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A-LIFE interview: a longitudinal study of the course of psychological status, psychosocial functioning and some pshycometric properties.

Inês Rocha Martins
(e-mail: ines___rocha@hotmail.com)

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Adolescent – Longitudinal Interval Follow-up Evaluation

Since the last years of the 20th century efforts have been made in order to develop standard psychiatric assessment.

Structured and semi-structured interviews have been administered, and it has been suggested that they increase the reliability and precision of diagnosis. Some of these interviews have been validated, achieved international acceptance through translation and a few have been greatly used in epidemiological and treatment research (Sørensen, Thomsen & Bilenberg, 2007). In child and adolescents psychiatry several structured and semi-structured diagnostic instruments have been developed during the last decades to make more objective and replicable diagnoses in younger (Kim et al., 2004).

The Adolescents – Longitudinal Interval Follow-up Evaluation (A-LIFE) is a semi-structured and sectioned interview that evaluates different and complementary variables. It was developed from LIFE (Longitudinal Interval Follow-up Evaluation) the original version for adults. Being a follow-up interview, A-LIFE provides information about the course of psychopathology over an extend period of time (Keller et al., 1987).

Having already been made its translation into Portuguese, this study aims to evaluate the course of psychopathology, psychosocial functioning and the relationship between both psycosocial functioning and severity of psychopathologic symptoms. We also analyzed some of the A-LIFE psychometric characteristics as concurrent and discriminant validity and the inter-rater validiy. The sample of this study was comprised by 25 adolescents (17 psychiatric patients and 8 students with a diagnostic made by an interview), from 12 to 18 years-old. The assessment protocol included the Adolescent – Longitudinal Interval Follow-up Evaluation (A-LIFE), the Schedule for Affective Disorders and Schizophrenia for School Aged Children-Present and Lifetime Version (K-SADS-PL), the Child Depression Inventory (CDI), the Multidimensional Anxiety Scale for Children (MASC) for adolescents and the Brief Symptom Inventory (BSI) and the Children Behavior Checklist (CBCL) for parents or carers.

Results generally showed that psycotherapy has effects on recovery or remission and that higher symptom severity levels assessed at the end of follow-up period are significantly related to higher scores of depressive symptoms at the intake. The adolescents evaluated by the A-LIFE as partial or total recovered obtained significant lower scores of depressive symptoms at the intake than those who did not achieved recovery or remission.

A-LIFE revealed to be an important instrument to the research and to the clinical evaluation, namely in a more detailed description of the course of psychopathology in adolescence.

Key Words: A-LIFE, Psychiatric Status Rating scale (PSRs), adolescents course of psychopathology, psychosocial functioning, psychometric properties.

Adolescent – Longitudinal Interval Follow-up Evaluation

Desde os últimos anos do século 20, que se têm vindo a desenvolver esforços no sentido de criar instrumentos standardizados de avaliação psicológica. Entrevistas estruturadas e semi-estruturadas têm sido cada vez mais utilizadas, defendendo-se que estas aumentam a fiabilidade e precisão dos diagnósticos clínicos. Algumas dessas entrevistas têm sido validadas, alcançando reconhecimento internacional através da sua tradução, sendo algumas delas largamente utilizadas a nível epidemiológico e de tratamento (Sørensen, Thomsen &Bilenberg, 2007).

No âmbito da psiquiatria infantil e da adolescência, algumas entrevistas estruturadas e semi-estruturadas têm-se desenvolvido durante as últimas décadas com o intuito de estabelecer diagnósticos mais objetivos e passíveis de serem replicados (Kim et al., 2004).

A *Adolescent – Longitudinal Interval Follow-up Evaluation* (A-LIFE) é uma entrevista clínica semi-estruturada, dividida em secções, que avalia diferentes variáveis complementares. Foi desenvolvida a partir da LIFE (*Longitudinal Interval Follow-up Evaluation*), a versão original, para adultos. Sendo uma entrevista de avaliação em follow-up, a A-LIFE fornece informação acerca do curso psicopatológico do indivíduo avaliado, durante um período alargado de tempo (Keller et al.,1987).

Depois de já ter sido feita a sua tradução para a língua portuguesa, este estudo tem como objetivo analisar o curso da psicopatologia, o funcionamento psicossocial e a relação entre o funcionamento psicossocial e a severidade dos sintomas psicopatológicos. Analizámos ainda algumas características psicométricas da A-LIFE, nomeadamente a validade concurrente e descriminante, e a validadede consensual. A amostra deste estudo foi composta por 25 adolescentes (17 dos quais doentes de um hospital psiquiátrico e os restantes 8 com diagnóstico feito por entrevista) com idades compreendidas entre os 12 e os 18 anos.

Do protocolo de avaliação faziam parte as entrevistas A-LIFE e a *Schedule for Affective Disorders and Schizophrenia for School Aged Children-Present and Lifetime Version* (K-SADS-PL), e os questionários de auto-resposta *Child Depression Inventory* (CDI), *Multidimensional Anxiety Scale for Children* (MASC) para os adolescents e o *Brief Symptom Inventory* (BSI) e o *Children Behavior Checklist* (CBCL) para os pais ou cuidadores.

Os resultados mostraram que a intervenção psicoterapêutica tem efeitos na recuperação e remissão dos adolescentes e que o nível de gravidade dos sintomas, avaliado no final do período de *follow-up*, estava significativamente associado a resultados mais elevados de sintomatologia depressiva no início do período de *follow-up*. Os adolescentes avaliados pela A-LIFE como recuperados ou em remissão obtiveram valores significativamente mais baixos de sintomatologia depressiva do que os que não recuperaram. O recurso a este instrumento pode, assim,ser importante ao nível da investigação assim como pode conferir vantagens à avaliação clínica, nomeadamente, na descrição mais detalhada do curso psicopatológico do adolescente.

Palavras-chave: A-LIFE, Escala de avaliação dos estados psiquiátricos (AEP), curso da psicopatologia nos adolescentes, funcionamento psicossocial, características psicométricas.

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Introdution

In both clinical practice and research, the clinical interview remains the main source of information about an adolescent's presenting symptomatology (Cicchetti & Toth, 2009). Merrel (2008) defends that clinicians must have a special care in conducting interviews with adolescents. According to this author, clinicians must do it from the perspective that adolescence is a unique developmental stage that brings numerous unique circumstances, challenges, and tasks or els they risk reaching invalid conclusions or obtaining low-quality information, based on their lack of sensivity to that unique developmental aspects of adolescence (Merrel, 2008).

The A-LIFE is a clinical semi-structured interview and constitutes an important tool used for assessing the longitudinal course of psychiatric disorders in adolescents. In context of "Prevention of depression in Portuguese adolescents: an effectiveness study of an intervention with adolescents and parents" project (Ref. PTDC/MHC-PCL/4824/2012) was made its translation into Portuguese, aplyed and studied referring to psychosocial functioning (using one of the sections of the interview). It was intended, in the present work, to study some characteristics of the A-LIFE, exploring and deepen aspects not yet addressed, as the course of psychopatology and information about recovery and remission, constituting an important step for the study of this interview and also to the mentioned big project on the prevention of depression in youngsters.

Thus, in the present work will be given a special emphasis to depression but it will also be more broadly addressed psychopathology in adolescents, since this interview covers a wide range of psychological disorders.

I – Conceptual framework

1. Adolescence and Psychopathology

By the time, adolescence has been reached tipically around 12 to 14 years of age (Merrel, 2008) and it is considered a particularly compelling period of development, characterized by a rather lengthy transition phase in which the individual is neither a child nor an adult (Cicchetti & Toth, 2009). According to Costello, Copeland & Angold (2011), that concept of adolescence as a special phase of life, different from both childhood and adulthood, has been seriously considered only in the last century.

Considering the extensiveness and impact of the changes that occur in adolescence, it is understandable that adolescence can be experienced as stormy and stressful (Schraml, Perski, Grossi & Simonsson-Sarnecki, 2011). In 1999, Arnett identified 3 central features that may be heightened in adolescence: mood disruptions, risk behaviors, and conflit with parents. Adolescents exhibit large individual differences in these areas. However the fact that mood disruptions and increased risk taking are typical during

adolescence suggests that behaviors associated with internalizing and externalizing forms of psychopathology are in ascendance (Cicchetti & Rogosch, 2002).

Current global epidemiological data consistently reports that up to 20% of children and adolescents suffer from a disabling mental illness and up to 50% of all adult mental disorders have their onset in adolescence (Belfer, 2008; Costello et al., 2011). Therefore, it is important to notice that in recognizing the turbulence of adolescence, there is a serious risk that the stress-related problems that occur on this phase of life can be regarded as an inescabaple norm, rather than as indication that adolescents need help and support (Schraml et al., 2011) so young people can not receive the help they actually need with the risk of having future consequences.

1.1 Adolescence Depression

Of the many potential mental health problems that may be experienced during adolescence, those related to mood appear to be among the most common (Reynolds, 1995). In adolescents, depression may be viewed as particularly insidious. As an internalizing problem, this disorder may go undetected an untreated unless formal procedures are instituted for identification and service delivery (Reynolds, 1995).

According to Verduyn, Rogers & Wood (2009) between 1% and 6% of children will suffer from depression with rates increasing during adolescence. According to these authors, the majority of children with depression will recover although one in five will still is depressed two years after the onset. Longer term, young people ho have been depressed are much more likely than those who have not to experience depression as adults (Verduyn et al., 2009). Longitudinal data confirmed prior cross-sectional data indicating that the rate of first episodes of Major Depression Disorder begins to increase substantially at 15 years of age and it is also at this point in life that the rate of Major Depression Disorder begins to diverge for girls and boys. By the late teenage years about twice as many girls as boys are diagnosed with this diagnosis (Arnarson & Craighead, 2009).

There is not a clear distinction between depression in the elderly and young people, both in symptoms and in relation to their response to treatment (Wilkinson, Moore & Moore, 1999). As in adults, depressive disorders in adolescents are not expressed as a single symptom (e.g. sad mood), but a set of symptoms that may include lowered fatigue, self-esteem, impaired school performance, sleeping and eating disorders and self-destructive impulses (Ryan, 1995). For all this, the constellations and severity of depressive symptoms and their potential impact on psychosocial and emotional functioning of adolescents suggest that depression should not be viewed as normal on adolescents' development (Ryan, 1995).

In recent years there has been an increased recognition of the coexistence of other forms of psychopathology with depression in adolescents (Reynolds, 1995), which was important for understanding the potential course, complications, problems in identification, and treatment

decisions specific to mood disorders in youngsters (Reynolds, 1995).

Verduyn et al. (2009) found a significant overlap between depressive disorders and anxiety disorders. According to Costello et al. (2011) these are among the most common diagnoses in youngsters, following drug abuse or dependence. In specialized mental health services depression is rarely seen in isolation. Concurrent symptoms of behavior problems or anxiety will be present in almost all cases and between 50% and 80% of depressed young people will also meet criteria for another disorder (Verduyn et al., 2009).

1.2 Psychosocial Functioning

As the experiencing of high demands increases during adolescence, social support and interpersonal relationships tend to deteriorate (Schraml et al., 2011).

