. (2004)	6 to 18 years	10 RCTs	Superiority of CBT compared to control condition
Compton et al. (2004)	6 to 18 years	21 RCTs	CBT significant effect in comparison to supportive therapy, WL or attention-placebo condition. Effects were maintained over time (3 month up to 6 years follow-up).
In-Albon & Schneider (2007)	6 to 18 years	24 studies with CBT as active treatment	No differences between treatment format (individual, group or family). Effectiveness on anxiety ad subsequent depressive symptoms.
James et al. (2005)	6 to 18 years	13 studies	Majority of the CBT treated patients remitted (vs WL or AP)
Muñoz-Solomando et al. (2008)	9 to 18 years	5 studies about individual CBT; 8 trials of group CBT	Best evidence for CBT in children and adolescents is in the treatment of generalized anxiety disorder. Moderately good evidence for depression.
Reynolds et al. (2012)	Children and adolescents	55 RCTs	Behavioural or cognitive-behavioural therapy resulted the recommend psychological therapy. Parental involvement was not associated with differential effectiveness. Larger ES in older children/adolescents.

Silverman et al. (2008)	Children with social phobia	32 studies	Superiority of CBT in comparison to control conditions. No differences between CBT format.
DEPRESSIVE DISORDERS			
Brent et al. (1997) and subsequent follow up study by **Birmaher et al. (2000)**	107 depressed adolescents	RCT	CBT more efficacious than family-therapy or supportive therapy. Two-years follow-up no longer show any differences among therapies.
Clarke et al. (1999)	Adolescents with major depression or dysthymia	Controlled trial	Acute CBT groups yielded higher depression recovery rates (66.7%) than the waitlist (48.1%). No differences between treatment format (adolescent-only; adolescent + parent). Rates of recurrence during the 2-year follow-up were lower than found with treated adult depression. The booster sessions did not reduce the rate of recurrence but accelerate recovery.
Harrington et al. (1998)	6 to 18 years	6 RCTs	CBT may be of benefit for depressive disorder of moderate severity in children and adolescents, but not recommended for severe depression.
Michael & Crowley (2002)	Children and adolescents	38 studies	Moderate to large treatment gains that were clinically meaningful for many afflicted youth
Reinecke et al. (1998)	Adolescents	6 studies	Short- and long-term effectiveness of cognitive-behavioral

			approaches for treating depressive symptoms in this population.
Weisz et al. (2006)	Children (<13 years) Adolescents (>13 years)	35 studies	Youth depression treatments appear to produce effects that are significant but modest in their strength and durability. Strategies different from CBT approaches are also considered. Limitations of the studies emerged.
Interpersonal Psychotherapy for Adolescents			
Mufson et al. (1999)	12-18 years	Controlled study	Superiority of IPT-A in comparison with clinical monitoring
Mufson et al. (2004b)	Adolescents	RCT	Adolescents treated with IPT-A compared with TAU showed greater symptom reduction, fewer clinician-reported depression symptoms and improvement in overall functioning.
Rossellò and Bernal (1999)	12-18 years	Controlled Study	IPT-A and CBT better than WL. Higher recovery rate in IPT-A group than in CBT group.
PHARMACOTHERAPY			
Brent et al. (2008) and subsequent update paper **(Emslie et al. 2010)**	12 to 18 years	RCT	Combine intervention resulted superior to monotherapy (CBT or SSRI). However, considering long term evaluation, initial treatment assignment did not affect rates of remission.
Compton et al. (2010) and subsequent update	7 to 17 years	RCT	No differences between medication (sertraline) and CBT.

paper **(Ginsburg et al. 2011)**			Combination was superior to CBT or sertraline alone, as well as placebo. Outcome remained similar in the update paper.
Cox et al. (2012)	Children and adolescents	10 RCTs	For the majority of outcomes there were no statistically significant differences between the interventions compared. There is very limited evidence about the relative effectiveness of psychological interventions, antidepressant medication and a combination of these interventions.
Dubicka et al. (2010)	Adolescents	5 RCTs	Some evidence of heterogeneity between studies emerged. No evidence of significant benefit of combined treatment over antidepressants. The small number of trials as well as the variation in sampling and methodology between studies limits the generalisability of the data.
Goodyer et al. (2007)	11 to 17 years	RCT	For adolescents with moderate to severe major depression there is no evidence that the combination of CBT plus an SSRI contributes to an improved outcome by 28 weeks compared with an SSRI alone.
Ipser et al. (2009)	18 years and under	22 short-term RCTs	The use of benzodiazepines can

			not be recommended, as there is insufficient efficacy data from controlled trials. Evidence supporting long-term medication interventions is limited and inconsistent.
James et al. (2005)	6 to 18 years	13 studies	CBT resulted an effective treatment for childhood and adolescent anxiety disorders in comparison to WL or AP. No difference between individual, group or parental/family format. However only just over half improving. Need for further therapeutic developments.
Kennard et al. (2008)	11 to 18 years	RCT	Results suggest that continuation phase CBT reduces the risk for relapse by eightfold compared with pharmacotherapy responders who received antidepressant medication alone during the 6-month continuation phase.
Strawn et al. (2012)	Children and adolescents	Literature review (last ten years)	SSRIs, both as monotherapy and when combined with psychotherapy, are effective in the treatment of pediatric anxiety disorders. RCTs do not suggest efficacy for benzodiazepines or atypical anxiolytic.
TADS Team (2004) and subsequent	Adolescents	RCT	Psychotherapy (CBT) seems to complement

update paper **(Kennard et al. 2006)**			the effects of antidepressant medication (fluoxetine), but overall rates of remission remain low and residual symptoms are common at the end of 12 weeks of treatment.
Walkup et al. (2008)	7 to 17 years	RCT	Both CBT and sertraline reduced the severity of anxiety in children. CBT was equivalent to sertraline, and all therapies were superior to placebo. Combination therapy was superior to both monotherapies.
Whittington et al. (2004)	5 to 18 years	Published trials and unpublished data	Published data suggest a favourable risk-benefit profile for some SSRIs; however, addition of unpublished data indicates that risks could outweigh benefits of these drugs (except fluoxetine) to treat depression in children and young people.
INTERVENTIONS FOR ENHANCING WELL-BEING			
Albieri et al. (2009)	8 to 11 years	Open clinical trial	WBT resulted in a decreasing of affective symptoms, maintained at 1 year follow-up
Burke (2009)	4 to 19 years	Review article of 15 studies	Data provide support for the feasibility of mindfullness-based interventions with children and adolescents, however there is no generalized empirical evidence of the efficacy of these

			interventions.
Liehr and Diaz (2010)	Disadvantaged children	Randomized trial	A mindfulness-based intervention resulted in a significant reduction in depression and anxiety
Murrel and Scherbart (2006; 2011)	Children and Adolescents	Review article	Acceptance and Commitment Therapy (ACT) has been found effective in treating a wide number of psychological conditions affecting adults. To date, however, little research has been done on the use of ACT with youth and parents.
Rashid et al. (2006)	Middle-school children	Clinical preliminary study	Positive Intervention delivered to groups significantly decreased levels of mild-to-moderate depression through 1-year follow-up. In comparison with treatment as usual and treatment as usual plus medication among outpatients with major depressive disorder.
Semple et al. (2005)	7-8 years old	Open clinical trial	Mindfullness training with anxious children is feasible and potentially helpful

EXPERIMENTAL SECTION

CHAPTER 2

STUDY 1

PSYCHOLOGICAL WELL-BEING IN CHILDREN AND ADOLESCENTS.

A COMPARISON BETWEEN PATIENTS AND HEALTHY STUDENTS

2.1 Introduction

A growing number of studies documented the importance to consider the role of psychological well-being and optimal functioning not as simply derived by the absence of illness, but as a distinct element. Thus, the removal of distress does not necessarily result in engendering wellness (Ryff and Singer 1996, Rafanelli et al. 2000, Fava et al. 2001, Fava et al. 1998a, Fava et al. 1998b), particularly if we consider psychological well-being from a eudaimonic perspective (Ryan & Deci, 2001). According to this position, a complete model of psychological well-being has been proposed by Carol Ryff (1989), encompassing six key dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Once defining these dimensions, Ryff (1989) created a self-rating questionnaire (PWB scales) for measuring them. Researches using this instrument on adult and ageing individuals have pointed out that psychological well-being is impaired in remitted patients with affective disorders (Rafanelli et al. 2000, Fava et al. 2001, Ruini et al. 2002). Moreover, patients in the remission phase of anxiety and mood disorders still display more residual symptoms and less well-being compared to healthy control subjects (Rafanelli et al. 2000, Fava et al. 2001, Ruini et al. 2002). Nowadays, however, there is still a paucity of studies exploring this dimension in youth both in clinical and general population and in comparison to each other. Visani et al. (2011) explored gender differences in the levels of psychological well-being and distress in a sample of adolescents students. Results did not display any gender differences on psychological well-being dimensions, but girls reported higher levels of distress than boys. These findings are not completely in line with previous studies using PWB scales on adults and ageing population (Steca et al. 2002, Ruini et al. 2003a, 2003b), where females reported significant lower levels in all PWB scales compared to males (except positive relations). These results suggest that adolescence is a period of life with peculiar characteristics in boys and girls, and further investigations are needed , in order to identify protective

resources that may moderate the risks for developing future distress in young generations (Visani et al. 2011). Considering the outcomes of a controlled study about school intervention for promoting well-being, Ruini and colleagues (2009) hypothesized that in developmental settings promoting positive functioning and building individual strengths could be more beneficial in the long term than simply addressing depressive or anxious symptoms. Also in clinical settings the enhancement of well-being and resilience is considered nowadays particularly important in vulnerable life stages such as childhood (Caffo et al. 2008, Richards and Huppert 2011, Olsson et al. 2013, Shoshani and Steinmetz 2013)

The aim of the present study is to analyze differences in eudaimonic well-being levels in a group of children and adolescents referred to a Mental Health Service for affective and behavioral disorders in comparison with a matched control group of healthy students recruited in various schools.

We hypothesize that patients' psychological well-being levels are lower than those of healthy students. Moreover, possible gender differences were also explored.

2.2 Methods

Sample

The total sample of 118 children (mean age=10,64 ; SD=2,10; 59,3% males) consisted of 2 different groups:

Patients group

51 children (mean age=10,71; SD=2,34; 62,7% males) referred to a Mental Health Service in the North-East of Italy and waiting for starting a psychotherapy to address affective disorders and behavioural problems were consecutively enrolled in the study. All intake diagnosis were performed by a clinical psychologist using the *Schedule for Affective Disorders and*

Schizophrenia for School Age Children -Present and Lifetime Version (K-SADS-PL) (Kaufman et al. 1997), a semi-structured diagnostic interview designed to assess current and past episodes of psychopathology in children and adolescents, according to DSM-IV-TR criteria [Graph 1].

Participant inclusion criteria were:

a) age between 8 and 16 years;

b) absence of diagnosis of pervasive developmental disorders, psychosis and mental retardation;

c) not receiving pharmacological treatments for the reported symptomatology.

The neuropsychiatric department's ethical commission approved the research protocol. Written informed consent from all children's parents were requested and obtained before enrolment.

Control group

67 students (mean age=10,60; SD=1,91; 56,7% males) who volunteered to participate to the study, were recruited in different schools of the North-East of Italy (primary, junior and high school). All parents gave written informed consent after the procedures were explained to families, students and teachers.

Participant inclusion criteria were:

a) age between 8 and 16 years;

b) absence of diagnosed psychological problems.

Assessment

All participants were asked to complete the **Ryff's Psychological Well-Being Scales** (PWB) (Ryff 1989) – brief form. This is an 18-item inventory that covers 6 areas of psychological well-being according to the eudaimonic perspective, postulated in Ryff's model (autonomy,

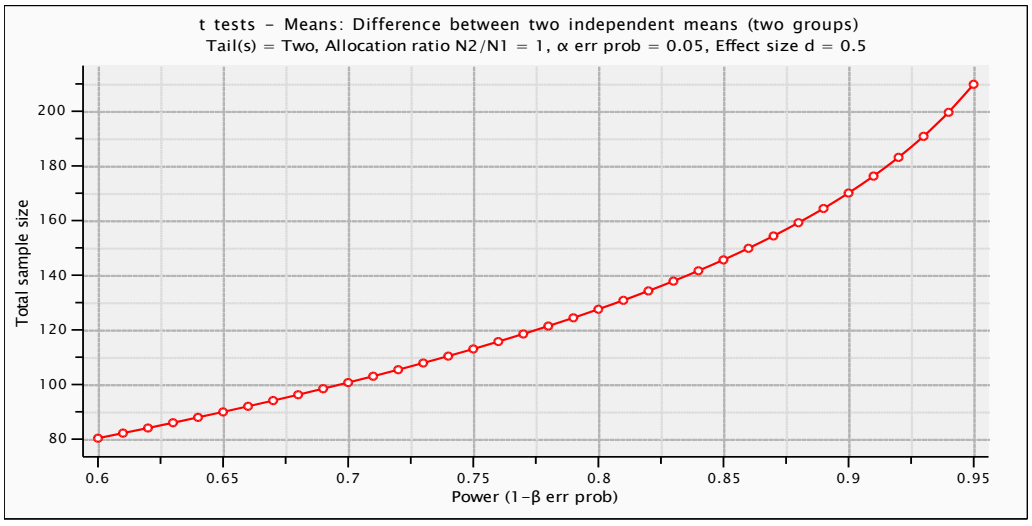
environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance). Participants answer on a 6 point Likert scale (1=This is not my case; 6= I Totally agree). Each scale score may range from 0 to 18. We have also calculated a total PWB score by adding together the scores of the six dimensions. PWB has been previously validated in an Italian population (Ruini, et al. 2003). In this study, adapted version of this questionnaire has been used, selecting items according to their relevance for a younger population.

The psychometric properties of the Italian version are good, with high inter-item correlations and a good test-retest reliability. PWB was used in a variety of studies with young samples, both in clinical and school settings (Ruini et al. 2007; 2009; Strauser et al. 2008, Tomba et al. 2010, Visani et al. 2011).

Statistical Analysis:

A priori power calculation has been conducted. Considering our sample size (N=118) the power is equal to 75%, providing a medium effect size (Table 2.1).

Table 2.1. ***Power calculation's representation.***



The data were entered in SPSS (version 17.0), then descriptive statistics were performed. Chi-square was calculated to demonstrate equivalent group composition according to gender. Subsequently, GLM Multivariate Analysis with group allocation and gender as Fix factors was performed for comparing the mean scores of each PWB_subscales. Then, GLM Univariate analysis with the same independent variables has been calculated for evaluating differences according to PWB_Total Scores.

In order to better explore the possible relationship between gender and well-being, the sample has been divided into 4 subgroups: male patients (MP); female patients (FP); healthy males (HM); healthy females (HF) and a contrast analysis has been performed (Method Simple, with MP as reference category).

Finally, only for descriptive purposes, diagnoses were clustered into 3 main groups (Anxiety, Mood and Behavioral disorders) and univariate Anova with Post Hoc Multiple comparisons (both considering each PWB_Subscale and PWB_Total Score) were carried out to .

2.3 Results

Table 2.2 showed group composition according to gender. Chi-square confirmed that the 2 groups were balanced (chi square= 0,51; p=0,57).

Descriptive statistics with reference to school attendance and diagnosis distribution are represented in Graph 2.1 and 2.2.

Multivariate ANOVA displayed a significant group effect (F=3,97; df=6; p≤0,001) as well as the interaction between gender and group (F=2,35; df=6; p≤0,05). In particular, patients displayed significant less well-being compared to healthy control subjects in all well-being dimensions, except for Environmental Mastery, where no significant differences were found (p=0,14) (Table 2.3).

When considering the interaction with gender, differences in Positive Relations with Others (F=4,74; df=1; p≤0,05) and Self-Acceptance (F=6,63; df=1; p≤0,05) emerged.

Considering gender by group allocation, contrast analysis showed that there were no significant differences between males and females in the patients group. Compared to HM, MP reported significant less well-being in Personal Growth ($p<0,05$) and Purpose in Life ($p<0,01$), as well as in the PWB_Total Score ($p<0,05$). Moreover, male patients displayed less well-being in all dimensions (and of course in the Total well-being score) compared to HF (Table 2.4).

Considering patients' diagnosis, Anova showed a significant difference between groups in Environmental Mastery and in Self-Acceptance (Table 2.5). Post Hoc comparisons confirmed only a trend to statistical significance between behavioral disorders group and anxiety one, with higher scores in the latter ($p=0,084$). Children with mood disorders displayed significant lower levels of Self-Acceptance in comparison with anxious ones ($p=0,041$). Considering PWB_Total Score, a trend to significance emerged ($F=3,04$, $df=2$; $p=0,057$), where patients with mood problems presented significantly lower well-being levels than anxious children ($p=0,053$).

2.4 Discussion and Conclusions:

This study has some limitations: a small sample size, the heterogeneity of diagnosis in the patients group, the self-selected healthy group and the absence of observed-rated instruments. Moreover, we have not taken into consideration possible distress symptoms in healthy subjects or personality factors, which can account for individual differences in experiencing well-being (Hendriks et al. 2008; Ryff, 2014). However, it underlines the importance to consider also the evaluation of psychological well-being, which have not been as extensively studied as models of hedonic well-being (Diener et al. 1999), especially in the so called “vulnerable life stages”. Our initial hypotheses that patients' eudaimonic well-being would have been lower than those of healthy students, has been confirmed almost completely. In fact, in our sample it resulted significantly impaired in all Ryff’s dimensions (except for Environmental Mastery) in comparison to matched healthy sample, suggesting how psychological well-being may

represent a predisposition toward positive optimal functioning that tends to be less developed in psychological distressed young patients. Considering PWB scores, healthy students accounted for scores that were almost equal (and high) in all dimensions (Table 2.3). Even though patients scores resulted significantly lower than those of the healthy students, they did not reach particularly low levels (Table 2.3). Personal Growth resulted the most impaired dimension, although reaching a medium level. In line with the literature (Fava 1999; 2012, Fava et al. 2007, Ruini and Fava 2009), in our sample of patients mood disorders seem to significantly impair well-being compared to anxiety and behavioral disorders, but data can be only considered as a preliminary observation and any conclusion would risk to be premature. Our findings may contribute to sustain the now well-established theory that well-being and distress are not mutually-exclusive, so the presence of the first does not mean the absence of the latter. To cite Ryff's words (2014): " […] *eudaimonic well-being is not the flipside of psychological distress. Both are important indicators of overall mental health [...]*".

Population and clinical studies on adult samples reveal diverse combination of how the two domains come together (Ryff and Singer 1996, Keyes 2002; 2005, Fava 2012, Ruini and Fava 2012; Ryff, 2014) and our data seems to confirm the same trend also for young population. In fact, our patients were waiting to start a psychotherapy therefore, distress symptoms were not as yet been addressed. Findings from a diverse set of studies and populations support the continuum model of mental health encompassing both symptomatology, well-being and their interconnection (Fava 1996, Keyes 2002, 2005, Hatch et al. 2010), confirming the importance to assess and then reinforce the positive as well as dismantling the negative (Marks and Dar 2000, Fava 2012).

Taking into account gender differences, male patients did not differ in their levels of well-being in comparison to female patients, but well-being appears to be in relation with gender, especially in specific dimensions, which are particularly relevant for children and adolescents (Positive Relations with Others and Self-acceptance). These findings provide new insights

concerning psychological well-being and its relationship to distress during childhood and adolescence. Moreover they could have relevant implications helping to plan both clinical and preventive interventions in youth, promoting specifically more relevant and vulnerable well-being dimensions. The development of strengths and resources against stress and adversities yields to moderate the risks of developing future distress and reduce the risk of psychopathology (Ryff and Singer 1996, O'Connel et al. 2009) as well as contribute to obtain a more complete and lasting recovery from mental illness (Fava 1996, Fava et al. 2004, Fava et al. 2007).

Future research with larger samples are necessary to better explore eudaimonic well-being dimensions in children and adolescents, taking into account its multidimensional nature and its differentiated relationships with distress (Rafanelli et al. 2000, Fava et al. 2001, Ruini et al. 2002). An additional important area for further research will be to replicate and extend the numerous findings regarding the correlates of hedonic well-being for eudaimonic well-being. We know a great deal regarding how demographic variables relate to hedonic well-being (Diener et al., 1999; Myers and Diener, 1995), but less is known regarding how these same variables relate to the components of eudaimonic well being, especially in youth (Gallagher et al. 2009).

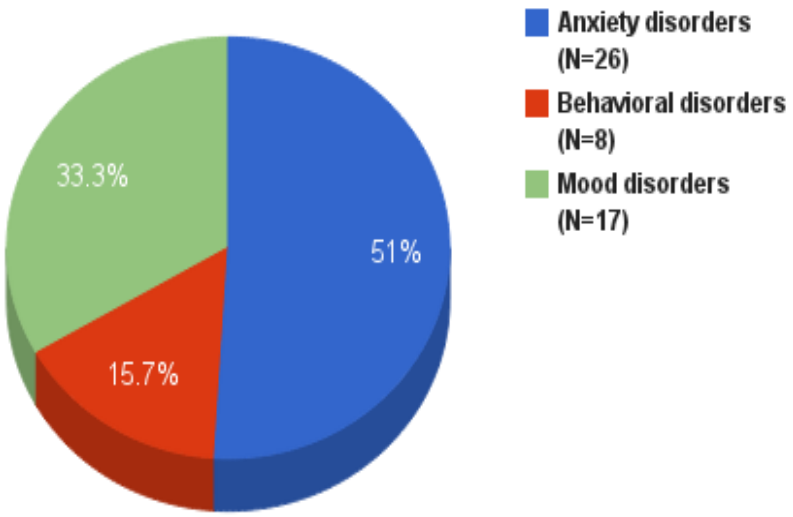
In conclusion, mental health promotion and protection preventing the loss of good mental health in youth is a crucial aim. Therefore, the development of new and updated insights into this complex dimensions of youth's well-being would contribute to improve both preventive and clinical protocols of intervention, fostering resilience and successful adaptation to the subsequent life periods.

