UNIVERSIDAD AUTÓNOMA DE MADRID

Facultad de Medicina

Departamento de Psiquiatría

ESTABILIDAD DIAGNÓSTICA Y PERSISTENCIA DE LOS TRASTORNOS DE ANSIEDAD DE INICIO EN LA INFANCIA Y LA ADOLESCENCIA

TESIS DOCTORAL

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AGRADECIMIENTOS

Muchas personas e instituciones han contribuido de forma directa o indirecta en la realización de este proyecto de tesis doctoral. A todas ellas quisiera expresar mi más sincero agradecimiento.

En primer lugar, quisiera agradecer a los Dres. D. Enrique Baca García y D. Antonio Ceverino Domínguez su excelente dirección y dedicación. Le agradezco enormemente al Dr. Baca García el que depositara su confianza en mí para el desarrollo de un proyecto que nació de él, así como que haya sido desde el inicio de mi formación en Psiquiatría un verdadero mentor en el campo profesional y de la investigación.

A los Dres. Dª María Oquendo, D. Carlos Blanco, Dª Moira Rynn, y D. David Shaffer por lo imprescindible de sus aportaciones a la tesis y por todas las veces que me han guiado y ofrecido su apoyo.

A la Dra Dª Kanita Dervic por sus inestimables recomendaciones y guía en este y en otros proyectos de colaboración con la Universidad de Viena.

A los Dres Dª Kanita Dervic y D. Manuel Esteves por la generosa lectura crítica de la tesis y sus acertadas observaciones y sugerencias.

A los Dres Dª María Mercedes Pérez Rodríguez y D Jorge López por su amable e incondicional ayuda en la preparación de la tesis.

A todos los miembros del Tribunal de Tesis por su amable aceptación para valorar este proyecto de tesis que tengo el honor de presentar ante ellos.

A todos los componentes de los equipos de salud mental y la dirección de los distritos de la Comunidad de Madrid en los que se llevó a cabo este estudio

sin cuya contribución hubiera sido imposible el llevar a cabo este proyecto de tesis.

Al Departamento de Teoría de la Señal de la Universidad Carlos III, especialmente al Dr Pablo Rodríguez Navarro cuya colaboración fue de extraordinaria ayuda en la realización de análisis que requirieron técnicas estadísticas no convencionales, como fueron los modelos de Markov.

A las instituciones académicas en las que recibí mi formación en Psiquiatría y a las personas que las constituyen. En especial, al departamento de Psiquiatría de la Universidad Autónoma de Madrid y al Servicio de Psiquiatría del Hospital Universitario Puerta de Hierro.

A la Fundación Alicia Koplowitz que me permitió realizar un programa fellowship de dos años de formación en Psiquiatía Infantil y de la Adolescencia en el Departamento de Psiquiatría de la Universidad de Columbia, New York.

A mis familiares y amigos que tanto apoyo me han dado a lo largo de mi vida y que durante la preparación de esta tesis han mostrado una vez más su incondicional ayuda.

DEDICATORIA

A mis padres, a los que debo todo.

A mis hermanos, a los que tanto quiero.

A María, mi mujer, quien, sin sospecharlo, cambió mi vida.

INTRODUCCIÓN

La estabilidad diagnóstica es el grado en el que un diagnóstico se mantiene constante en posteriores evaluaciones (1;2). La estabilidad de un diagnóstico ofrece la base sobre la cual predecir el curso y pronóstico de un trastorno (3) así como para proveer tratamientos basados en la evidencia. Mientras que la estabilidad diagnóstica de los principales trastornos psiquiátricos ha sido estudiada en un número limitado de investigaciones en poblaciones clínicas de pacientes adultos (4-18), la estabilidad diagnóstica de los trastornos psiquiátricos de inicio en la infancia-adolescencia ha recibido, si cabe, una menor atención por parte de la comunidad científica. Dado que la inestabilidad diagnóstica puede dar lugar a intervenciones terapéuticas inadecuadas o a tratamientos farmacológicos que pueden ser potencialmente dañinos (19), el estudio de la estabilidad diagnóstica de los trastornos psiquiátricos de inicio en la infancia-adolescencia en la práctica clínica es de una importancia capital.

Investigaciones previas de la estabilidad diagnóstica de los trastornos psiquiátricos en niños y adolescentes se han centrado, en su mayoría, en determinados grupos diagnósticos: psicosis (20-24), trastornos de la personalidad (25-28), trastornos generalizados del desarrollo (29;30), trastornos externalizantes (31-33), así como en los trastornos internalizantes (34;35). Tan sólo un pequeño número de estudios se ha centrado en el estudio simultáneo de la estabilidad diagnóstica de diversos trastornos psiquiátricos (36-40). En general, la estabilidad diagnóstica de los trastornos psiquiátricos de inicio en la infancia-adolescencia encontrada en estos estudios ha sido baja o moderada. Sin embargo, estos resultados se encuentran limitados por el pequeño tamaño muestral, el empleo de un número escaso de evaluaciones – generalmente dos o

tres-, así como por la corta duración de seguimiento observada en la mayoría de estos estudios lo que condiciona y cuestiona la generalización de los resultados de estas investigaciones previas y sugiere la necesidad de desarrollar nuevos estudios que puedan suplir dichas limitaciones.

Por otro lado, en la actualidad no existen investigaciones que hayan evaluado prospectivamente el impacto de la estabilidad diagnóstica de los trastornos psiquiátricos de inicio en la infancia-adolescencia en la continuidad y persistencia de los mismos a lo largo del tiempo y en la etapa adulta. Estas investigaciones tendrían una notable relevancia si se tiene en cuenta que:

1) La prevalencia de trastornos psiquiátricos en la infancia y en la adolescencia oscila entre un 18–20% (revisado por Roberts et al (41)). Incluso si se aplicaran criterios de disfuncionalidad a la hora de definir la presencia de los trastornos psicopatológicos en la población pediátrica, la prevalencia global de estos trastornos superaría el 10% (42).
2) Resultados acerca de la persistencia de los trastornos psiquiátricos en estudios epidemiológicos prospectivos indican que, entre un 23 a un 61% de los niños y adolescentes diagnosticados de un trastorno psiquiátrico cumplirán, años después, criterios diagnósticos de alguna patología psiquiátrica (43-52).
3) Diversos trabajos han señalado un peor pronóstico en pacientes cuyo trastorno psiquiátrico tuvo comienzo en la etapa juvenil comparados con aquellos en los que el inicio del trastorno psiquiátrico tuvo lugar en la etapa adulta (53-59).

4) Al evaluar conjuntamente datos de continuidad de los trastornos psiquiátricos en la infancia y adolescencia y estudiar su persistencia en la edad adulta, Kim-Cohen et al (60) concluyeron que la mayoría de los trastornos psiquiátricos evaluados en la etapa adulta son extensiones de trastornos psiquiátricos juveniles (77.9% de los pacientes que recibieron tratamiento psiquiátrico en la etapa adulta fueron diagnosticados antes de los 18 años).

En este trabajo, presentado para optar al título de Doctor en Medicina, nos hemos centrado en los trastornos de ansiedad de inicio en la niñez y adolescencia, al ser uno de los trastornos más prevalentes en la población infanto-juvenil. En este sentido hemos analizado el curso evolutivo de 1.869 niños y niñas que fueron diagnosticados con un trastorno de ansiedad entre edades comprendidas desde los 2-18 años y que fueron evaluados en centros asistenciales especializados por personal facultativo en al menos 3 ocasiones. El objetivo de esta investigación era determinar el grado de estabilidad diagnóstica de los trastornos de ansiedad de inicio en la etapa infanto-juvenil. Se hipotetizó que el grado de estabilidad diagnóstica de los trastornos de ansiedad puede predecir el grado de cronicidad y persistencia de dichos trastornos a lo largo del tiempo y en la etapa adulta.

INTRODUCTION

Diagnostic stability is the extent to which a diagnosis remains unchanged at successive patient evaluations (61;62). If present, stability of diagnosis offers a foundation from which to predict course and outcome of a disorder (63) and provide evidence-based treatment. A modest body of literature has examined the stability of major psychiatric disorders in adult clinical populations (64-78), but research on the stability of pediatric psychiatric diagnoses has received even less attention. Given that diagnostic instability may result in inappropriate or even harmful treatment recommendations or interventions in clinical practice (79), the study of the diagnostic stability of childhood psychiatric diagnosis is of utmost importance.

Previous investigations of diagnostic stability in children and adolescent have focused on single diagnostic clusters: psychoses (24;80-83), personality disorders (28;84-86), pervasive developmental disorders (87;88), and externalizing (89-91) as well as internalizing disorders (92;93). Only a handful of studies have focused on several psychiatric childhood diagnoses simultaneously (39;94-97). Overall, temporal diagnostic stability is reported to range from low to moderate among children and adolescents. However, these studies are limited by the use of small sample sizes and few assessment points – two or three in most of them, raising concerns about the generalizability of results, suggesting the need for the development of new studies capable of overcoming such limitations.

To the best of our knowledge there is no investigation to date that has prospectively evaluated the impact of the diagnostic stability on the persistence

and continuity of psychiatric disorders with onset in childhood/adolescence. Such investigation would be of great relevance given that:

1) The prevalence of psychiatric disorders in children and adolescents ranges between 18-20% (reviewed by Roberts et al (98). Even if impairment criteria were applied to define the presence of childhood psychiatric disorders, the prevalence of these disorders world be higher than 10% (99).
2) Results from prospective epidemiological studies have indicated that between 23% and 61% of children with a diagnosis at one point of time had a diagnosis, although not necessarily the same one, at a subsequent assessment (100-109).
3) Diverse studies have shown that psychiatric disorders with onset in childhood/adolescence are known to be associated with worse prognosis in adulthood (55;110-115) than those with onset in adulthood.
4) Kim-Cohen et al (116) studied continuity and persistence of childhood psychiatric disorders into adulthood and showed that most adults with a psychiatric disorder had a diagnosable disorder as children. (77.9% of patients who received psychiatric treatment as adults were diagnosed with a psychiatric disorder before age 18).

In this investigation, prepared to apply for a Doctorate in Medicine, we have focussed our attention on childhood anxiety disorders because these disorders are amongst the most prevalent childhood psychiatric disorders. In this vein, we have analyzed the course of 1,869 children and adolescents that were diagnosed with an anxiety disorder at ages between 2 and 18 years old.

These children and adolescents were evaluated in psychiatric outpatient facilities by psychiatrist/psychologist. The objective of this investigation was to determine the degree of diagnostic stability of childhood anxiety disorders. We hypothesized that the degree of diagnostic stability of the anxiety disorders with onset in childhood/adolescence predicts the degree of persistence of psychopathology and its continuity into adulthood.

BACKGROUND AND SIGNIFICANCE

Diagnostic stability and persistence of childhood psychiatric disorders

Improvements in the diagnostic criteria provided by diverse classification systems have progressively contributed to a better recognition and diagnosis of psychiatric disorders with onset in childhood and adolescence (117). However, the persistence along with the long-term outcomes of these psychiatric disorders continues to be scantily known (118). Prospective studies are regarded as the best approach for evaluating the natural history of psychiatric disorders and are methodologically preferred due to their inherent prevention of recall bias to occur (119). Previous investigations of persistence of psychiatric disorders with onset in childhood/adolescence have focused on single diagnostic clusters (psychoses, personality disorders, pervasive developmental disorders, and externalizing as well as internalizing disorders) precluding the analysis of the effect of other comorbid psychiatric disorders on outcome variables. Only a handful of studies have focused on several psychiatric childhood diagnoses simultaneously but have yielded contradictory results. In general, these investigations are limited by the use of small sample sizes and few assessment points – two or three in most of them, raising concerns about the generalizability of results and suggesting the need for the development of new studies capable of overcoming such limitations.

Diagnostic stability is the extent to which a diagnosis remains unchanged at successive patient evaluations (120;121). If present, stability of diagnosis offers a foundation from which to predict course and outcome of a disorder (122) and provide evidence-based treatment. Given that diagnostic instability may result in

inappropriate or even harmful treatment recommendations or interventions in clinical practice (123), the study of the diagnostic stability of childhood psychiatric diagnosis is of utmost importance. To the best of our knowledge there is no investigation to date that has prospectively evaluated the impact that diagnostic stability may have on the persistence over time of psychiatric disorders with onset in childhood/adolescence. Such investigation would be of great relevance given that results from prospective epidemiological studies have indicated that between 23% and 61% of children with a diagnosis at one point of time had a diagnosis, although not necessarily the same one, at a subsequent assessment (124-133). Similarly, retrospective studies have shown that most adults with a psychiatric disorder had a diagnosable disorder as children (134). In addition, given that psychiatric disorders with onset in childhood/adolescence are known to be associated with worse prognosis in adulthood , attempts to reduce the burden of mental illness (135) must pay attention to the psychiatric disorders occurring during developing years (136).

Childhood anxiety disorders

Anxiety disorders are among the most prevalent of childhood psychiatric disorders (137) and yet they are considered to be an understudied, underreported, and poorly understood phenomena (138-140).

Prior to 1980, the study of anxiety disorders in children and adolescents received little attention. Fears and worries during childhood tended to be viewed as transitory in nature and almost by no mean as a manifestation of psychopathology (141). It was not until the influx of the DSM-III (142) when childhood anxiety disorders were given an important position in the diagnostic

nomenclature and started to be regarded as a compelling area for research (143).