Both cross-section and longitudinal studies of the effect of depression on functional outcomes suggest that function is significantly disrupted by depression, even by mild or subsyndromal depressive symptoms. Functional impairment can occur globally, as well as in specific domains such as work or home (Greer, Kurian & Trivedi, 2010).

A variety of measures are available to evaluate function, either global or symptom-specific, and according to Greer et al. (2010) these should be used more often, both in clinical monitoring of patients as well as serving as a primary outcome measure in clinical trials investigating treatments for depression. By the profound impact that depression has on function and quality of life, the development of treatments that fully resolve functional impairments is imperative (Greer at al., 2010).

2. Psyco(patho)logic Evaluation

In general, diagnostic interviews can be distinguished taking into account their structure, so there are unstructured, structured and semi-structured interviews (Cicchetti & Toth, 2009).

Unstructured interviews don't have standardized procedures, giving full freedom to the interviewer to formulate the questions and to decide how the resulting information is to be used in archieving a diagnosis (Summerfeldt, Kloosterman & Antony, 2010). However, research does not support unstructured interviews as reliable means to standard diagnosis (Lauth, Levy, Júlíusdóttir, Ferrari & Péturson, 2008). Structured interviews may allow greater accuracy in the administration of the interview by standardizing the content, format, and order of the questions to be asked (Summerfeldt et al., 2010). Structured interviews can be divided into highly structured and semi-structured. Highly structured interviews contain exact wording and sequence of questions, well-defined rules for recording and rating of the respondents' answers. Due to their highly structured forms, little or no clinical judgment is needed, and they can be administered by lay interviewers with minimal training in using the instruments (Cicchetti & Toth, 2009). However its rigidity may impede the establishment of the interviewee-interviewer relationship, which may interfere with quality and

rigor of the collected information. Semi-structured interviews contain flexible guidelines for conducting the interview (Cicchetti & Toth, 2009) providing the interviewer some subjectivity, since it is not imposed to him a rigid way to drive the interview, a specific order of answering questions nor how to express them (Sørensen et al., 2007). This kind of interview usually requires an extensive training to ensure the accuracy of its clinical application (Sørensen et al., 2007; Cicchetti & Toth, 2009).

The use of structured and semi-structured interviews is now the standard in research settings. These strategies, administered in various ways, are rated positively by both responders and interviewers (Suppiger et al., 2009, *cit in* Summerfeldt et al., 2010)

Diagnostic interviews are instruments created to evaluate psychopathology. One of the very best advantages of these instruments is the decrease of variability on collecting information (Ulloa et al., 2006). Furthermore, an accurate, objective and replicable diagnostic not only has advantages in clinical practice but it is also essential to successful scientific study (Kim et al., 2004). In fact, the available diagnostic interviews can help us determine whether a patient is in or out of an episode at the time of the interview, and when an episode began. However, they do not give information about subcriterion levels of symptoms during the intervals between episodes, or even for discrete periods within an episode (Keller et al., 1987). The quantitative scales may also provide an accurate cross-sectional measure of symptom levels for the day, past week, or past month, but they do not reflect the course of psychopathology over an extended period of time (Keller et al., 1987). This way, it is highlighted the importance and the usefulness of A-LIFE. According to Keller et al., (1987), follow-up interviews as the Longitudinal Interval Follow-up Evaluation (LIFE) and its version for adolescents (A-LIFE) were developed to provide a method of supplementing diagnostic and quantitative assessments in the study of the long-term course of psychiatric disorders.

2.1 A-LIFE (Adolescent – Longitudinal Interval Follow-up Evaluation) (Keller et al., 1993; translation and adaptation Matos & Costa, 2011)

The A-LIFE (Keller et al., 1993) was developed from LIFE (Longitudinal Interval Follow-up Evaluation) (Keller et al., 1987), a clinical interview for adults. The A-LIFE was translated and adapted into Portuguese in 2011 by Matos & Costa (2011). The present study is the first adressing all domains of the interview: **A. Psychopathology** - this section gives an understanding of the symptoms present in each disturbance during the initiation and development of that disorder during follow-up (Keller et al., 1987); **B. Psychosocial Functioning** - including school performance, interpersonal relationships with family, interpersonal relationships with friends and recreational activities. Ratings reflect the patient's functioning during the worst week of the preceding month, as follows: 1 (very good), 2 (good), 3 (fair/slightly impaired), 4 (poor/moderately impaired), and 5 (very poor/severely impaired). The total score is the sum of the impairment scores

in each of the 4 domains and ranges from 4 to 21 (the higher the score the lower the functioning level). In addition to the classification of each one of these parameters, at the end of this domain, the interviewer assigns a general classification for the adolescents Global Social Adjustment (GSA); and finally **C. General Severity of Disease (GSD)** - a 100 points scale, completed based on the worst week of each month, as other items of the interview. This scale (GSD) allows researchers to obtain a basis for comparison with other studies, being widely used in psychiatric studies (Keller et al., 1987).

This interview allows us to follow the evolution of the psychiatric status since last clinical evaluation. Studies suggest its application from 7 to 17 years (Goldstein et al, 2009) and others from 13 to 18 years old (Gledhill & Garralda, 2010). This interview contains an instruction booklet and a coding sheet of psychiatric status (PSR – Psychiatry Status Ratings). The PSR are ordinal symptom-based scales with categories defined to match the levels of symptoms used in the Research Diagnostic Criteria (Keller et al., 1987).

Being a semi-structured interview, raters may resort to their own clinical judgment in how to conduct the interview. Anyway, the instructions presented by the authors at the beginning of the interview may help them on conducting it.

Weekly measures of psychopathology (PSR's) are assigned by the interviewer for each disturbance, allowing the quantification of psychiatric symptoms. These evaluations provide a record of the course of each initially diagnosed disorder or developed during the follow-up (Keller at al., 1987)

In the past several years, the Longitudinal Interval Follow-up Evaluation (LIFE) (Keller et al., 1987) has been considered a valid and reliable method of characterizing the week-by-week course of psychiatric disorders (Warshaw et al., 1994). A-LIFE (as LIFE) collects information about the duration of an episode, comorbidities, remission and the impact in subject psychosocial functioning. This instrument has been used in a wide variety of studies to systematically track subjects' symptom levels for specific psychiatric disorders, in order to learn more about the courses of these disorders or assess the efficacy of treatments. According to Warshaw et al. (1994), it is sufficiently rigorous to permit the identification of also psychiatric disorders relapse episodes. Studies using the LIFE have followed subjects for many years. This duration of follow-up provides a challenge to the ability to maintain consistency in assessing whether subjects meet criteria for disorders or not (Keller et al., 1987).

2.1.1 LIFE and A-LIFE administration

The LIFE, and so A-LIFE, is usually applied for a period of 6 months. However, it can be administered more frequently than every six months without any changes (Keller et al., 1987). Scientific considerations recommend that accuracy enhanced by shorter intervals and, therefore, more interviews per unit of follow-up time. However, resource constraints and limits to the patient's compliance with frequent contact counteract this

tendency, particularly in studies following up patients for several years (Keller et al., 1987).

The rater can prepare himself for the interview by previous PSRs and psychosocial ratings (in case of having access to this information). Approximately 45 to 60 minutes is spent with a patient but it can take longer, depending on the amount of preparation and formulation time required. Briefer interviews usually result from more frequent evaluations (Keller et al., 1987).

To assess symptom course, the interviewer starts by asking the subject what happened to him/her since the last interview. The course of subsequent pathology is then assessed by inquiring about "change points". The timing of those changes is established by relating them to other events, such as holidays, birthdays, or other events like these (e.g. "*Something happened last Christmas?*"). The patient's responses to the initial probe determine the subsequent probes so the interview has the structure of a decision tree, with branches determined by the responses (Keller et al., 1987). According to these authors (Keller et al., 1987), LIFE interviews should be administered by trained raters with experience in structured clinical interviews and criterion-based diagnostic systems.

2.1.2 Psychiatric Status Ratings (PSR's)

Symptom severity is tracked week by week using the 6-point A-LIFE PSR scale.

In all versions of LIFE, Psychiatric Status Ratings (PSRs) are separately assigned for each disorder being followed (Warshaw et al., 1994). PSR levels 1 and 2 mean wellness; PSR levels 3 and 4 mean that a subject is not well (meets partial but not full criteria, with the exception of panic, where PSR 4 signifies persistent fear); PSR levels 5 and 6 represent full DSM-IV criteria for the disorder.

For some of the secondary disorders (e.g., alcohol/drug abuse) the scale is condensed in 3 points (Keller et al., 1987).

3. Studies Review

Logitudinal studies of functional outcomes are being increasingly conducted (Greer, Kurian & Trivedi, 2010). The LIFE was originally used on this context, in NIMH (National Institute of Mental Health) Collaborative Depression Study (Keller et al., 1987). It is still difficult to find at literature studies using A-LIFE, finding more easily studies with the adult version (LIFE) and some variations of it that have been used successfully in a wide variety of naturalistic and clinical studies (Keller et al., 1987).

A study within the course and outcome of bipolar disorder in youth - COBY – Course and Outcome of Bipolar Youth (Goldstein et al. (2009), identified the A-LIFE interview as a useful measure of psychosocial functioning. This study comprised a sample of 446 children and adolescents, aged from 7 to 17 years-old, with bipolar disorder diagnose. Participants were interviewed using the rating scales of psychosocial functioning present

in A-LIFE (Goldstein et al., 2009). The results reveal the presence of mild to moderate invalidation in work (which includes school performance), interpersonal relations and global domains of the general functioning areas of youth with bipolar disorder. Children and adolescents who were in episode showed invalidation levels of psychosocial functioning higher than those who were in recovery (partial or total recovery) in all areas and demonstrated lower levels of life satisfaction. Still, children and adolescents who were in partial remission or recovery reported significant psychosocial functioning invalidation (Goldstein et al., 2009). The predictors of higher invalidation in psychosocial functioning were the presence of mood episodes, the severity of affective symptoms, psychotic symptoms and the presence of comorbidity with behavioral disorder (Goldstein et al., 2009).