Table 2.2. Group Composition according to gender.

	Patients Group	Healthy Group	Total
Males	32 (27,1%)	38 (32,2%)	70 (59,3%)
Females	19 (16,1%)	29 (24,6%)	48 (40,7%)
Total	51 (43,2%)	67 (56,8%)	118 (100%)

Percentage (in parenthesis) are referred to the total sample.

Graph 2.1. Clustered Diagnosis in the patients group.



Graph 2.2. Schools attended by participants in the two groups.

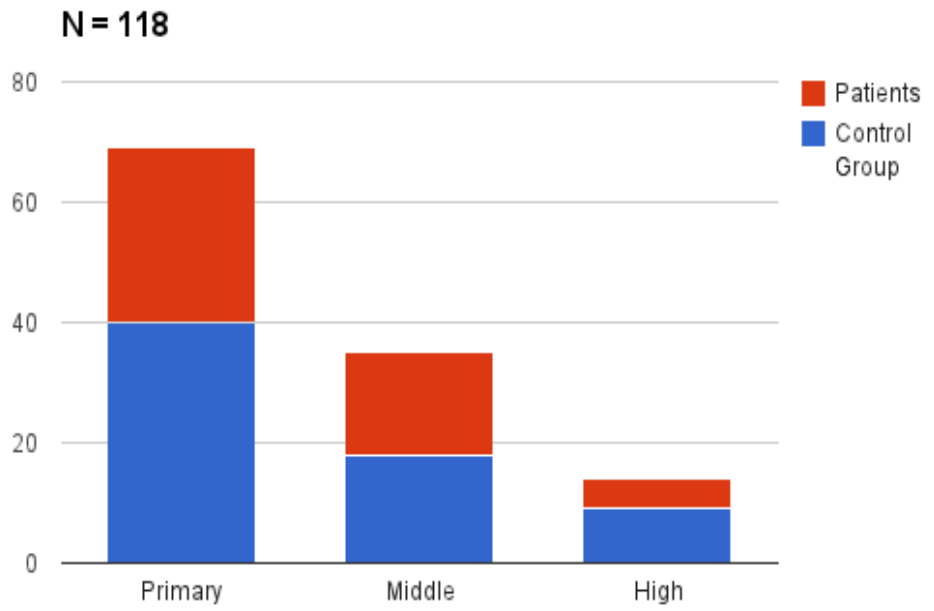


Table 2.3. PWB Scores in patients (N=51) and healthy students (N=67).

PWB_Subscales	Patients	Healty students		
	Mean (SD)		F (df=1)	p
Autonomy	12,8 (3,96)	14,39 (3,17)	**6,69**	<0,05
Environmental Mastery	13,55 (3,04)	14,37 (3,21)	2,18	n.s.
Personal Growth	11,75 (4,03)	14,0746 (3,09)	**12,34**	≤0,001
Positive Relations with Others	12,24 (3,92)	14,48 (3,32)	**13,75**	<0,001
Purpose in Life	13,8 (3,67)	15,6418 (2,63)	**8,29**	<0,01
Self-Acceptance	12,37 (3,78)	14,1 (2,98)	**10,42**	<0,05
PWB_Total Score	76,51 (14,96)	87,06 (12,96)	**18,88**	≤0,01

Table 2.4. Group by Gender differences in PWB scores (N=118).

PWB_Subscales	Gender*Group allocation mean (SD)				
	Male Patients (N=32)	Female Patients (N=19)	Healthy males (N=38)	Healthy females (N=29)	F (df=3)
Autonomy	12,84 (3,96)	12,74 (3,26)	13,60 (3,53)	**15,41 (2,29)**[a]	**3,46***
Environmental Mastery	13,37 (3,19)	13,84 (2,83)	13,68 (3,47)	**15,27 (2,61)**[a]	2,21
Personal Growth	11,31 (3,93)	12,47 (4,18)	**13,23(3,43)**[a]	**15,17 (2,17)**[a]	**6,54****
Positive Relations with Others	12,50 (3,73)	11,79 (4,29)	13,53 (3,53)	**15,72 (2,57)**[a]	**6,22****
Purpose in Life	13,34 (3,87)	14,58 (3,24)	**15,47 (2,90)**[a]	**15,86 (2,25)**[a]	**4,07****
Self-Acceptance	12,62 (3,62)	11,95 (4,10)	13,03 (2,93)	**15,52 (2,43)**[a]	**6,19****
PWB_Total Score	76 (15,01)	77,37 (15,26)	**82,55 (14,25)**[a]	**92,96 (7,99)**[a]	**9,33****

*$p \leq 0,05$

**$p \leq 0,001$

[a] Significant Contrast Analysis with Male Patients as reference category

Table 2.5. PWB Scores according to patients' diagnosis (N=51).

PWB_Subscales	Anxiety Disorders (N=26)	Mood Disorders (N=17)	Behavioral Disorders (N=8)	F (df=2)	p
	Mean (SD)				
Autonomy	12,96 (3,97)	12,47 (4,12)	13,00 (4,03)	0,87	n.s.
Environmental Mastery	14,54 (2,10)	12,82 (3,57)	11,87 (3,60)	**3,36**	≤0,05
Personal Growth	12,31 (3,27)	11,06 (5,26)	11,37 (3,46)	0,52	n.s.
Positive Relations with Others	13,19 (3,73)	10,65 (4,43)	12,50 (2,39)	2,3	n.s.
Purpose in Life	14,73 (3,58)	12,59 (3,14)	13,37 (4,53)	1,88	n.s.
Self-Acceptance	13,35 (3,81)	10, 47 (3,86)	13,25 (1,75)	**3,55**	≤0,05
PWB_Total Score	81,08 (11,65)	70,06 (18,78)	75,37 (11,34)	3,04	n.s.

CHAPTER 3

STUDY 2

THE DYNAMICS OF FLOURISHING IN CHILDREN TREATED WITH AN ADAPTED WELL-BEING THERAPY PROTOCOL

3.1 Introduction

As described extensively in Chapter 1, child and adolescent mental disorders are showing a growing trend with a worldwide prevalence of approximately 20% (WHO, 2001). Kessler et al. (2005) reported that half of all lifetime cases of mental disorders starts by age 14 and symptoms of anxiety seem to be the earliest of all forms of psychopathology (Beesdo et. 2009). Further, there is evidence that mental health problems in childhood generate additional large costs in adulthood (Beesdo et. 2009; Bittner et al., 2007; Kendall and Pimental, 2003; Keren and Tyano, 2012) and could have largely hidden costs for the society, disrupting education and the opportunity of careers (Beesdo et al., 2007; Sakolsky and Birmaher, 2008).

Together with affective disorders, conduct and behavioral problems (Attention Deficit/Hyperactivity Disorder-ADHD, Oppositional Defiant Disorder- ODD, Conduct Disorder-CD) are becoming an increasing concern in youth mental health, with a consistent male preponderance (Merikangas et al. 2009). A strong association between disruptive behavior disorders and mood and anxiety disorders has been documented (Loeber et al. 2000).

In addition to official epidemiological data, approximately 5% of children in pediatric settings manifests psychological distress through physical symptoms and somatization. These symptoms are often misinterpreted and diagnosed as other medical disorders, and produce a significant impairment in children's daily life (Gerber et al. 2010). This could explain how, despite their high prevalence (10 to 20%) and substantial morbidity, psychological disorders in childhood remain under-recognized and untreated (Costello et al. 2005).

These alarming data point out the primary importance of both the detection and subsequently the treatment of mental disorders during childhood.

3.2 The Restoration of Well-Being In Children

Nowadays a common agreement in clinical psychology indicate that the road to recovery from mental illness lies not exclusively in the alleviation of suffering and distress, but also in the

enhancement of positive emotions, personal strengths and well-being. Therefore, the absence of mental illness does not imply the presence of mental health (Ryff, 1989; Keyes, 2002).

Keyes (2002; 2002a) proposed the concept of *flourishing,* suggesting that mental health could be described as a syndrome of symptoms of positive feelings and positive functioning in life (a combination of high levels of emotional well-being, psychological well-being, and social well-being). On the other hand, the concept of *languishing* describes the absence of mental health, the experience of difficulties and unhappiness in daily life even if full criteria for a mental disorder are not met (Keyes, 2002). Flourishing is considered a basic indicator of positive development. Individuals who are flourishing, learn effectively, work productively, have better social relationships and have better health and life expectancy (Diener et al., 2009; Howell, 2011; Huppert, 2009; Keyes and Annas, 2009; Raibley, 2012). In his pioneer work on American adolescents (from 12 to 18 years old), Keyes (2006) found that only a small proportion (around 25%) is actually flourishing, whereas the majority presents moderate mental health and 6% is languishing. The level of mental health declined with age, with a 10% loss of flourishing between middle school and high school. Subsequent analysis confirmed age differences in flourishing mental health, with the lowest prevalence in the youngest age cohorts (Keyes, 2006; 2007; Keyes and Westerhof, 2012). Keyes found a prevalence of conduct problems across groups defined as mentally unhealthy and languishing, whereas a better psychosocial functioning (in terms of school integration, closeness to others and self-determination) was found in the mental health group (Keyes, 2006). Extending Fredrickson's Broaden-and-Build Theory of Positive Emotions (1998) and Losada's model of team performance (1999), there is evidence that ratios of positive to negative affect can distinguish individuals that flourish from those that do not (Fredrickson and Losada, 2005). Specifically, normal functioning is characterized by a ratio of positive to negative affect near 2.5, whereas optimal functioning, or flourishing, is characterized by a ratio of positive to negative at or above 2.9. As predicted by the theory, this mathematical model showed that higher levels of

positivity were linked with greater flexibility and resilience to adversity, more social resources, and optimal functioning (Losada, 1999; Losada and Heaphy, 2004).

In addition to positive emotions, the concept of eudaimonic well-being is considered another important ingredient of *flourishing mental health* (FMH), according to Keyes and Westerhof formulation (2012). It has received increasing attention in promoting flourishing and optimal functioning in clinical settings (Ruini and Fava, 2012; Ryff and Singer, 1996). Ryff (1989) described a multidimensional model of eudaimonic well-being that encompasses six specific dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance. Together with hedonic dimensions, they contribute to a global description of FMH (Huta and Ryan, 2010; Huta and Waterman, *in press*). This multidimensional model of eudaimonic well-being may be well suitable also for younger populations, since they are involved in tasks and challenges that influence and are influenced both by their inner factors (e.g., autonomy, self-esteem, problem solving, personal growth) and external resources (e.g., family, friends, school etc.) (Ryan et al. 2008).

3.3 Psychological Treatments

Traditional psychotherapies are mainly oriented on symptom reduction with the aim to reduce distress, treat illness and "repair" weakness. Thus, successful psychotherapy (i.e. CBT) would be expected to engender positive changes through the decreasing of "the negative". However, the growing attention to the restoration of patients' well-being dimensions in patients has reframed the concept of "effective treatment", adopting a broader clinical vision which conceives the restoration of well-being not only as the absence of symptoms, but also as specific endpoint of an effective therapy (Fava, 1996; 1999; 2012; Fava et al. 2007). This assumption influenced the development of new therapeutic techniques with the specific aim to increase patient's personal comfort, improve quality of life and psychological well-being (Fava, 1998; Fava and Ruini, 2003; Fava et al. 2005; Ruini and Fava, 2009). Even though the same

enlarged aims of psychotherapy should have been applied to children and adolescent populations, the restoration of well-being is still a neglected concept in youth psychotherapy. The majority of clinical interventions applied with distressed young populations, such as Cognitive Behavior Therapy (CBT) or Interpersonal Psychotherapy for Adolescents (IPT-A), does not address specifically the issue of restoring well-being and promoting flourishing mental health (see Review in Chapter 1).

A specific therapeutic technique based on Ryff's well-being model has been developed - Well-Being Therapy, WBT (Fava et al. 1998; Fava and Ruini, 2003)- and tested in several studies on adult patients (Fava et al., 2005; Ruini and Fava, 2009). WBT is effective in treating affective disorders, generalized anxiety disorders, cyclothymia, recurrent depression, post-traumatic stress disorders (Belaise, Fava, and Marks, 2005; Fava et al., 1998; 2004; 2011; Fava, Ruini, and Rafanelli, 2005; Ruini and Fava, 2009) as well as in decreasing somatization in medica settings (Rafanelli and Ruini, 2012). It could be considered an innovative, sequential psychotherapeutic strategy for enhancing well-being in addition to standard cognitive-behavioral packages (Fava and Ruini, 2003; Fava, Ruini, and Rafanelli, 2005; Ruini and Fava, 2009).

Recently, a modified form of WBT has been developed and applied in school settings (*Well-Being Therapy-School Program protocol*, Ruini et al., 2006). It was then tested in several controlled studies both with middle and high school students (Ruini et al., 2009; Tomba et al., 2010). Results showed the effectiveness of the WBT-School protocol in promoting psychological well-being, with particular reference to personal growth, compared to the attention placebo group. Further, it was found to be effective also in decreasing distress, in particular anxiety and somatization, and these benefits were maintained at follow-up (Ruini et al., 2009). Considering these promising outcomes with younger populations, Albieri et al. (2009; 2011) applied a modified WBT protocol (Child-WBT) in a group of clinically distressed children, reporting emotional and behavioural disorders. Even though it was only a preliminary clinical cases evaluation, the results were encouraging and children significantly improved after

8 sessions of Child -WBT (Albieri et al. 2009; 2011).

The aim of the present study was to explore the effect of the Child-WBT protocol (Albieri et al. 2009, 2011) in a group of children with mood, anxiety and behavioral disorders, analyzing the dynamics of flourishing over time.

The innovative ingredients of Child-WBT are: the promotion of psychological well-being (eudaimonic perspective) and the focus on optimal functioning (flourishing) in a pediatric clinical setting.

3.4 Methods

Child-WBT Protocol

A complete version of the protocol is available in Albieri et al. (2009; 2011). In the present study the traditional structure has been maintained (the sequential model of 4 CBT sessions followed by 4 WBT sessions), as well as the participation of children's parents (one before the intervention and the other at the conclusion of the intervention). These moments provided therapist with important feed-back on child's behaviour in everyday life and at the same time gave useful information to parents on how to handle daily child's difficulties.

All the therapies were performed by the same clinical psychologist.

Sample

A sample of 16 children and adolescents referred to a Neuropsychiatric Department in the North-East of Italy for affective disorders and behavioural problems were consecutively enrolled in the study. Participant inclusion criteria were:

a) age between 7 and 16 years;
b) absence of diagnosis of pervasive developmental disorders, psychosis and mental retardation;

c) not receiving pharmacological treatments for the reported psychiatric symptomatology.

The neuropsychiatric department's ethical commission provided approval for the research protocol and written informed consent from all children's parents were requested and obtained before enrolment.

Flowchar of Child-WBT intervention is provided in Figure 3.1.

Assessment:

Observed-rated instruments

At the intake, inclusion criteria and psychiatric diagnoses were established by one clinical psychologist, who was not involved in the treatment, using the **Schedule for Affective Disorders and Schizophrenia for School Age Children -Present and Lifetime Version** (K-SADS-PL) (Kaufman et al. 1997).

In order to obtain a comprehensive clinical judgment, children clinical status was evaluated using **Kellner's Global Scales for Illness Severity** (GSIS) (Kellner, 1972). After Child-WBT intervention and at 1-year follow-up, patients' treatment response was evaluated using **Kellner's Global Scale for Change after treatment** (GSC) (Kellner, 1972). In the GSIS, clinicians are asked to rate children's illness severity on a 9-point likert scale ranging from 1 (well) to 9 (incapaciting), whereas on the GSC 9-point likert scale, clinicians rate the change after treatment from 1 (a lot better) to 9 (a lot worse). Clinical judgment was expressed taking into account not only the presence/absence of specific DSM-IV criteria in children, but also the information provided by parents during the 3 planned sessions. Therefore, changes in child's family and school functioning were also included in the final judgment.

Self-rated instruments

In the first and last sessions, and after 1 year, patients were assessed using self-report

instruments:

1) **Ryff's Psychological Well-Being Scales** (PWB) (Ryff, 1989) – brief form: an 18-item inventory that covers 6 areas of psychological well-being according to the eudaimonic perspective, postulated in Ryff's model (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance). Each scale score may range from 0 to 18. A total PWB score has been also calculated by adding together the 6 dimensions' scores. In this study, an adapted version of this questionnaire has been used, where items were selected according to their relevance for a younger population. In this study an adapted version of this questionnaire has been used, where items were selected according to their relevance for a younger population and rephrased in order to become easier to understand. PWB has been previously validated in an Italian population (Ruini, et al. 2003). The psychometric properties are good, with high inter-item correlations and a good test-retest reliability. PWB was used in a variety of studies with young samples, both in clinical and school settings (Ruini et al. 2007; 2009; Strauser et al. 2008, Tomba et al. 2010, Visani et al. 2011)
2) **Kellner's Symptom Questionnaire** (SQ) (Fava and Kellner, 1982): a 92 item self-rating scale that yields 4 scales of distress (anxiety, depression, somatization and hostility-irritability) and 4 scales of well-being (relaxation, contentment, physical well-being and friendliness). Each symptom scale score may range from 0 to 17; each well-being scale scores from 0 to 6. The Symptom Questionnaire (SQ) is a yes/no questionnaire with brief and simple items. Its scales have been extensively validated (Fava et al. 1983; Kellner, 1987). In the present study, SQ well-being subscales were computed to represent the lack of these well-being dimensions (reverse scores). Six items from the Depression subscale and 6 items from the Contentment subscale (direct score) were used to obtain a quantitative indicator of Flourishing (Positive to Negative ratio).

Statistical Analysis

Descriptive statistics (mean, SD) were calculated in the sample.

Psychological changes over the time (baseline, post-treatment and follow-up) were analyzed using a repeated measures analysis of variance, with PWB and SQ scales scores as dependent variables. General Linear Model-contrast analysis (Simple method) and calculation of effect size (Partial Eta Squared coefficient, η2p) were performed to compare outcome scores at post interventions and follow-up to the baseline levels.

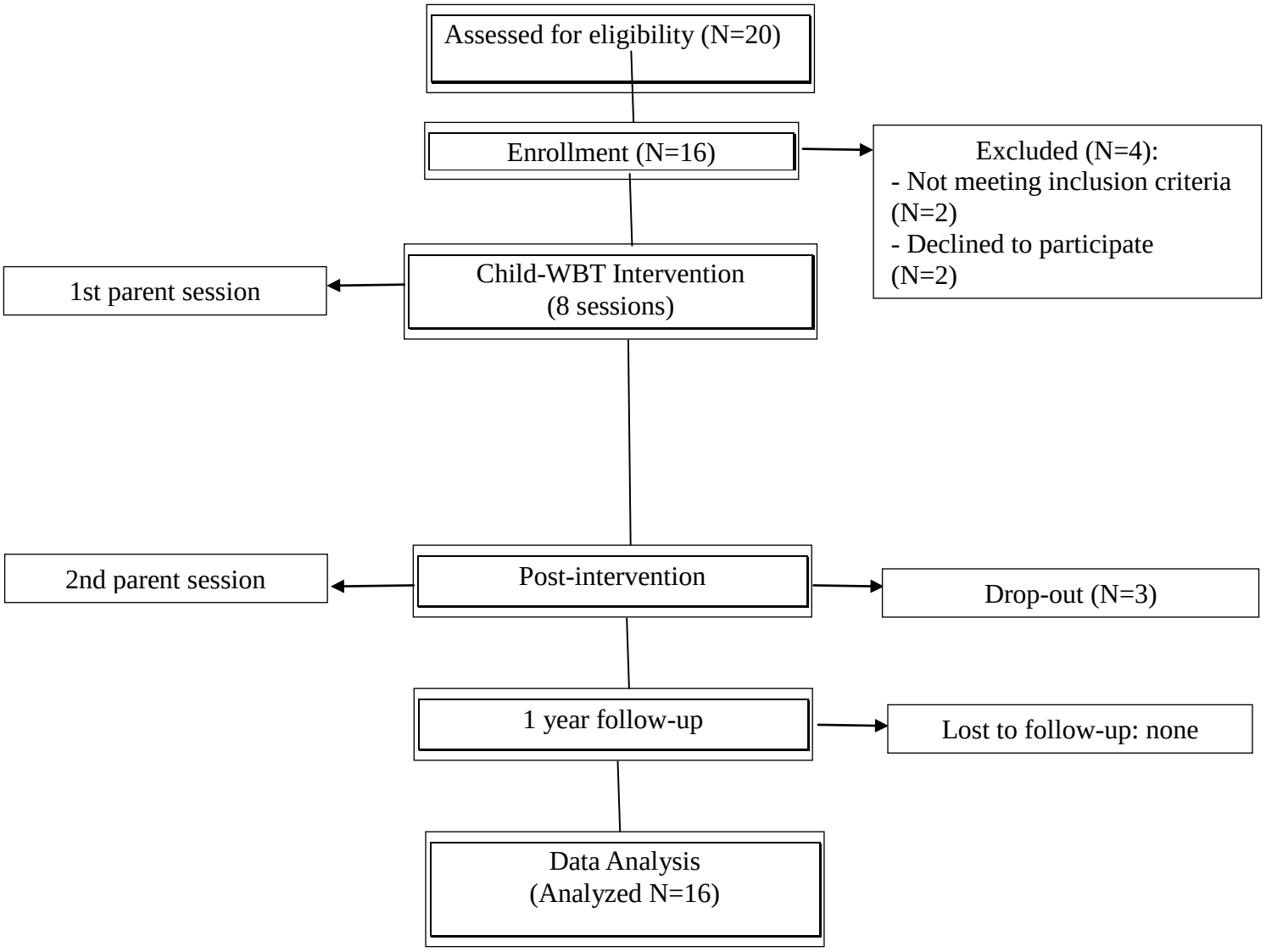
Twelve items from SQ subscales of *Contentment* and *Depression* were separately analyzed for evaluating their trend over time, and for obtaining a quantitative indicator of flourishing (the ratio of positivity -Contentment- to negativity -Depression-).