Anxiety disorders and subsequent psychiatric disorders:

Although it has been previously stated that anxiety disorders in children and adolescents are often associated with a significant risk of developing subsequent psychiatric disorders, with psychiatric comorbidity and psychosocial impairment (144-146), the fact is that the number of studies that have specifically examined the course of anxiety disorders in children and adolescents is limited.

Several follow-up studies have focused on a particular anxiety disorder, such as separation anxiety disorder, obsessive-compulsive disorder, panic disorder, social anxiety, and post-traumatic stress disorder (147-161), precluding however the analysis of the effect of other comorbid anxiety disorders on outcome variables (162) (See Table 1).

Table 1. Anxiety disorders and subsequent psychiatric disorders

Author/ Year	Anxiety Disorder Subtype	Sample	Study design	Findings
Bruckl TM, 2007	-Separation anxiety disorder (SAD)	-N=1090 -14-17 y/o at baseline (Munich)	-Prospective longitudinal community study -Data from Early Developmental Stages of Psychopathology Study (EDSP)	• Considerable degree of lifetime comorbidity between SAD and other mental disorders • SAD group was at increased risk of developing panic disorder with agoraphobia, specific phobia, genalized anxiety disorder, obsessive compulsive disorder, bipolar disorder, pain disorder, and alcohol dependence.
Perkonig g A, 2005	Post-traumatic stress disorder (PTSD)	N=2548 -14-24 y/o at baseline (Munich) N=125 DSM-IV PTSD or sub-threshold PTSD	-Prospective longitudinal community study -Data from Early Developmental Stages of Psychopathology Study (EDSP)	• Chronic PTSD was associated with higher rates of incident somatoform disorders and incident other anxiety disorders. • Among subjects with chronic PTSD, new traumatic events were associated with incident mood disorders
King SM, 2004	SAD Overanxious disorder (OAD)	N=708 twin girs; 694 twin boys Ages 10-12 y/o	-Longitudinal community-based study -Duration of the study=3-4 years	• Externalizing psychopathology predicted having tried alcohol, nicotine and cannabis by age 14 as well as regular and advanced experiences • Internalizing disorders showed weak effects
Goodwin RD, 2004	Panic attack	N=3,021 subjects ages 14-24 yr Panic attack (n=131 at baseline; 186 at any time)	-5 year Prospective longitudinal community study -Data from Early Developmental Stages of Psychopathology Study (EDSP)	• Panic at any time (time 0, T2, or T3) was associated with increased cumulative lifetime incidence of any: • anxiety disorder • mood disorder • substance use disorder, • eating disorder • somatoform disorder
Foley DL, 2004	Separation anxiety disorder	N=161 of 2,061 8-17 y/o	Prospective community-based twin study (duration=18m. on average) Virginia Twin Study for Adolescent Behavioral Development (VTSABD)	• Children with persistent SAD had significantly more impairment associated with overanxious disorder/phobias and depression symptoms at time 2. • Only risk of a new depressive disorder at time 2 distinguished children with persistent SAD from children with transient SAD.
Zimmer mann P, 2003	Panic attack Agoraphobia Social phobia Specific phobia Phobia NOS Generalized anxiety disorder (GAD) Any anxiety	N=3021 Baseline; N=2548 at f-u	-5 year Prospective longitudinal community study -Data from Early Developmental Stages of Psychopathology Study (EDSP)	• Lifetime anxiety disorders assessed at baseline, significantly predicted the onset of hazardous use and abuse, and were associated with the onset of any alcohol use disorder over the follow-up

Diagnostic stability of anxiety disorders

Alternatively, some follow-up studies have reported prospective data on the diagnostic stability of anxiety disorders while exploring the natural history of diverse childhood psychiatric disorders.

It is important to note that different methods of estimating diagnostic stability have been used by different researchers (39). For instance, positive concordance rates describe the percentage of those diagnosed with a disorder at one time who manifest the same disorder at a later time (i.e., present–present). However, positive concordance rates fail to account for the introduction of new cases of a disorder. The kappa coefficient corrects for this problem. Kappa is usually preferable to concordance rates because it provides a more comprehensive estimate of stability and corrects for agreement due to chance. When reported alone, however, kappa may give somewhat misleading estimates of stability because it is exceedingly reduced by high incidences of new cases and is excessively magnified by high negative concordance rates. Thus, it is important to examine both concordance rates and kappa estimates to establish accurately diagnostic stability. Evidence to date suggests low to moderate levels of temporal diagnostic stability among children and adolescents.

We will briefly describe epidemiological and clinic-based studies that have evaluated diagnostic stability using prospective positive rates and/or kappa estimates.

Valevski et al (163) reviewed the records of all 351 patients consecutively admitted to a psychiatric inpatient unit from 1974–1978. The duration of follow-back was 15–19 years. Data on demographic characteristics, psychiatric

diagnoses, date and length of hospitalizations, and mortality were collected from the computerized registry of the Israel Ministry of Health. The diagnoses used in the study were those assigned at admission(s) and recorded in the government records. All were based on the International Classification of Diseases, ninth revision (ICD-9) (164). Stability of diagnosis was measured using kappa score and was analysed only in the patients readmitted to hospital at least twice. The results showed that the most stable diagnosis was anxiety disorder, followed by personality disorder. However, other prospective studies have not replicated these findings.

Pettit et al (39) reviewed the records of 3,783 children and adolescents hospitalized between 1992 and 2000. All patients who were hospitalized two or more times during that 9-year period were included in their study (n=815). The authors used an across-episodes approach to examine if the DSM-IIIR or DSM-IV psychiatric disorder given at one hospitalization remained stable over subsequent hospitalizations. According to the authors, while temporal stability refers to the presence or absence of a disorder at two distinct time points, across-episode diagnostic stability refers to the recurrence of specific symptom patterns over distinct episodes of psychopathology, with intermittent periods of reduced or no psychopathology. Changes in the form of psychopathology across episodes would indicate low diagnostic stability. The authors used concordance rates and the kappa coefficient to estimate diagnostic stability across episodes and found anxiety disorders to have low temporal diagnostic stability. However, in their sample, anxiety disorders were rare, with posttraumatic stress disorder being the only anxiety disorder with an incidence higher than 1%. The results also indicate moderate to low stability among most

diagnoses. The authors indicated that such degree of diagnostic stability would be consistent with the notion of “developmental plasticity” in children and adolescents and with a “symptom-stressor model”, in which expressions of psychopathology fluctuate according to alterations in environmental conditions.

Wittchen et al (165) examined the stability of symptoms, syndromes, diagnoses, and caseness of various specific mental disorders, defined by DSM-IV (166) criteria using retrospective and longitudinal prospective data from the baseline and the first follow-up investigation of the Early Developmental Stages of Psychopathology Study (EDSP). Results from this investigation show that the 12-month prevalence for any anxiety disorder declined from 14.5% to 10.4%. This finding indicates that anxiety disorders may be mostly early-onset disorders, with only a few incident cases after early adolescence. Using positive concordance rates, the authors showed that panic disorder and specific phobia were the most stable anxiety disorder diagnoses, whereas specific phobia not otherwise specified, agoraphobia, and social phobia were the least stable. Complete remissions for specific anxiety disorder diagnoses were highest for specific phobia not otherwise specified (93% of cases were complete remissions) and agoraphobia (75.4%). These findings apparently suggest that there was a significant proportion of transient developmental significant phobias with a favorable natural course, likely to remit completely without any comorbid condition present. Although the specific diagnostic stability of anxiety disorders diagnoses such as panic disorder and generalized anxiety disorder was also low overall, the follow-up outcome was considerably less favorable. Of note, shifts between anxiety and affective disorders, but also to somatoform and substance use disorders, were particularly frequent.

Mattanah et al (167) examined the diagnostic stability of multiple DSM-III-R diagnoses in a sample of adolescents inpatients (N=65). Adolescents were evaluated at baseline and were assessed two years after hospitalization. Stability of diagnosis was measured using the percentage of persisting cases (subjects who met the criteria for the same diagnosis at follow-up) and the kappa estimate. The author showed that internalizing disorders which included anxiety disorders but also major depression and dysthymia had the highest percentage of persisting cases but an insignificant kappa (16%). This low value of the kappa estimate was considered to be caused by the high number of new cases of internalizing disorders diagnosed at follow-up. The authors concluded that a diagnosis of an internalizing disorder at one point during adolescence might be a useful marker for later internalizing problems but remarked that the absence of such a diagnosis would not diminish the chance of presenting similar problems later in life. Results for anxiety disorders were not shown separately and were presented clustered with the rest of the internalizing disorders studied. Whether the same pattern of persistence of the disorder and low kappa values are also applicable for different anxiety disorders was not investigated. The authors also concluded that in adolescents with significant psychiatric problems that require hospitalization three groups might be differentiated: 1) those who recover (“diagnostically transient”), those who continued to show similar problems (“diagnostically stable”), and 3) those who continued to show problems but different in their clinical manifestations (“diagnostically variable”).

Beidel et al (168) conducted a study among 150 children aged 7-12 years recruited from elementary schools who were evaluated using the Anxiety

Disorders Interview Schedule for Children (169), self reports, and psychophysiological measures at the initial assessment and six months later. At 6 months, nearly half of those initially diagnosed with DSM-III-R social phobic features continued to report those features. Similarly, more than fifty percent of those initially diagnosed with threshold or subthreshold overanxious disorder continued to describe significant overanxious traits at 6months. The authors concluded that although not all children diagnosed with an anxiety disorder will continue to have it 6 months later, a substantial proportion will.

Cohen et al (170) conducted an epidemiological study in a sample of 734 children from the general population. The authors studied the persistence and new onset of six of the more prevalent psychiatric disorders including anxiety disorders. The diagnoses of such psychiatric disorders were made from maternal and child interviews when the children were ages 9-18 and again two years and a half later. Diagnostic stability was measured using prospective consistency rates and kappa estimates. The findings showed considerable levels of diagnostic persistence over the follow-up period for all diagnoses except major depression. The authors found anxiety disorders to have moderate diagnostic stability and similar to other childhood psychiatric disorders the authors concluded that cannot be dismissed as transitory.

Cantwell et al (171) studied 151 children who presented to a community speech/language clinic and who were evaluated 4 years later. Follow-up data for various DSM-III child and adolescent psychiatric diagnoses were presented by the authors. While they described high stability for only three diagnoses: infantile autism, attention deficit disorder with hyperactivity, and oppositional

disorder, they found that DSM-III-R diagnoses such as separation anxiety and overanxious disorders lacked predictive validity.

Diagnostic stability of anxiety symptoms

Other researchers have studied the stability of anxiety symptomatology using a dimensional approach rather than a categorical approach and have prospectively evaluated the persistence of anxiety symptoms using validated scales.

For instance, Bosquet et al (172) conducted a prospective longitudinal study of adaptation in families and children considered at high risk (children of primiparous pregnant women living in poverty, with low educational level, of young age, with lack of support, chaotic living conditions, or with significant life stress). Assessments included objective and projective psychological tests, interviews, questionnaires, and observations of child behavior and mother–child interactions. Anxiety symptoms were measured using the CBCL (173). The CBCL is an standardized report on children´s and adolescent´s adaptive functioning and emotional and behavioral problems in the previous months, as reported by parents or parent surrogates, teachers, respectively. Problems behaviors are scored on syndromes (Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior) and broad –band scores (Internalizing, Externalizing, and Total Problems). A semi-structured interview (K-SADS) (174) were also used to create a lifetime anxiety diagnosis score. Assessments were conducted during neonatal period, 12 months, 18 months, 42 months, kindergarten, first grade, sixth grade, 16 years, and 17.5 years. The authors found moderate stability in anxiety symptoms throughout childhood and

adolescence and suggested that the impact of specific risk factors may differ at different developmental stages. According to the authors, the moderate stability in anxiety symptoms may indicate that, for some children, anxiety symptoms may not resolve spontaneously and would benefit from intervention. In addition, given that the relative contribution of various risk factors to the development of anxiety appeared to be moderated by developmental stage the authors suggested that such developmental stage needs to be considered when tailoring an intervention.

Visser et al (175) investigated the stability of behavioral and emotional problems in childhood and adolescence. Subjects (n=1652) were referred to an outpatient clinic at a University Hospital in Rotterdam and were followed during 6.2 years on average. Internalizing scores derived from the CBCL (173), YSR (176), and Teacher´s Self Report (177) at initial assessment were related to scores on the same instruments at follow-up. Stabilities were generally higher for externalizing scores than for internalizing scores. It was found a sex effect. Thus, a relative increase in internalizing problems was found for girls. Girls predicted to have higher Somatic Complaints, Anxious/Depressed, Thought Problems, and Internalizing scores than boys.

Hofstra et al (178) studied the continuity and change of behavioral and emotional problems from childhood to adulthood in an epidemiological sample of 1,615 children and adolescents aged 4-16 years at initial assessment. These subjects were followed during 14 years. At initial assessment parents completed CBCL (173) and at follow-up subjects completed Young Adult Self Report (YASR) (179) and parent completed Young Adult Behavior Checklist (180). With respect to internalizing scores the authors found that stability coefficient was

low to medium. Older subjects (females and males) had significantly higher stability coefficients for internalizing scores than younger subjects. Older females had significantly higher stability coefficients for internalizing scores than older males. CBCL Withdrawn, Anxious/Depressed, and Social Problems scores at initial assessment predicted internalizing problems at 14 year follow-up. On the other hand, internalizing scale Withdrawn was predicted of both adult internalizing and externalizing problems.