In 2010, Gledhill carried out a study using A-LIFE, performed under general medicine consultation in northwest London, showing the relevance of follow-up studies. This study sample consisted in 274 adolescents, from 13 to 18 years-old, of which only 26 belonged to clinical population (with Depressive Disorder). Using a follow-up period of 6 months, this study aimed to examine the outcome of depressive disorder amongst adolescents who were depressed at the time of consultation. The hypothesis under study argued that: 1) most teenagers would be recovered six months after the consultation and 2) the existence of physical symptoms at the time of consultation would be a predictor of a persistent Depressive Disorder six months after the same consultation. A range of assessment tools was used, such as MFQ (Mood and Feelings Questionnaire), K-SADS (Schedule for Afective Disorders and Schizophrenia) applied as close as possible to the date of the index consultation to determine whether the adolescent had a depressive diagnosis (Gledhill, 2010) and CGAS (Children's Global Assessment Scale). The A-LIFE six months after intake to assess the course of symptoms evaluated by asking about shift points, anchored to significant events such as birthdays and testing. Symptom severity was assessed weekly with the A-LIFE measurement scale for assessing the psychiatric state (PSR).The results showed that after 6 months more than 50% of teenagers had not recovered and that a longer period of recovering was associated with higher levels of depressive symptoms (evaluated at the intake) and fewer positive life events. A higher recovery time was associated with early ages, more severe depressive symptoms and less positive life events reported, prior to the general practice consultation (Gledhill, 2010). There was a lack of significant differences regarding to age, family composition and socioeconomic status when comparing adolescents with depressive disorder with normal adolescents (Gledhill, 2010). They found that significantly more young people in the depressed group had missed over 10 days of school in the previous year (X^2 = 10.72, p= .001) and over half the depressed group had prior lifetime contact with a mental health professional, compared with other attendees (X^2 = 26.95, p= .001). Adolescents depressed at consultation shown significantly higher levels of mood symptoms and impairment from physical symptoms.

The Treatment of Resistant Depression in Adolescents (TORDIA) was a study designed to examine second-step interventions in adolescents with depression who had not responded to an initial selective serotonin reuptake inhibitor (SSRI) trial. The purpose of this study was to report on the outcome of participants in TORDIA after 24 weeks of treatment, including remission and relapse rates and predictors of treatment outcome (Emslie et al., 2010). Participants (N=334; age range from 12 to 18 years) were randomly assined to one of the following four treatments: 1. Switch to another SSRI ; 2. Switch to venlafaxine; 3. Switch to another SSRI plus Cognitive-Behavioral Therapy (CBT); or 4. Switch to venlafaxine plus CBT. All participants, regardless of treatment status, were evaluated by an independent evaluator who was blind to treatment assignment at weeks 0, 6, 12 and 24. Initial and week-12 diagnoses were based ond the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version (Kiddie-SADS-PL) criteria. At weeks 12 and 24, the independent evaluator also rated the week-by-week severity of depressive disorder for the previous 3-month period with the A-LIFE (Adolescent Longitudinal Interval Follow-Up Evaluation), using a 4-point scale (1 = not present; 2 = possible; 3 = probable; 4 = definite) (Emslie et al., 2010). In this sample of chronically depressed adolescents who had already failed to respond to an adequate trial of SSRI treatment, nearly 40% achieved remission after 6 months of randomly assigned treatment in the TORDIA study. These findings point to the importance of the early trajectory of treatment response in determining remission after 6 months. In adition to clinical severity they also found other clinical variables that predicted a failure to remit, namely family conflict, drug and alcohol use, and anxiety disorder (Emslie et al., 2010).

The first Portuguese study, to our knowledge, which investigated A-LIFE (specifically Psychosocial Functioning domain) was made with a sample composed by 25 adolescents taken from the general population and 26 adolescents clinically referred. Regarding to the clinical sample group Costa (2011) found a moderate correlation (r=.416) between depressive symptomatology (measured by CDI) and Psychosocial Functioning total score (measured by A-LIFE) and also a high correlation (r=.768) between CDI and Interpersonal relationships of Psychosocial Functioning. There were not detected significant associations between gender or age and Psychosocial Functioning.

II - Objectives

The main objective of the present study was to assess the evolution of psychopathology in adolescents from a clinical group, through a follow-up evaluation with the A-LIFE interview, with a minimum of 3 months and a maximum of 18 months (the majority of adolescents (n = 15) had a follow-up of 3 months, 5 had a follow-up of 6 months and 5 a follow-up of 5 months).The more specific objectives relate to:

A. To study some predictors of recovery. The majority of teenagers who meet criteria for a disorder assessed by K-SADS-PL in T1 should maintain the same diagnose at T2 (the end of follow-up period).

Hypothesis 1: It is anticipated that recovered individuals should be receiving psychotherapeutic intervention.

Hypothesis 2: Adolescents evaluated by the A-LIFE as partial or total recovered at the end of follow-up should obtain a significantly lower scores than those who have not recovered on self-report depressive and anxiety measures (CDI e MASC, respectively) applied at T_1.

Hypothesis 3: Adolescents who obtain higher scores on self-report depressive and anxiety measures (assessed by CDI and MASC, respectively) at T_1 show a higher level of symptoms severity (assessed by A-LIFE at T_2) than those who obtain lower scores on those measures.

B. To study if there were significant correlations between scores on self-report depressive and anxiety measures (CDI and MASC) applied at T_1 and the results obtained on the same measures at T_2.

C. To study the predictive power of the scores obtained on self or others report assessment questionnaires applied at T_1 correlating them with the diagnoses of A-LIFE at T_2.

Hypothesis 4: Major Depressive Disorder diagnoses assessed by A-LIFE should be more correlated with the self-report depressive symptomatology measure (CDI) and the Depression or Isolation subscales of CBCL rather than with MASC or CBCL Hiperactivity/attention subscale.

Hypothesis 5: Anxiety Disorders diagnoses assessed by A-LIFE should be more correlated with the self-report anxious measure (MASC) or the Anxiety subscale of CBCL than with CDI or CBCL Hyperactivity/attention subscale.

Hypothesis 6: ADHD diagnoses assessed by A-LIFE should be more correlated with CBCL Hiperactivity/attention subscale than with self-report depressive or anxiety symptomatology measures (CDI or MASC, respectively).

C. To study if there is an association between parents and children's psychopathology, comparing self report questionaires.

Hypothesis 7: There should be positive and significant correlations between the scores of the parental psichopathology measure (BSI), applied to parents or carers at T_1, and self-report depressive and anxious

symptomatology measures (CDI and MASC) applied also the intake.

Hypothesis 8: There should be positive and significant correlations between the scores obtained on parental psychopathology measure (BSI) applied to parents or carers at T_2, and self-report depressive and anxious symptomatology measures (CDI and MASC) also applied at T_2.

D. Check if there is a relationship between psychosocial functioning and demographic variables (namely, sex and age) and the severity of symptoms or recovery, assessed by A-LIFE, at T_2.

Hypothesis 9: There should be significant relations between psychosocial funcioning and gender or age of adolescents.

Hypothesis 10: There should be positive and significant correlations between psychosocial funcioning and the severity of symptoms.

Hypothesis 11: There should be positive and significant correlations between psychosocial funcioning and the recovery.

E. To study concurrent validity correlating A-LIFE diagnoses with self and others report assessment measures that evaluate the same constructs, at T_2

Hypothesis 12: There should be positive and significant correlations between the Major Depressive Disorder diagnoses and self and others report depression measures scores (CDI and Depression or Isolation subscales of CBCL).

Hypothesis 13: There should be positive and significant correlations between Anxiety Disorders diagnoses and self and others report anxiety measures scores (MASC and Anxiety subscale of CBCL).

Hypothesis 14: There should be positive and significant correlations between PHDA diagnoses and the total scores obtained at Hiperactivity/attention subscale of CBCL.

F. To study discriminant validity correlating A-LIFE diagnoses with self and others report measures that evaluate different constructs, at T_2.

Hypothesis 15: There should be weak correlations between Major Depressive Disorder diagnoses and self and others report anxiety measures scores (MASC and Anxiety subscale of CBCL) or the total scores obtained at Hiperactivity/attention subscale of CBCL.

Hypothesis 16: There should be weak correlations between Anxiety Disorders diagnoses and self and others report assessment depression measures scores (CDI and Depression subscale of CBCL) or Hiperactivity/attention subscale of CBCL.

Hypothesis 17: There should be weak correlations between PHDA diagnoses and self and others report depression measures (CDI and Depression subscale of CBCL) or self-report anxiety measures scores (MASC and Anxiety subscale of CBCL).

G. To study the degree of agreement between A-LIFE and clinical diagnoses, at T_2 (consensual validity)

Hypothesis 18: There should be significant correlations between A-LIFE and clinician diagnoses, at T_2.

III - Materials and methods

1. Subjects

In order to accomplish the above mentioned objectives, the present study followed a longitudinal design. The sample of this study was comprised by 25 adolescents, 8 males and 17 females, from 12 to 18 years-old. Of the 25 participants 17 were psychiatric outpatients, collected in a Psychiatric Hospital at the Adolescence Psychology Consultation[1] (three of them were institutionalized) and 8 were adolescents with a diagnosis made in schools at the intake that were not receiving psychotherapy. They presented a mean age of 15.48 (*SD* = 1.58) and of 9.44 (*SD* = 1.47) years of education (Table 1).

Table 1. Social and demographic characteristics among participants: sex, age and years of education (N=25)

	Males		**Females**		**Total**	
	n	**%**	**n**	**%**	**n**	**%**
Sex	8	32	17	68	25	100
Age						
13	2	25	1	5.9	3	12
14	2	25	3	17.6	5	20
15	0	0	4	23.5	4	16
16	2	25	4	23.5	6	24
17	1	12.5	3	17.6	4	16
18	1	12.5	2	11.8	3	12
Years of education						
7º	1	12.5	1	5.9	2	8
8º	3	37.5	2	11.8	5	20
9º	2	25	5	29.4	7	28
10º	1	12.5	4	23.5	5	20
11º	0	0	3	17.6	3	12
12º	1	12.5	2	11.8	3	12

[1] Whith the precious collaboration of Dra. Helena Godinho psychologist.

All adolescents of the sample were assessed by A-LIFE at T_2 (the end of follow-up). Diagnoses made at the intake (T_1) by K-SADS-PL were: Major Depressive Disorder (n = 5), Not Otherwise Specified (NOS) Anxiety Disorder (n = 5), Generalized Anxiety Disorder (n = 3), Obsessive-Compulsive Disorder (n = 1), Specific Phobia (n = 1), Panic Disorder (n = 1), Attention Deficit/Hiperactivity Disorder NOS (n = 4), Attention Deficit/Hiperactivity Disorder (n = 2) and Adjustment Disorder (n = 1). Only two adolescents had not K-SADS-PL diagnosis having here been considered clinician diagnoses: Social Phobia (n = 1) and Major Depressive Disorder (n = 1) (Table 2).

Table 2. Phsicopathologic characteristics among participant (N=25)

	T_1
Disorder	**n**
Anxiety Disorders	**12**
Anxiety Disorder NOS	5
Generalized Anxiety Disorder	3
Obsessive-Compulsive Disorder	1
Specific Phobia	1
Panic Disorder	1
Social Phobia	1
Major Depressive Disorder	**6**
Disruptive Disorders	**6**
Attention Deficit/Hiperactivity Disorder (ADHD)	2
Attention Deficit/Hiperactivity Disorder NOS	4
Perturbação de adaptação	**1**

Note. T_1 = intake; NOS = Not Otherwise Specified;

2. Measures

Adolescent - Longitudinal Interval Follow-up Evaluation (A-LIFE; Keller et al, 1993; Portuguese translation and adaptation by Matos & Costa, 2011).