Finally, in order to evaluate the change of children's clinical status according to clinicians' evaluations, pre-post and follow-up data were analyzed using Friedman's non-parametric test for repeated measures. We chose a non-parametric procedure because clinical evaluations may not fit the normal data distribution.

An intent to treat analysis (ITT) for missing data was carried out using the last observation carried forward (LOCF) procedure.

For all the analyses the significance level was set at .05, two tailed. Statistical analysis were performed using Statistical Package for the Social Science, Version 17.0 (Spss Inc.).

Figure 3.1. Child-WBT Intervention Flowchart



3.5 Results

Sixteen children (14 M; 2 F) aged from 7 to 14 (M=10.13 ; SD=1.78) were consecutively enrolled in the study. At the intake, different diagnoses were established according to DSM-IV-TR criteria and comorbidity with learning disorders was found in half of the cases (Table 3.1). Three patients dropped-out from treatment after few sessions, because of families' difficulties (working schedule not fitting with planned sessions). Only pre-treatment data resulted available for these patients.

Tables 3.2-3.3 show means and SD scores according to the self-rated instruments over time.

Well-Being Scores

Considering PWB scores, no significant differences emerged according to Anova. However contrast analysis showed significant improvements in Self-Acceptance_follow-up scores ($F=8,366$; $df=1,15$; $p\leq0.01$). PWB_Total score tended to increase over time, even if statistical significance was not reached. The same trend emerged when considering positivity indicator, which tended to increase, but did not reach statistical significance (post: $p=0.09$; follow-up: $p=0.08$) (Table 3.2).

Distress Scores

Considering SQ scores, significant differences in Somatization ($F=6.006$; $df=2,15$; $p<0.01$) and Physical Well-being ($F=5.727$; $df=2,15$; $p<0.01$) emerged. Contrast analysis showed that Child-WBT resulted in a significant post-treatment improvement in Anxiety ($p=0.04$) and Depression ($p=0.05$). Moreover, Physical Well-being and Somatization resulted in a significant improvement both at post-treatment and follow-up. Negativity significantly decreased at post treatment ($p<0.01$) (Table 3.3).

Partial Eta Squared coefficient (η2p) showed a low-medium effect-size; SQ_Total Somatization was the highest one (η2p=.425) (Table 3.2-3.3).

Flourishing Trend

Figure 3.2 shows the positivity to negativity ratio trend. It increased over time, with a progressive improvement ranging from 1.9 (baseline) to 2.5 (post-treatment) and 2.7 (1 year follow-up), paralleling the same trend of the PWB_Total scores.

Observer_Rated results

Table 3.4 shows means and SD scores according to observer-rated evaluations. A significant improvement in children's clinical status emerged (X^2=21.167; df=2; p=.00).

DSM-IV criteria were no more satisfied in the 62% of completers, particularly when concerning disruptive behaviours and other externalizing symptoms.

Table 3.1. ***Sample of children included in the study.***

Patient	Gender (M/F), Age	Diagnosis	Comorbidity
1	M, 12	Distymia	Learning Disability
2	M, 7	ADHD (combined subtype)	/
3	M, 11	ODD	Problems with primary support group
4	M, 9	MDD	Learning Disability
5	M, 10	ODD	Learning Disability
6	M, 10	GAD	Learning Disability
7	M, 10	ODD, Attention Deficit	
8	M, 8	ADHD (inattentive subtype)	Borderline intellectual functioning
9	M, 8	Disruptive Behavior NOS	Learning Disability
10	M, 9	GAD	Problems with primary support group
11	M, 10	Social Anxiety	Learning Disability
12*	M, 14	CD	Problems with primary support group
13*	M, 12	ODD	Problems with primary support group
14*	M, 12	GAD	Learning Disability + Problems with primary support group
15	F, 10	Separation Anxiety	/
16	F, 10	Separation Anxiety	Subthreshold depressive symptoms

*drop-out

ADHD= Attention Deficit Hyperactivity Disorders; ODD=Oppositional Defiant Disorder; MDD=Major Depressive Disorder; GAD=Generalized Anxiety Disorder; CD=Conduct Disorder

Table 3.2 Well-being scores over time.

SCALE	Child-WBT (N=16)			F (df=1)		ES (η^2_p) (df=1)	
	Pre-treatment Mean (SD)	Post-treatment Mean(SD)	Follow-up Mean (SD)	Post[a]	Follow-up[a]	Post[a]	Follow-up[a]
Autonomy	12.81 (4.13)	13.88 (3.57)	13.19 (3.83)	1.17	0.11	0.07	0.01
Environmental Mastery	13.19 (3.19)	12.37 (3.63)	13.81 (3.08)	0.77	0.42	0.05	0.03
Personal Growth	12.38 (3.93)	12.69 (3.59)	12.44 (3.35)	0.94	0.00	0.01	0.00
Positive Relations	12.31 (3.11)	13.19 (3.86)	13.25 (3.97)	1.26	0.83	0.05	0.18
Purpose in Life	13.19 (3.64)	14.69 (3.09)	14.75 (2.54)	3.25	3.29	0.18	0.09
Self-Acceptance	12.13 (3.34)	13.19 (2.37)	13.75 (3.11)	1.46	**8.37****	0.09	**0.36**
PWB Total	76.00 (12.47)	80.00 (12.03)	81.19 (11.09)	3.15	3.40	0.17	0.18
POSITIVITY	4.93 (1.61)	5.19 (1.05)	5.19 (1.33)	0.33	0.22	0.02	0.01

[a] Contrast analysis with baseline as reference category
*p ≤ .05
** p ≤ .01

Table 3.3. Distress scores over time.

SCALE	Child-WBT (N=16)			F (df=1)		ES (η^2_p) (df=1)	
	Pre-treatment Mean (SD)	Post-treatment Mean (SD)	Follow-up Mean (SD)	Post[a]	Follow-up[a]	Post[a]	Follow-up[a]
SQ_Anxiety	5.81 (4.20)	4.25 (4.20)	4.69 (3.50)	**5.33***	1.45	**0.26**	0.08
SQ_Depression	5.00 (3.48)	3.25 (3.59)	3.19 (3.31)	**4.56***	2.71	**0.23**	0.15
SQ_Somatic Symptoms	6.88 (3.74)	3.69 (4.14)	3.50 (4.03)	**10.86****	**8.34****	**0.42**	**0.36**
SQ_Hostility	5.25 (5.08)	5.13 (4.91)	4.88 (4.42)	0.02	0.07	0.00	0.01
SQ_Relaxation	1.81 (1.68)	2.00 (1.75)	1.63 (1.59)	0.30	0.11	0.02	0.01
SQ_Contentment	1.06 (1.61)	0.81 (1.05)	0.81 (1.33)	0.33	0.22	0.02	0.02
SQ_ Physical Well-being	2.31 (1.30)	1.31 (1.09)	1.06 (1.06)	**4.80***	**10.71****	**0.24**	**0.42**
SQ_Friendliness	1.81 (1.87)	2.13 (1.82)	2.44 (2.19)	0.59	1.38	0.02	0.08
NEGATIVITY	2.13 (1.45)	1.50 (1.46)	1.31 (1.58)	**6.82***	2.54	**0.31**	**0.15**

[a] Contrast analysis with baseline as reference category

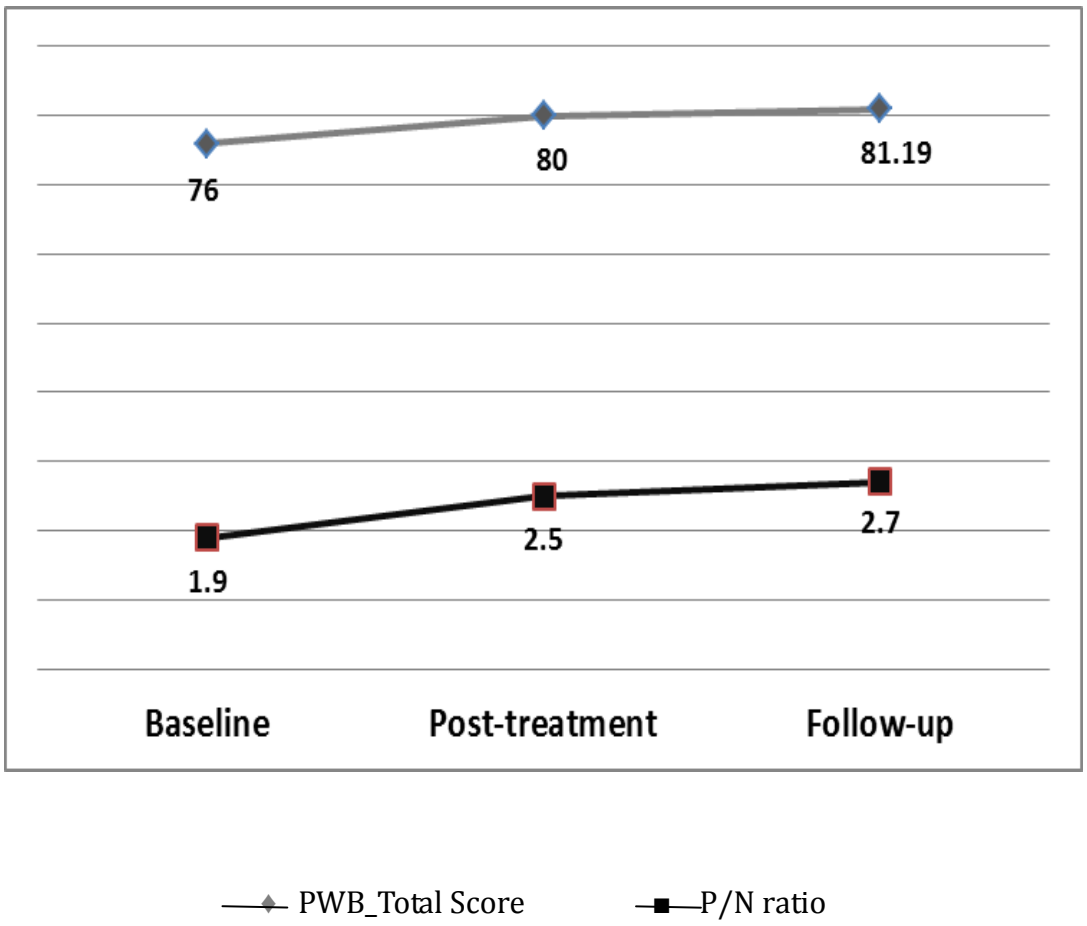
*p ≤ .05

** p ≤ .01

Table 3.4. Means and SD scores according to observer-rated evaluations.

SCALE	N	Mean	SD	Min.	Max.	Medium Rank
Illness Severity GSIS (pre-treatment)	13	6.96	0.92	5.00	8.50	3
Change after treatment (GSC)	13	2.81	0.99	1.00	5.00	1.46
Illness Severity follow-up	13	3.27	1.27	2.00	6.00	1.54

Figure 3.2. Parallel trend of PWB_Total Score and P/N ratio over time.



3.6 Discussion

This study has obvious limitations, due to its explorative nature: the limited number of participants with male prevalence, their heterogeneity in terms of psychopathology, and the absence of a control group. However, it yields important clinical information.

The aim of the study was to explore the effect of the Child-WBT protocol (Albieri et al., 2009; 2011) in diminishing symptomatology and in promoting flourishing and well-being in a child population with affective and behavioural disorders.

Previous investigations using WBT with youth (Ruini et al., 2006; 2009; Tomba et al., 2010) involved students without specific psychiatric or psychological disorders, and the school protocols were administered in a group format. The results showed that WBT school program was effective in decreasing anxiety (especially physical anxiety and somatisation) and in improving psychological well-being (particularly personal growth) also in the long term. In the present open clinical trial, we replicated these findings: Child-WBT was associated with symptoms reduction, particularly anxiety, somatisation, and physiological anxiety (Table 3.3). Therapeutic effects were maintained also at 1 year follow-up. This suggests that this protocol could have important clinical implications in view of the documented high prevalence of anxious and somatic symptoms in children and adolescents (Beesdo et al. 2009; Gerber et al. 2010).

Child-WBT triggered also an increase in psychological well-being, particularly in self-acceptance dimension, which further improved at follow-up (Table 3.2). Moreover, the improvements in self-acceptance could suggest an important role of this therapeutic strategy with adolescents, who tend to manifest a decrease of this dimension according to cross-sectional and longitudinal data (Rawana and Morgan, 2013; Zimmerman et al. 1997). Indeed, an impaired self-acceptance may be a risk factor for severe mental disorders such as depression, eating disorders, conduct problems and substance abuse (Glass et al. 2011;

Nierenberg et al. 2010; O'Dea, 2004; Valiente et al. 2012).

Another encouraging result obtained from the intervention pertains the reduction of externalizing problems (according to both clinicians' evaluation and parents' opinion), without the use of specific medication. Difficult temperament, hyperactivity, aggressive behaviours were found to be antecedents of psychosocial problems in adulthood, such as personality disorders (Glenn et al., 2007). Moreover, children who exhibit elevated levels of conduct problems are at increased risk for developing co-occurring depressive symptoms, especially during adolescence (Capaldi, 1992; Loeber et al., 2000). Based on this assumption, Cutuli et al. (2006) treated a group of middle-school-aged students who exhibited elevated levels of behavioral problems, using a protocol for the prevention of depressive symptoms: the *Penn Resiliency Program* (PRP). PRP consisted in a manualized group intervention for the improvement of cognitive-behavioral and social problem-solving skills, with specific focus also on resilience concepts (Gillham et al. 2006). Longitudinal results demonstrated that the program successfully prevented effects of disruptive behaviour, as well as elevations in depressive symptoms across early to mid-adolescence compared to controls (Cutuli et al. 2006). Thus, the reduction of externalizing symptoms in our sample of children confirms those obtained with PRP and may suggest a possible role of Child-WBT in modifying maladaptive behaviours and in preventing the development of future distress. Future studies with longitudinal design should test this hypothesis. From a technical point of view, these promising results may be explained with the fact that WBT involves different ingredients (CBT techniques, psychoeducation, behavioural activation, narrative elements, focus on eudaimonic well-being) which are administered in a sequential order, instead of simultaneously. Previous investigations on adult samples (Fava, 1999; Fava et al. 2005; 2008; Fava and Ruini, 2003; Fava and Tomba, 2010; Karwoski et al. 2006) have documented the efficacy of this sequential approach compared to standard CBT techniques. It allows a more complete cognitive

restructuring and is in line with indications for the need of a more pervasive recovery in clinical setting (Fava, 2012; Fava et al. 2008).

Another crucial ingredient of the Child-WBT protocol is the frequent involvement of parents during children treatment. As psychological distress and well-being refer to a pattern of observable negative/positive functioning, the integration of clinician and parents' information (observer-rated measures) could contribute to a more detailed consideration of children clinical status, with a positive feed-back on treatment effectiveness. The repeated assessment by observer-rated measures over time could also help therapists to adjust the focus of the intervention during the different phases of the therapy (Fava et al. 2008; 2012a; 2012b).

Finally, the results obtained with this pilot clinical trial showed that it has triggered improvement in eudaimonic well-being, that paralleled an increase in P/N ratio, considered an indicator of flourishing. In our sample, children presented a baseline P/N ratio of 1.9 that improved to 2.5 after intervention and reached 2.7 at 1 year follow-up. Fredrickson and Losada (2005) suggest that a positive to negative affectivity ratio near 2.5 could be considered as normal functioning, and 2.9 as flourishing. The concept of flourishing mental health (Keyes, 2002) refers to a syndrome of subjective well-being that combines feeling good (i.e., emotional well-being) with positive functioning (i.e., psychological and social well-being). The significant decrease of negative affectivity and the increasing trend of PWB and positive to negative ratio (P/N) may suggest that Child-WBT was able to facilitate the movement along the continuum from a low / moderate level toward a better psychosocial functioning. The comparable growing trend both in the self-assessed psychological well-being (PWB) and in the P/N ratio seems to indicate that Child-WBT protocol could reinforce hedonic and eudaimonic well-being at the same time, in a comprehensive perspective where both contribute in achieving patients' optimal functioning. These results are promising, when considering that our sample was composed by children presenting an initial severe

symptomatology and impaired functioning in school, family, and interpersonal domains (GSIS mean pre-treatment=6,91).

Findings from a diverse set of studies and populations support Keyes' argument for the continuum model of mental health encompassing both symptomatology, flourishing and their interconnection (Hatch et al. 2010; Keyes, 2002; 2005). Keyes (2012) stated that, as a society, we need to know how people can flourish as well as why some languish. This model is in line with the common and universally accepted consideration that absence of mental illness does not automatically mean presence of mental health. Promoting psychological well-being is particularly important in vulnerable life stages such as childhood (Caffo, Belaise, and Forresi, 2008; Olsson et al., 2013; Richards and Huppert, 2011; Shoshani and Steinmetz, 2013). However, nowadays little empirical research has explored the role of positive emotions and eudaimonic well-being in child psychotherapy (Proctor et al. 2009; Sin and Liubomirsky, 2009). Character strengths predict subjective well-being during adolescence (Gillham et al., 2009) and the integration of strength-based approaches into traditional clinical practice has been found to be effective in treating depressed children (Seligman et al. 2006). Further clinical research is needed considering that these positive interventions could add important therapeutic ingredients to the development of improved mental health services for young generations.

CHAPTER 4

STUDY 3

THE EFFECTIVENESS OF CHILD WELL-BEING THERAPY IN CHILDREN WITH MOOD AND ANXIETY DISORDERS COMPARED TO STANDARD COGNITIVE BEHAVIORAL THERAPY. A LONGITUDINAL CONTROLLED INVESTIGATION

4.1 Introduction

Ad widely discussed in Chapter 1, affective disorders are among the most prevalent forms of psychological suffering during childhood and adolescence. If untreated, these problems can be predictors of more severe disorders in adulthood. A substantial evidence supports the efficacy of CBT intervention suggesting that psychological treatments are likely to become an increasingly important option in treating children and adolescents with affective disorders (Benjamin et al. 2010). However, literature review (Chapter 1) underline other important issues:

α) a large percentage of children treated with psychotherapy (especially depressed children) does not show improvement;

β) most of the published review on this topic does not focus on a head to head comparison, but just compare the effect-size of each treatment (Watanabe et al. 2009), furthermore, a potential weakness of most psychotherapy research is that greater part of the studies have compared active treatments with inert conditions (Jensen, 2003, Weisz, 2006);

χ) a paucity of clinical trials involving long-term evaluation is a specific weakness in pediatric psychopathology research: more than one third of the investigations did not include follow-up assessment and the remaining trials demonstrated the efficacy of psychotherapy only in the short term (Weisz, 2006; Reynolds et al. 2012);

δ) alleviating psychological distress is one target of efforts, but enhancing psychological well-being and positive functioning should be another crucial target of child-psychotherapy (Joseph and Linley, 2006, Caffo et al. 2008 ; Ryff, 2014);

ε) little empirical research has explored the role of positive emotions and eudaimonic well-being in child psychotherapy (Proctor et al. 2009; Sin and Liubomirsky, 2009, Bolier et al. 2013).

As emerged in Study 1, mental health promotion and protection preventing the loss of good mental health in youth is a crucial aim. We may assume that, as for adults, psychological well-being is impaired in children and adolescents with affective disorders who remitted upon standard treatment (Fava, 2012). Impaired school performance, the absence or paucity of positive interpersonal relationships and low self-esteem are some of the most common residual symptoms (Tao et al. 2010) and can be considered as factors predicting absence of full recovery or risk factors for future relapses (Emslie et al. 2008).

Moreover, clinicians underline the growing need to promote efforts in narrowing the gap between research and practice in terms of what clinical scientists know about what works and what clinicians actually do in practice (Herschell et al. 2004).

These findings suggest that there is still substantial room for improvement in psychological treatments for affective disorders in youth.

On these considerations, a conceptual innovation in the treatment of affective disorders in young population has been proposed: Child Well-Being Therapy (Child-WBT), an innovative psychotherapeutic strategy adapted from adult Well-Being Therapy protocol (Fava et al. 1999, Ruini & Fava, 2003). Well-Being Therapy (WBT) is based on the multidimensional model of well-being discussed in previous chapters. Nowadays it is considered a well-established clinical methods, especially effective for treating residual symptoms and preventing future relapse in depressed adults (Fava et al. 1998; Fava et al. 2004; Fava & Ruini, 2005; Seligman et al. 2006), but has shown to be effective also for the treatment of other disorders, such as generalized anxiety disorders (Fava et al. 2005a) cyclothymia, recurrent depression, post-traumatic stress disorders (Belaise, Fava, and Marks, 2005; Fava et al., 1998; 2004; 2011; Fava, Ruini, and Rafanelli, 2005; Ruini and Fava, 2009) as well as in decreasing somatization in medically ill patients (Rafanelli and Ruini, 2012). WBT showed to contribute to the achievement of a more complete and lasting recovery from illness (Fava et al. 1998, 2001, 2007; Ruini et al. 2002) and it is used at international levels nowadays (Layard, 2006, Ryff 2014.) .