Course and persistence over time of childhood anxiety disorders

Finally, few prospective studies have specifically studied the course and outcome of multiple childhood and adolescent anxiety disorders concurrently. These studies are briefly described below.

Keller et al (181) in a naturalistic study that evaluated the lifetime psychiatric histories of 275 clinically referred children, showed that nearly half of children diagnosed with an anxiety disorder were estimated to continue to present these disorders 8 years after onset, which was indicated as a more prolonged time to recover than the investigators initially expected. Moreover, among children who had recovered for their initial episode of anxiety disorders, almost a third presented another episode during the follow-up period. In addition, Keller et al (182) showed that comorbidity with depressive and other psychiatric disorders was considerably high.

Last et al (183) prospectively examined the course of DSM-III-R anxiety disorders in clinically referred children and found that more than 80% of the participants with an anxiety disorder at baseline were recovered at the end of the follow-up period (3 to 4 years), which led these authors to conclude that a favourable course and outcome could be expected from anxiety disorders in

clinically referred children. Children with anxiety disorders were found not to be at greater risk for the development of other psychiatric disorders in general, or anxiety disorder in particular than children with ADHD, but were more likely to develop subsequent psychiatric disorders (30%), principally new anxiety disorders, than normal controls.

Last el al (184) using a similar methodology than their aforementioned study, compared children with anxiety disorder who had not develop a depressive disorder during the follow-up, children with an anxiety disorder and a depressive disorder, and a normal control group. Although anxious youths without comorbid depressive disorders were found to be functioning almost in the same way in most social areas as the never-psychiatrically ill individuals, those with comorbid anxiety and depression disorders were found to function significantly more poorly during their young adulthood years. Furthermore, this comorbid group was reported to be the most impaired group as evidenced by its higher frequency of mental health services use and larger incidence of psychological problems during the follow up period.

Pine et al (185) conducted a prospective study of an epidemiologically selected sample of children and adolescents living in upstate New York. They showed that the existence of an anxiety disorder in adolescents predicted a two to three fold increased risk for anxiety later in life. In addition, results of this study showed support for either specificity or non-specificity in the course of adolescent anxiety disorders. Thus, while simple phobia in adolescents predicted primarily simple phobia in adulthood, and social phobia in adolescents predicted principally social phobia in adulthood, overanxious, generalized anxiety, and panic disorder showed a non-specific course. The results of

additional analyses pointed out that even though most adolescent psychiatric disorders were absent in adulthood, the vast majority of adult psychiatric disorders were preceded by an anxiety or a depressive disorder in adolescence.

Woodward et al (186), in a longitudinal study of a birth cohort of 1265 children from New Zealand showed that significant linear associations were found between the number of anxiety disorders reported in adolescence and an array of unfavourable outcomes at age 21. Such associations between the number of anxiety disorders and risks of subsequent anxiety, depressive, and substance use disorders were shown to be present even after statistically controlling for confounder factors.

Essau et al (187), in a longitudinal school-based study among adolescents aged 12-17 years showed that most adolescents (77.4%) with any anxiety disorders at baseline did not meet criteria for an anxiety disorder at follow-up. Older age, presence of somatoform, and substance use disorders were reported to be factors associated with persistence of anxiety disorders. Adolescents with comorbid anxiety disorders (anxiety disorder + any psychiatric disorder) were more likely to continue to have anxiety, depressive, and somatoform disorders at follow-up. In addition, more than half of the adolescents with an anxiety disorder at baseline developed another psychiatric disorder during the follow-up period.

Costello et al (188) conducted a longitudinal community study among 1420 children aged 9-13 who were assessed annually for DSM-IV disorders until age 16 as part of The Great Smoky Mountain Study (GSMS) (189). The results with regard to the incidence of anxiety disorders were not homogenous but rather were dependent of the anxiety disorder subtypes. Thus, social

anxiety and panic disorders increased in prevalence over time, whereas the prevalence of separation anxiety disorder decreased during follow-up. Panic disorder showed the highest level of continuity among the anxiety disorders. Additionally, having an anxiety disorder was found to predict the occurrence of a subsequent depressive disorder, result that was especially significant among girls in which anxiety disorders predicted depressive disorders (and vice-versa) even after psychiatric comorbidity was controlled for.

Summary

In sum, findings from several epidemiological studies and from a few studies conducted among youth clinically referred have yielded inconsistent findings with regard to the course and persistence of anxiety disorders in children and adolescents (ranging from benign to almost malignant course), their stability (ranging from low to moderate) or the prediction of other forms of psychopathology.

OBJECTIVES

While previous studies have provided detailed information about the diagnostic stability of the anxiety disorders, they are limited by small sample size and few assessment points. In addition, the use of fixed predetermined time intervals between assessment points may have contributed to the occurrence of recall bias.

Given the paucity information regarding diagnostic stability of anxiety disorders and their persistence over time, we aimed to evaluate:

1. the long-term stability of anxiety disorders with onset in childhood and adolescence in a large sample of pre-schoolers, children and adolescents who were evaluated at multiple time points in psychiatric clinical settings.
2. the impact of diagnostic stability on the persistence of the anxiety disorder over time, continuity into adulthood, and service use.

HYPOTHESES

This study provided a unique opportunity to shed light on the question of how stable do pediatric anxiety diagnoses remain over time and how the degree of diagnostic stability influence the persistence of the anxiety disorder.

We hypothesized that:

1. Anxiety disorders would show low to moderate levels of diagnostic stability as has been reported in previous studies.
2. The degree of diagnostic stability of the anxiety disorders with onset in childhood/adolescence predicts their degree of persistence and their continuity into adulthood. We posit that those individuals with lower degree of diagnostic stability of their anxiety disorder would have higher degree of persistence of the anxiety disorder, higher continuity into adulthood, and greater service use.

MATERIAL AND METHODS

Source of Data

Beginning in 1986, public mental health centres in the province of Madrid, Spain have recorded all psychiatric visits in a regional registry (Registro Acumulativo de Casos de la Comunidad de Madrid). From 1986 to 1992, diagnoses were coded according to the *International Classification of Diseases, Ninth Revision* (ICD–9) (190). Since 1992, diagnoses were coded according to *International Classification of Diseases, Tenth Revision* (ICD-10) (191).

Individual service users are reliably identified in the database used for our analyses because each patient is given an identifying number (192) (a numeric code is used to ensure patient anonymity), which remains the same throughout all contacts mains with psychiatric services within the study area. To ensure that no patient had been assigned more than one identifier, we reviewed all the cases in the database and removed any duplicates we found. We defined duplicates as ‘patients with identical first name, family name, gender and year of birth’; ‘patients with identical first name, family name, gender and street address’, or ‘patients with identical first name, family name, gender and hospital/ambulatory re- record number’. We deleted any cases with significant suspicion of duplication.

Data extraction

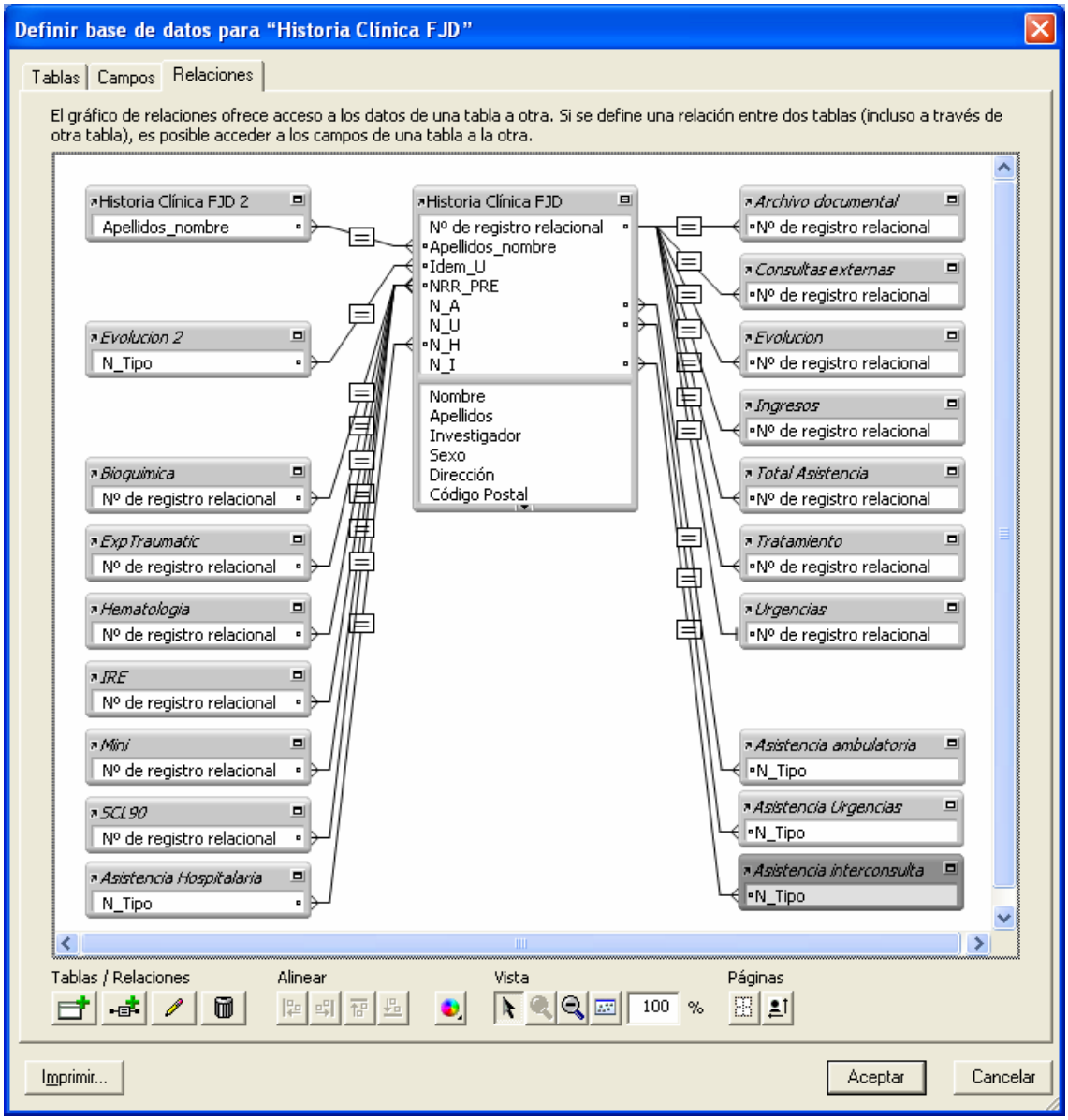
We extracted regional registry data regarding all psychiatric visits to all pediatric psychiatric clinics belonging to two catchment areas in Madrid. ICD-9 codes were converted to ICD-10 codes using guidelines published by the World Health Organization (1993) (191).

Sistema de información

Se partió del registro de pacientes del área 11 y el distrito Centro, de los registros de urgencias del Hospital 12 de octubre y de la Fundación Jiménez Díaz así como de los registros de hospitalización de estos dos centros. Estos registros informatizados recogen el conjunto mínimo básico de datos (CMBD) definido por la Comunidad de Madrid (ver Anexo 1). La base de datos resultante contiene la información asistencial de aproximadamente 150.000 pacientes (25.000 menores de edad) y cerca de 2 millones de actos médicos. La fuente fundamental de esta base de datos fue el registro acumulativo de casos atendidos en los CSM de Centro, Arganzuela, Aranjuez, Usera, Villaverde y Carabanchel (desde el 1/1/1992 hasta el 30/04/2006) . Este registro recoge el CMBD definido por la Comunidad de Madrid.

Se diseñó una base de datos relacional con el programa File Maker v6.0 para integrar estos registros. El diseño de la base de datos relacional puede verse en la Figure1. A cada paciente se le asignó una clave de identificación numérica y a cada asistencia se le asignó un número correlativo.

Figure 1. Diseño relacional de la base de datos FileMaker. Tomado de la tesis doctoral del Dr Ignacio Basurte (193)



El procedimiento de fusión exigió un proceso de unificación de las bases de datos, depuración de posibles casos y asistencias repetidas y validación posterior, para ello se desarrollaron diversas rutinas de programación que permitián actualizar periódicamente el sistema con los datos procedentes de las distintas fuentes. El problema más importante del proceso de fusión fue recodificar los diagnósticos de la CIE-9 MC utilizada por el CMBD a la CIE-10

para ello se emplearon las tablas de conversion entre la CIE-9 y la CIE-10, según criterios de la Organización Mundial de la Salud.

Paralelamente se desarrollo un interface para la introducción y consulta de datos (Figure 2 y Figure 3). La bondad de este sistema y metodología desarrollada permite fusionar casi cualquier base de datos desarrollada para la asistencia sanitaria que está diseñada bajo los requisitos del CMBD.