The A-LIFE (Keller et al., 1993) was developed from the LIFE (Keller et al, 1987). The A-LIFE is a semi-structured interview and rating system for assessing the longitudinal course of psychiatric disorders in sufficient detail to enable researches to date individual episodes of any psychistric disorder and thus to provide the basis for precise calculation of time to recovery, lenght of ensuing wellness intervals, and time to subsequent relapse or recurrence. It is composed by an instruction booklet and a coding sheet. It is divided into 3 general sections, namely: Psychopathology, Psychosocial Functioning and General Severity of Disease (GSD). An interviewer uses A-LIFE to collect detailed psychopathologic, psychosocial and treatment information for a follow-up period.

The psychosocial information is recorded so that these data can be linked temporally to the Psychiatric Status Ratins – PSR (Described bellow at conceptual framework).

Children's Depression Inventory (CDI) (Kovacs, 1983; Portuguese version: Dias & Gonçalves, 1999)

This questionnaire is compoded by 27 items, assessing cognitive, emotional and behavioral depression in children and adolescents (ages 7 to 17 years).

CDI attempts to quantify a range of depressive symptoms, including: Negative Mood, Anhedonia (inability to experience pleasure), Negative Self-Esteem, Ineffectiveness and Interpersonal Problems. To answer each item, the child / adolescent has to choose the statement that best describes him/her in the last two weeks.

The answers are classified in ascending order of severity: 0 (no symptom), 1 (moderate symptom) and 2 (presence of symptom), with a total score (sum of all items) varying between 0 and 54 points. Thus, each item refers to characteristics symptoms of depressed, not depressed or moderately depressed subjects.

The Portuguese version shows high values of internal consistency, with a Cronbach coefficient of .80 and .84[2] (Dias & Gonçalves, 1999). In the present study this scale presents a very good internal consistency for its total in both the intake (Cronbach alpha of .919) and the end of the follow-up period (Cronbach alpha of .922).

Multidimensional Anxiety Scale for Children (MASC) (March, Parker, Sullivan, Stallings & Conners, 1997; Portuguese version: Matos et al. (in prep)

MASC assesses symptoms of anxiety in children and adolescents, aged from 8 to 19 years. It is a 39 items questionnaire, and each item is rated on a 4-point Likert scale ranging from 0 - "Never true about me"; 1 – "Rarely true about me"; 3 – "Sometimes true about me"; and 4 – "Often true about me". According to March et al. (1997) it is composed by four subscales: a) Physical symptoms (12 items), including the sub-subscales Tension / Impatience and Somatic Complaints; b) Avoidance of Danger (9 items) which includes the sub-subscales Perfectionism and Anticipatory Anxiety; c) Social Anxiety (with also 9 items), including the sub-subscales Humiliation Fear and Performance Fear, and d) Separation Anxiety (9 items). On the original version, the authors reported Cronbach's alphas ranging from .74 to .85 (Thaler, Kazemi & Wood, 2010). The Cronbach's alpha[2] of the

[2] We considered in the current study the internal consistency values for *Cronbach alfa* proposed by Pestana e Gageiro (2003): .60 is inadmissible, between .60 and .70 is weak, between .70 and .80 is reasonable, between .80 and .90 is good and between .90 and 1 is very good value.

Portuguese version was .89 (Matos et al., in prep). In the present study this scale presents a good internal consistency for its total in both the intake (Cronbach alpha of .889) and the end of the follow-up period (Cronbach alpha of .805).

Children Behaviour Checklist (CBCL) (Achenbach & Edelbrock, 1983; Portuguese version: Fonseca, Simões, Rebelo, Ferreira & Cardoso, 1994)

The CBCL is intended to describe and evaluate social skills and behavior problems of a child / adolescent, assessed by parents/carers. This questionnaire has two parts. The first one is related to the quantity and quality of the subject's involvement in various activities and social interaction situations (contituted by 20 questions). The second one is constituted by 120 questions based on internalizing and externalizing problems. Parents should indicate whether a certain characteristic behavior is or not applied to the child (for the last six months), using a 2-points Lickert scale ranging from 0 (not true true) to 2 (often true). On the Portuguese version (Fonseca, 1994), subscales found in this inventory were: Opposition / immaturity, Aggressiveness, Hyperactivity / attention, Depression, Social problems, Somatic complaints, Isolation, Anxiety and Obsessive / schizoid. The Cronbach's alpha of the Portuguese version revealed a great internal consistency (varying between .73 and .83) (Fonseca, 1994). In the present study we used Hyperactivity / attention, Depression, Isolation and Anxiety subscales. At the intake the Cronbach alpha values were: reasonable for Hyperactivity / attention (.749) and Depression (.765) and inadmissible for Isolation (.297) and Anxiety (.513). Relatively to the end of follow-up the Cronbach alpha values were reasonable for Depression (.746), inadmissible for Hyperactivity / attention (.555) and weak for Isolation and Anxiety (.680 and .603, respectively).

Brief Symptom Inventory (BSI) (Derogatis, 1993; Portuguese version: Canavarro, 1999)

BSI is a self-resport inventory consisting of 53 items, adressing nine dimensions: Somatization, Obsessions, Compulsions, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. In addition to these dimensions, psychopathological symptoms are also evaluated through three global indices (General Symptom Index - GSI, Total Positive Symptoms Index-TPS and Positive Symptom Index - PSI). These are short evaluations of emotional disorder and represent different aspects of psychopathology. The General Symptom Index (GSI) is the sum of all items scores and then divide for responses total number.Higher scores on GSI indicate higher levels of psychological distress. The answers are given on a Likert scale of five points, ranging from 0 - Never to 4 - Too often.

The psychometric studies conducted in the Portuguese version

(Canavarro, 1999) showed that this scale has adequate levels of internal consistency for the nine dimentions, with alpha values between .62 (Psychoticism) and .80 (Somatization) and test-retest coefficients between .63 (Paranoid ideation) and .81 (Depression) (Canavarro, 1999). In the present study we used the GSI scores, witch revealed a very good internal consistency for its total in both the intake (Cronbach alpha of .912) and the end of the follow-up period (Cronbach alpha of .940).

Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL) (Kaufman et al., 1997; Portuguese version: Matos et al., (in prep)

The Kiddie-SADS-PL was adapted by the K-SADS for Joan Kaufman, Boris Birmaher, David Brent, Uma Rao and Neal Ryan in 1996 (Marques, 2011). It is a semi-structured diagnostic interview useful for the past and present evaluation of psychopathology in children and adolescents from 6 to 18 years-old (Ulloa et al., 2006). It consists of a screening interview, and in addition five supplements, which are completed for problem areas discovered during the screening (Sørensen et al., 2007). This interview evaluates 32 psychiatric diagnoses according to DSM-IV-R, searching for a total of 82 symptoms (Kaufman et. al, 1997). The main diagnoses assessed with the K-SADS-PL include: Mood Disorders, Schizophrenia and other Psychotic Disorders, Anxiety Disorders, Eating Disorders, Attention Deficit and Disruptive Behavior Disorders, Elimination Disorders, Tic Disorders and Alcohol and Substance abuse (Marques, 2011). According to Sørensen et al. (2007), the K-SADS duration is 60-90 min for both, parent and child interviews.

Several investigations already undertaken to assess the validity and reliability of this interview have revealed good psychometric properties (Ghanizade et al., 2006). In a study of the interview author the inter-rater agreement was 100% for almost diagnoses (Kaufman et al., 1997). In terms of validity, it was concluded that this interview had good concurrent validity (Kaufman et al., 1997).

3. Procedures

This research protocol was reviewed and approved by the Ethics Committee of the educational institutions enrolled in the study (schools and psychiatric hospital). Prior to beginning the survey, all participants and their parents (as the subjects were minor) gave their informed consent and were fully informed about voluntary character of their collaboration, confidentiality of the data, as well as the aims and procedures of the study.

The questionnaires described above (CDI and MASC) were administered by the authors and completed by participants in classroom context (to 8 adolescents) or after consulting (to 17 adolescents) in a cabinet waived for this purpose. Those that were destined to parents or carers (CBCL and BSI) were given them the possibility to complete them at home and deliver later. This procedure was done in both beginning and ending of

the follow-up period (T_1 and T_2, respectively).

At the Intake the interview Kiddie-SADS-PL was administered to all participants, except two. Of the 25 participants, 8 have diagnose made by the Kiddie-SADS-PL interview (adolescents with a diagnostic made at schools at the intake that were not having psychotherapy) and 15 have a diagnosis made by the same interview and a diagnosis made by the therapist too adolescents of the consult of psychology of adolescents of the Psychiatric Coimbra Hospital. Two have only the clinical diagnosis (individuals who were not possible to apply the interview because there were no conditions to, or on the right timming). In a second time, in a 3 (N=15), 6 (N=5) or 18 months (N=5) follow-up period, it was administered the A-LIFE interview.

It was given to the investigators the clinical diagnostic of adolescents, corresponding to the intake (T_1) and T_2 (the end of follow-up time), after applying the both interviews.

Data analyses were performed using IBM SPSS Statistics 20.

4. Results

1. Study of the course of psychopathology at follow-up and its predictors

Of the twenty five participants four had recovered. According to some authors (e.g., Birmaher et al., 2006 & Keller et al., 1987), we considered recovery as a period of at least eight weeks at PSR 1 (No symptoms) or 2 (Residual). We also found that ten individuals remitted (symptom severity level decreased is required for a remission). In this work we refer remission as decreasing symptom severity level (PSR<5) but not remaining at PSR1 or 2, during at least eight weeks. The eleven adolescents that did not recovered or remitted are those who maintained the same disorder diagnosed at the intake (T_1) during the follow-up period (3, 6 or 18 months) in other words, did not decrease the severity of symptoms (remained at PSR 5, at least). Among the eleven adolescents that did not achieved remission or recovery, six were part of the group collected in the psychiatric hospital (all receiving psychotherapy and only one was receiving psychotherapy plus medication). Of the remaining five adolescents (of the group diagnosed in school context) three were receiving medication only and two were not receiving any kind of treatment.

The four adolescents who achieved recovery had an Attention Deficit/ Hiperactivity Disorder No Otherwise Specified (NOS) (n=2) or an Anxiety Disorder NOS (n=2) diagnosed by Kiddie-SADS-PL interview at the intake. These adolescents were receiving psychotherapy in a hospital and none of them were receiving or had received medication in the past.

Of the ten adolescents who remitted seven were part of the group collected in the psychiatric hospital (all receiving only psychotherapy). The remaining three were part of the group diagnosed in school context (none of them were receiving psychotherapy but one was receiving medication). Six

of these ten adolescents had a PSR of 2 (Residual) for the following disorders: two Attention Deficit/ Hiperactivity Disorders (ADHD), Major Depressive Disorder, Anxiety Disorder NOS and two Generalized Anxiety Disorders. Three of these adolescents were in a PSR3 (Partial Remission) of a Major Depressive Disorder and only one was in a PSR4 (Marked) of Anxiety Disorder NOS.

1.1 Diagnoses changes from the Intake (T_1) to the end of the follow-up period (T_2)

Considering that the majority of adolescents had an initial evaluation made by the Kiddie-SADS-PL interview at T_1, (n=23) we considered it to this analysis (except in two cases we considered the clinician diagnosis), in order to check if there were diagnostic changes from the intake (T_1) to the end of follow-up (T_2), considering A-LIFE results.