As for adults, Child-WBT is a short-term (8 sessions), CBT-based approach, aimed to the promotion of psychological well-being in children, in sequential addition to cognitive-behavioral packages (Albieri et al. 2009; 2011, Albieri and Visani, 2014). Preliminary data derived from a first open study (described in Chapter 3) suggested that this strategy is suitable for young patients with affective and behavioral disorders, helping them in reducing distress, somatizations and cognitive impairments associated with the disorders. Moreover, outcomes showed that psychological well-being dimensions increased over time (1 year) following a growing trend, which was perceived both from patients and from observers (clinicians and family). Despite the obvious limitations of this first pilot study, important clinical information may be yielded and be the basis for future investigations. WBT has been tested with non-clinical samples as well, thus shifting toward prevention of mental or physical health problems. For example, Ruini et al. (2007) adapted WBT to school settings with the objective to prevent psychological disorders such as depression and anxiety during adolescence. A comparison of students receiving the intervention with an attention-placebo group revealed significant improvements in personal growth along with reductions in multiple indicators of distress, maintained at follow-up (Ruini et al. 2009; Tomba et al. 2009).

4.1.1 *The sequential combination of Cognitive Behavioral Treatment and Well-Being Therapy: a new Child-WBT clinical protocol.*

As a consequence of the important clinical information derived from the first pilot study (Chapter 3), a modified tailored protocol of Child-WBT (CWBT) has been developed. It consists in an extended version (a total of 12 sessions), with larger number of sessions focused on Ryff's eudaimonic well-being dimensions, greater behavioural activation and the introduction of some narrative techniques. The sequential model, a core feature of classic WBT-protocol, was maintained, with 6 CBT sessions followed by 6 well-being-focused sessions. The two additional sessions addressed to parents (immediately before and after the intervention) were

maintained and boosted in terms of duration (from 45 minutes to 1,5 hours each).

[CWBT new protocol is described in detail in Appendix 1].

Aims and hypotheses of the study

The primary aim of the present study was to evaluate the effects of this new version of CWBT which encompasses CBT/WBT combination (6 CBT + 6 WBT), applied to a group of children with mood and anxiety disorders, by comparing it to an active treatment (CBT) and a Control Group (6 month waiting list, WL). More specifically, we expected that:

a) children in the treatment groups (CWBT and CBT) would reported less distress symptoms after treatment compared to children addressed to WL;

b) improvements of children in the 2 experimental groups would be confirmed both through self-rated instruments and according to clinical judgement;

c) children who underwent CWBT would displayed higher level of psychological well-being and improved interpersonal functioning compared to children receiving only CBT.

The secondary aim of the investigation is to analyse the long-term trajectories in levels of distress and psychological well-being in the two treatment-groups (CWBT and CBT). Considering the protective role that WBT has displayed in previous investigations (Fava et al. 2004; Ruini and Fava, 2009) it is expected that CWBT group would present a lower number of relapse and thus a better long term outcome than CBT.

4.2 METHODS

Sample:

34 children and adolescents referred to a Neuropsychiatric Department in the North-East of Italy for affective disorders were consecutively enrolled in the study. Participant inclusion criteria were:

a) age between 8 and 16 years;

b) absence of diagnosis of pervasive developmental disorders, psychosis and mental retardation;

c) absence of diagnosis of bipolar disorders or other psychiatric disorders;

d) not receiving pharmacological treatments for the reported psychiatric symptomatology.

The neuropsychiatric department 's ethical commission provided approval for the research protocol. After complete description of the study, written informed consent were requested by children participants and by their parents. Only children giving their assent and whose parents have provided the written informed consent were enrolled in the study.

The effectiveness of CWBT was tested in a controlled trial where participants were randomly assigned to:

6 CBT sessions + 6 WBT sessions (CWBT) (N=12)

12 sessions of standard Cognitive Behavioral Therapy (CBT) (N=11)

6 months waiting list (WL) (N=11)

Follow-up assessment has been conducted at 3, 6 and 12 month after the end of the treatments (CWBT group and CBT group).

(See Consort Flowchart of the study).

Interventions:

- Child-WBT (CWBT)

The Protocol is described in details in Appendix 1. 6 CBT sessions were followed by 6 well-being-focused sessions according to a sequential model.

- Cognitive behavioral therapy (CBT).

12 sessions focused on traditional CBT techniques: self-observation in a diary, psycho education on connection between thoughts and emotions, behavioral techniques, focus on negative dysfunctional thoughts and cognitive restructuring. The contents of the 12 sessions correspond to the 6 CBT sessions of CWBT protocol. The basic difference between the two protocols is the lacking of any focus on eudaimonic well-being dimensions in the CBT approach.

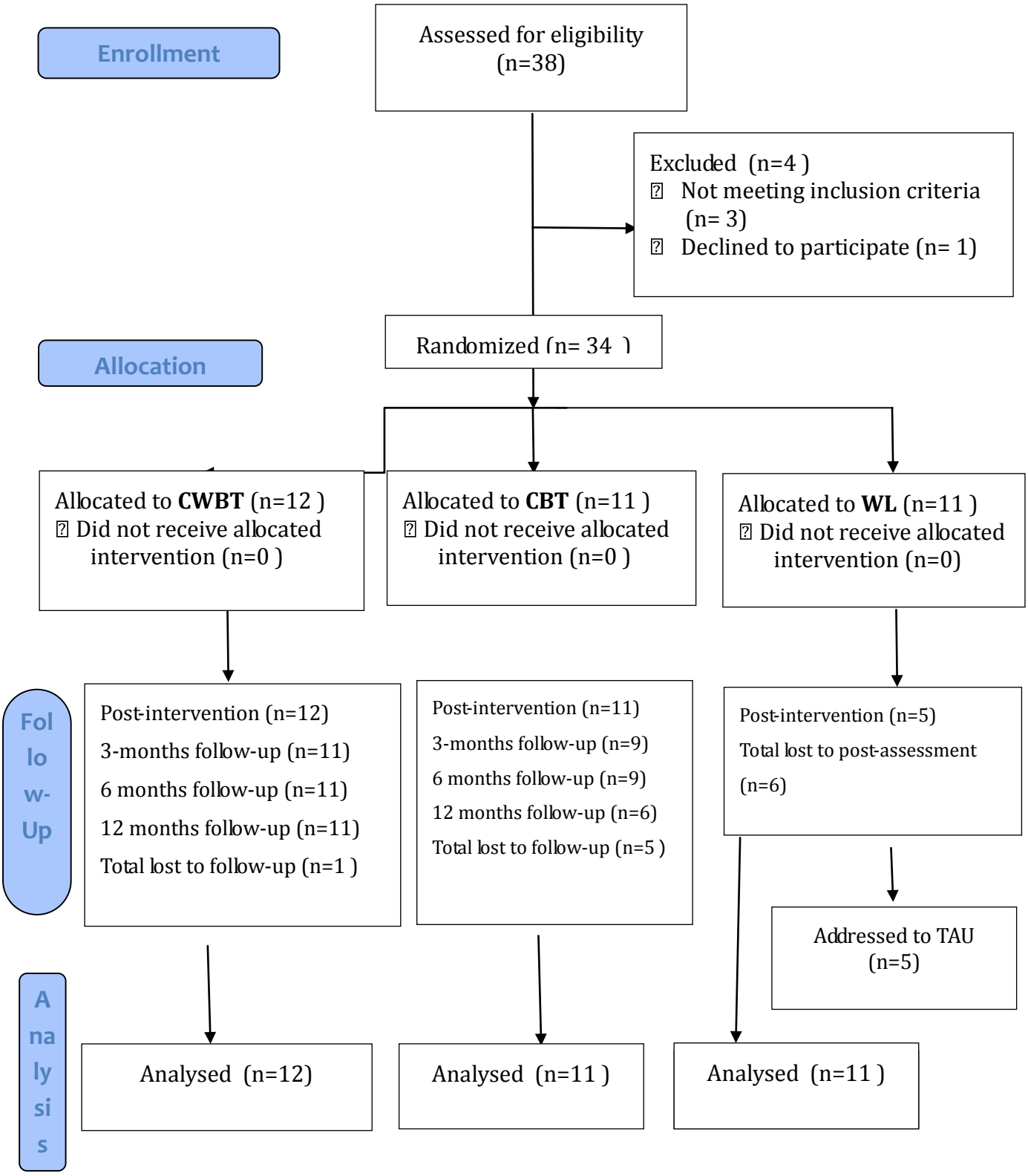
All the therapies were performed by the same clinical psychologist.

Clinical psychologists who performed the therapies met the patients' family in order to explain the aims of the intervention and the importance of parents' support and collaboration during the therapy. Then, at the end of the therapy, parents received a feed-back from the therapist about the whole experience, together with some important advices on how to help the child to keep the reached goals. At the same time, the involvement of the family provided therapist with more continuous feed-back on child's behaviour in everyday life.

Control Group

After an intake session with parents, patient was met by the same clinical psychologist who performed all the therapies. A brief psycho education and general advices were given both to the family and the child, who was then placed on the waiting list. Patients were encouraged to contact the Service for any urgent need and advised that they would be contacted after 6 months (which is the average waiting time for patients addressed to Neuropsychiatric Department in Italy). After that period of time the same therapist met the patient and his family for a new assessment and addressed the patients to treatment as usual (TAU) if still needed.

CONSORT Flow chart of the treatment study



ASSESSMENT

Both observed and self-rated instruments were used.

OBSERVER-RATED INSTRUMENTS:

At the intake, inclusion criteria and psychiatric diagnoses were established by a clinical psychologists, who was not involved in the treatment, using:

- **Schedule for Affective Disorders and Schizophrenia for School Age Children - Present and Lifetime Version (K-SADS-PL)** (Kaufman et al. 1997), a semi-structured diagnostic interview designed to assess current and past episodes of psychopathology in children and adolescents. Diagnosis were established according to ICD-10 criteria (World Health Organization, 1994);
- **Children Global Assessment Scale**, **CGAS** (Schaffer et al. 1983), to provide a global measure of functioning in children and adolescents. The measure gives a single global score on a scale from 0 to 100 (the higher is the score, the better is child functioning). In making their rating, clinicians refer to a specific glossary in order to determine the meaning of the given score. In the present study, CGAS has been used for a pre-post evaluation.

SELF-RATED INSTRUMENTS:

In the first and last sessions, patients were assessed as follows:

d) **Revised Children's Manifest Anxiety Scale** (RCMAS) (Reynolds & Richmond, 1978);

The RCMAS is a self-rating, 37 item questionnaire with dichotomous questions (yes/no) for assessing anxiety in children (age range = 8–19 years). The 37 items are divided into four scales: Physiological Anxiety (10 items), Worry/Over-sensitivity (11 items), Social Concerns/Concentration (7 items) and the Lie Scale (9 items). A Total Anxiety score can be computed using the 28 anxiety items. The remaining items comprise the Lie Scale,

which is a validity scale (to detect social desirability) and not a clinical measure and it has not been considered in this study. The raw score on each scale is the number of items to which the child responds ‘‘Yes’’ for that scale. Higher scores indicate greater levels of the anxiety construct measured by each scale. RCMAS is one of the most used tools to assess anxiety symptoms in childhood and has good psychometric properties: high internal consistency, good test-retest reliability (alpha = .87) and predictive validity (Callahan, 1993).

e) **Cognitive Triad Inventory for Children** (CTI-C) (Kaslow et al. 1992). This is a 36 item, self-report questionnaire for the assessment of children and adolescents’ depression, according to Beck’s cognitive triad model. Children may answer on a 3 point scale (yes/maybe/no). Item are divided into three subscales (respectively about Self, World and Future, in line with adults' cognitive triad), each one consists of 12 item and a Total scale, obtained by adding up the previous three, is also calculated. The questionnaire has a strong concurrent and internal validity (Cronbach's alpha = .92).

f) **Children’s Somatization Inventory-Child Report Form (CSI)** (Walker et al. 1991); it is a questionnaire for assessing the presence of somatic symptoms in children. It is widely used in preadolescence and adolescence and can be completed by children from 7 years of age. CSI assessed the perceived severity about 35 somatic symptoms which are measured through a 5-point scale (0 = never to 4 = always), referring to the last 2 weeks (this time period was chosen to reduce the impact of small diseases of short duration). The total score is calculated by adding the scores of each item/symptom and ranges from 0 to 140 (high levels of somatization). Both self-rated and observed-rated versions are available. In this study was used the self-rated one. The tool has good psychometric properties (alpha = .90), positively correlated with measures of anxiety and depression (Garber et al. 1991). It may be used for screening or follow-up evaluations, both in educational and clinical context.

g) **Ryff's Psychological Well-Being Scales** (PWB) (Ryff, 1989) – brief form: an 18-item inventory that covers 6 areas of psychological well-being according to the eudaimonic perspective, postulated in Ryff's model (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, self-acceptance). Children answer on a 6 point Likert scale (1=This is not my case; 6= I Totally agree). Each scale score may range from 0 to 18. A total PWB score has been also calculated by adding together the 6 dimensions' scores. In this study an adapted version of this questionnaire has been used, where items were selected according to their relevance for a younger population and rephrased in order to become easier to understand. PWB has been previously validated in an Italian population (Ruini, et al. 2003). The psychometric properties are good, with high inter-item correlations and a good test-retest reliability. PWB was used in a variety of studies with young samples, both in clinical and school settings (Ruini et al. 2007; 2009; Strauser et al. 2008, Tomba et al. 2010, Visani et al. 2011)

Follow-up evaluations: they consisted of an update of clinical status. During each follow-up session children completed all the above mentioned assessment instruments. Unless a relapse occurred, no patient received additional psychotherapeutic intervention. Relapse is defined as the occurrence of an episode of depressive of anxiety disorder (according to ICD-10 criteria). In case of relapse, booster psychotherapeutic sessions have been provided by the same clinical psychologist who performed the first line of treatment.

Data Analysis

Pre-post statistical analysis

Differences between groups at baseline were analysed using the analysis of variance (ANOVA) for quantitative variables (RCMAS, CTI-C, CSI, PWB scale scores), with Post-Hoc multiple

comparisons to evaluate whether one or more means vary from each other.

Differences between interventions were compared using analysis of variance for repeated measures. The ‘‘group allocation’’ (CWBT, CBT, WL) represented the ‘‘between subject factor’’, while ‘‘pre-post time” represented the ‘‘within subject factor’’. Self-rated instruments' scores were the dependent variables. The efficacy of the interventions was tested by examining the interaction effect between ‘‘group allocation’’ and ‘‘time’’. Contrast analysis (Simple method) were conducted, with CWBT as reference category. Possible gender and age effects were also considered in the model.

GLM for repeated measures with contrast analysis was also used to evaluate any differences according to clinical judgements (CGAS) at post-intervention.

Follow-up statistical analysis

Analysis of variance for repeated measure was used for comparing the mean scores of each outcome measure at different assessment times. Group allocation (CWBT vs CBT) represented the between-subjects factor, while baseline, post-treatment, 3-6 and 12 month follow-up evaluations were set as within-subject factors. Considering the small sample size and the limited possibility to apply complex statistical models, only Total Scores of each questionnaire have been considered as dependent variables (RCMAS Total Scale; CTI-C_Total Scale, CSI, PWB_Total Scale). Changes over time were assessed by means of contrast analysis comparing each level with the overall mean of the previous levels (Difference Method).

Finally, only for descriptive purposes, diagnoses were clustered into 2 main groups (Anxiety and Mood disorders) and time*group effect analysis with PWB_Total Score as dependent variable were carried out. Descriptive evaluations about treatment group allocation*diagnosis were also made.

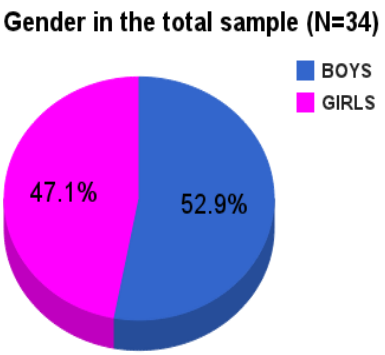
Partial Eta Squared coefficients (η2p) were calculated for measuring effect size (ES) at post-

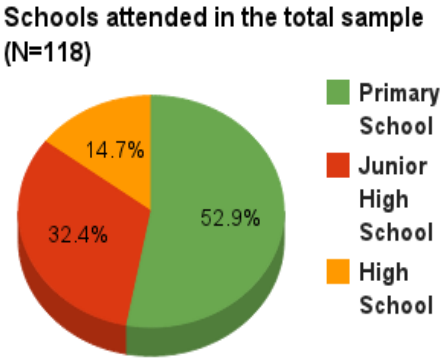
intervention and over time. Results are expressed as means (SD). For all tests performed, the significance level was set at 0.05, 2 tailed. The intent to treat analysis for missing data was performed using the last observation carried forward (LOCF) procedure. Statistical analysis has been conducted using IBM SPSS Statistics 20.

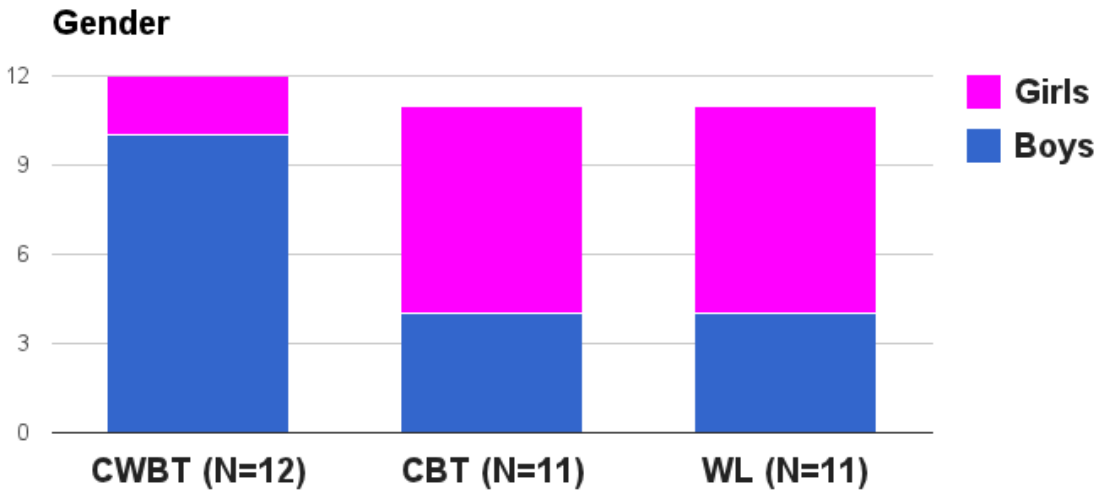
4.3 PRE-POST INTERVENTION RESULTS

Descriptive statistics are reported in the following Tables (Tables 4.1-4.3).

Table 4.1. Descriptive Statistics in the total sample and according to group allocation.


Gender in the total sample (N=34)
BOYS
GIRLS
47.1%
52.9%


Schools attended in the total sample (N=118)
Primary School
Junior High School
High School
14.7%
32.4%
52.9%


Gender
12
9
6
3
0
Girls
Boys
CWBT (N=12)
CBT (N=11)
WL (N=11)

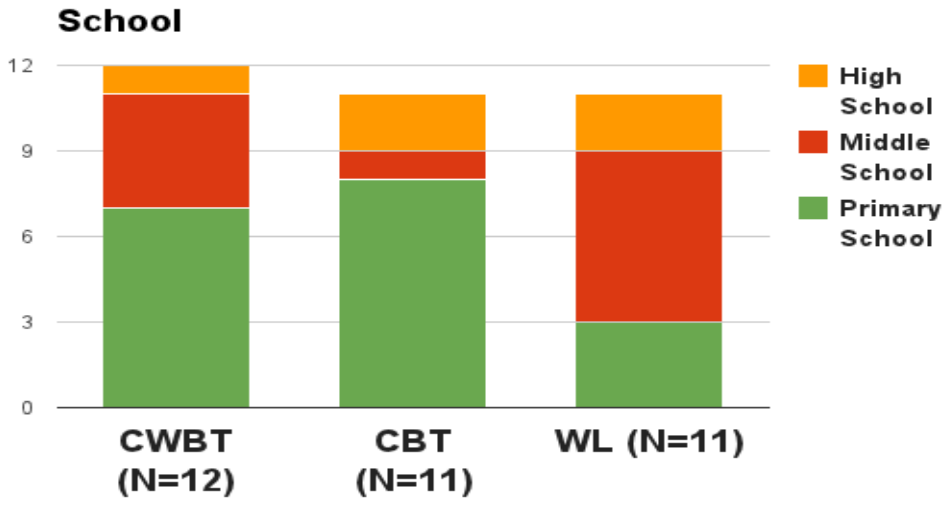

School
12
9
6
3
0
High School
Middle School
Primary School
CWBT (N=12)
CBT (N=11)
WL (N=11)

Table 4.2. Mean age in the total sample and according to group allocation.

	Mean age (SD)	Min.	Max.
Child-WBT	10,67 (2,46)	8	16
CBT	10 (2,68)	8	16
WL	12 (2,45)	8	16
Total Sample	10,88 (2,59)	8	16

Table 4.3. Clinical characteristics of patients assigned to Child-WBT, CBT or WL.

Diagnosis (ICD-10 criteria)	Child-WBT	CBT	WL	Total
Generalized Anxiety Disorder	**3**	**/**	**2**	**5**
Separation Anxiety	**1**	**2**	**/**	**3**
Agoraphobia	**/**	**1**	**/**	**1**
Social Anxiety	**1**	**2**	**/**	**3**
Phobic Anxiety disorders	**2**	**3**	**2**	**7**
OCD-predominantly obsessional thoughts and ruminations	**/**	**/**	**1**	**1**
OCD- predominantly compulsive acts	**/**	**/**	**1**	**1**
Adjustment Disorder with prolonged depression	**2**	**/**	**1**	**3**
Dysthimia	**/**	**/**	**1**	**1**
Childhood Emotional Disorders Unspecified	**/**	**1**	**2**	**3**
Mixed Anxiety and Depressive Disorders	**3**	**2**	**1**	**6**
Total	**12**	**11**	**11**	**34**

Data are given as number of patients

Comorbidity with learning disabilities was found in the 35% of the total (33% within CWBT, 45% within CBT and 27% within WL). Moreover, the 32% of the total sample (50% within CWBT, 54% within CBT and 36% within WL) presented a Z-code, indicating the presence of **factors that influence health status, mainly related to primary support group**, including

family circumstances.