Figure 2. Interface gráfico para introducción y consulta de datos (Filiación). Tomado de la tesis del Dr Ignacio Basurte (193)

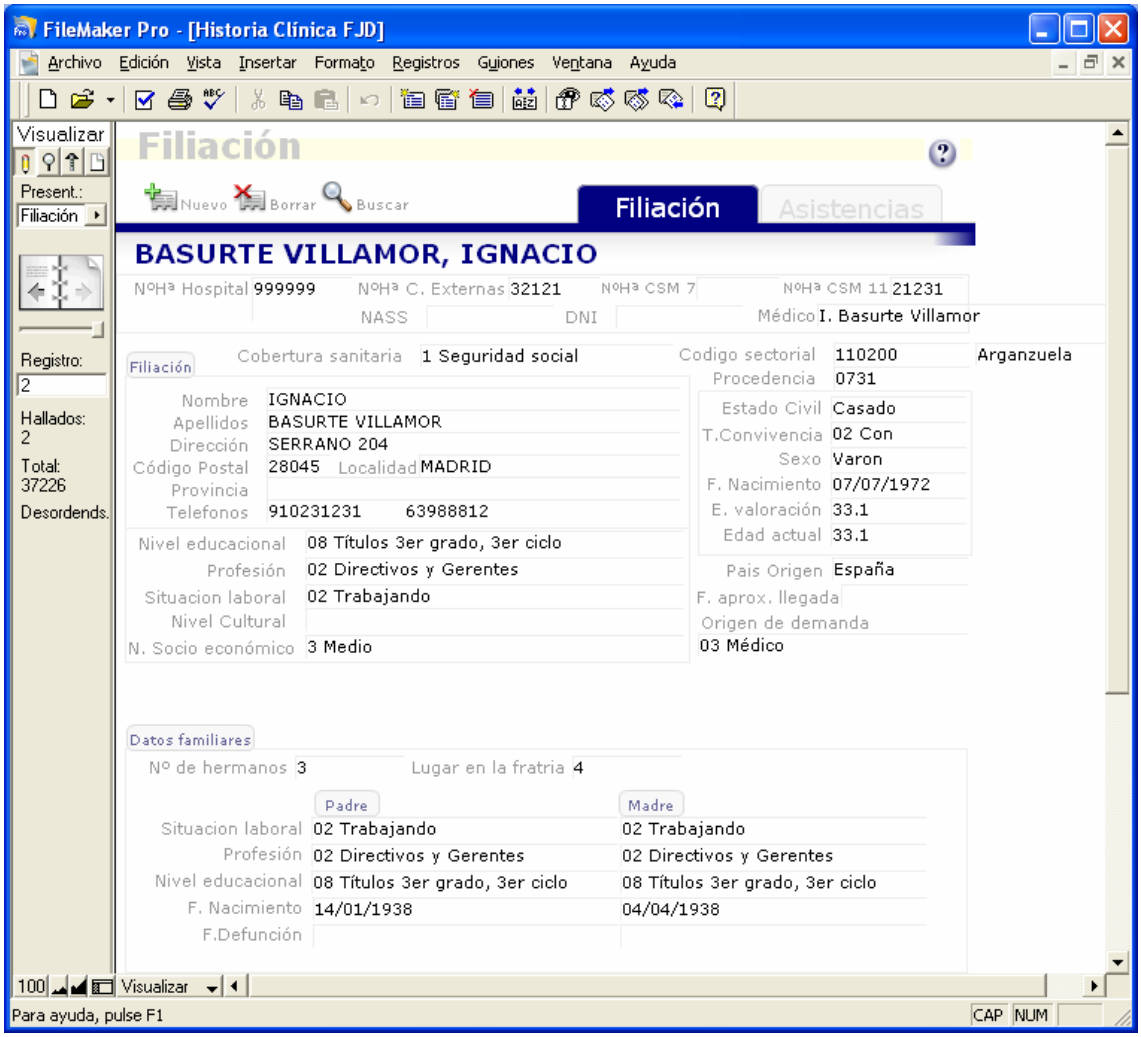
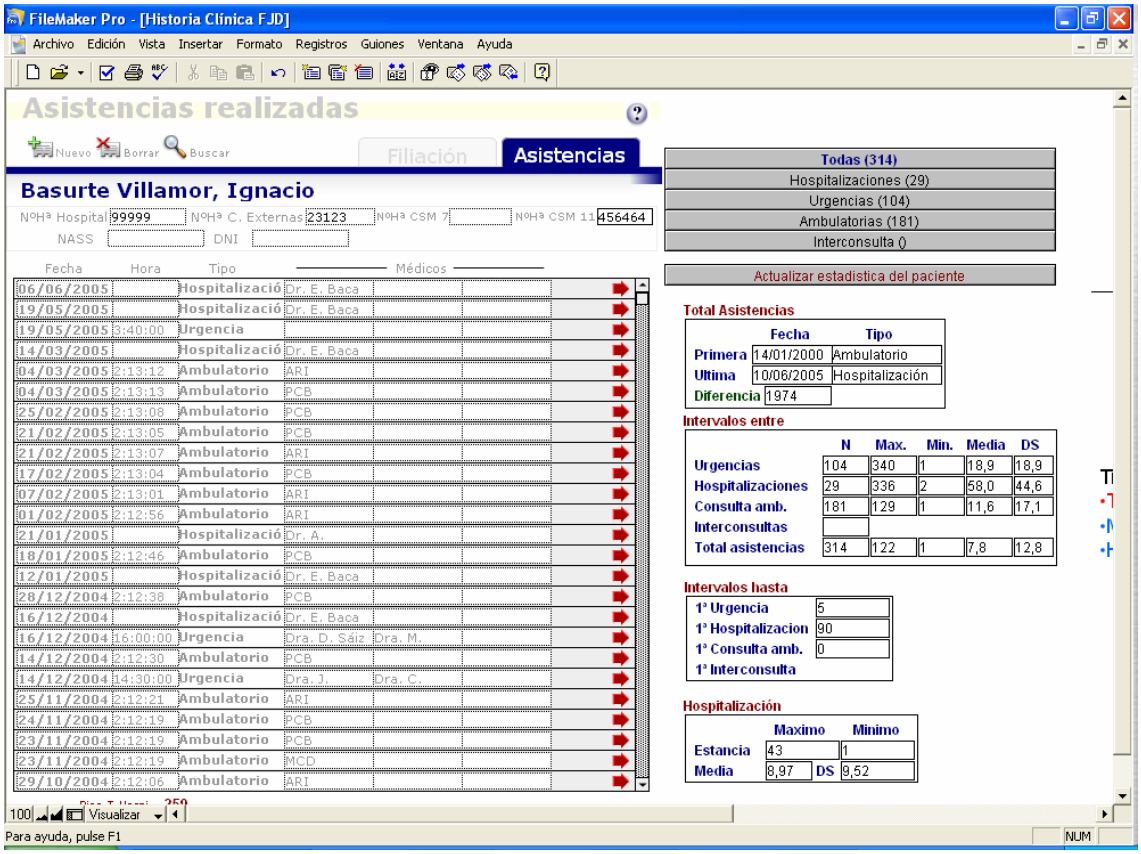


Figure 3. Interface gráfico para introducción y consulta de datos (Evolución). Tomado de la tesis del Dr Ignacio Basurte (193)



Características socio-demográficas de las áreas de salud incluidas en el estudio

Características de los distritos de la Comunidad de Madrid incluidos en el estudio

En la siguiente tabla (Table 2) se recogen las principales características socio-demográficas de los distritos de la comunidad de Madrid incluidos en nuestro estudio. Aunque superficialmente suponen únicamente el 9% de la Comunidad de Madrid, la población total que vive en ellos supera el 25% del total de la Comunidad de Madrid. Al analizar los datos por grupos de edad observamos que este porcentaje se mantiene prácticamente constante en los grupos de 0 a14 años, de 15-64 años, de 65 a 74 años y en aquellos de 75 años y más.

Otro dato relevante es el alto porcentaje de población inmigrante que vive en estos distritos. Observamos que salvo en el distrito de Arganzuela, en el resto de los distritos de la comunidad de Madrid incluidos en este estudio, observamos una mayor prevalencia de población inmigrante comparada con el total de la Comunidad de Madrid, que en el caso del distrito Centro llega a superar el 26% de la población frente al 16% del total de la población inmigrante residente en la Comunidad de Madrid.

Table 2. Características sociodemográficas de los distritos de la Comunidad de Madrid incluidos en esta investigación

Características	**TOTAL Comunidad de Madrid**	**Centro**	**Arganzuela**	**Carabanchel**	**Usera**	**Villaverde**	**Total áreas de Madrid incluidas en estudio**	**% con respecto a Comunidad de Madrid**
Superficie (Ha.)	**60.708,69**	523,73	655,21	1.409,30	770,28	2.028,65	5387,17	8,87
Población a 1-1-2007	**3.187.062**	141.396	149.577	248.350	136.391	146.184	821898	25,78
De 0 a 14 años	**411.537**	12.709	18.447	31.635	19.121	21.669	103581	25,16
De 15 a 64 años	**2.177.603**	104.352	105.935	169.106	92.038	99.993	571424	26,24
De 65 a 74 años	**296.384**	10.151	11.484	23.968	12.129	13.758	71490	24,12
De 75 y más	**301.493**	14.183	13.706	23.638	13.103	10.764	75394	25,00
Población a 1-1-2007 según nacionalidad								
Nacionalidad (Total)	**3.187.062**	141.396	149.577	248.350	136.391	146.184	821898	25,78
Española	**2.680.830**	104.131	126.382	194.513	106.745	115.070	646841	24,12
Extranjera	**505.572**	37.232	23.164	53.810	29.623	31.101	174930	34,60
% Extranjeros	**15,9**	26,3	15,5	21,7	21,7	21,3		
Título escolar (Censo 2001)								
Analfabetos	**42.863**	1.506	943	3.578	3.335	3.291	12653	29,51
Sin estudios	**261.892**	10.087	8.401	25.830	17.380	18.239	79937	30,52
Primer grado	**436.885**	19.466	18.791	40.718	22.830	22.043	123848	28,34
ESO, EGB y Bachillerato Elemental	**552.111**	23.113	24.021	47.891	26.010	28.490	149525	27,08
Bachillerato Superior	**406.975**	18.378	20.731	26.930	11.475	13.042	90556	22,25
FP Grado Medio	**100.045**	3.734	4.018	8.438	5.033	5.942	27165	27,15
FP Grado Superior	**117.618**	4.343	5.442	9.246	4.440	5.595	29066	24,71
Diplomatura	**227.215**	10.133	12.794	12.639	4.993	5.685	46244	20,35
Licenciatura	**357.518**	18.719	18.848	13.356	4.907	5.088	60918	17,03
Doctorado	**33.534**	2.115	1.497	826	308	282	5028	14,99
Relación con la actividad económica (Censo 2001)								
Hombres de 16 y más años	**1.169.870**	51.140	52.012	88.197	47.389	51.914	290652	24,84
Activos	**796.904**	36.917	36.175	59.368	31.963	35.784	200207	25,12
Ocupados	**712.498**	31.684	32.614	52.677	27.696	31.731	176402	24,75
Parados	**84.406**	5.233	3.561	6.691	4.267	4.053	23805	28,20
Inactivos	**372.966**	14.223	15.837	28.829	15.426	16.130	90445	24,25
Mujeres de 16 y más años	**1.366.786**	60.454	63.474	101.255	53.322	55.783	334288	24,45
Activas	**672.717**	32.429	34.147	47.449	24.279	25.709	164013	24,38
Ocupadas	**574.890**	27.490	29.774	39.753	19.822	20.973	137812	23,97
Paradas	**97.827**	4.939	4.373	7.696	4.457	4.736	26201	26,78
Inactivas	**694.069**	28.025	29.327	53.806	29.043	30.074	170275	24,53
Crecimiento vegetativo (2005)	**5.351**	**-80**	**216**	**556**	**564**	**780**		
Nacimientos	**32.407**	1.426	1.496	2.649	1.674	1.753	8998	27,76
Defunciones	**27.056**	1.506	1.280	2.093	1.110	973	6962	25,73
Renta familiar disponible per cápita en 2000							0	
Euros	**12.768**	12.393	13.179	9.664	8.577	8.674		

Área del Hospital Fundación Jiménez Díaz

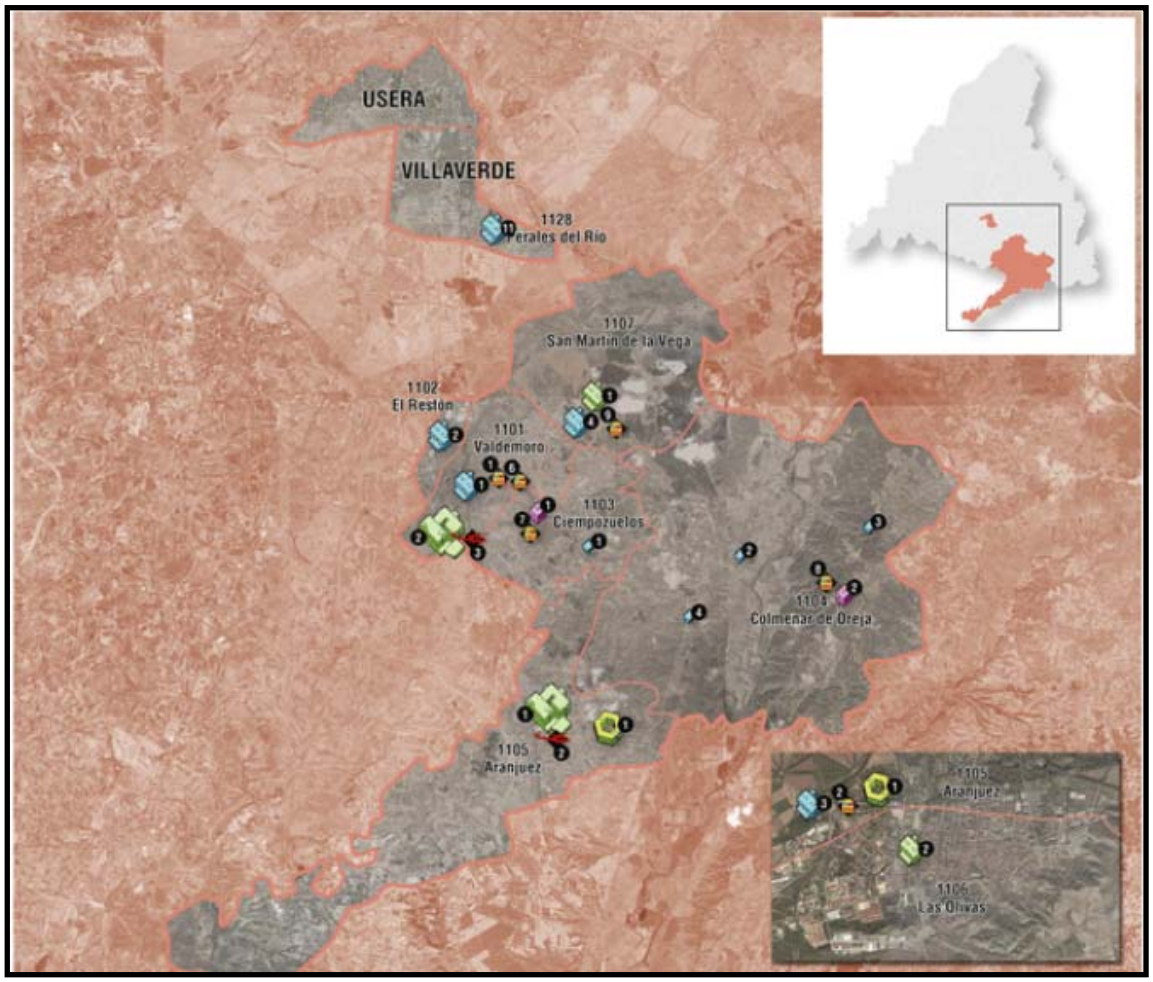
En la siguiente ilustración (Ilustración 1) se recogen las diferentes áreas sanitarias de la Comunidad de Madrid en la que se incluye el área del Hospital Fundación Jiménez Díaz.