As aforesaid, four adolescents became symptom free. There were also two diagnostic changes from T_1 to T_2 in Anxiety Disorders (one adolescente with a Generalized Anxiety Disorder at T_1 went on to have a Specific Phobia at T_2 and other with a Panic Disorder at T_1 went on to have a Generalized Anxiety Disorder at T_2). There were also two changes in the type of disorder: the Adjustment Disorder diagnosed at T_1 went on to a Anxiety Disorder (Anxiety Disorder NOS) at T_2 and one Anxiety Disorder (Specific Phobia) at T_1 went on to a Humor Disorder (Major Depressive Disorder) at T_2. In most cases it is noted that the diagnoses are maintained from T_1 to T_2 (Table 3).

Table 3. Diagnoses changes from the Intake (T_1) to the end of the follow-up period (T_2) (N=25)

T_1		**T_2**	
Diagnosis	**n**	**Diagnosis**	**n**
Anxiety Disorder	**12**	**Anxiety Disorder**	**11**
Anxiety Disorder NOS		Anxiety Disorder	
Generalized Anxiety	5	NOS Generalized	5
Disorder		Anxiety Disorder	
Obssessive-	3	Obssessive-	3
Compulsive Disorder	1	Compulsive	1
Specific Phobia	1	Disorder	1
Panic Disorder	1	Specific Phobia	0
Social Phobia	1	Panic Disorder	1
		Social Phobia	
Major Depressive Disorder	**6**	**Major Depressive Disorder**	**7**
Disruptive Disorders	**6**	**Disruptive**	**4**
PHDA		**Disorders**	
PHDA SOE	2	PHDA	2
	4	PHDA SOE	2
Adjustment Disorder	**1**		**0**

1.2 Depressive and anxious symptomathology: relation between intake and follow-up evaluation

There were strong and significant correlations[3] between CDI (self-report depressive symptomatology measure) applied at T_1 and T_2. For the relation between CDI applied at T_1 and the self-report anxiety measure (MASC) applied at T_2, no significant correlations were found (Table 4).

Table 4. CDI T_1 as a predictor of CDI T_2 and CDI T_1 as a predictor of MASC T_2 (previous depressive symptomatology as a predictor of subsequent anxious symptomatology). Spearman correlations. (N=19)

	CDI T_1	
	rho	***p***
CDI T_2	.805	.000***
MASC T_2	.276	.253

Note. CDI= Children's Depression Inventory ; MASC = Multidimensional Anxiety Scale for Children; T_1 = Intake; T_2 = The end of follow-up
p<.001***

There were no significant correlations between the self-report anxiety measure (MASC) applied at T_1 and CDI (self-report depressive measure) applied at T_2 nor MASC applied at T_1 and MASC applied at T_2 (Table 5).

Table 5. MASC T_1 as a predictor of CDI T_2 (previous anxious symptomatology as a predictor of subsequent depressive symptomatology) and MASC T_1 as a predictor of MASC T_2 (previous anxious symptomatology as a predictor of subsequent anxious symptomatology) (N=19)

	CDI T_1	
	rho	***p***
CDI T_2	.367	.122
MASC T_2	.408	.083

Note.CDI= Children's Depression Inventory ; MASC = Multidimensional Anxiety Scale for Children; T_1 = Intake; T_2 = The end of follow-up

1.3 Previous depressive and anxious symptomathology as recovery predictors[4]

Using the Mann-Whitney test, it was found that there were significant differences (U = 20; Z = -2.328, p = .020) between adolescents who did and did not achieve recovery or remission regarding to the total score of CDI applied at intake. It is possible to conclude that recovered adolescents obtained a lower score on CDI than those who have not recovered (Table 6).

[3] In assessing the magnitude of correlations were considered the values proposed by Pestana e Gageiro (2003), suggesting a .20 (or less) correlation value as a very low correlation, between .21 and .39 a low correlation, between .40 and .69 a moderate correlation, between .70 and .89 a high correlation, and more than .90 a very high correlation.

[4] In order to have enough subjects to perform the analyses we que considered the sample of recovered and remitted patiens.

Table 6. Means, Standard deviation and U-Mann-Whitney test to study relations between recovered/not recovered adolescents relatively to previous depressive symptomatology (N=21)

		Recovery/Remission	
		Yes (n=13)	**No (n=8)**
CDI Total U = 20; Z = -2.328, *p* = .020*	**M (SD)**	11.15 (8.79)	19.75 (7.40)

Note. CDI = Children's Depression Inventory

*p<.05

Using the Mann-Whitney test, it was found that there were significant differences (U = 34; Z = -1.269, *p* = .250) between adolescents who did and did not achieve recovery or remission There were no significant differences (U = 34.500; Z = -1.269, *p* =.205) between adolescents who did and did not achieve recovery or remission regarding MASC scores (applied at the intake) (Table 7).

Table 7. Means, Standard deviation and U-Mann-Whitney test to study relations between recovered/not recovered adolescents relatively to previous anxious symptomatology (N=21)

		Recovery/Remission	
		Yes (n=13)	**No (n=8)**
MASC Total U = 34.500; Z = -1.269, *p* = .250	**M (SD)**	1.23 (.45)	1.45 (.38)

Note. MASC = Multidimensional Anxiety Scale for Children

1.4 Previous depressive and anxious symptoms as predictors of symptoms severity[5] at the follow-up (T_2)

Using the Kruskal Wallis test, it was found that there were significant associations (X^2 = 6.396; *p* =.041) in CDI (applied at the intake) total score and the symptoms severity of the T_2 observed disorders. This self-report depressive symptomatology measure seems to be a good predictor of the symptoms severity (Table 8).

[5] The three symptom groups (Symptom-free, Subsyndromic and With didorder) represent states of illness activity and constitute a continuum of severity. Symptom-free corresponds to a severity level of 1 (PSR 1), Subsyndromic corresponds to a severity level of 2, 3 or 4 (PSR 2, 3 or 4) and With disorder corresponds to a severity level of 5 or 6 (PSR 5 or 6).

Table 8. Kruskal Wallis test to study the association betweenthe CDI total score (depressive symptoms self-measurement) evaluated at T_1 and the symptoms severity at T_2 (N = 21)

		Symptoms severity		
		Symptom-free (n=4)	**Subsyndromic (n=9)**	**With Disorder (n=8)**
CDI Total $X^2 = 6.396$; $p = .041$*	**M (SD)**	8.00 (7.44)	12.55 (9.38) (n=9)	19.75 (7.40)

p<.05*

Using the Kruskal Wallis non parametric test, it was found that there were no significant differences ($X^2 = 1.855$; $p = .395$) concerning to MASC (applied at the intake) total score (Table 9).

Table 9. Kruskal Wallis test to study the association betweenthe MASC total score (anxious symptoms self-measurement) evaluated at T_1 and the symptoms severity at T_2 (N = 21)

		Symptoms severity		
		Symptom-free (n=4)	**Subsyndromic (n=9)**	**With Disorder (n=8)**
MASC Total $X^2 = 1.855$; $p = .395$	**M (SD)**	1.10 (.48)	1.29 (.45)	1.45 (.38)

1.5 Previous psychopathological symptoms as predictors of A-LIFE diagnoses at the follow-up (T_2)

We studied the predictive value of the assessments made by questionnaires at the intake (T_1) relatively to A-LIFE diagnoses made at T_2.

As we have mentioned, the follow-up period was of 3 months for fifteen adolescents, 6 months for five and 18 months for the remaining five.

Depressive symptomathology measures

There were not found significant correlations between Major Depressive Disorder and the depressive symptomatology measures (CDI and CBCL Isolation and Depression subscales) (Table 10).

Table 10. Correlations between Major Depressive Disorder and the scores obtained at depressive symptomatology measures (CDI and CBCL Depression and Isolation subscales)

	Major Depressive Disorder		
	rho	***p***	**n**
CDI	.373	.096	21
CBCL			
Depression	.345	.136	20
Isolation	.337	.146	20

Note. CDI= Children's Depression Inventory; CBCL = Child Behavior Checklist

Anxious symptomatology measures

There were no significant correlations between Anxiety Disorders and MASC (self- report anxiety measure) or the CBCL Anxiety subscale (Table 11)

Table 11. Correlations between Anxiety Disorders and anxious symptomatology measures (MASC and CBCL Anxiety subscale)

	Anxiety Disorders		
	rho	***p***	**n**
MASC	.190	.408	21
CBCL Anxiety	-.166	.485	20

Note. MASC = Multidimensional Anxiety Scale for Children; CBCL = *Child Behavior Checklist*

Hiperactivity/attention measures

There were not found significant correlations between Attention Deficit/Hiperactivity Disorder (ADHD) and CBCL Hiperactivity/attention subscale. It is noteworthy the practically null relation between these two variables (Table 12).

Table 12. Correlations between ADHD and CBCL Hiperactivity/attention subscale scores (N=20)

	ADHD	
	rho	***p***
CBCL Hiperactivity/attention	.020	.933

Note.CBCL = Child Behavior Checklist

1.6. Relationship between parental and children psychopathology

There were no significant correlations between the parental psychopathology measure (BSI) and the scores obtained at self- report depressive or anxious symptomatology measures (CDI or MASC, respetively) at the intake (Table 13).

Table 13. Correlations between the parental psychopathology measure (BSI) and the self-assessment depressive or anxious symptomatology measures (CDI and MASC, respectively), aplplied at T_1 (N=20)

	BSI T_1 (GSI)	
	rho	***p***
CDI T_1	.060	.803
MASC T_1	-.069	.774

Note. CDI= Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children ;T_1 = Intake; T_2 = The end of follow-up; GSI = General Symptoms Index

There were not found significant correlations between the scores obtained in the depressive sympotomatology measure (CDI) and the parental psycopathology measure (BSI), at T_2. On the other hand, there were found moderate and statistically significant correlations between MASC (self-report anxiety measure) and BSI (Table 14).

Table 14. Correlations between the parental psychopathology measure (BSI) and the self-assessment depressive and anxious symptomatology measures (CDI and MASC, respectively), applied atT_2 (N=21)

	BSI T_2 (GSI)	
	rho	***p***
CDI T_2	.302	.183
MASC T_2	.439	.047*

Note. CDI= Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; T_1 = intake; T_2 = the end of follow-up; GSI = General Symptoms Index
p<.05*

There were no significant correlations between the parental psychopathology measure (BSI) applied at the end of follow-up and the scores obtained at self-report depressive or anxious symptomatology measures (CDI or MASC, respectively) at the intake (Table 15)

Table 15. Correlations between the parental psychopathology measure (BSI) applied atT_1 and the self-assessment depressive and anxious symptomatology measures (CDI and MASC, respectively), applied atT_1 (N=21)

	BSI T_2 (GSI)	
	rho	***p***
CDI T_2	.270	.264
MASC T_2	.279	.247

Note. CDI= Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; T_1 = intake; T_2 = the end of follow-up; GSI = General Symptoms Index

2. Psychosocial Functioning Study

For the study of the A-LIFE Psychosocial Functioning Schedule we examined the four following domains: School performance, Interpersonal relations with relatives, Interpersonal relations with friends and Recreational activities. Ratings reflect the patient's functioning during the worst week of the preceding month. The total instrument score is the sum of the impairment scores in each four domains and ranges from 4 to 21.