BASELINE differences

At baseline Anova showed significant differences between groups in RCMAS_Physiological Anxiety ($F=3.99$; $df=2,31$; $p<0.05$) and RCMAS_Worry ($F=3.38$; $df=2,31$; $p<0.05$). Post Hoc confirmed that CBT group presented significant higher levels of RCMAS_Physiological Anxiety compared to WL group ($p<0.05$) and higher scores in RCMAS_Worry compared to CWBT group (trend toward statistical significance, $p=0.054$). Furthermore, significant differences were found in CTI_Future subscale ($F=4.24$; $df=2,31$; $p<0.05$) and in CTI_Total Score ($F=3.79$; $df=2,31$; $p<0.05$) where CBT group presented significantly higher scores in comparison to CWBT ($p<0.05$). No differences between groups in somatization (CSI) emerged.

Considering well-being scores, differences between groups resulted in PWB_Autonomy ($F=6,6$, $df=2,31$; $p<0.01$) and PWB_Personal Growth ($F=3.50$; $df=2,31$; $p<0.05$). In fact, CBT group showed significantly lower levels of Autonomy compared to WL group ($p<0.01$) and of Personal Growth compared to CWBT group ($p<0.05$).

No significant differences were found at baseline according to C-GAS_clinical judgement ($F=0.21$; $df=2,31$; $p=0.81$) (Table 4.4).

Table 4.4. Baseline differences between groups.

Scales	CWBT (N=12) Mean (SD)	CBT (N=11) Mean (SD)	WL (N=11) Mean (SD)	F (df=2,31)
Self-rated Instruments:				
RCMAS_Physiological Anxiety	4,33 (1,23)	**5,36 (2,25)**	**3,27 (1,62)**	**3,991***
RCMAS Worry	**5,17 (1,85)**	**7,27 (2,24)**	5,64 (1,96)	**3,385(*)**
RCMAS Concentration	2,42 (1,62)	3,54 (2,16)	3,09 (2,43)	0,858
RCMAS Total Anxiety	11,92 (4,08)	16,18 (5,31)	12,00 (4,52)	3,081
CTI-C Self	4,67 (2,57)	8,54 (5,20)	7,36 (5,43)	2,226
CTI-C World	5,83 (2,17)	10,09 (5,65)	7,73(5,06)	2,577
CTI-C Future	**4,33 (2,19)**	**9,45 (5,95)**	6,36 (3,53)	**4,424***
CTI-C Total	**14,83 (5,49)**	**28,09 (15,36)**	21,45 (11,99)	**3,789***
CSI	21,17 (11,57)	23,73 (10,37)	18,70 (12,76)	0,495
PWB Autonomy	13,17 (4,24)	**9,81 (2,86)**	**15,00 (2,79)**	**6,600****
PWB Environmental Mastery	14,58 (1,93)	13,73 (3,87)	12,54 (2,94)	1,336
PWB Personal Growth	**13,00 (2,00)**	**8,91 (4,25)**	12,00 (4,79)	**3,505***
PWB Positive Relations	14,00 (3,46)	11,09 (5,09)	11,09 (3,99)	1,852
PWB Purpose in Life	14,58 (4,05)	13,72 (4,61)	13,72 (2,49)	0,194
PWB Self-Acceptance	13,58 (2,74)	12,09 (4,66)	11,64 (4,72)	0,715
PWB Total	82,92 (10,47)	69,36 (19,47)	76,00 (16,01)	2,164
Observed-rated evaluation:				
CGAS	53,58 (4,10)	52,45 (4,55)	53,91 (7,39)	0,213

Bold values refer to significant differences in multiple comparisons *p<0,05 **p<0,01

PRE-POST Comparisons between groups:

6 patients (66%) in the WL group dropped-out after the first assessment, so an intent to treat analysis was performed. None patients in the other two groups dropped-out.

Results are reported in Table 4.5.

Anxiety

Anxiety (Total Scale) resulted in significant Multivariate effects (time: $F=15.24$; $df=1,31$; $p<0.001$; time*group: $F=5.79$; $df=2,31$; $p<0.01$). Contrast analysis showed that CWBT group displayed a significantly higher improvement compared to other two groups (CWBT vs CBT $p\leq0.001$: CWBT vs WL $p<0.05$).

Considering RCMAS subscales, Anova for Repeated Measures showed a significant Multivariate effect both considering group allocation ($F=2.18$; $df=8,31$; $p<0.05$), time ($F=5.06$; $df=4,31$; $p<0.01$) and the interaction time*group allocation ($F=2.98$; $df=8,31$; $p<0.01$).

Univariate analysis within subjects (time effect) showed a significant decrease in all subscales. When considering group interaction, significant differences resulted for Physiological Anxiety ($F=9.03$; $df=2,31$; $p\leq0.001$) and Worry Subscales ($F=3.75$; $df=2,31$; $p<0.05$).

Contrast analysis between groups showed a significant difference between CWBT and CBT in Pysiological Anxiety ($p<0.01$), Concentration($p<0.05$) and Worry ($p<0.01$). CWBT differed from WL in Worry ($p<0.01$).

Depression

Considering CTI-C_Total Score, Anova for Repeated Measures showed a trend to significant Multivariate time effect ($F=3.96$; $df=1,31$; $p=0.055$), whereas the interaction (time*group allocation) resulted not significant ($F=0.74$; $df=2,31$; $p=0.48$).

Contrast analysis showed that CWBT group resulted in a significantly higher improvement compared to CBT ($p<0.01$) and an almost significant tendency compared to WL ($p=0.06$).

Anova for repeated measures showed that there were no significant differences for CTI-C subscales scores, even if a trend to significativity within subjects (time effect) was observed in CTI_Self ($F=3.62$; $df=1,31$; $p=0.06$) and CTI_World ($F=3.37$; $df=1,31$; $p=0.07$). Contrast analysis showed that CWBT differed significantly from CBT in all the subscales ($p<0.05$) and from WL in CTI_Self ($p<0.05$).

Somatizations

Anova for Repeated Measures showed a significant Multivariate effect both considering time effect ($F=32,4$; $df=1,30$; $p<0,001$) and the interaction time*group ($F=9,05$; $df=2,30$; $p\leq0,001$).
When considering contrast analysis, results did not reach statistical significance (CWBT vs CBT: $p=0.19$; CWBT vs WL: $p=0.32$).

Psychological Well-Being

Considering PWB_Total Score, Anova for Repeated Measures showed a significant Multivariate time effect ($F=5.34$; $df=1,31$; $p<0.05$), whereas the interaction (time*group allocation) resulted not significant ($F=1.39$; $df=2,31$; $p=0.27$). Contrast analysis showed that CWBT group resulted in a significantly higher improvement compared to CBT ($p\leq0,05$).
With reference to PWB subscales, Anova for Repeated Measures showed a significant Multivariate effect only when considering group allocation effect ($F=2.31$, $df=12$, $p<0.05$).
Univariate analysis displayed a significant time effect within subject in Purpose in Life ($F=4.121$; $df=1,31$; $p\leq0.05$), together with a trend toward significance in Personal Growth ($F=3.351$; $df=1,31$; $p=0.08$).
Contrast comparisons between groups resulted in a significant difference between CWBT and CBT in Autonomy ($p<0.01$) and Personal Growth ($p<0.05$) and between both CBT and WL groups in Positive Relations with Others ($p\leq0.05$).

Effect sizes (η2p) considering pre-post changes resulted generally from small to medium. The ES was greater for physiological anxiety and somatization. (Table 4.5).

Gender and age effects

We considered also gender and age possible effects. Globally, pre-post outcomes did not change when age (as covariate) and gender (as between subject factor) were included in the general model. However, when considering depression (CTI-C scores), multivariate analysis showed a trend to a significant age difference between groups ($F=2.47$; $df=3,27$; $p=0.08$) (Graph 4.1). Considering well-being, age and gender showed a significant effect per se (age: $F=2.77$; $df=6,27$; $p<0.05$; gender: $F=2.95$; $df=6,27$; $p\leq0.05$), which was not maintained in the interaction with time and group. Hereupon, Pearson correlation analysis between CTI-C_Total, PWB_Total and age and in the total sample has been conducted. Results showed no significant correlation between age and depression ($r=0.25$; $p=0.15$), but there was a significant inverse relation with PWB_Total score ($r=-0.44$; $p<0.01$). Therefore, older patients displayed less psychological well-being. Data are represented in Graphs 4.1-4.3.

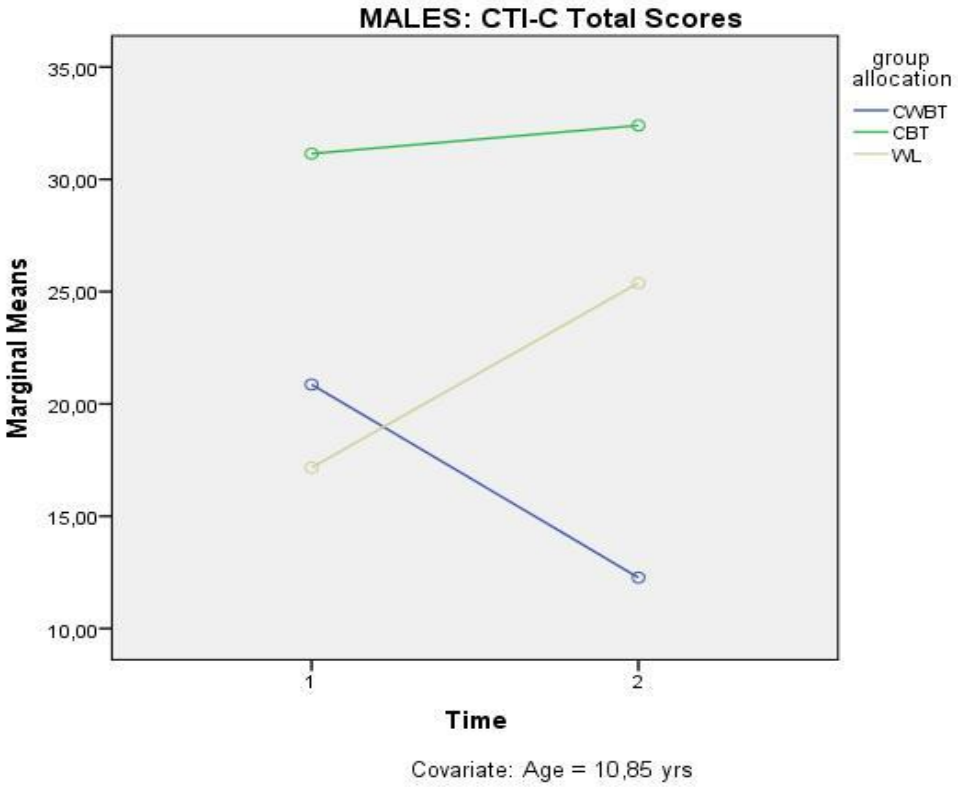
Table. 4.5. Changes in self-rating scales.

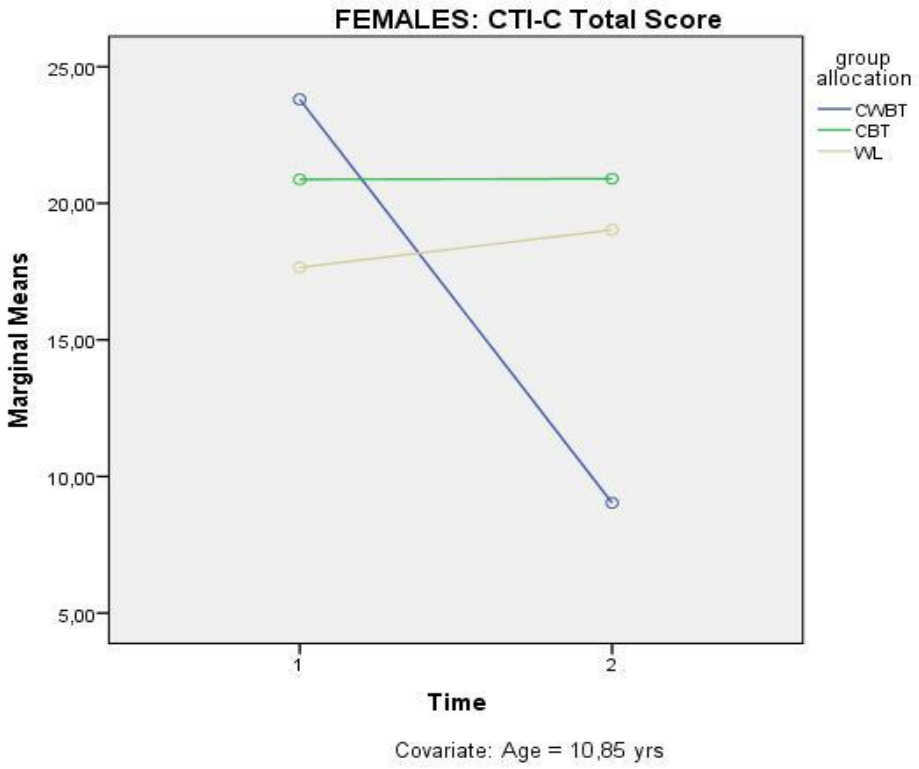
	Pre-Treatment			Post-Treatment			F [a] (df=2, 31)	ES (η2p)
	CWBT (N=12)	CBT (N=11)	WL (N=11)	CWBT (N=12)	CBT (N=11)	WL (N=11)		
	Mean (SD)			Mean (SD)				
Scales								
RCMAS_Physiological Anxiety	4,33 (1,23)	5,36 (2,25)	3,27 (1,62)	1,75 (1,12)	**4,00 (1,67)**	3,64 (1,75)	**9,031****	**0,37**
RCMAS Worry	5,17 (1,85)	7,27 (2,24)	5,64 (1,96)	2,58 (2,15)	**5,09 (2,38)**	**6,00 (2,37)**	**3,753***	**0,19**
RCMAS Concentration	2,42 (1,62)	3,54 (2,16)	3,09 (2,43)	1,00 (0,85)	**2,91 (1,70)**	2,91 (2,43)	1,682	0,10
RCMAS Total Anxiety	11,92 (4,08)	16,18 (5,31)	12,00 (4,52)	5,33 (3,39)	12,00 (3,25)	12,54 (5,03)	**5,788****	**0,28**
CTI-C Self	4,67 (2,57)	8,54 (5,20)	7,36 (5,43)	3,08 (1,44)	**7,27 (4,05)**	**7,36 (5,43)**	0,935	0,06
CTI-C World	5,83 (2,17)	10,09 (5,65)	7,73 (5,06)	4,33 (1,77)	**8,00 (3,63)**	7,91 (5,43)	1,180	0,07
CTI-C Future	4,33 (2,19)	9,45 (5,95)	6,36 (3,53)	4,08 (2,87)	**8,73 (6,13)**	5,81 (3,12)	0,064	0,01
CTI-C Total	14,83 (5,49)	28,09 (15,36)	21,45 (11,99)	11,50 (4,52)	**24,00 (11,14)**	21,09 (12,72)	0,744	0,05
CSI	21,17 (11,57)	23,73 (10,37)	18,70 (12,76)	7,50 (4,21)	15,82 (9,46)	18,40 (12,33)	**9,055****	**0,38**
PWB Autonomy	13,17 (4,24)	9,81 (2,86)	15,00 (2,79)	14,25 (2,70)	**11,73 (1,62)**	14,54 (3,14)	1,145	0,09
PWB Environmental Mastery	14,58 (1,93)	13,73 (3,87)	12,54 (2,94)	14,67 (1,72)	13,09 (3,91)	13,09 (3,05)	0,432	0,03
PWB Personal Growth	13,00 (2,00)	8,91 (4,25)	12,00 (4,79)	13,50 (2,47)	**11,64 (4,18)**	12,09 (4,97)	1,802	0,10
PWB Positive Relations	14,00 (3,46)	11,09 (5,09)	11,09 (3,99)	15,17 (3,13)	**12,27 (3,23)**	**11,54 (4,39)**	0,129	0,01
PWB Purpose in Life	14,58 (4,05)	13,72 (4,61)	13,72 (2,49)	15,92 (3,23)	15,09 (4,66)	14,09 (3,01)	0,421	0,03
PWB Self-Acceptance	13,58 (2,74)	12,09 (4,66)	11,64 (4,72)	14,08 (2,47)	13,82 (3,74)	11,00 (4,67)	1,988	0,11
PWB Total	82,92 (10,47)	69,36 (19,47)	76,00 (16,01)	87,58 (10,13)	**77,64 (13,67)**	76,36 (14,77)	1,380	0,08

[a] within subject contrast – timeXgroup *p< 0.05 **p< 0.01.

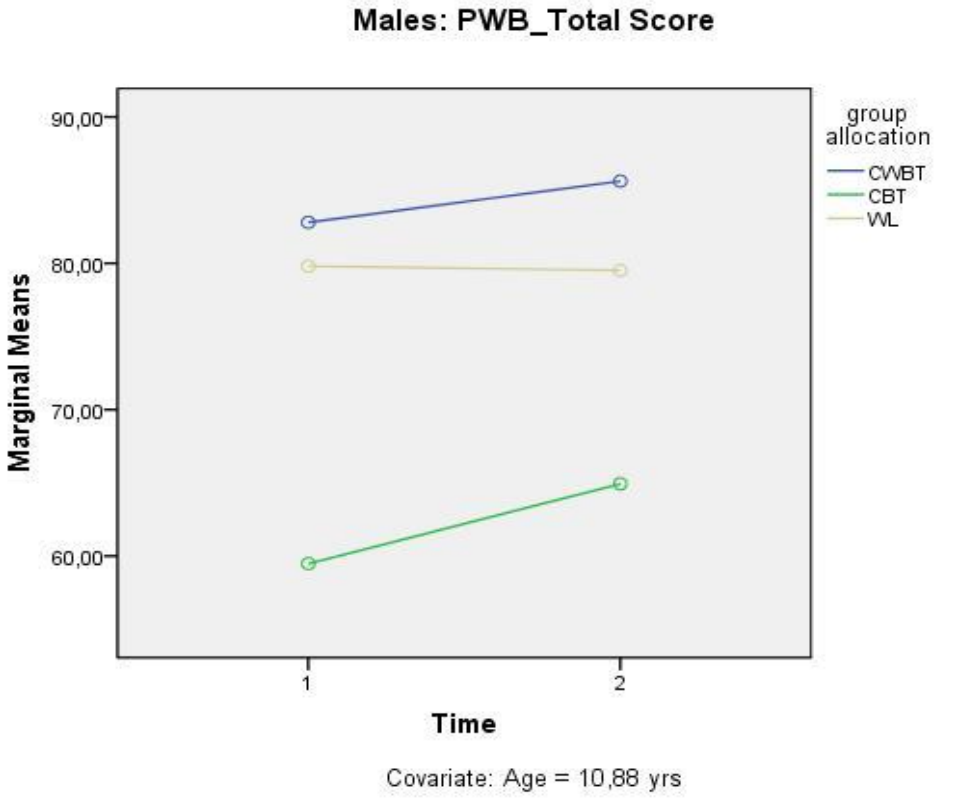
Bold values refer to significant differences in contrast analysis with CWBT as reference category.

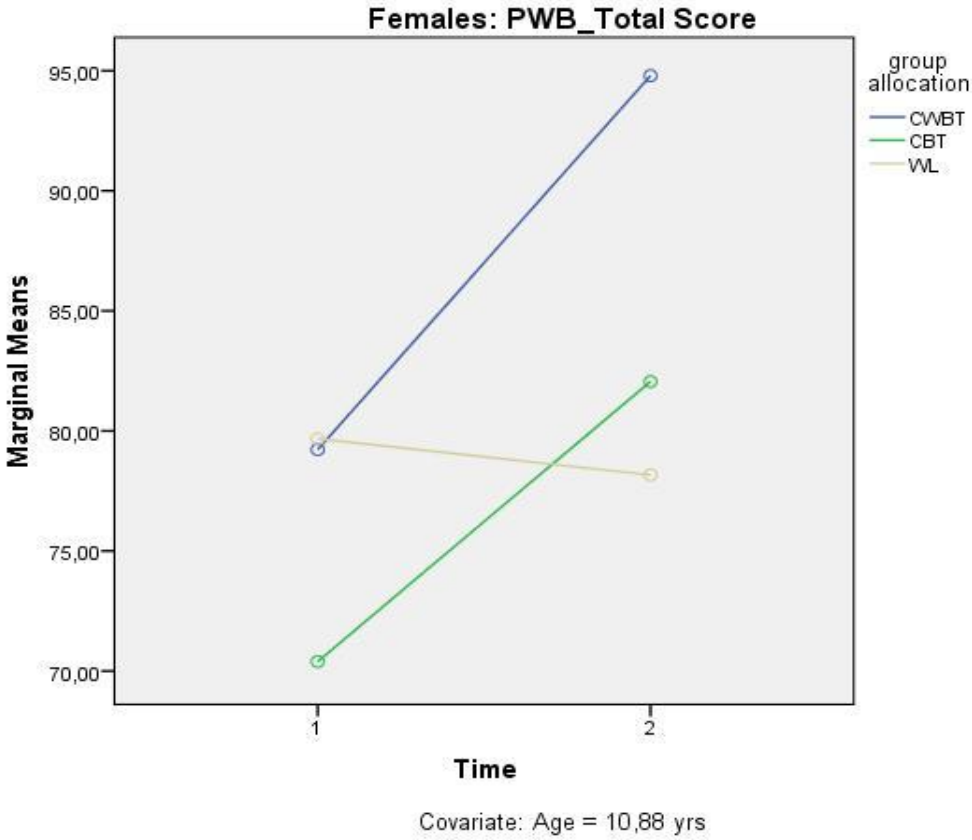
Graph 4.1. Graphic representation of gender and age interaction on depression.