Ilustración 1: Vista aérea del distrito centro y foto del exterior del Hospital Fundación Jiménez Díaz

Área del Hospital 12 de Octubre:

A continuación ilustramos gráficamente el área del Hospital 12 de Octubre (Ilustración 2)

Ilustración 2 Vista aérea de los distritos del área del Hospital 12 de Octubre



Participants

This prospective cohort included all preschoolers (2-5 years), children (6-12 years) and adolescents (13-18 years) who received psychiatric care in two catchment areas of the province of Madrid between 1 January 1992 and 30 April 2006 due to any psychiatric reason. These age groups were defined according to the National Library of Medicine and the National Institutes of Health's classification of ages (194). Inclusion criteria for this study were: (1) age 18 years or younger at first diagnosis of an ICD-10 anxiety disorder, (2) evaluated by a psychiatrist/psychologist on at least three occasions, and (3) psychiatric diagnosis documented during at least 80% of the subject's visits. Institutional Review Boards at "Fundacion Jimenez Diaz" and "12 de Octubre" Hospitals approved the study.

Setting

Services were rendered at psychiatric outpatient centers that are part of the Spanish National Health Services, which is financed by taxes and provides coverage free of charge for all Spanish citizens and legal immigrants.

Variables

Diagnoses were made by treating psychiatrists/psychologists according to ICD-9 or ICD-10, depending on the assessment date. Treating clinicians had standard clinical training in diagnostic assessment and were hired by the National Mental Health System to specifically treat the children and adolescent population. Responsible psychiatrists/psychologists had an extended experience evaluating and treating children and adolescents. Psychiatrists/psychologists recorded a maximum of 2 diagnoses per patient per visit for administrative purposes and were blind to the study process.

We grouped anxiety disorder diagnoses according to the following categories: phobic disorders (F40.0, F40.2, F40.8, F40.9, or F93.1); social anxiety disorders (F40.1 or F93.2); obsessive-compulsive disorder (OCD) (F42); stress-related disorders (F43.0, F43.1, F43.8 or F43.9); and "other" anxiety disorders (F41, F41.0, F41.1, F41.2, F41.3, F41.8, F41.9 or F93.0) which, among others, included generalized anxiety disorder and panic disorder (**Table 3**, Appendix 2)

Table 3 Anxiety ICD-10 psychiatric disorder diagnoses included in the analysis

ICD-10 Psychiatric Diagnosis Code	ICD-10 Psychiatric Diagnosis
F40.0, F40.2, F40.8, F40.9, or F93.1	Phobic disorders
F40.1 or F93.2	Social anxiety disorders
F42	Obsessive-compulsive disorder
F43.0, F43.1, F43.8 or F43.9	Stress-related disorders
F41, F41.0, F41.1, F41.2, F41.3, F41.8, F41.9 or F93.0	Other anxiety disorders

We also included the following ICD-10 diagnoses in the analyses (Table 4): 1) mental and behavioral disorders due to psychoactive substance use (F10-19); 2) schizophrenia, schizotypal and delusional disorders (F20–29); 3) mood (affective) disorders (F30–39); 4) somatoform disorders (F45), conversion and other neurotic disorders (F44, F48) and adjustment disorders (F43.2); 5) eating disorders (F50); 6) non-organic sleep and/or other physiological dysfunction disorders (F51-F55); 7) disorders of adult personality and behaviour (F60–69), including the individual diagnoses of specific personality disorders (F60) and other specific personality disorders (F60.8); 8) developmental disorders including mental retardation (F70-79) and disorders of psychological

development (F80-89); 9) disruptive behavior disorders including hyperkinetic disorders (F90), conduct disorders (F91), and mixed disorders of conduct and emotions (F92); 10) other emotional and/or behavioral disorders with onset in childhood (F93.3, F93.8, F93.9, F94, F98); and 13) mental disorder, not otherwise specified (F99).

Table 4. Non-anxiety ICD-10 psychiatric disorder diagnoses included in the analysis

ICD-10 Psychiatric Diagnosis Code	ICD-10 Psychiatric Diagnosis
F00-09	Organic, including symptomatic, mental disorders
F10-F19	Mental and behavioral disorders due to psychoactive substance use
F20-29	Schizophrenia, schizotypal and delusional disorders
F30-39	Mood (affective) disorders
F43.2, F44, F45, F48	Adjustment, conversion, somatoform, and other neurotic disorders:
F50	Eating disorders
F51, F52, F53, F54, F55	Non-organic sleep and/or other physiological dysfunction disorders
F60-69	Disorders of adult personality and behavior
F70-79,	Mental retardation
F80-89	Disorders of psychological development
F90, F91, F92	Disruptive behavior disorders including hyperkinetic disorders, conduct disorders , and mixed disorders of conduct and emotions (F92)
F93.3, F93.8, F93.9, F94, F98	Other emotional and/or behavioral disorders with onset in childhood
F95	Tics disorders
F99	Unspecified mental disorder

Analytic strategy

Diagnostic stability

We examined three complementary indices of diagnostic stability:

1) <u>Temporal consistency</u>

Temporal consistency is the presence or absence of a particular disorder at two different time points (39). Three measures of temporal consistency are presented for each category of anxiety disorders (195). The first, “prospective

consistency", is the proportion of individuals in a category at the first evaluation who remain in the same category at their last evaluation. This would correspond to positive predictive value if the last diagnosis were the gold standard. It is clinically useful because it indicates the extent to which a diagnosis given at the initial evaluation will be present at the last evaluation, thus directing clinical treatment.

The second, "retrospective consistency", is the proportion of individuals with a diagnosis assigned at the last evaluation that had received the same diagnosis at the first evaluation. This is conceptually similar to sensitivity and as with prospective consistency, high values indicate good temporal consistency of the diagnosis. Thus, if a diagnosis made by a clinician at the last evaluation - when more information has become available- coincides with the diagnosis given at the initial evaluation, it could be argued that the initial clinical presentation was adequately captured and diagnosed.

However, prospective and retrospective consistency rates fail to account for the fact that new cases may develop after initial presentation and other cases may remit (39), which is corrected by the use of the third measure of temporal consistency, the kappa coefficient (196). The kappa coefficient is the agreement between diagnoses at first and last evaluations and measures the agreement correcting for the effect of chance. We adopted the guidelines for the interpretation of kappa coefficients from Altman(197): <20%, poor agreement; 21%-40%, fair agreement; 41%-60%, moderate agreement; 61%-80% good agreement; 81%-100% very good agreement.

2) Diagnostic constancy:

Because prospective and retrospective consistency and the kappa coefficient rely only on two evaluations, they often fail to reflect the diagnostic process through multiple evaluations that is more characteristic of routine clinical practice(198). To capture this process, we also measured the proportion of patients who received the same diagnosis in at least 75% of the evaluations. From a clinical perspective, this measure would better assess the stability of the diagnoses throughout successive clinical encounters than the diagnostic information obtained at two distant time points (up to 13 years in our study). Subjects who received anxiety disorder diagnoses within the same category (i.e., within the “phobic disorders” category) in at least 75% of evaluations were categorized as having a constant anxiety disorder.

3) Probability of diagnostic change:

We used First-order Markov Models to discern what diagnoses are more likely to be made in a next visit for patients previously diagnosed with an anxiety disorder. The rationale for using this tool is based on the notion that some problems can be modeled as a state machine, i.e., a sequence of states and the set of probabilities of jumping from one to the others and to itself. The changes in the state take place at fixed periods of time. For these problems a useful mathematical tool are Markov Models (MM). The basic assumption of the first order Markov Model is that all the information needed to estimate the next state at t+1 is contained in the present state at time t. The resulting model is very tractable at the expenses of a lack of modeling capability. Nevertheless, for the problem at hand MM has revealed very useful.

More deeply, the MM consists of a sequence of T states and the probabilities a_{ij}:

$$\vec{\omega} = \{\omega_1, \omega_2, \cdots, \omega_T\}; \qquad a_{ij} = \Pr\{\omega(t+1) = \omega_j \mid \omega(t) = \omega_i\}; (i, j) \in [0, T]$$

Once the states have been chosen, the training of the model consists of simply computing the a priori probabilities of the T ω_i states and the estimation of the transitions a_{ij}. This is achieved by a frequentist approach: the count of the number of times a transition occurs divided by the total number of transitions.

The values of the transitions from one state to another can be represented as an image in which the color of the pixels reflects the probability of each transition. The probability of each transition is represented by a gradient, from dark blue (the lowest probability=0) to dark red (the highest probability=1).

In some of the experiments, the Markov Model presents a little modification, due to the fact that the changes of state of the patients occurs in times not uniformly spaced. Our solution has been to include the time information while encoding the states of the model. Consequently, the transitions of the model occur in a virtual time index that has not a literal sense (199;200).

In sum, a First-order Markov Model represents a process in which the future is independent from the past and depends only on the current state (in this case, the current diagnosis). For making a prediction at time *t*, the relevant information is the state at time *t* (in this case, the diagnosis at time *t*) and no further information on how the process developed before time *t* is needed. The Markov model calculates the probabilities of diagnostic change from one given diagnosis to the following diagnosis (199;201).

Markov model results can be interpreted to mean that: a) subjects who have received a diagnosis with high transition probability to the same diagnosis in Markov Models would have a high likelihood of receiving the same diagnosis in the next visit; conversely b) subjects who have received a diagnosis with low transition probability towards the same diagnosis in Markov Models would have a low likelihood of receiving the same diagnosis in the next visit.

Comorbidity

We calculated the prevalence of comorbid psychiatric diagnoses that were identified during subsequent assessments for the children and adolescents with an anxiety diagnosis. There were a very small percentage of subjects with a comorbid diagnosis at first evaluation. None individual comorbid diagnoses was present at first evaluation in more than 1% of subjects with anxiety disorders (i.e. 0.7% of subjects with phobic disorder diagnosis had a comorbid eating disorder diagnosis at first evaluation, 0.3% of subjects with “other” anxiety disorder diagnosis had a comorbid eating disorder at first evaluation). There was no age effect or sex effect in the prevalence of comorbid psychiatric disorder at first evaluation.

Duration of follow-up, persistence of the disorder, and service use

We calculated the duration of follow-up for each of the anxiety disorders studied. We considered anxiety disorders remitted if subjects diagnosed with an anxiety disorder have not visited the mental health over a two-year period since the last recorded visit. Given that we were interested in looking the influence of diagnostic stability on the persistence of the disorder over time, subjects with constant and inconstant anxiety disorder diagnoses were compared on the duration of follow-up. We hypothesized that children and adolescents who

received an anxiety disorder diagnosis in at least 75% of their visits to mental health professionals (constant diagnosis) would have a shorter duration of follow-up than those who did not (inconstant diagnosis). We also hypothesized that subjects with unstable anxiety disorder diagnoses will be more likely to be followed until adulthood than subjects with a stable anxiety disorder diagnosis. Following a similar line of reasoning we posit that subjects with inconstant anxiety diagnosis would have a higher number of visits to the mental health facilities during the follow-up.

Statistical analysis

We compared temporal consistency measures of different anxiety disorder diagnoses using Wald's method (197) to calculate confidence intervals for each measure of temporal consistency (Statistical Package for the Social Sciences, version 14.0). We conservatively considered two confidence intervals that share a boundary or do not overlap to be significantly different from one another. We also compared the prevalence of comorbid psychiatric diagnoses between those with and without a constant anxiety disorder diagnosis using Fisher´s Exact Test. To test if diagnostic stability influences the duration of follow up, Kaplan Meier survival analyses were conducted. To control for the potential effects of gender and age at first evaluation, Cox-regression analyses were used and stepwise backward analysis and Likelihood ratio were calculated. The proportion of subjects who continued to be followed in infancy, childhood, adolescence, and adulthood was compared with regard to diagnostic constancy, age at first evaluation, and gender using Chi^2 tests. Comparisons of the number of visits between subjects with and without constant anxiety

disorder diagnosis were calculated using t-tests as appropriate. All these comparisons were performed two-tailed.