It was found the majority of the adolescents showed a 3 level (moderate) of psychosocial functioning (n = 15), followed by level 2 - good (n = 9) and only one showed a poor psychosocial functioning (level 4). None of the adolescents was found to have a very good or very poor psychosocial functioning.

2.1 Psychosocial Functioning and gender

Using Mann-Whitney test, there were not found significant relations between gender (females or males) and the Psychosocial Functioning. It is so possible to conclude that psychosocial functioning does not vary by gender (Table 16).

Table 16. Relations between Psychosocial functioning scores and gender. Mann-Whitney test (N=25)

	Gender			
	Females		Males	
	M	SD	M	SD
Psychosocial Functioning (total) U = 58.500; Z = -.556, *p* = .578	9.18	1.87	8.74	2.07
School performance U = 48.000; Z = -1.364, *p* = .173	2.12	.49	2.63	1.06
Relationships with relatives U = 54.000; Z = -.864, *p* = .388	3.29	1.11	3.00	1.31
Relationships with friends U = 62.000; Z = -.381, *p* = .703	1.88	.99	1.88	.64
Recreational activities U = 49.000; Z = -1.130, *p* = .259	3.18	1.38	2.50	1.42

2.2 Psychosocial Functioning and age

There were no significant correlations between age (considered as a continuous variable) and the Psychosocial Functioning. We can conclude that psychosocial functioning does not vary with age (Table 17).

Table 17. Relation between Psychosocial Functioning scores and age of the evaluated adolescents. Speraman Correlations (N=25)

	Age	
	rho	*p*
Psychosocial Functioning (total)	.290	.159
School performance	.134	.523
Relationships with relatives	.110	.600
Relationships with friends	.184	.379
Recreational activities	.372	.067

At Table 18 are presented descriptive data concerning adolescents' age and psychosocial functioning.

Table 18. Psychosocial Functioning descriptive data regarding to age (N=25)

	Age											
	13 (n = 3)		14 (n = 5)		15 (n = 4)		16 (n = 6)		17 (n = 4)		18 (n = 3)	
	M	DP	M	DP	M	DP	M	DP	M	DP	M	DP
Psychosocial Functioning (total)	7.38	1.41	9.64	1.67	8.18	1.16	9.12	2.42	9.30	1.80	10.33	2.31
School performance	2.33	.58	2.80	.84	1.75	.50	2.17	.41	2.00	.82	2.67	1.16
Relationships with family	3.33	1.53	3.40	1.14	2.50	.58	3.50	1.23	4.00	1.16	2.00	.00
Relationships with friends	2.00	1.00	2.00	1.23	2.00	.82	1.83	.41	2.00	1.42	1.33	.58
Recreational activities	1.67	.58	2.80	1.30	3.00	.816	3.17	1.84	2.75	1.70	4.33	.58

2.3 Psychosocial Functioning and recovery

There were found no significant assossiations between recovery and the total score of Psychosocial Functioning or its domains (Table 19).

Table 19. Correlations between Recovery and Psychosocial Functioning scores (N=25)

	Recovery/Remission			
	Yes		No	
	M	SD	M	SD
Psychosocial Functioning (total) U = 57.000; Z = -1.100, *p* = .272	8.61	1.25	9.58	2.48
School performance U = 66.500; Z = -.673, *p* = .501	2.30	.63	2.18	.87
Relationships with relatives U = 73.500; Z = -.203, *p* = .839	3.29	1.27	3.09	1.04
Relationships with friends U = 56.000; Z = -1.252, *p* = .211	1.64	.63	2.18	1.08
Recreational activities U = 64.500; Z = -.699, *p* = .485	2.79	1.31	3.18	1.54

2.4 Psychosocial functioning and Symptoms severity

Using the Kruskal Wallis test, we found no significant assossiations between Psychosocial functioning scores and the severity of symptoms. We can conclude that the severity of symptoms o does not vary with psychosocial functioning (Table 20)

Table 20. Psychosocial functioning scores and symptoms severity.Kruskal-Wallis test.

	Symptoms severity							
	Symptom-free		Subsyndromic		With disorder		X^2	*p*
	M	DP	M	DP	M	DP		
Psychosocial Functioning (total)	7.73	.97	8.96	1.21	9.58	2.48	2.732	.255
School performance	2.25	.50	2.40	.70	2.18	.87	.508	.776
Relationships with family	2.25	.50	3.70	1.25	3.09	1.04	4.945	.084
Relationships with friends	1.50	.57	1.70	.68	2.18	1.08	1.759	.415
Recreational activities	2.75	1.50	2.80	1.32	3.18	1.54	.489	.783

3. Study of some psychometric A-LIFE characteristics

3.1Concurrent validity

In order to evaluate the concurrent validity at T_2 (the end of the follow-up period) we calculated Spearman's Correlations between the presence/absence of a diagnostic (assessed by A-LIFE) and the scores obtained in questionnaires that evaluate relevant symptomatology for these diagnoses.

Due to the reduced extent of the sample in more specific Anxiety Disorders diagnoses, we choose to analyse data for Anxiety Disorders in general, Major Depressive Disorders and ADHD.

3.1.1Major Depressive Disorder

There were no significant correlations between Major Depressive Disorders and the depressive symptomatology measures CDI (total score) and CBCL Depression and Isolation subscales (Table 21).

Table 21. Correlations between Major Depressive Disorders and the scores obtained at CDI and CBCL Depression and Isolation subscales

	Major Depressive Disorder		
	rho	***p***	**n**
CDI (Total score)	.366	.93	22
CBCL			
Depression	.359	.502	20
Isolation	.380	.098	

Note. CDI= Children's Depression Inventory; CBCL = Child Behavior Checklist

3.1.2 Anxiety Disorders

There were not found significant correlations between Anxiety Disorders and the anxious symptomatology measures MASC (total score) and CBCL Anxiety subscale (Table 22)

Table 22. Correlations between Anxiety Disorders and MASC or CBCL Anxiety subscale scores

	Anxiety Disorders		
	rho	***p***	**n**
MASC (Total score)	.282	.203	22
CBCL			
Anxiety subscale	.101	.670	20

Note. MASC = Multidimensional Anxiety Scale for Children; CBCL = *Child Behavior Checklist;*

3.1.3 Attention Deficit/Hiperactivity Disorder (ADHD)

The correlations between the Hiperactivity/atention subscale of CBCL were almost null and did not showed statistic significance (rho=.040, p=.866).

3.2 Discriminant validity

In order to evaluate discriminant validity we calculated Spearman's correlations between the presence/absence of a diagnostic and symptomatology not directely related with this diagnostic.

3.2.1 Major Depressive Disorder

a) Major Depressive Disorder and anxious symptomatology

There were not found significant correlations between Major Depressive Disorders and MASC total score. Concerning to the correlation between Major Depressive Disorder and Anxiety CBCL subscale there were no statistic significance, however it is important to notice that these two variables were negatively correlated (Table 23).

Table 23. Correlations between Major Depressive Disorder and anxious symptomatology measures (MASC and CBCL Anxiety subscale)

	Major Depressive Disorder		
	rho	***p***	**n**
MASC Total score	.324	.141	22
CBCL Anxiety subscale	-.086	.718	20

Note. MASC = Multidimensional Anxiety Scale for Children; CBCL = Child Behavior Checklist

b) Major Depressive Disorder and Attention problems/Hiperactivity

There were no significant correlations between Major Depressive Disorder and CBCL Hiperactivity/attention subscale score (Table 24).

Table 24. Correlations between Major Depressive Disorder and the attention problems/hiperactivity measure (CBCL Hiperactivity/attention subscale)

	Major Depressive Disorder	***p***	**n**
CBCL Hiperactivity/attention	.037	.877	20

Note. CBCL = Child Behavior Checklist

3.2.2 Anxiety Disorders

a) Anxiety disorders and depressive symptomatology

There were not found significant correlations between Anxiety Disorders and the scores obtained in depressive symptomatology measures (CDI and CBCL Depression subscale) (Table 25).

Table 25. Correlations between Anxiety Disorders and CDI or CBCL Depression subscale

	Anxiety Disorders		
	rho	***p***	**n**
CDI Total score	.111	.621	22
CBCL Depression subscale	.162	.495	20

Note. CDI= Children's Depression Inventory; CBCL = Child Behavior Checklist

a) Anxiety Disorders and Attention problems/Hiperactivity

There were no significant correlations between Anxiety Disorders and CBCL Hiperactivity/attention subscale (Table 26).

Table 26. Correlations between Anxiety Disorders and CBCL Hiperactivity/attention subscale score (N=20)

	Anxiety Disorders	
	rho	***p***
CBCL Hiperactivity/attention subscale	-.081	.734

Note. CBCL = Child Behavior Checklist

3.2.3 Attention Deficit and Hiperactivity Disorder (ADHD)

a) ADHD and depressive symptomatology

There were not found significant correlations between ADHD and the scores obtained in CDI or CBCL Depression subscale (Table 27).

Table 27. Correlations between ADHD and CDI or CBCL Depression subscale scores

	ADHD		
	rho	***p***	**n**
CDI Total score	-.038	.868	22
CBCL Depression subscale	-.342	.140	20

Nota. CDI= Children's Depression Inventory; CBCL = Child Behavior Checklist

b) ADHD and anxious symptomatology

There were no significant correlations between ADHD and the scores obtained in MASC or CBCL Anxiety subscale (Table 28).

Table 28. Correlations between ADHD and MASC or CBCL Anxiety subscale scores

	ADHD		
	rho	***p***	**n**
MASC Total score	.075	.741	22
CBCL Anxiety subscale	-.262	.265	20

Nota. MASC = Multidimensional Anxiety Scale for Children; CBCL = Child Behavior Checklist

3.3 Consensual validity

For this analysis we considered only patients with diagnoses made by A-LIFE and made by clinician (n=17), excluding those adolescents who had not a diagnosis attributed by the clinician (n=8).

There was a moderate kappa[6] value for Anxiety Disorders. Kappa value for Major Depressive Disorder was weak and for ADHD the kappa value was good. It was found that the degree of concordance between the diagnoses made by A-LIFE and made by the clinician were statistically significant to ADHD and also to Anxiety Disorders. Kappa value was weak but showed statistic significance to the adolescents who had no diagnostic (Table 29).

[6] We used Landis & Koch (1997) criteria to interpret kappa coefficients (excelent: kappa > .75; good: kappa = .59 a .75; moderate: kappa = .40 a .58; weak: kappa = < .40).