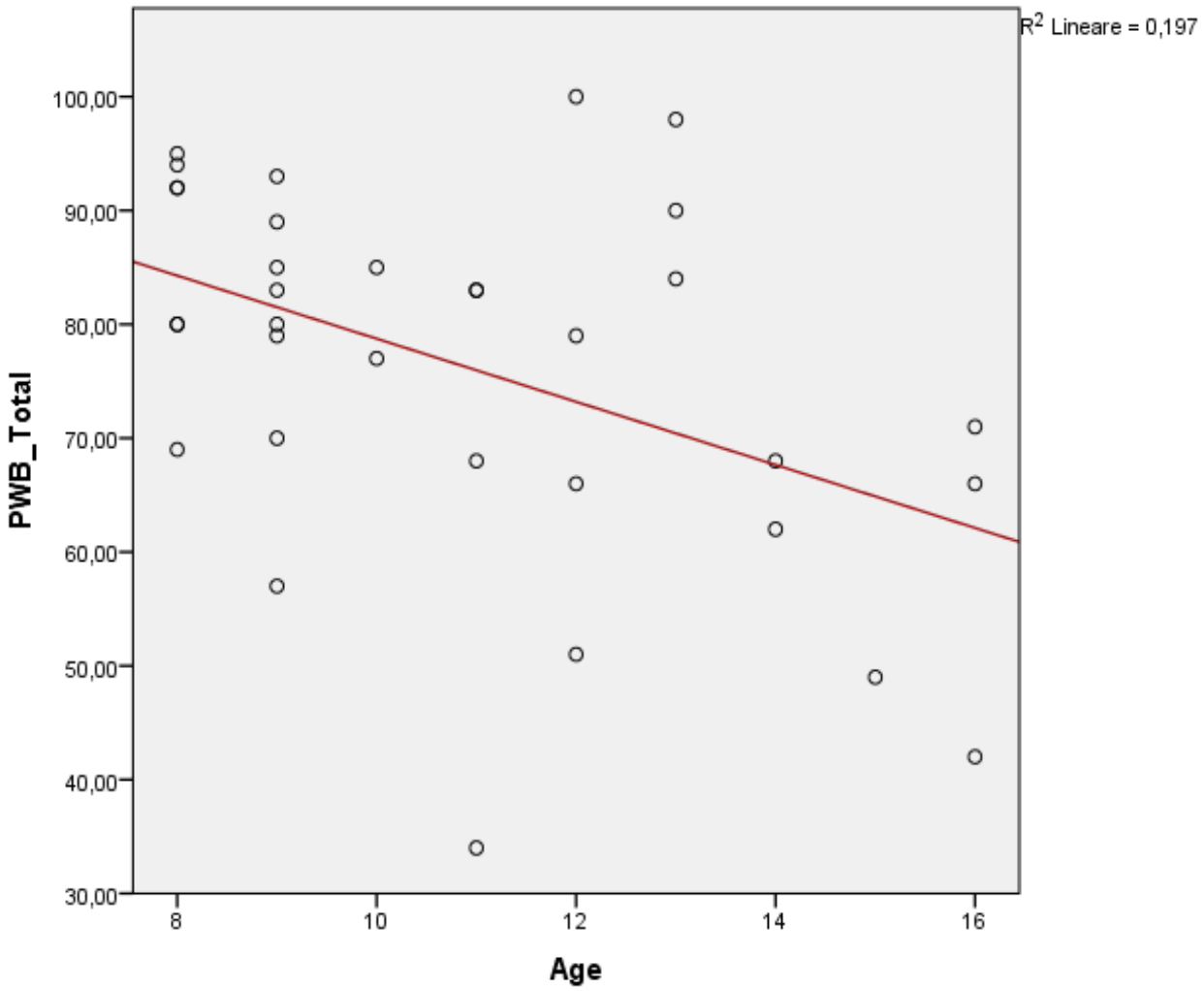


Graph 4.2. Graphic representation of gender and age interaction on well-being.





Graph 4.3. Distribution of PWB_Total scores in relation to age in the total sample (N=34).



The red linear fit line represents the trend of data.

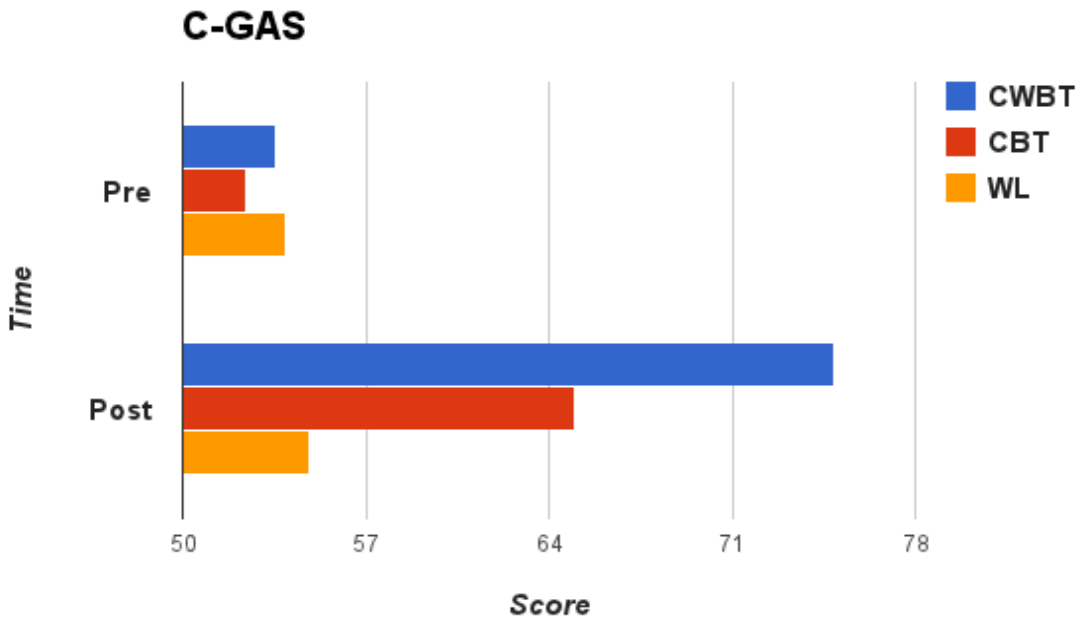
POST_TREATMENT OBSERVER-RATED EVALUATION

Clinical judgement:

ICD-10 criteria were no more satisfied in 10 out of 12 patients (83%) in the CWBT group and in 6 out of 11 (54%) in CBT group. Conversely, ICD-10 criteria were still met by 4 out of 5 patients in the WL condition (80%).

Considering C-GAS clinical evaluation, Multivariate test reported a significant effect both considering time (F=101,04; df=1; p<0,001) and the interaction "time*group allocation" (F=26,58; df=2; p<0,001). Contrast analysis showed that children in the CWBT group were rated as significantly higher improved compared to CBT (p<0,05) and WL (p<0,001) (Graph 4.4).

Graph 4.4. Graphic representation of clinical judgement changes over time.



4.4 FOLLOW-UP RESULTS

An important element that needs to be emphasized pertains the fact that during the longitudinal research (from 3-months follow-up on) the city in which the study took place was hit by a strong earthquake, so the data might be biased by this uncontrollable variable. The enrolment of patients has been consecutive, therefore the earthquake effect cannot be confined to a specific moment for the whole sample.

Anxiety

Multivariate test showed a significant time effect (F=8.41; df=4,21; p<0,001), however the interaction with group resulted not significant (F=0.728; df=4,21; p=0.58).

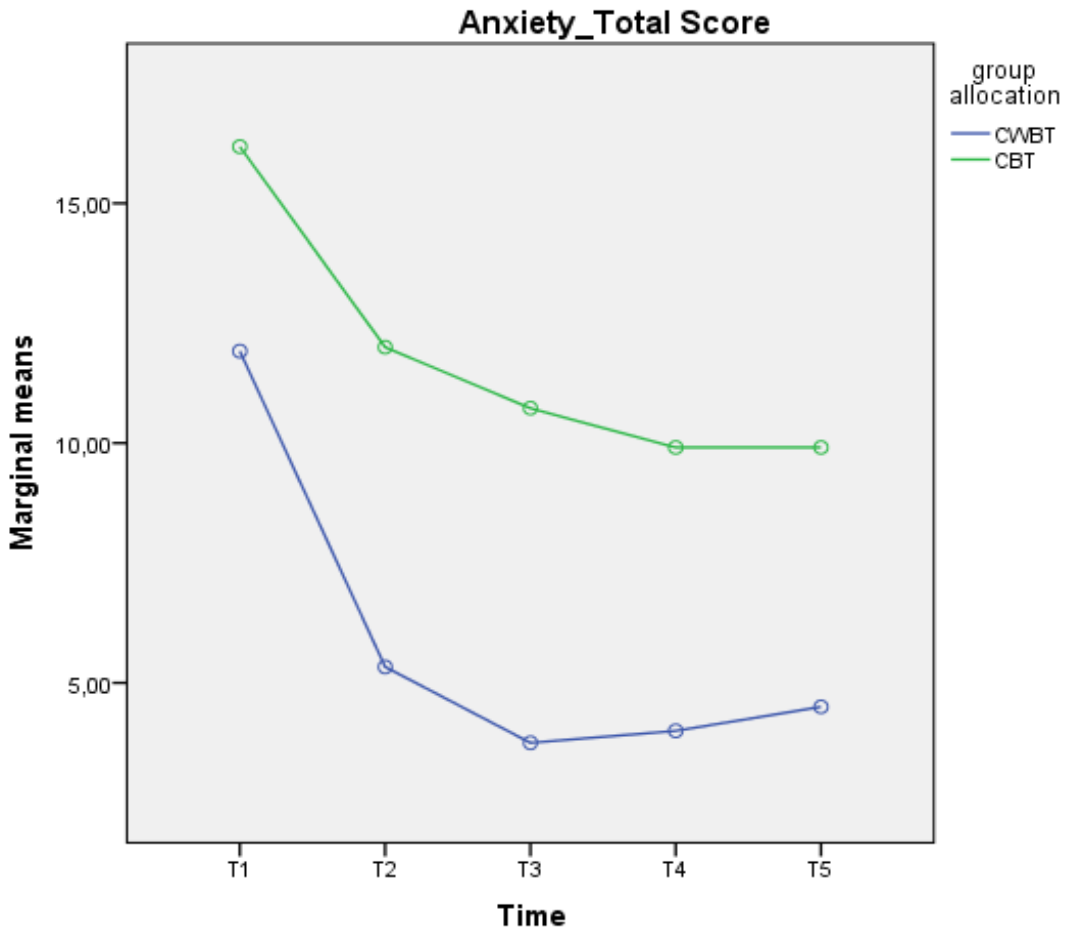
Contrast analysis confirmed that Anxiety Total Score continued to significantly improve over time, but did not emerge any differences between treatments (Table 4.6 and Graph 4.5).

Table 4.6. Changes in Anxiety scores over time.

RCMAS_Total Anxiety	CWBT (N=12)	CBT (N=11)	F [a] (df=1, 21)	ES (η2p)
	Mean (SD)	Mean (SD)		
Pre-Treatment (T1)	11,92 (4,08)	16,18 (5,31)	/	/
Post-Treatment (T2)	5,33 (3,39)	12,00 (3,25)	1,102	0,05
3 months after treatment (T3)	3,75 (2,63)	10,73 (4,98)	0,658	0,03
6 months after treatment (T4)	4,00 (4,35)	9,91 (5,47)	0,002	0,01
12 months after treatment (T5)	4,50 (4,46)	9,91 (4,37)	0,175	0,01

[a] within subject contrast – timeXgroup (Difference Method) *p< 0.05 **p< 0.01.

Graph 4.5. Graphical representation of changes in Anxiety scores over time.



Depression

Multivariate test resulted in a not significant time (F=1.550; df=4,21; p=0.23) or time*group effect (F=0.339; df=4,21; p=0.85).

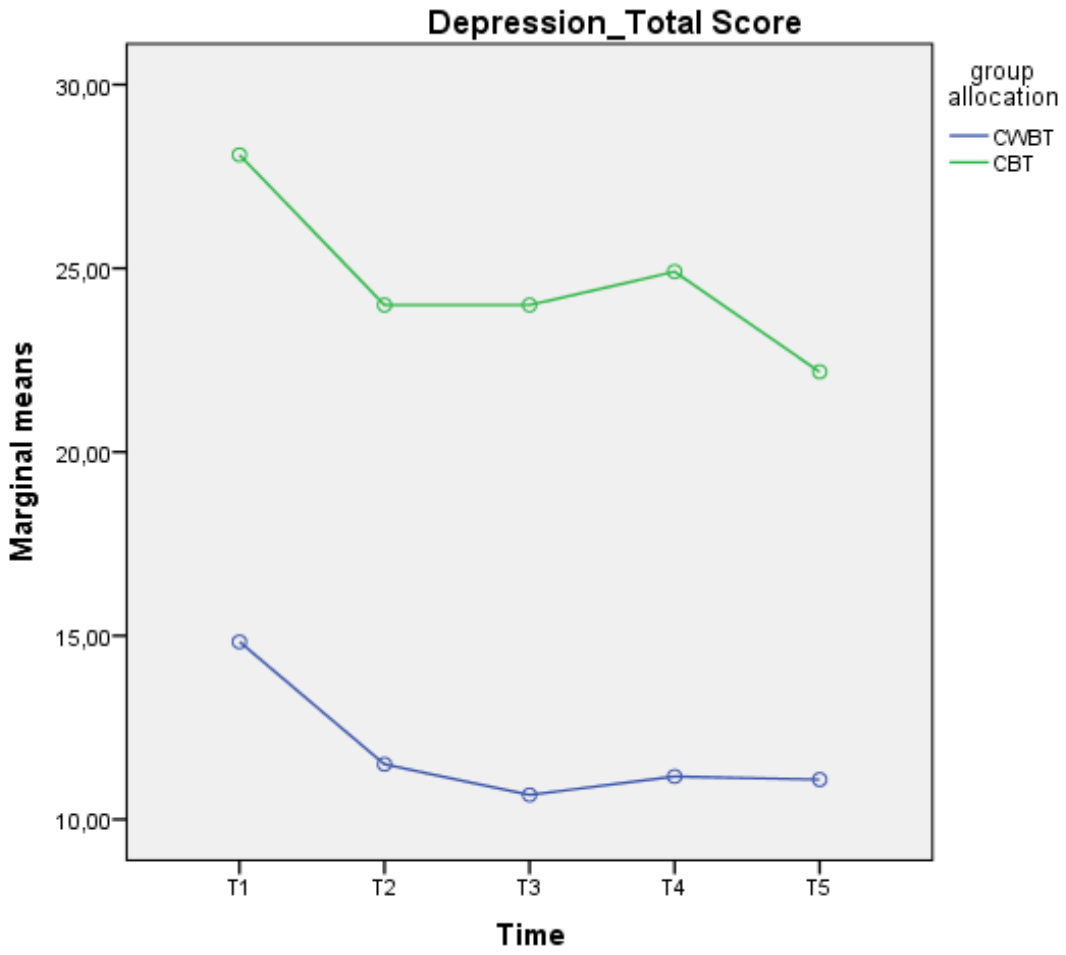
Contrast analysis within subjects confirmed a trend to statistical significance at post treatment (as reported in pre-post results) (F=3.294; df=1,21; p=0.06), however did not emerge any differences between groups over time (Table 4.7 and Graph 4.6).

Table 4.7. Changes in Depression scores over time.

CTI-C_Total Score	CWBT (N=12) Mean (SD)	CBT (N=11) Mean (SD)	F [a] (df=1, 21)	ES (η2p)
Pre-Treatment (T1)	14,83 (5,49)	28,09 (15,36)	/	/
Post-Treatment (T2)	11,50 (4,52)	24,00 (11,14)	0,041	0,00
3 months after treatment (T3)	10,67 (5,74)	24,00 (13,15)	0,015	0,00
6 months after treatment (T4)	11,17 (6,68)	24,91 (13,04)	0,096	0,01
12 months after treatment (T5)	11,08 (7,45)	22,18 (11,22)	0,667	0,03

[a] within subject contrast – timeXgroup (Difference Method) *p< 0.05 **p< 0.01.

Graph 4.6. Graphical representation of changes in Depression scores over time.



Somatization

Multivariate test showed a significant time effect (F=10.48; df=4,21; p≤0.001), but the interaction with group allocation resulted not significant (F=2.139; df=4,21; p=0.12).

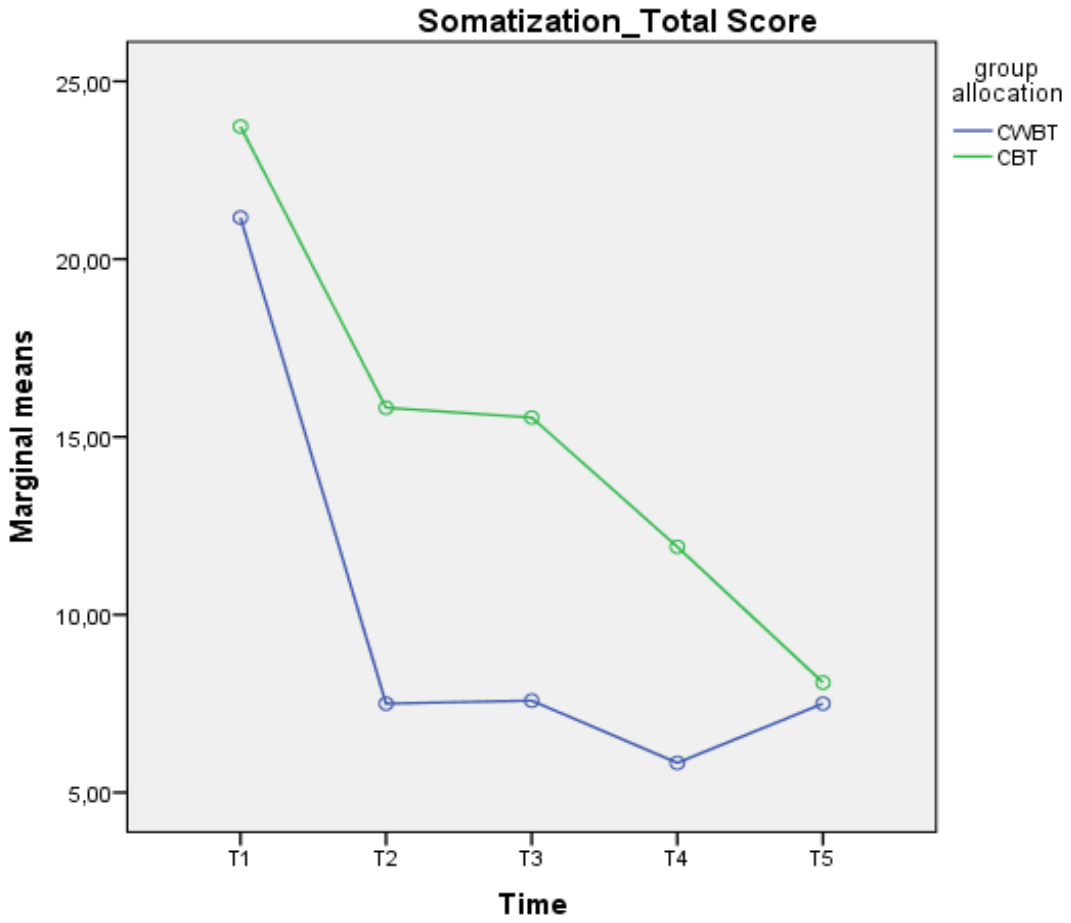
Contrast analysis confirmed that Somatization resulted significantly decreased over time, but did not emerge any difference between treatments although, somatization's trend at 1 year follow-up resulted slightly raised up in CWBT group, even if scores continued to remain lower than in CBT one (Table 4.8 and Graph 4.7).

Table 4.8. Changes in Somatization scores over time.

CSI_Total Score	CWBT (N=12) Mean (SD)	CBT (N=11) Mean (SD)	F [a] (df=1, 21)	ES (η2p)
Pre-Treatment (T1)	21,17 (11,57)	23,73 (10,37)	/	/
Post-Treatment (T2)	7,50 (4,21)	15,82 (9,46)	2,768	0,12
3 months after treatment (T3)	7,58 (7,04)	15,54 (10,87)	0,622	0,03
6 months after treatment (T4)	5,83 (3,76)	11,91 (9,70)	0,003	0,00
12 months after treatment (T5)	7,50 (5,58)	8,10 (5,03)	3,710	0,15

[a] within subject contrast – timeXgroup (Difference Method) *p< 0.05 **p< 0.01.

Graph 4.7. Graphical representation of changes in Somatization scores over time.



Well-Being

Multivariate test resulted in a not significant time ($F=2.059$; $df=4,21$; $p=0.13$) or time*group effect ($F=0.360$; $df=4,21$; $p=0.83$). However, contrast analysis within subjects showed a significant improvement over time (post treatment: $p<0.05$; 6 months follow-up: $p<0.05$).