RESULTS

Characteristics of the sample

Of the 23,163 youth in the registry, 1,869 met inclusion criteria and had 27,945 psychiatric/psychological consultations. Subjects were evaluated 15.0 times on average (range 3-204). The distribution of the sample by sex and age at first evaluation is shown in Figure 4. Initially 8.8% of the sample was evaluated between 2 and 5 years, 57.5% between 6 and 12 years, and 33.7% between 13 and 18 years.

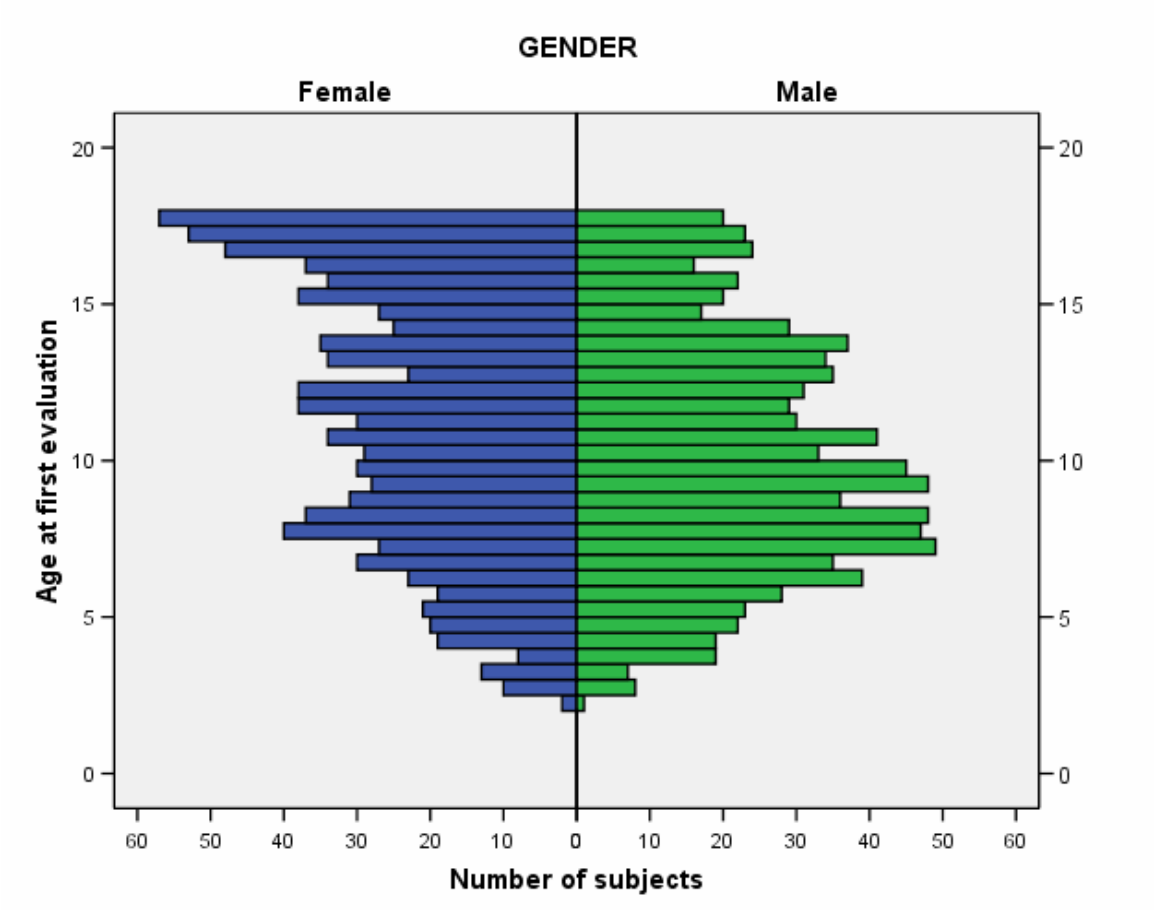


Figure 4. Sex distribution of the sample by age at first evaluation.

Although the proportions of females (50.7%) and males (49.3%) were similar, differences between sexes were found after stratification by age at first evaluation (χ^2=46.7, df=2, p<0.001). Significantly more males (55.2%) than females (44.4%) were initially diagnosed with an anxiety disorder during childhood followed by significantly more females (61.6%) than males (38.4%) diagnosed with an anxiety disorder during adolescence. The proportions of females (49.4%) and males (50.6%) who received an initial anxiety disorder diagnosis during preschool years were not significantly different.

First psychiatric diagnosis

Results with regards to first psychiatric diagnosis are presented in table 5. More than 65% of the whole sample had an anxiety disorder as the first psychiatric diagnosis (42.8% phobic disorders, 12.3% social anxiety disorders, 3.4% obsessive-compulsive disorder, and 3.7% stress-related disorders, and 13.4% other anxiety disorders). Although some anxiety disorder subgroups increased their prevalence over time (i.e. obsessive-compulsive disorder and other anxiety disorders), others reached a peak in childhood and relatively decreased during adolescence (phobic disorders and social anxiety).

Despite the majority of children and adolescents were initially diagnosed with an anxiety disorder, a variety of other psychiatric diagnoses were found to precede the onset of anxiety disorders. Among these disorders, adjustment disorders and other emotional and/or behavioral disorders with onset in childhood were the most prevalent. No sex differences were observed.

Table 5. Psychiatric diagnoses at the first evaluation by gender and age at the first evaluation

ICD-10 Psychiatric Diagnosis	Pre-schooler N=81	Child N= 478	Adolescent N= 388	Pre-schooler N=83	Child N=597	Adolescent N=242	Total N (%)
• Anxiety disorders							
Phobic disorders	37	243	111	36	305	67	799 (42.8)
Social anxiety disorders	11	57	50	3	71	37	229 (12.3)
Obsessive compulsive disorder	1	13	17	3	14	15	63 (3.4)
Stress-related disorders	4	16	17	2	19	12	70 (3.7)
Other anxiety disorder	6	13	112	5	35	67	250 (13.4)
• Non-anxiety disorders							
Substance use disorders	--	--	--	--	2	1	3 (0.2)
Schizophrenia and related disorders	1	1	1	--	1	2	6 (0.3)
Affective disorders	--	--	8	--	5	2	15 (0.8)
Conversion and/or other neurotic disorders and/or adjustment disorders	6	51	29	16	32	14	148 (7.9)
Somatoform disorders	--	2	5	--	7	1	15 (0.8)
Eating disorders	--	4	13	2	3	1	23 (1.2)
Personality disorders	--	1	2	--	--	--	3 (0.2)
Non-organic sleep and/or other physiological dysfunction disorders	1	9	--	3	6	1	20 (1.1)
Mental retardation and other developmental disorders	2	10	4	2	11	2	32 (1.8)
Hyperkinetic and/or other disruptive behavior disorders	1	11	7	6	20	10	57 (3.0)
Tic disorders	--	--	--	--	4	1	5 (0.3)
Other emotional and/or behavioural disorders with onset in childhood	8	23	10	3	40	9	93 (5.0)
Others	3	11	2	2	20	--	38 (2.0)

Temporal consistency of anxiety disorder diagnoses

Overall sample

Prospective consistency ranged from 66.4% for other anxiety disorders to 78.6% for stress-related disorders (

Table 6). Retrospective consistency for anxiety disorder categories ranged from 52.2% for OCD to 82.1% for stress-related disorders. OCD and "other" anxiety disorders had significantly lower overall retrospective consistency than phobic, social anxiety, and stress-related disorders. Kappa values ranged from 54.4% in "other" anxiety disorders category to 79.5% in stress-related disorders category.

Table 6. Temporal consistency of ICD-10 anxiety disorder.

	First evalu a. (n)	Prosp. Cons. (%)	95%CI	Retrosp Cons. (%)	95%CI	First vs Last evaluatio n (κ^1) (%)	95%CI
Phobic	801	77.5	74.6-80.4	78.6	75.7-81.4	61.8	58.2-65.4
Social anxiety	229	72.0	66.2-77.8	78.5	73.0-84.1	71.9	66.8-76.8
OCD	63	74.6	63.8-85.3	52.2	41.9-62.5	59.8	50.5-69.1
Stress-related	70	78.6	69.0-81.2	82.1	72.9-91.2	79.5	72.0-87.0
"Other"	253	66.4	60.5-72.2	56.5	50.9-62.2	54.4	49.0-59.8

[1]All Kappa (κ) statistics are significant (P<0.001).
Prosp. Cons.= Prospective consistency (%)
Retrosp. Cons. = Retrospective consistency (%)

Sample stratified by age

Consistency of ICD-10 anxiety disorders by age at first evaluation is shown in Table 7. Prospective consistency rates for phobic and social anxiety disorders were significantly higher in those first evaluated during childhood compared with those first evaluated during adolescence.

There were no significant age effects on the prospective consistency rates for obsessive-compulsive, stress-related, and “other” anxiety disorders.

Retrospective consistency rates for OCD and “other” anxiety disorders were significantly lower than for phobic, social anxiety, and stress-related disorders among those first evaluated in childhood or adolescence.

Kappa values for those first evaluated in childhood ranged from 42.2% in “other” anxiety disorders to 82.3% in stress-related disorders. Kappa values for those first evaluated in adolescence ranged from 55.3% in “other” anxiety disorders to 72.9% in stress-related disorders.

Table 7. Temporal consistency of ICD-10 anxiety disorder by age at first evaluation

Preschoolers	**First evalua. (n)**	**Prosp. Cons. (%)**	**95%CI**	**Retrosp Cons. (%)**	**95%CI**	**First vs Last evaluation (κ[1]) (%)**	**95%CI**
Phobic	73	86.3	78.4-94.1	67.7	58.2-77.2	51.9	39.3-64.5
Social anxiety	14	64.2	39.1-89.3	75.0	50.0-99.4	66.6	45.0-88.1
OCD	4	50.0	10.0-98.9	100.0	100-100	66.1	22.2-100
Stress-related	6	100.0	100-100	85.7	59.7-100	92.0	76.3-100
"Other"	11	66.4	60.5-72.2	56.5	50.9-62.2	39.2	12.6-65.8
Children							
Phobic	549	80.8	77.5-84.1	80.0	76.6-83.3	59.8	54.9-64.5
Social anxiety	128	76.5	69.2-83.9	74.8	67.3-82.2	72.3	65.8-78.8
OCD	27	85.1	71.7-98.5	50.0	35.5-64.4	61.8	48.5-75.0
Stress-related	35	82.8	70.3-95.3	82.8	70.3-95.6	82.3	72.4-92.1
"Other"	60	60.0	47.6-72.3	37.5	27.8-47.1	42.2	32.0-52.2
Adolescent							
Phobic	179	63.6	56.6-70.7	80.2	73.7-86.8	61.3	54.2-68.3
Social anxiety	87	66.6	56.7-76.5	86.5	78.4-94.7	72.0	63.5-80.3
OCD	32	68.7	52.6-84.8	52.3	37.2-67.4	57.0	43.1-70.7
Stress-related	29	68.9	52.1-85.8	80.8	64.3-95.6	72.9	59.3-86.4
"Other"	182	69.7	63.1-76.4	67.1	60.5-73.8	55.3	48.1-62.4

[1]All Kappa (κ) statistics are significant (P<0.001).
Prosp. Cons.= Prospective consistency (%)
Retrosp. Cons. = Retrospective consistency (%)

Sample stratified by sex

Consistency of ICD-10 anxiety disorders by sex is shown in Table 8. Prospective consistency rates for the majority of the anxiety disorder categories were similar in females and males. Both sexes showed prospective consistency rates in the range of 70-80%, the only exception being "other" anxiety disorders with rates of 68.4% for females and 63.5% for males.

Retrospective consistency rates for both sexes were also between 70-80%, the only exceptions being OCD and "other" anxiety disorders with rates of 65.7% and 55.8% in females and of 43.6% and 58.1% in males, respectively.

Kappa values for phobic, social anxiety, and stress-related disorders were similar for both sexes and were in the range of 60-80%. "Other" anxiety disorders in both sexes and OCD in males had the lowest kappa values of all the anxiety disorders and were in the range of 50-60%.

Table 8. Temporal consistency of ICD-10 anxiety disorder by sex.

Females	First evalua. (n)	Prosp. Cons. (%)	95%CI	Retrosp. Cons. (%)	95%CI	First vs Last evaluation (κ^1) (%)	95%CI
Phobic	393	75.9	71.7-80.1	78.9	74.8-83.1	62.0	56.9-67.1
Social-anxiety	118	70.3	62.0-78.5	83.0	75.6-90.3	73.1	66.1-80.0
OCD	31	74.1	58.7-89.5	65.7	49.9-81.4	68.6	55.6-81.6
Stressrelated	37	73.0	58.7-87.3	77.1	63.2-91.1	74.0	62.4-85.5
"Other"	146	68.4	60.9-76.0	55.8	48.5-63.1	53.6	46.5-60.7
Males							
Phobic	408	79.1	75.1-83.0	78.9	74.8-83.1	61.7	56.6-66.8
Social anxiety	111	73.8	65.7-82.0	74.5	66.4-82.6	70.7	63.5-77.8
OCD	32	75.0	59.9-90.0	43.6	30.5-56.7	53.1	40.2-65.9
Stress-related	33	84.8	72.6-97.1	87.0	76.0-98.9	85.6	76.4-94.8
"Other"	107	63.5	54.4-72.6	58.1	49.1-67.0	55.3	46.9-63.5

Diagnostic constancy of anxiety disorder diagnoses

Overall sample

The proportions of patients that remained within the same diagnostic category during at least 75% of evaluations are presented in

Table 9. OCD and "other" anxiety disorders were significantly less constant than the remaining anxiety disorder categories.