Table 29. Kappa coeficients of the consensual validity (N = 17)

Disorders	n A-LIFE diagnoses	n Clinician diagnoses	k	*p*
Anxiety Disorders	4	9	.430	.031*
Major Depressive Disorder	1	1	.044	.707
ADHD	1	2	.638	.005**
No disorder	11	5	.370	.049*

Nota.ADHD = Attention Defficit/Hiperactivity Disorder; n A-LIFE = number of diagnoses made by A-LIFE; n Clinician = number of cases diagnosed by the clinician.

V – Discussion

Present research aims to assess the course of psychological status, psychosocial functioning and some pshycometric characteristics of the A-LIFE interview, following a longitudinal design.

In 2001, Warshaw et al. emphasized the importance of follow-up measures (as A-LIFE) in order to learn more about the course of psychiatric disorders, many of which are chronic or have episodes lasting for several years. In our study it was shown that this interview allows to make a detailed evaluation of the course of psychopathology (specifically the severity of symptoms in the follow-up period), to know the possible predictors of these symptoms, and which variables could be related with recovery or remission of a disorder. In addition to these aspects related to psychopathology, with the present interview we could study significant variables related to the adolescents' functioning (namely, interpersonal significant relathionships, school performance and recreational activities). According to our findings A-LIFE revealed to be an important and usefull assessment instrument.

1. Study of the course of psychopathology at follow-up and its predictors

It was found that only four of the twenty five adolescents achieved recovery and ten remitted symptomatology. These results seem to be in agreement with those obtained by Gledhill (2010) in a study with adolescents with a depressive disorder. This study revealed that after six months more than half of teenagers failed to achieve recovery. In 2010, also in a study with depressive adolescents, Emslie et al. found that only nearly 40% of them achieved remission after six months of treatment (with psychotherapy and/or medication). In our study the majority of the sample was receiving only psychotherapy (n=16). Seven of them were remittied (43.75%), four had recovered (25%), and five had not remitted or recovered (31.25%).

As expected in the presented hypothesis, the majority of teenagers who meet criteria for a disorder at the intake (excluding those who have recovered) maintained the same diagnosis (or kind of disorder) at the end of the follow-up period. The adolescents evaluated by the A-LIFE as recovered or remitted obtained significant lower scores in CDI (self-report depressive

symptoms measure) than those who have not recovered.These results are in line with Emslie et al. (2010) findings according to which depressed adolescents who did not remit showed a much higher rate of depressive symptoms compared to those who had remitted.

We found that adolescents who obtained higher scores in the self-report depressive measure (CDI) at the intake showed significant higher depressive symptoms severity in the end of follow-up period than those who obtained lower scores at the intake on the same measure. Regarding to previous anxiety symptoms, they did not reveal to be predictive of subsequent anxiety symptoms neither previous depressive symptomatology revealed to be predictor of subsequent depressive symptomatology, which is inconsistent with previous findings. According to Costello, Foley & Angold (2006) adolescents with depression are six to twelve times more likely to have anxiety than adolescents who are not depressed. Family and twin studies suggest that anxiety and depression share inherited responsibility, but anxiety in childhood tends to precede later depression during adolescence (Thapar & Rice 2006). However, we believe that our results may be explained because of the reduced sample extent.

There were not found significant relations between the evaluations made by self-report measures applied at the intake and disorders diagnosed by A-LIFE at the end of follow-up. There were no significant correlations between depressive symptoms measures (CDI and CBCL Depression subscale) and Major Depressive Disorder diagnoses, between anxiety symptoms measures (MASC and CBCL Anxiety subscale) and Anxiety Disorder or between attention problems/hiperactivity measure (CBCL Attention problems/hiperactivity subscale) and ADHD, contrary to what was expected. It is important to note that the CBCL Anxiety subscale showed a negative correlation with Anxiety Disorders. Although this result was not statistically significant, it suggests that the evaluations parents do in what concerns to their children's psychopathologic symptoms is not congruent to what children report about themselves.

Regarding to the parents' psychopathology self-reported measure (BSI) applied at the intake, there were not found significant correlations between the scores obtained in the mentioned measure and the depressive or anxious symptomatology measures (CDI or MASC, respectively). At T_2 there was found a moderate significant and positive correlation between BSI and MASC which is in line with recent studies showing that there is an association between parent and childrens' psycopathology. According to Kovacs, Devlin, Pollock, Richards & Mukerji (1997) children and adolescents of depressed parents have a higher rate of depression and also a higher risk for comorbid disorders such as anxiety, substance use disorders, and conduct disorder (Kovacs, 1997; De Graaf, Bijl, Smit, Vollebergh, Spijker, 2002). In 2011, Kakow et al. found that higher levels of parental depressive symptoms are related to higher levels of parental guilt induction and higher levels of parental guilt induction are associated with more child

internalizing problems. Thus, we can conclude that higher levels of parental depressive symptoms are associated with more child internalizing problems.

2. Psychosocial Functioning Study

Studies using A-LIFE did not find statistically significant differences between gender in what concerns to the total score of psychosocial functioning (Goldstein et al., 2009; Gledhill, 2010). The present study appears to be in line with these previous studies, showing no significant correlations between pychosocial functioning global score and gender. The same was noticed for all evaluated psychosocial functioning domains.

Regarding to age, our results seems to be consistent with Costa (2011) findings: they not revealed significant correlations between age and psychosocial functioning.

In our study there were not found significant associations between psychosocial functioning and symptoms severity or recovery. These results appear to be in disagreement with what has been reported in literature. According to Giaconia, Reinherz, Paradis, Hauf & Stashwick (2001) psychosocial impairment has been linked to adolescent depression. In 2009, Goldstein et al. showed that adolescents who were in an episode of a disorder revealed higher invalidation levels of psychosocial functioning than those who were in partial remission or recovery.

3: Study of some psychometric A-LIFE characteristics

To the best of our knowledge, so far no investigation was ever made in order to investigate the A-LIFE validity and reliability. A psychometric study of its original version (LIFE - for adults) showed good psychometric characteristics. Excellent reliability was achieved in PSRs for the major episodic affective illnesses, with an intraclass correlation coefficient of at least .90 for each item. The psychosocial items had also showed a high reliability (Keller, 1987).

In our study there were not found significant results in concurrent and discriminant validity so the validity of this interview can not be confirmed. We believe that these results may be due to the small dimention of the sample.

However, although without statistical significance, there were found some expected results: CDI (depressive symptomatology self-report measure) showed higher correlations with Major Depressive Disorder than with Anxiety Disorders or ADHD. On the other hand, the anxiety self-report measure (MASC) showed higher correlations with Major Depressive Disorder than with Anxiety disorders, contrary to what was expected. These can be explained by the fact that the majority of Anxiety disorders in our sample are NOS (No Otherwise Specified) which can be characterized by mixed symptoms of anxiety and depression (APA, 2002). Furthermore some

authors enphazised that there is considerable depression co-morbidity with other disorders, particularly anxiety (Reynolds, 1995; Essau, 2008; Verduyn et al., 2009) and conduct disorders (Verduyn et al., 2009).

Correlations obtained showed that there is no agreement between the evaluations made by the A-LIFE and evaluations parents or carers do about the adolescents' symptoms. Children Behavior Checklist (CBCL) evaluates the perception that parents/carers have about adolescents problems. Relatively to the disorders evaluated in the current research, there were no significant correlations with the parents/carers answers reflecting the poor perception that they reveal about adolescents' difficulties. These are interesting data once, as mentioned, Depressive Disorders that have a high prevalence in childhood and adolescence go often unnoticed and untreated (Schraml et al., 2011)**.**

Regarding the consensaul validity, it was found an agreement, statistically significant, between the A-LIFE's and the clinicians' evaluation at T2, only for ADHD and Anxiety Disorders diagnoses. The small sample dimension and also the fact that there were few individuals in each disturbance can have influenced these results, so they need to be confirmed. It is also important to note that the clinician has done more diagnoses than A-LIFE. The clinician found five adolescents with no diagnosis, whereas A-LIFE found eleven adolescents without diagnoses. So, the hypothesis postulated that there would be found strong relations between A-LIFE and clinicians diagnoses was not totally corroborated.

Strengths and weaknesses

The present study is an important contribution for the understanding of the course of psychopathology in adolescents. It was implemented a longitudinal design that permited to evaluate the psychiatric course and psychosocial functioning of adolescents over time. The longitudinal design of the study and its clinical sample composed by adolescents, a population group not yet widely covered by investigations, are some of the strengths of the present study.

The interview complexity and the time required for its implementation was a challenge in collecting the sample, making it difficult to collect a larger number of adolescents.

The reduced number of adolescents belonging to specific diagnosis did not allow more detailed analysis for each diagnosis. In fact, we had to classify the subjects in general diagnostic cathegories (e.g. Anxiety Disorder). Because of the small size of the sample it was also impossible to compare different periods of follow-up (3, 6 or 18 months).

The lack of studies made with this interview created some difficulties on gathering information for literature review and in discussing the data (sometimes data comparation with previous studies was impossible to do) data comparison with previous studies. However, some of our results probed to be consistent with the existent studies.

In future studies other psychometric characteristic must be studied in the Portuguese population namely the inter-rater agreemnent of A-LIFE. Studies in other countries have shown the inter-rater agreement A-LIFE has shown consistent values (Warshaw, 2001). The representativeness of the sample must be also improved and information about demographic, academic, familiar, social and clinic data must be collected, using several sources of information (as parents or carers).

References

American Psychiatric Association. (2002) Diagnostic and Statistical Manual of Mental Disorders (4rd ed.). Washington DC: Author.

Arnarson, E., & Craighead, W. (2009). Prevention of depression among Icelandic adolscents: A 12 month follow-up. *Behavior Research and Therapy*, *49*, 170-174.

Arnarson, E., & Craighead, W. (2009). Prevention of depression among Icelandic adolscents. *Behavior Research and Therapy*, *47*, 577-585.

Arnett, J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist, 54*, 317-326.

Bahls, S. (2002). Aspectos clínicos da depressão em crianças e adolescentes. *Jornal de Pediatria, 78,* 359-366.

Beardslee, W., Keller, M., Lavori, P., Staley, J., Sacks, N. (1993). The impact of parental affective disorder on depression in offspring: longitudinal follow-up in a nonreferred sample. *Journal of th American Academy of Child and Adolescent Psychiatry, 32,* 723–730

Belfer, M. (2008). Child and adolescent mental disorders: the magnitude of the problem across the globe. *Journal of Child Psychology and Psychiatry*, 49, pp. 226-236.

Birmaher, B., Axelson, D., Strober, M., Gill, M., Valeri, S., Chiappetta, L., Ryan, N., …& Keller, M. (2006). Clinical Course of Children and Adolescents With Bipolar Spectrum Disorders. *Arch Gen Psychiatry, 63*, 175-183.

Canavarro, M. (1999). Inventário de Sintomas Psicopatológicos -BSI. In M. Simões, M. Gonçalves, & L. Almeida (Eds.). *Testes e Provas Psicológicas em Portugal* (Vol. II; pp. 87-109). Braga: SHO/APPORT.

Ciccetti, D. & Rogosch, F. (2002). A developmental psychopathology perspective on adolescence. *Journal of Consulting and Clinical Psychology, 1*, 6-20.