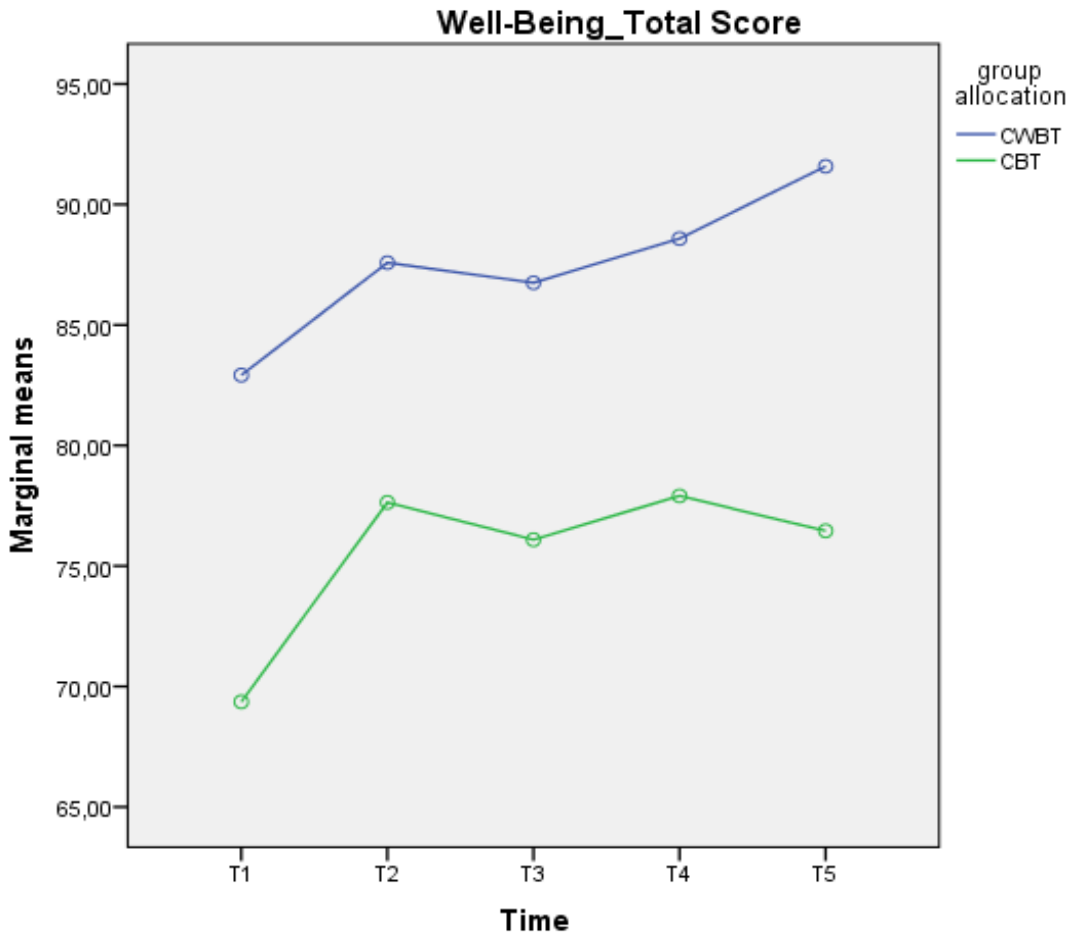
Between subjects contrasts confirmed that there were no statistical differences between groups although, CWBT group seems to follow an increasing trend, while CBT group is decreasing (Table 4.9 and Graph 4.8).

Table 4.9. Changes in Well-Being scores over time.

PWB_Total Score	CWBT (N=12) Mean (SD)	CBT (N=11) Mean (SD)	F [a] (df=1, 21)	ES (η2p)
Pre-Treatment (T1)	82,92 (10,47)	69,36 (19,47)	/	/
Post-Treatment (T2)	87,58 (10,13)	77,66 (13,67)	0,461	0,02
3 months after treatment (T3)	86,75 (13,68)	76,10 (17,22)	0,048	0,00
6 months after treatment (T4)	88,58 (10,76)	77,91 (16,40)	0,062	0,00
12 months after treatment (T5)	91,58 (12,48)	76,45 (16,03)	0,713	0,03

[a] within subject contrast – timeXgroup (Difference Method) *p< 0.05 **p< 0.01.

Graph 4.8. Graphical representation of changes in Well-Being scores over time.



Follow-up Clinical judgement (K-SADS-PL):

1 patient in the CWBT group and 5 in the CBT condition were lost at follow-up evaluations.

During this period 1 relapse occurred in each group (according to ICD-10 criteria) and booster session have been provided.

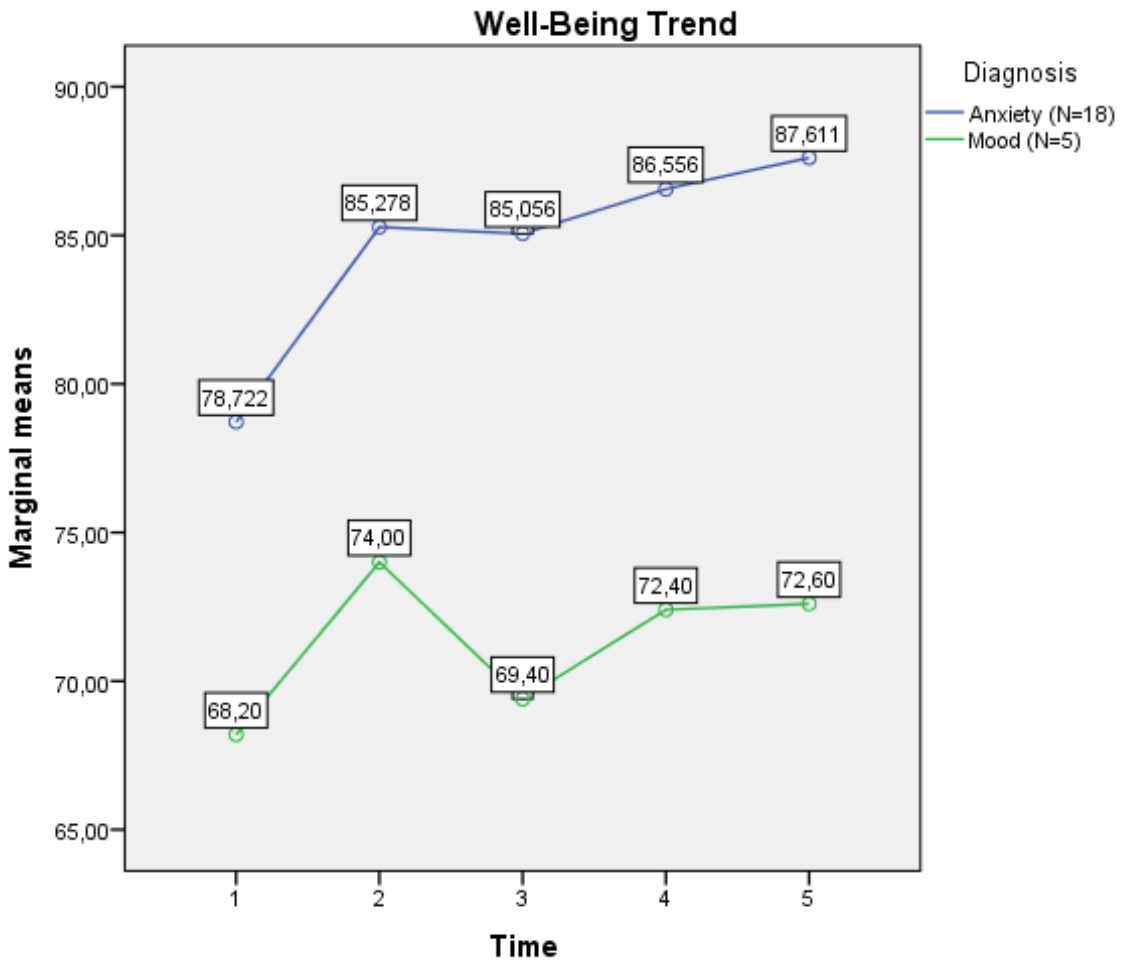
Of the remaining 10 patients treated with CWBT protocol, 7 were judged as recovered and 3 still presented sub-threshold symptoms. In CBT group, 4 were judged as recovered. Sub-threshold symptoms were found in the remaining 4 children.

Descriptive analysis according to diagnostic group allocation

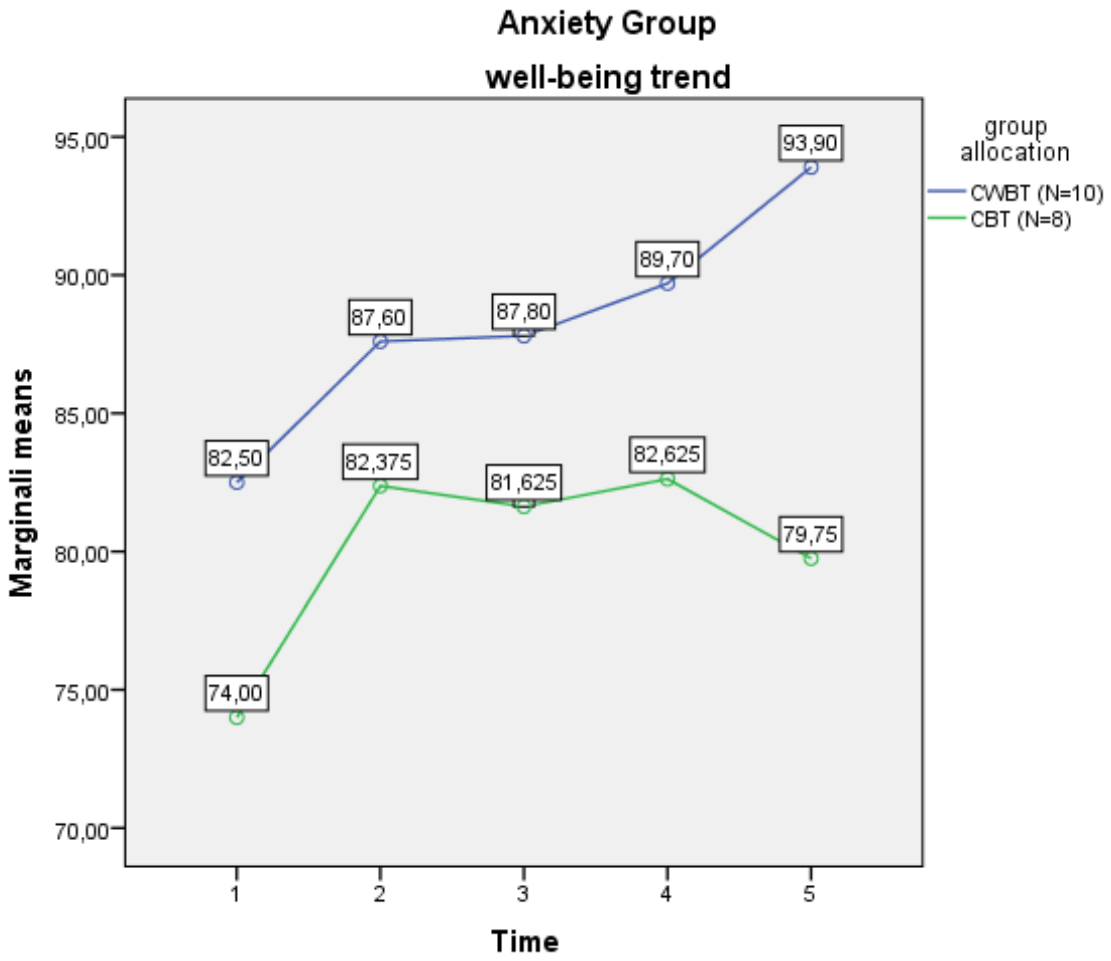
Considering the two diagnostic groups in the total sample (Anxiety and Mood disorders) an increasing trend emerged, particularly for anxiety disorders (Graph 4.9).

Referring to treatment group allocation, they seem to follow different trajectories over time in favour of CWBT for anxiety disorders and of CBT for mood diagnosis (Graph 4.10 e 4.11). However, while in the "Anxiety Group" the sample size was relatively acceptable and comparable (10 anxious patients in CWBT group vs 8 anxious patients in CBT group), in the "Mood Group" the number of depressed patients was very small and difficult to compare (2 in CWBT group vs 3 in CBT group).

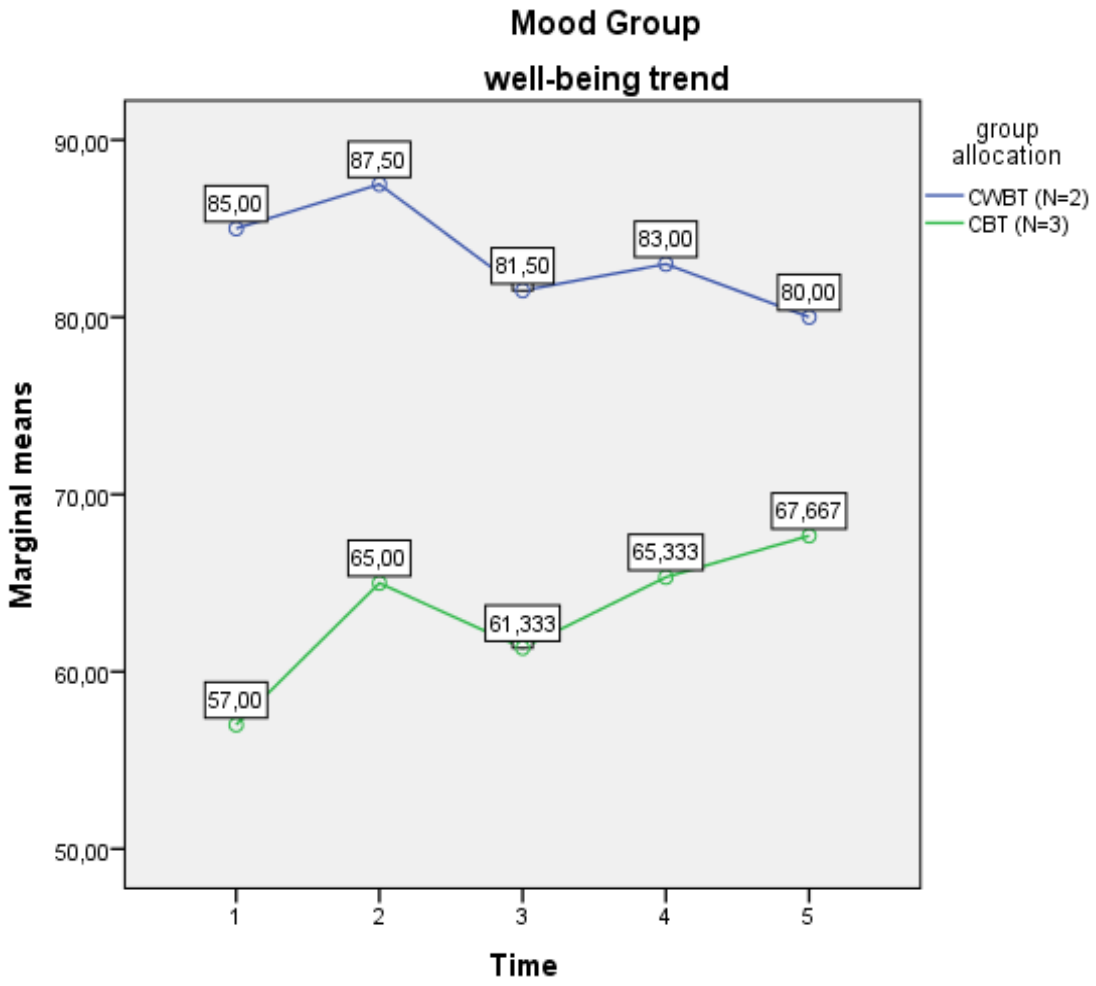
Graph 4.9. Well-Being trend according to diagnostic groups in the total sample (N=23)



Graph 4.10. Well-Being trend in the "Anxiety Group" according to treatment allocation (N=18).



Graph 4.11. Well-Being trend in the "Mood Group" according to treatment allocation (N=5).



4.5 DISCUSSION

This study has considerable limitations due to several reasons: the small sample size, its baseline clinical characteristics (CBT group differed significantly in some anxiety, depressive and well-being dimensions compared to other groups, which accounted for less distress symptoms and higher well-being scores), the high number of drop-outs in WL condition, the heterogeneity of the intake diagnosis and the gender distribution unbalance in CWBT group.

Moreover, the earthquake that hit the city during the follow-up period represented an uncontrollable but relevant confounding variable, with important clinical implications that the mere statistical analysis cannot properly consider.

This confirms how difficult the implementation of clinical trials with children can be. In fact, clinical trials in children are recognised by the scientific community as more challenging than those in adults (Caldwell et al. 2004), for several reasons. The pool of eligible patients entering studies is often small because many conditions are uncommon or peculiar, then the threshold for gaining consent is often higher and more complex, because parents have to make decisions about study participation on behalf of their child and, uncertain about what is best, generally opt for the standard intervention rather than trial participation (Caldwell et al. 2004). Furthermore, parents generally are in urgent need of help when they recognize psychological difficulties in their children, so they look for an immediate solution and if that does not arrive within the first moments of the therapy, it makes them choose to interrupt the therapy.

We tried to overcome these difficulties by involving parents from the initial stages of the intervention, explaining in details the procedures and the subsequent phases of the study. This proved to be an important strategy, considering the low number of drop-out in the treatment conditions, where none patient discontinued therapy.

Despite the above mentioned limitations, which reduce the generalizability of data, this study provides some important outcomes. The main aim was to evaluate the effects of a new version of WBT, which encompasses a sequential combination of CBT/WBT (6 CBT + 6 WBT), adapted

for children and adolescents with mood and anxiety disorders (Child-WBT, CWBT). Results showed that this intervention was effective in decreasing distress, and promoting psychological well-being over time (Table 4.5). When comparing group allocations, significant differences emerged favouring CWBT, with particular reference to anxiety and its physiological and cognitive features. The results lend support to previous data showing complex correlations between well-being and distress indexes, as discussed in Study one and widely recognised by the scientific community nowadays (Fava and Ruini 2012, Ryff 2014). CWBT showed encouraging benefits also on depression (total score), confirming a significant higher improvement in comparison with both CBT and WL groups, as well as a rising trend in well-being total scores and specifically in Autonomy, Personal Growth and Positive Relations with others (Table 4.5). These data are in line with previous investigations using WBT in school settings, where WBT-School protocol resulted particularly effective in decreasing physiological anxiety and enhancing well-being dimensions, such as Personal Growth (Ruini et al. 2006, 2009; Tomba et al. 2010). Findings replicate also preliminary data about the application of Child-WBT in neuropsychiatric setting (Albieri et al. 2009, 2001; Albieri e Visani 2013) and seem to confirm how the sequential combination of CBT and WBT may induce a decrease in distress, favouring positive functioning. However, the present data need to be interpret with caution. In fact, at this stage of investigation it is difficult to ascribe specific effect to the well-being ingredient, considering the baseline differences found in the sample. Even if clinical judgement at baseline (CGAS) showed a comparable impairment between groups (Graph 4.4), children in CBT group reported a worse symptomatology (according to self-rated evaluations) which significantly improved after treatment. From a statistical point of view this bias has been controlled using GLM for repeated measure analysis, that considered possible group effect through the interaction time*group. Nevertheless, from a clinical point of view this can represent another interfering element, as children in the CWBT group, starting from a lower level of distress, while improving, tend to reach a "ceiling effect" beyond which it is no longer

possible to detect further changes. Thus, the possibility to determine the effect of the independent variable (treatment) resulted limited, being hard to distinguish if it could be due to the loss of treatment effect, or it could be better explained by the difficulty to measure it (i.e. instruments' low sensitivity). These aspects, together with the limited power of the sample, could lead to an underestimation of treatment's effect.

However, it should be considered that advantages of CWBT approach emerged also in some dimensions that did not differed from CBT group at baseline (i.e. RCMAS_physiological anxiety, RCMAS_concentration, CSI and PWB_positive relations with others) (Table 4.5). This could suggest that, as found on previous clinical investigations in adult setting (Fava et al. 1998; Fava et al. 2004; Belaise, Fava, and Marks, 2005; Fava & Ruini, 2005; Fava et al. 2005a; Fava, Ruini, and Rafanelli, 2005; Ruini and Fava, 2009; Rafanelli and Ruini, 2012), focusing on eudaimonic well-being also in paediatric settings could help to achieve a more complete remission from psychopathology. Observer-rated evaluation globally confirmed this trend, because CWBT showed a greater recovery rate (83%) than CBT (54%), but any generalization would be premature. As expected, diagnosis in WL group were confirmed in the 80% of completers and this could be read, together with self-rated data, as a confirmation of the superiority of specific psychotherapeutic ingredients in comparison with nonspecific factors pertaining inert conditions and/or the spontaneous remission due to natural time course of the disease (as reported in Chapter 1 literature review).

Another relevant finding of the present study derives from the long term evaluation, which generally represents a specific weakness in the pediatric psychopathology research, considering that more than one third of the investigations did not include follow-up assessment and the remaining trials demonstrated the efficacy of psychotherapy only in the short term (Weisz, 2006). In our study, children allocated to CWBT and CBT treatment underwent several follow-up evaluations up to 12 month after the end of the therapy, in order to consider long term trajectories. Again, the sample characteristics limit the possibility to infer possible

causality between variables, but important clinical elements could be underlined. The secondary hypothesis of our study was that CWBT group would present a lower number of relapse and thus a better long term outcome, with particular attention to eudaimonic well-being dimensions. No additional drop-out were reported in the CWBT group, where patients continued to express great appreciation for the therapeutic sessions and motivation to be involved in the activities. Conversely, 5 patients were lost at follow-up in the CBT group because of families' difficulties (working schedule not fitting with planned sessions).

The beneficial effect of both interventions seems to be maintained and in some cases it continued to improve over time. Specifically, all distress scores remain widely below the initial level, even if the mentioned natural disaster (earthquake) frightened the majority of children involved in the study (fortunately none of them suffered significant personal damages) (Table 4.6-4.9).