Table 9. Diagnostic constancy of childhood anxiety disorders

Total	Female (%)	95%CI	Male (%)	95%CI	Total (%)	95%CI
Phobic disorders	62.5	58.4-66.5	65.6	62.7-68.4	64.1	61.1-66.9
Social anxiety disorders	61.1	53.6-68.6	56.8	51.3-62.2	58.9	53.5-64.3
Obsessive compulsive disorder	41.4	30.7-51.9	43.4	35.1-51.5	42.6	34.3-50.7
Stress-related disorders	57.1	41.9-72.2	68.3	58.6-77.9	62.2	52.2-72.2
"Other"	39.1	32.2-45.9	35.0	30.7-39.2	37.4	33.1-41.7

Sample stratified by age and gender

Only the diagnostic constancies of phobic disorders and "other" anxiety disorders were significantly different between those first evaluated in childhood compared with those first evaluated in adolescence. Phobic disorder diagnoses were significantly more constant in those first evaluated in childhood while "other" anxiety disorders were significantly more constant in those first evaluated in adolescence (table 10).

No significant sex differences were observed on the diagnostic constancy of the anxiety disorder categories studied.

Table 10. Diagnostic constancy by age at first evaluation and sex

Preschoolers	Female (%)	95%CI	Male (%)	95%CI	Total (%)	95%CI
Phobic disorders	68.6	56.7-80.4	57.6	48.3-66.8	62.7	53.6-71.7
Social anxiety disorders	75.0	42.9-100	57.1	34.8-79.3	68.4	47.5-89.3
Obsessive compulsive disorder	--	--	33.3	6.0-65.9	25.0	0.0-55.0
Stress-related disorders	50.0	1.0-98.9	50.0	21.7-78.2	45.5	33.4-57.4
"Other"	35.7	9.6-61.7	15.4	01.7-28.9	25.9	9.3-42.4
Children						
Phobic disorders	68.3	63.6-72.8	67.5	64.0-70.9	67.8	64.4-71.2
Social anxiety disorders	68.8	60.0-77.6	53.8	46.5-60.9	60.1	53.0-67.2
Obsessive compulsive disorder	47.8	33.0-62.5	38.6	26.9-50.2	41.8	29.9-53.6
Stress-related disorders	70.0	50.8-89.1	72.7	59.2-86.1	71.4	57.7-85.0
"Other"	21.7	12.8-30.5	27.7	20.9-34.5	24.7	18.1-31.2
Adolescents						
Phobic disorders	48.3	38.0-58.6	62.5	56.1-68.3	53.5	47.2-59.8
Social anxiety disorders	50.0	36.0-63.9	63.3	54.5-72.0	55.6	46.5-64.5
Obsessive compulsive disorder	39.4	22.7-56.0	51.5	39.4-63.5	45.5	33.4-57.4
Stress-related disorders	47.6	22.3-72.8	66.7	51.2-82.0	55.6	39.3-71.7
"Other"	46.9	37.1-56.6	43.6	37.8-49.2	45.7	40.0-51.4

Diagnostic constancy and comorbid psychiatric diagnoses

Subjects with a constant diagnosis had different prevalence of comorbid psychiatric disorder diagnoses during follow-up than subjects with an inconstant diagnosis (table 11). Those with inconstant phobic, social anxiety, OCD, stress-related, and “other” anxiety disorder diagnoses had higher prevalence of comorbid diagnoses than those with constant diagnoses. More than 20% of those with inconstant diagnoses of OCD, stress related, and “other” anxiety disorder and slightly less than 15% of those with inconstant diagnoses of phobic and social anxiety disorder had a comorbid mood disorder. The prevalence of eating disorders among those with an inconstant anxiety disorder ranged from 10.7% among those with inconstant social anxiety disorder to 27.5% for those with inconstant OCD.

Table 11. Comorbid non-anxiety ICD psychiatric disorder diagnoses by anxiety disorder category and diagnostic constancy

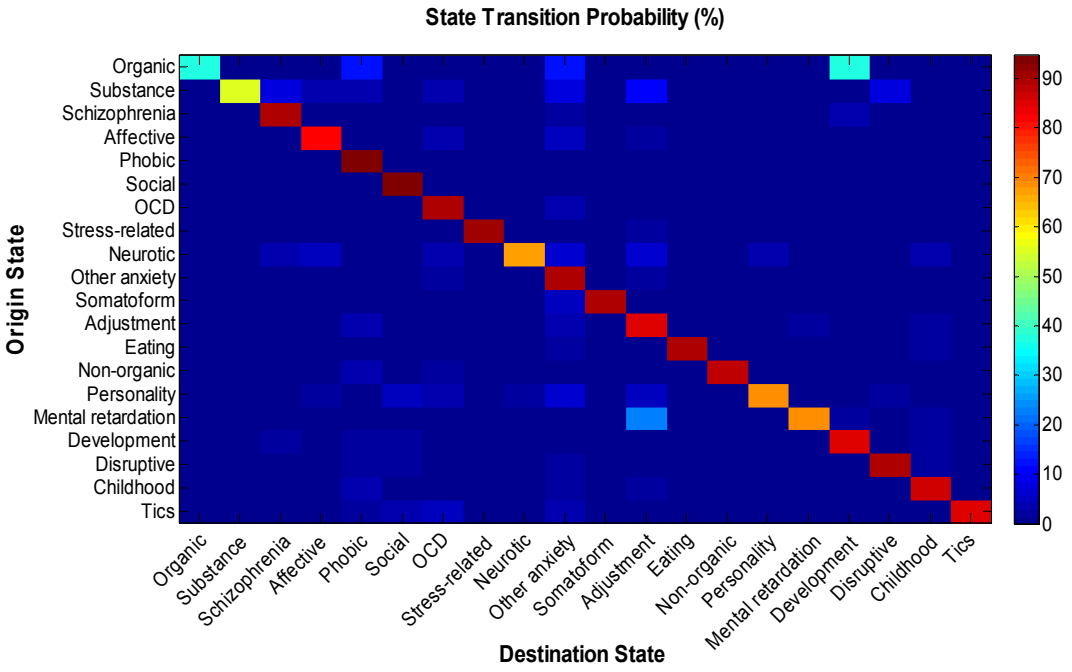
	Phobic		Social anxiety		OCD		Stress-related		Other anxiety	
Diagnostic constancy	**C (%)**	**I (%)**	**C (%)**	**I (%)**	**C (%)**	**I (%)**	**C (%)**	**I (%)**	**C (%)**	**I (%)**
Organic, including symptomatic, mental disorders	0.5	0.3	--	--	1.2	--	--	--	0.3	1.1
Mental and behavioural disorders due to psychoactive substance use	1.8*	0.4	2.3	0.5	4.9	3.3	--	1.8	3.3*	0.5
Schizophrenia, schizotypal and delusional disorders	2.6$	0.6	3.1	1.1	2.5	--	5.9	--	5.9*	0.5
Mood (affective disorders	14.8*	2.6	13.0*	3.7	23.5	13.3	20.6$	--	23.3$	6.6
Phobic disorder	100.0	100.0	6.0$	0.6	8.1$	1.0	1.8*	0.1	24.2$	2.5
Social Anxiety disorder	13.7*	4.8	100.0	100.0	4.6	1.6	--	--	7.6	2.1
Obsessive-compulsive disorder	38.3$	11.7	11.1*	--	100.0	100.0	--	--	39.7*	20.0
Stress-related disorders	20.6*	1.8	--	--	--	--	100.0	100.0	17.6*	1.8
“Other” anxiety disoders	32.8$	5.5	4.6*	--	12.1*	3.8	2.3	--	100.0	100.0
Eating disorders	13.3$	3.2	10.7	2.7	27.5	1.7	14.7	1.8	11.1*	3.3
Disorders of adult personality and behavior	5.7$	1.5	15.3	6.4	13.6	3.3	5.9	--	9.5	6.0
Mental retardation	1.0	0.1	2.3	0.5	1.2	--	2.9	--	3.6$	--
Disorders of psychological development	8.9$	1.3	15.3	6.9	2.5	3.3	2.9	--	8.2	1.1

C= Constant diagnosis
I= Inconstant diagnosis
* Fisher Exact Test (2-tailed, $p<0.05$)
$ Fisher Exact Test (2-tailed, $p<0.01$)

Probability of diagnostic changes

The first Markov Model included the whole sample (Figure 5). The highest transition probabilities are distributed on the diagonal of Figure 5. This means that the most probable transitions were within the same diagnostic category. In other words, the probability of receiving a diagnosis within the same diagnostic category during the next consultation was higher than the probability of receiving a diagnosis within a different category. Among all anxiety disorder categories, the probability of transition to the same category was ≥80%. This indicates that on average, there was less than 20% probability of changing diagnoses (switching from one category to another from one visit to the next).

Figure 5. Markov's model

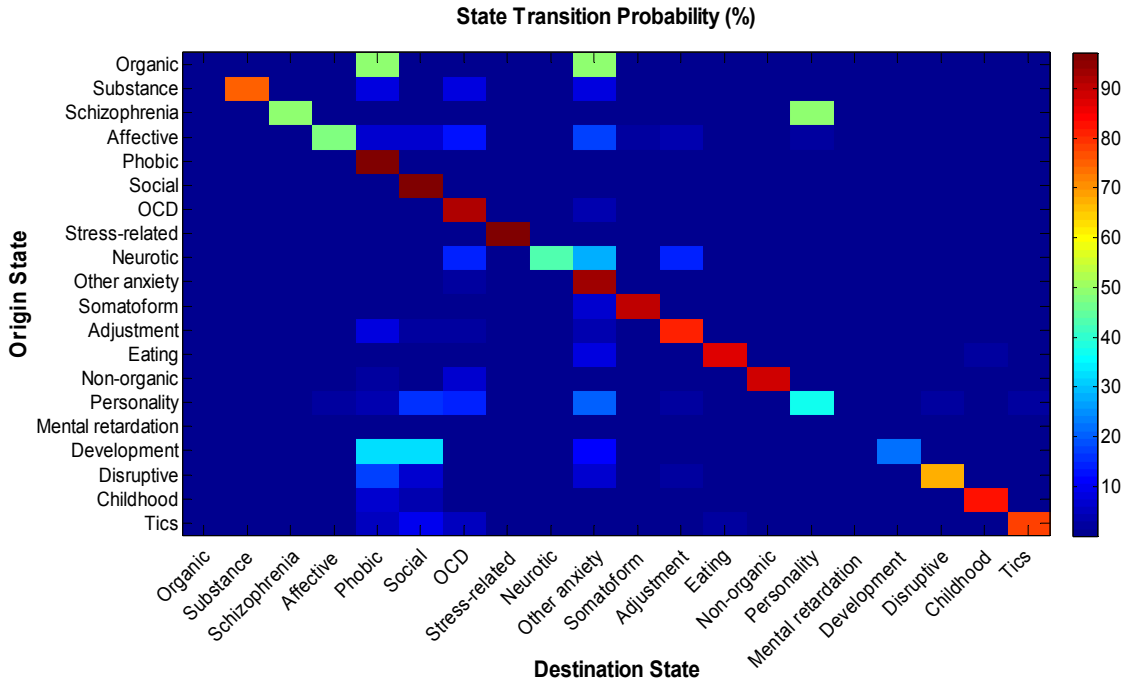


Legend Figure 5: The y-axis represents "prior" diagnostic states (diagnosis received at the previous consultation, and the x-axis represents "next" diagnostic states (diagnosis received at the following consultation. The values of the transitions from one state to another can be represented as an image in which the color of the pixels reflects the probability of each transition. For

example, if a patient has been previously diagnosed with an organic mental disorder (F0 on the y-axis, the probability of being diagnosed with an organic mental disorder in the next visit (F0 on the x-axis would be about 0.40 (on the diagonal).

The second model (Figure 6) included patients who had received the anxiety disorder diagnosis in at least 75% of the evaluations ("constant diagnosis" group.

Figure 6. Markov´s model of "constant diagnosis" group (patients who received the anxiety disorder diagnosis in at least 75% of the evaluations.



This is an interesting model, since the "constant diagnosis" group includes all patients who have consistently been assigned the diagnosis of an anxiety disorder by the clinicians who have assessed them. The most probable transitions across diagnostic blocks were from other diagnoses to anxiety disorders, but not from anxiety disorders to other diagnoses. This indicates that patients who receive a constant diagnosis of anxiety disorder may have previously received other psychiatric diagnoses, but once they receive a constant diagnosis of anxiety disorder they do not switch to any other diagnostic

block. The psychiatric diagnoses that these individuals had previously received may reflect the most common differential diagnosis of anxiety disorders observed in clinical practice.