Ciccetti, D. & Toth (2009). A Developmental Psychopathology Perspective on Adolescent Depression. In S. Nolen-Hoeksema, & L. Hilt (Eds.), *Handbook of depression in adolescents* (pp. 3-7). New York:

Routledge.

Costa, A. S. (2011). Tradução da Entrevista A-LIFE - Adolescents Longitudinal Interval Follow-up Evaluation - Estudo Preliminar do Funcionamento Psicossocial numa Amostra de Adolescentes Portugueses. Tese de Mestrado não publicada. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra.

Costello, E., Foley, D., Angold, A. (2006). 10-year research update review: the epidemiology of child and adolescent psychiatric disorders: II. Developmental epidemiology. *J Am Acad Child Adolesc Psychiatry, 45,* 8–25.

Costello, E., Copeland, W., & Angold, A. (2011). Trends in psychopathology across the adolescent years: what changes when children become adolescents, and when adolescents become adults? *J Child Psychol Psychiatry, 52*, 1015-1025.

De Graaf, R., Bijl, R., Smit, F., Vollebergh,W., & Spijker, J. (2002). Risk factors for 12-month comorbidity of mood, anxiety, and substance use disorders: findings from the Netherlands Mental Health Survey and Incidence Study. *The American Journal of Psychiatry, 159,* 620–629.

Dias, P. & Gonçalves, M. (1999). Avaliação da ansiedade e da depressão em crianças e adolescentes (STAIC-C2, CMAS-R, FSSC-R e CDI): Estudo normativo para a população portuguesa. In A. P. Soares, S. Araújo e S. Caires (Orgs.). *Avaliação Psicológica: Formas e Contextos* (vol. VI). Braga: APPORT.

Emslie, G., Mayes, T., Porta, G., Vitiello, B., Clarke, G., Wagner, K., Asarnow, J., …Strober, M. (2010). Treatment of Resistant Depression in Adolescents (TORDIA): Week 24 Outcomes. *Am J Psychiatry, 167,* 782-791

Essau, C. (2008). Comorbidity of depressive disorders among adolescents in community and clinical settings. *Psychiatry Research, 158,* 35–42

Fonseca, A., Simões, A., Rebelo, J., Ferreira, J. & Cardoso, F. (1994). Um inventário de competências sociais e de problemas do comportamento em crianças e adolescentes – o Child Behaviour Checklist de Achenbach (CBCL). *Psychologica, 12,* 55-78.

Ghanizadeh, A., Mohammadi, M. & Yazdanshenas, A. (2006). Psychometric properties of the Farsi translation of the kiddie schedule for affective disorders and shizophrenia-present and lifetime version. *Bio Med*

Central Psyquiatry, 6 (10).

Giaconia, R., Reinherz, H., Paradis, A., Hauf, A. & Stashwick, C. (2001). Major depression and drug disorders in adolescence: general and specific impairments in early adulthood. *Journal of the American Academy of Child and Adolescent Psychiatry, 40,* 1426–1433.

Gladstone T. R. G., Beardslee W. B. (2009). The Prevention of Depression in Children and Adolescents: *A Review: Canadian Journal of Psychiatry, 54 (4),* 212-221.

Gledhill J., Garralda M. E. (2010). The short-term outcome of depressive disorder in adolescents attending primary care: a cohort study. *Social Pshychiatry and Psychiatric Epidemiology. Advance online publication.* Doi: 10.1007/s00127-010-0271-6

Goldstein, T., Birmaher, B., Axelson, D., Goldstein, B., Gill, M., Emposito-Smythers, C., et al. (2009). Psychosocial functioning among bipolar youth. *Journal of Affective Disorders, 144*, 177-183.

Greer, T., Kurian, B., & Trivedi, M. (2010). Defining and Measuring Functional Recovery from Depression. CNS Drugs, 24 (4), 267-284.

Jarret, R., Kraft, D., Doyle, J., Foster, B., Eaves, G. & Silver, P. (2001). Preventing Recurrent Depression Using Cognitive Therapy With and Without a Continuation Phase: A Randomized Clinical Trial. *Arch Gen Psychiatry,58,* 381-388.

Judd, L., Akiskal, H., Maser, J., Zeller, P., Endicott, J., Coryell, W., Paulus, M.,…Keller, M. (1998). A Prospective 12-Year Study of Subsyndromal and Syndromal Depressive Symptoms in Unipolar Major Depressive Disorders. *Arch Gen Psychiatry,55,* 694-700.

Judd, L., Akiskal, H., Schettler, P., Endicott, J., Leon, A., Solomon, D., Coryell, W., … Keller, M. (2005). Psychosocial Disability in the Course of Bipolar I an II Disorders: A Prospective, Comparative, Longitudinal Study. *Arch Gen Psychiatry, 62*, 1322-1330

Kakow, A., Forehand, R., Haker, K., McGee, L., Champion, J., Potts, J., Hardcastle, E., Roberts, L. &Compas, B. (2011). Use of parental guilt induction among depressed parents. *Journal of Family Psychology, 25,* 147-151.

Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., et al. (1997). Schedule for affective disorders and schizophrenia for school-

age-children-present and lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psyquiatry, 36*, pp. 980-988.

Keller, M., Lavori, P., Friedman, B., Nielsen, E., Endincott, L., McDonald-Scott, P. & Andreasen, N. (1987). The Longitudinal Interval Follow-up Evaluation: A comprehensive method for assessing outcome in prospective longitudinal studies. *Arch Gen Psychiatry, 44*, 540-54.

Kim, Y., Cheon, K.-A., Kim, B.-N., Chang, S.-A., Yoo, H.-J., Kim, J.-W., et al. (2004). The reliability and validity of kiddie-schedule for affective disorders and schizophrenia-present and lifetime version – Korean version (K-SADS-PL-K). *Yonsei Medical Journal, 45*, 81-89.

Kovacs, M., Devlin, B., Pollock, M., Richards, C., Mukerji, P. (1997). A controlled family history study of childhood-onset depressive disorder. *Archives of General Psychiatry ,54*, 613–623.

Lauth, B., Levy, S., Júlíusdóttir, G., Ferrari, P., & Pétursson, H. (2008). Implementing the semi-structured interview kiddie-SADS-PL into an in-pacient adolescent clinical setting: Impact on frequency of diagnoses. *Child and Adolescent Psyquiatry and Mental Health, 2* (14).

March, J., Parker, J., Sullivan, K., Sttanlings, P. & Conners, K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Subscale structure, Reliability, and Validity. *American Academy of Child and Adolescent Psychiatry, 4*, 554-565.

Marques, C., Matos, A. (2011). Tradução, Adaptação e estudo piloto de algumas propriedades psicométricas da Schedule for Affective Disorders ans Schizophrenia for School Aged Children-Present and Lifetime Version – Versão Portuguesa (K-SADS-PL-PT). Tese de Mestrado não publicada. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.

Matos, A., Marques, C., Salvador, M., Cherpe, S., Arnarson, E., Craighead, W. & Kaufman, J. (in prep). Study of some psychometric chatactristic of THE Schedule for Affective Disorders ans Schizophrenia for School Aged Children-Present and Lifetime Version – Versão Portuguesa (K-SADS-PL-PT).

Matos, A., Salvador, M., Cherpe, S., Oliveira, S., March, J., Arnarson, E. & Craighead, W. (in prep). The Multidimensional Anxiety Scale for Children (MASC): Psychometric Properties and Confirmatory Factor Analysis in a Sample of Portuguese Adolescents.

Merrel, K. (2008). Behavioral, Social, and Emotional Assessment of Children and Adolescents (3ª ed.). Lawrence Erlbaum Associates.

Orvaschel, H. (2006). Structured and semi-structured interviews. In M. Hersen (Eds.), *Clinician's handbook of behavioral assessment* (pp. 159-179). Oxford: Academic

Pestana, M. & Gageiro, J. (2003). Análise de dados para ciências sociais: A complementaridade do SPSS (3ª ed.). Lisboa: Edições Silabo.

Reynolds, W. (1995). Depression. In V. B. Hasselt & M. Hersen (Eds.), *Handbook of adolescent psychopathology: A guide to diagnosis and treatment* (pp. 192-216). New York: Lexington Books

Rodriguez, B. F., Bruce, S. E., Pagano, M. E., Keller, M. B. (2004). Relationships among psychosocial funtioning, diagnostic comorbidity, and the recurrence of generalized anxiety disorder, panic disorder, and malor depression.*Journal of Anxiety Disorder, 19,* 752-766.

Ryan, E. (1995). Clinical interviewing. In V. B. Hasselt & M. Hersen (Eds.), *Handbook of adolescent psychopathology: A guide to diagnosis and treatment* (pp. 192-216). New York: Lexington Books

Saint-Clair Bahls. (2002). Aspectos clínicos da depressão em crianças e adolescentes. *Jornal de Pediatria*, *78*, 359-365.

Schraml, K., Perski, A., Grossi, G. & Simonsson-Sarnecki, M. (2011). Stress symptoms among adolescents: The role of subjective psychosocial conditions, lifestyle, and self-esteem. *Journal of Adolescence, 34*, 987-996.

Sørensen, M., Thomsen, P., & Bilenberg, N. (2007). Parent and child acceptability and staff evatuation of K-SADS-PL. *European Child & Adolescent Psyquiatry, 16*, 293-297.

Summerfeldt, L., Kloosterman, P., & Antony, M. (2010). Structured and semistructured diagnostic interviews. In M. Antony & D. Barlow (Eds.). *Handbook of assessment and treatment planning for psychological disorders* (2ª ed, pp. 95-137). New York: The Guildford Press.

Thaler, N., Kazemi, E. & Wood, J., (2010). Measuring anxiety in youth with learning disabilities: reliability and validity of the Multidimensional anxiety scale for children (MASC). *Child Psychiatry Hum Dev, 41*, 501-514.

Thapar, A., Rice, F. (2006) Twin studies in pediatric depression. *Child Adolesc Psychiatr Clin North Am, 15,* 869–81.

Ulloa, R., Ortiz, S., Higuera, F., Nogales, I., Fresán, A., Apiquian, R., Cortés, J., … Peña, F. (2006). Estudio de fiabilidade interevaluador de la versión en español de la entrevista Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL). *Actas Esp Psiquiatr, 34*, 36-40.

Verduyn, C., Rogers, J., & Wood, A. (2009). Depression: Cognitive behavior therapy with children and young people. Hove: Routledge.

Vila, M., Kramer, T., Obiols, J. & Garralda, M. (2012). Adolescents who are frequente attenders to primary care: contribution of psychosocial factors. *Soc Psychiatry Psychiatr Epidemiol, 47*, 323-329.

Warshaw, M., Dyck, I., Allsworth, J., Stout, R., Keller, M. (2001). Maintaining reliability in a longterm psychiatric study: an ongoing inter-rater reliability monitoring program using the longitudinal interval follow-up evaluation. *Journal of Psychiatric Research, 35, 297-305.*

Wilkinson, G., Moore, B. & Moore, P. (1999). Guia Prático Climepsi do Tratamento da Depressão. Lisboa: Climepsi Editores.