Considering differences according to treatment allocation, CWBT patients maintained lower level of distress than CBT ones. The graphic distributions of patients' score (Graph 4.5-4.7) illustrate relevant improvements, even though statistical significance was not reached. This could probably due to the above mentioned "ceiling effect", together with the limited power of the sample. Nevertheless, from a clinical point of view this longitudinal (and positive) trend is an important change, if we consider the baseline psychological distress (according to CGAS clinical evaluation, Graph 4.4) where comorbidities with other disorders or family problematic circumstances were diagnosed in about half of the cases. Therefore, it is conceivable, even though yet to be tested, that the sequential combination of CBT and WBT (CWBT) may yield more enduring effects than CBT in terms of triggering a global psychological well-being, which further improved at follow-up (Graph 4.8). It is also conceivable that this approach may be particularly effective if we consider that our sample was composed by children presenting an initial severe symptomatology and impaired functioning in school, family, and interpersonal domains. Another essential consideration pertains the fact that this approach may avoid the

use of psychotropic drugs, that may improve symptomatology in the short term, but lead to a worsening of the clinical course in the long term (as described in Chapter 1). Given the controversial results of pharmacotherapy in children and adolescents with emotional disturbances, CWBT could provide an effective strategy, devoid of drugs' dangerous side effects for the prevention and the treatment of common psychological disorders among youth.

Improving individuals' psychological well-being, promoting optimal functioning, coping styles and developmental processes is particularly important in vulnerable life stages such as childhood and adolescence (Walker 2001, Caffo et al. 2008, Richards and Huppert 2011, Olsson et al. 2013, Shoshani and Steinmetz 2013) and could yield lasting personal changes which act as protective factors against stress and future adversities. As emerged in previous studies were WBT protocol was tested in a sample of students (Ruini et al. 2007; 2009; Tomba et al. 2010), building individual strengths could be more beneficial in the long term than simply addressing depressive or anxious symptoms. Tomba and colleagues (2010) in the cited study, where WBT-School Protocol was compared to Anxiety Management Strategies in a sample of middle school students, underlined that the distinct effects of each strategy may lead to postulate that the sequential combination of symptom and well-being oriented therapy may yield more complete and lasting effects that each strategy alone. Similarly, Brent (2006) suggested the benefits of combined strategies for depressed children and adolescents. These considerations originate from the concept of recovery from affective disorders devised by Fava (1996) and widely recognised nowadays, which postulates that the absence of well-being creates conditions of vulnerability. Therefore the route to recovery lies not exclusively in the absence of symptomatology, but also in the presence of specific well-being dimensions (Fava et al. 1998; 2007; Fava, 1999). Nevertheless, we may assume that, as for adults, psychological well-being is impaired in children and adolescents with affective disorders who remitted upon standard treatment. Impaired school performance, the absence or paucity of positive interpersonal relationships and low self-esteem are some of the most common residual symptoms (Tao et al.

2010) and can be considered as factors predicting absence of full recovery or presence of future relapse (Emslie et al. 2008). This residual symptomatology may be re-interpreted as the lack of psychological well-being in one of six areas described by Ryff's model (1989), such as environmental mastery, personal growth, positive relation with other, self-acceptance, purpose in life and autonomy (Albieri and Visani, 2013). Our data seem to sustain this conceptualization, where the sequential CBT/WBT strategy resulted in a higher recovery rate than CBT. Moreover, in our small sample of patients, long term follow-up evaluations displayed that CWBT resulted particularly helpful for anxious children (Graph 4.10), conveying the hypothesis that the well-being enhancing strategy (CWBT) was able to address what the other type of symptoms-focused treatment (CBT) was less able to affect.

However, when considering only the small group of depressed children, our data seem to suggest that traditional CBT still represents the treatment of preference (Graph 4.11). Obviously, the small sample size hampers the generalizability of data and only descriptive information can be drawn at this stage. If future studies will confirm this trend, then this would be considered an important peculiarity compared to WBT for adults, where the superiority of the sequential model was confirmed both for anxious and depressed patients (Fava et al. 2004; Ruini and Fava, 2009).

Further, from this study a number of preventive implications could be derived. Our sample confirmed that psychological well-being tend to decrease with age (Graph 4.3), in the transition from preadolescence to adolescence, suggesting the importance of promoting eudaimonic well-being in this specific period of life, an especially risky stage for mental health problems (WHO, 2004). Particular attention to the building of good interpersonal relationships could improve the socialization processes and prevent interpersonal and behavioural problems, as well as other forms of youth psychosocial distress (such as drug abuse, violence and aggressive behaviours) (Ruini et al. 2009). Early psychotherapeutic interventions may stop or delay such occurrences. Finally, the study contribute to provide indications about a model of intervention

for clinical psychology in paediatric mental health settings, particularly in our country, that are in urgent need of implementing cost-effective protocols in the National Health Service (NHS). In fact, the study was conducted in NHS setting and proved to be suitable to the needs of the Service (in terms of duration, level of involvement of patients and their family and low cost of the raw materials used in the sessions).

Further investigations with adequate sample size should determine whether the combined, sequential integration of symptom-oriented and well-being strategies could play an important role in children and adolescents' psychotherapeutic options, fostering resilience and a successful adaptation to the growth process. CWBT seems to be a promising treatment strategy that could add important therapeutic ingredients to the development of improved services for children in need of psychological help.

CONCLUSIONS

The aim of this dissertation was to test the feasibility of a new psychotherapeutic protocol for treating children and adolescents with mood and anxiety disorders: Child-Well-Being Therapy (CWBT). This strategy represents a conceptual innovation for the treatment of affective disorders, which originates from the adult Well-Being Therapy protocol (Fava et al. 1999, Ruini & Fava, 2003). Well-Being Therapy (WBT) is based on the multidimensional model of well-being postulated by Carol Ryff (eudaimonic perspective). In sequential combination with cognitive-behavioral therapy, WBT is nowadays considered a well-established clinical method, effective for treating residual symptoms and preventing future relapse in depressed adults, but has shown to be effective also for other disorders (generalized anxiety, cyclothymia, post-traumatic stress disorder, somatoform disorders), contributing to achieve a more complete and lasting recovery. In the first part of this dissertation a narrative review on the effectiveness of psychological treatments for anxiety and depression in children and adolescents, with a specific focus on positive interventions, has been presented. Results confirmed how substantial evidence supports the efficacy of cognitive-behavioral therapy (CBT) in anxious and depressed children. However, also controversial outcomes emerged, suggesting that the improvement of treatments' efficacy is needed. In the second part of this dissertation the outcomes of three experimental studies are described. The first one explored the differences in psychological well-being in a group of anxious and depressed patients in comparison with a matched control group of healthy students. Results confirmed that patients' eudaimonic well-being was lower than those of healthy students, suggesting how psychological well-being may represent a predisposition toward positive optimal functioning that tends to be less developed in psychological distressed young patients (particularly depressed children). Our findings contribute to sustain the importance to assess and then reinforce “the positive” as well as

dismantling “the negative”. The second study, in fact, escribed an open clinical trial which explored the feasibility of an 8-sessions CWBT protocol in a group of 16 children (M=10.13 ; SD=1.78) with mood, anxiety and behavioral disorders, analyzing its effects in diminishing symptomathology and in promoting flourishing and well-being over time. CWBT resulted associated to symptoms reduction, particularly anxiety, somatisations, physiological anxiety, together with the reduction of externalizing problems (according to both clinicians’ evaluation and parents’ opinion). Therapeutic effects were maintained at 1 year follow-up. CWBT triggered also an increase in psychological well-being (particularly in self-acceptance dimension) and in the positive to negative emotion ratio (considered an indicator of flourishing), which further improved at follow-up. As a consequence of the important clinical information derived from this first pilot investigation, a third study has been implemented. Therefore, a modified and extended version of CWBT (12 sessions) has been developed and then tested in a controlled study with children and adolescents affected by mood and anxiety disorders. They were consecutively randomized into 3 different treatment groups: CWBT, CBT and 6 months waiting list (WL). CBT and CWBT were also compared through repeated follow-up assessments over time that analysed symptom reduction, relapse/remission rates, and improvements in well-being. Despite the recognised difficulties of implementing a clinical longitudinal study in paediatric settings and the limits due to sample characteristics, interesting data emerged. In particular, both treatments resulted effective in decreasing distress and in improving well-being. When comparing group allocations, significant differences emerged favouring CWBT, with particular reference to anxiety and its physiological and cognitive features. Moreover, CWBT showed encouraging benefits also on depression, confirming a significantly higher improvement in comparison with both CBT and WL groups, as well as a rising trend in well-being total scores, particularly in Autonomy, Personal Growth and Positive Relations. However, the present findings need to be interpret with caution. In fact, it is difficult to ascribe the specific, additive effect of the well-being ingredient, with these small sample size.

Further, the groups presented some baseline differences according to self-report measures, even though clinical judgement at baseline showed a comparable impairment between groups. When considering longitudinal outcomes, again the sample characteristics limit their generalizability, but important clinical elements should be underlined. CWBT showed a greater recovery rate (83%) than CBT (54%). The beneficial effect of both interventions seems to be maintained even improved over time, with CWBT group remaining at a lower level of distress compared to CBT one. Further investigations with adequate sample size should determine whether the combined, sequential integration of well-being and symptom-oriented strategies could play an important role in children and adolescents' psychotherapeutic options, fostering resilience and a successful adaptation during the growth process. The integration of approaches is in line with the growing trends aimed to an integration of different interventions in different moments of the therapy (such as a sequential approach where CBT precedes WBT) going over the old concept of "monotherapy", which results simplistic and insufficient to lead to a complete remission of symptoms (Fava et al. 2008). Recent trends in child psychiatry suggest to focus on child's competencies, enhancing growth in psychological domains. This is in line with the concept of *flourishing*, a global health status which combines high levels of emotional, psychological and social well-being.

In conclusion, the outcomes derived from the present dissertation address important conceptual and technical issues in the framework of clinical child psychotherapy. The investigations involved children in the general as well as clinical populations and provide novel and crucial indications on the complex relationships between psychological distress and well-being in developmental age.

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APPENDIX

Appendix 1. Protocol of Well-Being Therapy for children.

CHILD WELL - BEING THERAPY	
The protocol consists of 12, 1-hour sessions, which were held once a week. Child-WBT was based on the interaction between child and therapist using games, role-playing, fairy tales, and involved the use of a diary during each session with specific homework assignments. Two sessions were also addressed to parents (at the beginning and at the end of child's therapy).	
	PARENT TRAINING
SESSION:	
	COGNITIVE BEHAVIORAL TECHNIQUES
1	CHILD-ASSESSMENT
2	The child is trained to identify, recognize and express a wide variety of emotions, both positive and negative, by face expressions or body gestures. Through role-playing the child is encouraged to communicate his/her emotions to the therapist in an assertive way.
3	Focus on the link between emotions and behaviours, including physical symptoms for facilitating considerations on how all these feelings could influence our behaviors.
4	Relationship between thoughts and emotions, according to the cognitive model. Child is trained to the self-observation in a diary and is asked to report his/her daily situations (at school, with friends, with parents) for helping him/her realize that the way he/she interprets situations can influence his/her emotions.
5-6	Cognitive restructuring according to CBT model. Child learns how to identify and differentiate negative/dysfunctional thoughts and helpful ones, taking examples from his/her daily activities. Finally child is instructed to recognize cognitive errors and correct them with alternative, more positive and realistic interpretations.
	WELL-BEING THERAPY
7-8	Focus on **Self-Acceptance** and **Positive Relations**: child is asked to recognize his/her positive and negative personal characteristics and to consider that

	everyone has virtues and faults. Then child is invited to remember and report in the diary some compliments received in the past and is encouraged to pay compliment to friends (homework). This allowed child to reflect on how could be difficult to be nice with someone, but also how receiving an unexpected compliment could be gratifying.
9-10	**Autonomy** (perception of one's skills and abilities) and **Purpose in Life** (objectives to be reached in the future): child is asked to reflect both on abilities he already possess and the ones he would like to develop. Child is also invited to write down a story about future plans (social activities, school, sports and leisure time) reflecting on how to reach those goals learning easy problem-solving strategies. Furthermore, child is helped to recognize some **personal strengths** he possess and he could rely on.
11	**Happiness** and **emotional well-being**: child is asked to think and share with the therapist some important and positive moments he/she has experienced during the life. Child is also trained to recognize daily moments of well-being, writing them on the diary.
12	The protocol ends with final general advices about how to make children's life happier.
	CHILD ASSESSMENT
	PARENT TRAINING
Follow-up	Update of patient's clinical status and parents' feed-back about child's behavior in everydat life.
	CHILD ASSESSMENT

Adapted from: Albieri E. and Visani D. (2014). The Role of Psychological Well-Being in Childhood Interventions. In Fava GA and Ruini C (Eds). *Increasing Psychological Well-Being in Clinical and Educational Settings. Interventions from different cultural backgrounds.* Springer, The Neetherlands.

"COSA PENSO E COSA SENTO"

Nome:_____ Data:_____

Età:_____ Sesso: M F Classe:_____

Scuola:_____

Rispondi scegliendo fra SI o NO:

1.	Ho difficoltà a prendere decisioni……	SI	NO
2.	Divento nervoso quando le cose non mi vanno bene……	SI	NO
3.	Gli altri hanno meno difficoltà di me nel fare le cose……	SI	NO
4.	Mi piacciono tutte le persone che conosco……	SI	NO
5.	Spesso ho difficoltà a respirare……	SI	NO
6.	Sono spesso preoccupato……	SI	NO
7.	Ho paura di molte cose……	SI	NO
8.	Sono sempre gentile……	SI	NO
9.	Mi arrabbio facilmente……	SI	NO
10.	Mi preoccupo di cosa i miei genitori mi diranno……	SI	NO
11.	Sento che agli altri non piace come faccio le cose……	SI	NO
12.	Uso sempre le buone maniere……	SI	NO
13.	La sera faccio fatica ad addormentarmi……	SI	NO
14.	Sono preoccupato di cosa gli altri pensano di me……	SI	NO
15.	Mi sento solo anche in mezzo agli altri……	SI	NO
16.	Sono sempre buono……	SI	NO
17.	Spesso ho mal di stomaco……	SI	NO
18.	I miei sentimenti vengono facilmente feriti ……	SI	NO
19.	Ho le mani sudate……	SI	NO
20.	Sono sempre carino con tutti……	SI	NO
21.	Sono molto stanco……	SI	NO
22.	Sono preoccupato di ciò che può accadere……	SI	NO
23.	Le altre persone sono più felici di me……	SI	NO
24.	Dico sempre la verità……	SI	NO
25.	Faccio brutti sogni……	SI	NO
26.	Quando tengo a qualcosa, i miei sentimenti vengono facilmente feriti……	SI	NO
27.	Sento che qualcuno mi dirà che faccio le cose nel modo sbagliato……	SI	NO
28.	Non mi arrabbio mai……	SI	NO
29.	Qualche volta mi sveglio spaventato……	SI	NO
30.	La sera quando vado a letto sono preoccupato……	SI	NO
31.	E' difficile per me concentrarmi a scuola……	SI	NO
32.	Non dico mai cose che non dovrei……	SI	NO

33. Mi muovo molto sulla sedia…… SI NO

34. Sono nervoso…… SI NO

35. Molte persone sono contro di me…… SI NO

36. Non dico mai bugie…… SI NO

37. Spesso mi preoccupo che mi possa accadere qualcosa di brutto…… SI NO

Rispondi scegliendo fra SI, FORSE, NO

1.	Me la cavo bene in molte cose.	Sì	FORSE	NO
2.	Le attività scolastiche non sono divertenti.	Sì	FORSE	NO
3.	La maggior parte delle persone è amichevole e disponibile.	Sì	FORSE	NO
4.	E' probabile che per me niente andrà bene.	Sì	FORSE	NO
5.	Sono un fallimento.	Sì	FORSE	NO
6.	Mi piace pensare alle belle cose che mi accadranno nel futuro.	Sì	FORSE	NO
7.	Svolgo bene i miei compiti scolastici.	Sì	FORSE	NO
8.	Le persone che conosco mi aiutano quando ne ho bisogno.	Sì	FORSE	NO
9.	Credo che tra qualche anno le cose andranno molto bene per me.	Sì	FORSE	NO
10.	Ho rovinato quasi tutte le amicizie che ho avuto.	Sì	FORSE	NO
11.	In futuro mi accadranno molte cose belle.	Sì	FORSE	NO
12.	Le cose che faccio ogni giorno sono divertenti.	Sì	FORSE	NO
13.	Non sono capace di fare niente.	Sì	FORSE	NO
14.	Io piaccio alla gente.	Sì	FORSE	NO
15.	Nella vita non c'è niente che mi entusiasma.	Sì	FORSE	NO
16.	I miei problemi e le mie preoccupazioni non se ne andranno mai.	Sì	FORSE	NO
17.	Sono bravo come gli altri.	Sì	FORSE	NO
18.	Il mondo è un luogo cattivo.	Sì	FORSE	NO

19.	Non ho motivo di pensare che le cose mi andranno bene in futuro.	Sì	FORSE	NO
20.	Le persone importanti della mia vita sono disponibili e gentili con me.	Sì	FORSE	NO
21.	Odio me stesso.	Sì	FORSE	NO
22.	Risolverò i miei problemi.	Sì	FORSE	NO
23.	Mi succedono molte cose brutte.	Sì	FORSE	NO
24.	Ho un amico che è disponibile e gentile con me.	Sì	FORSE	NO
25.	So fare bene molte cose.	Sì	FORSE	NO
26.	Il mio futuro è troppo brutto per pensarci.	Sì	FORSE	NO
27.	Alla mia famiglia non interessa quello che mi succede.	Sì	FORSE	NO
28.	Le cose in futuro mi andranno bene.	Sì	FORSE	NO
29.	Mi sento in colpa per molte cose.	Sì	FORSE	NO
30.	Nonostante i miei sforzi, gli altri mi rendono difficile ottenere ciò che mi serve.	Sì	FORSE	NO
31.	Sono una persona buona.	Sì	FORSE	NO
32.	Non mi aspetto niente di bello da grande.	Sì	FORSE	NO
33.	Mi piaccio.	Sì	FORSE	NO
34.	Devo affrontare molte difficoltà.	Sì	FORSE	NO
35.	Ho problemi con il mio carattere.	Sì	FORSE	NO
36.	Penso che da grande sarò felice.	Sì	FORSE	NO

Nelle ultime 2 settimane, quanto spesso hai avuto questi problemi:

	0 Mai	**1 Raramente**	**2 Qualche volta**	**3 Spesso**
1. Mal di testa	0	1	2	3
2. Vertigini	0	1	2	3
3. Dolore al cuore o al petto	0	1	2	3

4. Fiacco, senza energia	0	1	2	3
5. Dolore in fondo alla schiena	0	1	2	3
6. Dolore ai muscoli	0	1	2	3
7. Fatica a respirare	0	1	2	3
8. Caldo o freddo improvviso	0	1	2	3
9. Formicolìo	0	1	2	3
10. Nodo alla gola	0	1	2	3
11. Debolezza	0	1	2	3
12. Senso di pesantezza alle braccia o alle gambe	0	1	2	3
13. Nausea, stomaco in disordine	0	1	2	3
14. Stitichezza	0	1	2	3
15. Perdita di peso - diarrea	0	1	2	3
16. Mal di stomaco	0	1	2	3
17. Con il cuore che batte forte o veloce	0	1	2	3
18. Difficoltà a deglutire/inghiottire	0	1	2	3
19. Abbassamento/perdita della voce	0	1	2	3
20. Difficoltà a sentire /sordità	0	1	2	3
21. Vedere doppio	0	1	2	3
22. Vista offuscata / annebbiata	0	1	2	3
23. Cecità	0	1	2	3
24. Svenimento	0	1	2	3
25. Perdita di memoria / amnesia	0	1	2	3
26. Convulsioni (tremori molto forti)	0	1	2	3
27. Difficoltà a camminare	0	1	2	3
28. Paralisi (non riuscire a muovere i muscoli)	0	1	2	3
29. Difficoltà a fare pipì	0	1	2	3
30. Vomito	0	1	2	3
31. Sentirsi gonfio	0	1	2	3
32. Il cibo ti disgusta	0	1	2	3
33. Dolore alle ginocchia e ai gomiti	0	1	2	3
34. Dolore alle braccia o alle gambe	0	1	2	3
35. Dolore a fare pipì	0	1	2	3

Indica quanto sei d'accordo con quello che è scritto in queste frasi:

1_____2_____3_____4_____5_____6

Non è il mio caso Sono completamente d'accordo

1. A volte cambio i miei modi di fare per essere come gli altri. 1 2 3 4 5 6
2. Non mi piacciono l'ambiente in cui mi trovo e le persone attorno a me. 1 2 3 4 5 6
3. E' importante fare nuove esperienze per cambiare i miei punti di vista. 1 2 3 4 5 6
4. La maggior parte delle altre persone ha più amici di me. 1 2 3 4 5 6

5. Sono contento di quello che faccio e che spero di fare in futuro. 1 2 3 4 5 6

6. Ci sarebbero molte cose di me stesso che vorrei cambiare. 1 2 3 4 5 6

7. Mi preoccupo di quello che le altre persone pensano di me. 1 2 3 4 5 6

8. Di solito riesco a gestire bene i miei impegni. 1 2 3 4 5 6

9. Non mi sento molto migliorato rispetto a qualche anno fa. 1 2 3 4 5 6

10. So che mi posso fidare dei miei amici e loro sanno che possono fidarsi di me. 1 2 3 4 5 6

11. Le cose che faccio ogni giorno mi sembrano stupide e poco importanti. 1 2 3 4 5 6

12. Anche se ho fatto qualche sbaglio in passato, penso che tutto andrà per il meglio. 1 2 3 4 5 6

13. Cerco di pensare con la mia testa e non con quella degli altri 1 2 3 4 5 6

14. Riesco sempre a fare le cose o a stare con le persone che più mi interessano. 1 2 3 4 5 6

15. Ho difficoltà quando sono in nuove situazioni in cui devo cambiare le mie abitudini. 1 2 3 4 5 6

16. Trovo difficile aprirmi quando parlo con gli altri. 1 2 3 4 5 6

17. Non sono sicuro che la mia vita abbia molto significato. 1 2 3 4 5 6

18. Quando mi confronto con amici e familiari sono soddisfatto di come sono. 1 2 3 4 5 6