Duration of follow-up

Results with regard to duration of follow-up depending on the to stability of anxiety disorder diagnoses are shown below. We used two years since the last visit at the mental health facilities as the indicator for remission. Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with constant diagnoses as opposed to subjects with inconstant diagnoses. Having an inconstant anxiety disorder diagnosis was found to significantly increase the duration of follow-up compared with having a constant anxiety disorder diagnosis. We also present graphical representations of the survival functions for each of the anxiety disorders studied and cox regression analyses.

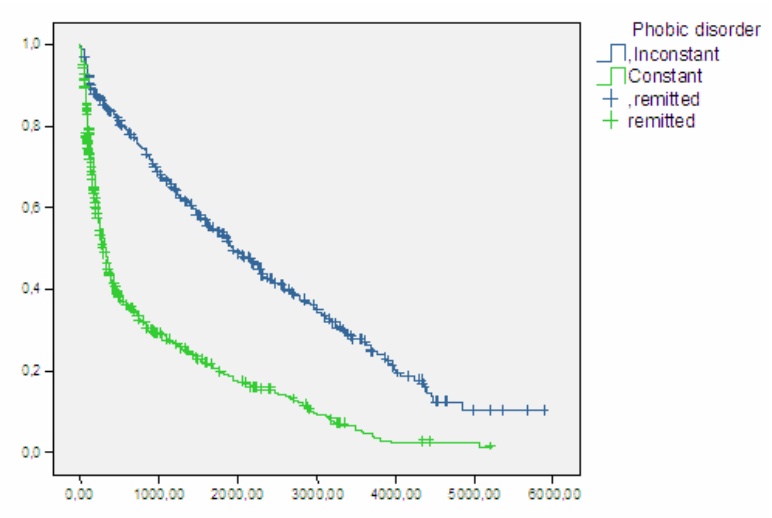
Phobic disorders

Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with constant phobic disorder diagnoses as opposed to subjects with inconstant phobic disorder diagnoses (Table 12).

Table 12. Phobic disorders: Kaplan-Meier Survival analysis of duration of follow-up

Duration of Follow-up				95% Confidence Interval		Log Rank (Mantel-Cox)		
		Median	Std. Error	Lower Bound	Upper Bound	χ^2	Df	P
Phobic disorders	**Inconstant**	1938,000	171,722	1601,425	2274,575			
	Constant	323,000	22,827	278,258	367,742			
	Overall	721,000	71,520	580,821	861,179	155,83	1	,000

Figure 7. Survival analysis of duration of follow-up of phobic disorder diagnosis by diagnostic constancy



Cox Regression analysis

Given that age at first evaluation and sex could affect the relationship between diagnostic constancy and duration of follow-up we will also show the results of the Cox regressions conducted for each of the anxiety disorders studied. Cox-regression analysis controlling for the effect of gender and age at first evaluation showed that duration of follow up of patients diagnosed with phobic disorders was significantly dependent on the constancy of the diagnosis but not on gender or age at first evaluation. Having an inconstant phobic disorder diagnosis versus having a constant phobic disorder diagnosis increases more than two fold the duration of follow-up (Table 13).

Table 13. Phobic disorders: cox regression analysis

		Wald	Gl	Sig.	Exp(B	95,0% Cl Exp(B	
						Lower	Upper
Phobic disorder	inconstant Vs constant diagnosis	160,026	1	,000	2,602	2,244	3,018

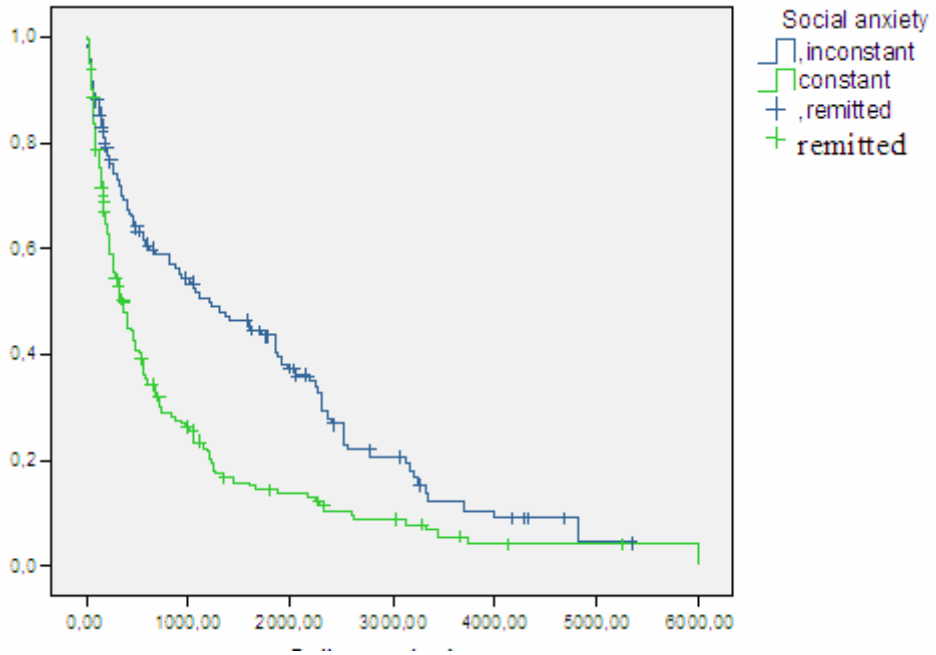
Social anxiety disorders

Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with social anxiety disorder diagnoses as opposed to subjects with inconstant social anxiety disorder diagnoses (
Table 14).

Table 14. Social anxiety disorders: Kaplan-Meier Survival analysis of duration of follow-up

Duration of Follow-up				95% Confidence Interval		Log Rank (Mantel-Cox		
		Median	Std. Error	Lower Bound	Upper Bound	χ^2	Df	P
Social anxiety disorder	**Inconstant**	1225,000	292,127	652,430	1797,570			
	Constant	369,000	58,440	254,458	483,542			
	Overall	510,000	66,120	380,405	639,595	20,521	1	,000

Figure 8. Survival analysis of duration of follow-up of social anxiety disorder diagnosis by diagnostic constancy



Cox regression

Similarly, cox-regression analysis controlling for the effect of gender and age at first evaluation showed that duration of follow up of patients diagnosed with social anxiety disorders was significantly dependent on the constancy of the diagnosis but not on gender or age at first evaluation. Having an inconstant social anxiety disorder diagnosis versus having a constant social anxiety disorder diagnosis increases more than one and a half times the duration of follow-up.

Table 15. Social anxiety disorders: cox regression analysis

		Wald	Gl	Sig.	Exp(B	95,0% Cl Exp(B	
						Lower	Lower
Social anxiety	inconstant Vs constant diagnosis	17,223	1	,000	1,682	1,316	2,150

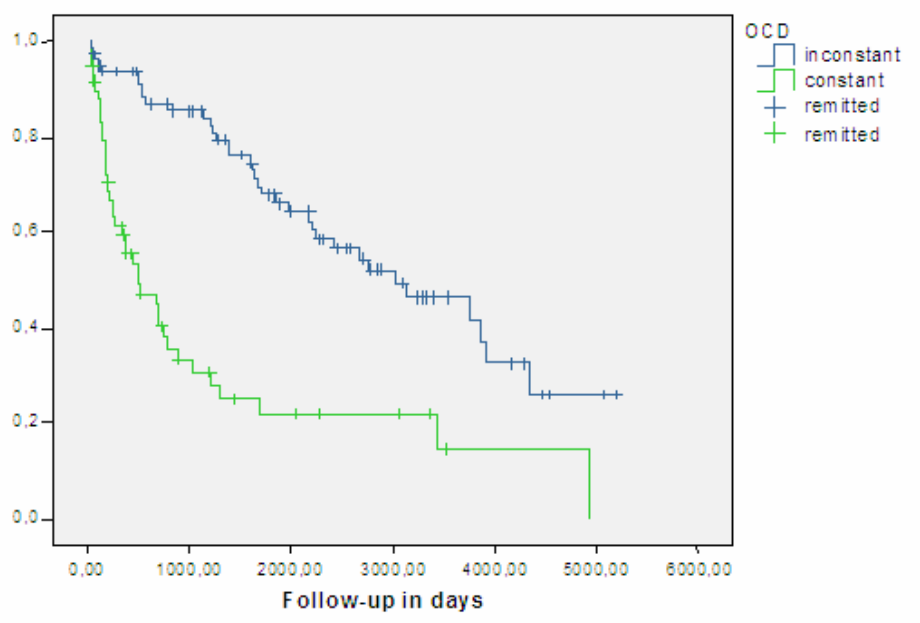
Obsessive-compulsive disorder

Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with obsessive compulsive disorder diagnoses as opposed to subjects with inconstant obsessive compulsive disorder diagnoses (Table 16).

Table 16. Obsessive-compulsive disorder: Kaplan-Meier Survival analysis of duration of follow-up

Duration of Follow-up				95% Confidence Interval		Log Rank (Mantel-Cox		
		Median	Std. Error	Lower Bound	Upper Bound	χ^2	Df	P
Obsessive compulsive disorder	**Inconstant**	3035,000	615,454	1828,710	4241,290			
	Constant	490,000	197,172	103,543	876,457			
	Overall	1728,000	346,268	1049,315	2406,685	30,309	1	,000

Figure 9. Survival analysis of duration of follow-up of OCD disorder diagnosis by diagnostic constancy



Cox regression

Among subjects with an OCD diagnosis cox-regression analysis controlling for the effect of gender and age at first evaluation showed that duration of follow up was significantly affected by the constancy of the diagnosis (Table 17). Age at first evaluation and sex did not influence the duration of follow-up. Having an inconstant OCD diagnosis versus having a constant OCD diagnosis increases more than three times the duration of follow-up.

Table 17. Obsessive-compulsive disorder: cox regression analysis

		Wald	Gl	Sig.	Exp(B	95,0% Cl Exp(B	
						Lower	Lower
OCD	inconstant Vs constant diagnosis	31,635	1	,000	3,499	2,262	5,414

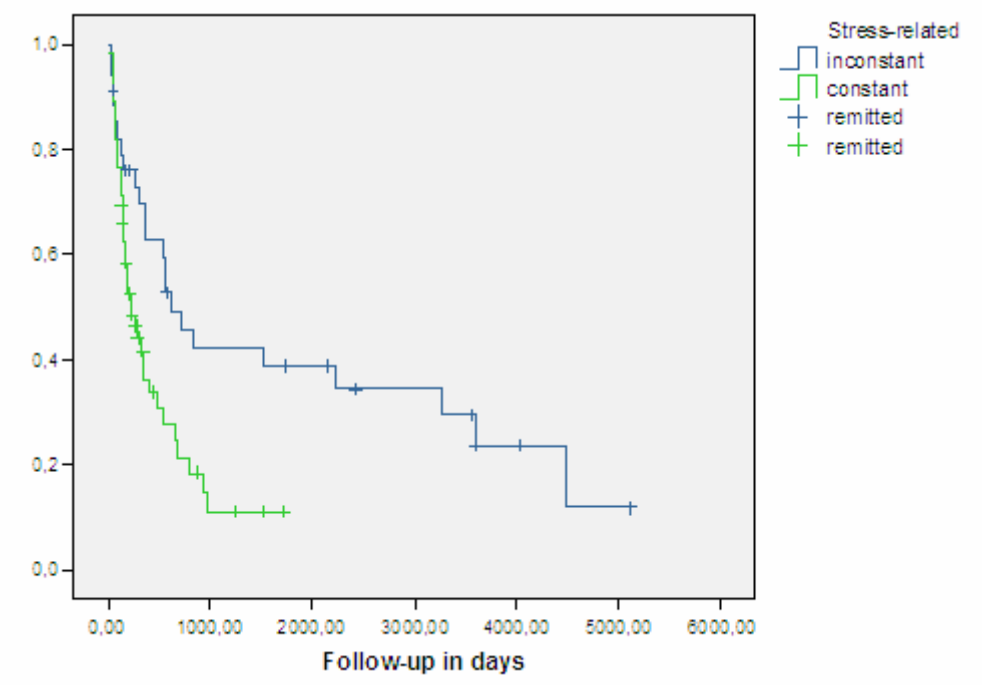
Stress-related disorder

Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with stress-related disorder diagnoses as opposed to subjects with inconstant stress-related disorder diagnoses (Table 18).

Table 18. Stress-related disorder: Kaplan-Meier Survival analysis of duration of follow-up

Duration of Follow-up				95% Confidence Interval		Log Rank (Mantel-Cox		
		Median	Std. Error	Lower Bound	Upper Bound	χ^2	Df	P
Stress-related disorder	**Inconstant**	623,000	184,907	260,583	985,417			
	Constant	236,000	63,001	112,518	359,482			
	Overall	360,000	99,189	165,590	554,410	7,420	1	,006

Figure 10. Survival analysis of duration of follow-up of stress-related disorder diagnosis by diagnostic constancy



Cox regression

Among subjects with stress-related disorders, cox-regression analysis controlling for the effect of gender and age at first evaluation showed that duration of follow up was significantly affected by the constancy of the diagnosis but also by sex. Age at first evaluation did not influence the duration of follow-up (

Table 19). Having an inconstant stress-related disorder diagnosis versus having a constant diagnosis increases nearly two times the duration of follow-

up. Males were also more likely to show a longer duration of follow-up than females.

Table 19. Stress-related disorders: cox regression analysis

		Wald	gl	Sig.	Exp(B	95,0% CI Exp(B	
						Lower	Lower
Stress related	Male Vs females	4,858	1	,028	1,730	1,063	2,818
	inconstant Vs constant diagnosis	5,147	1	,023	1,877	1,089	3,235

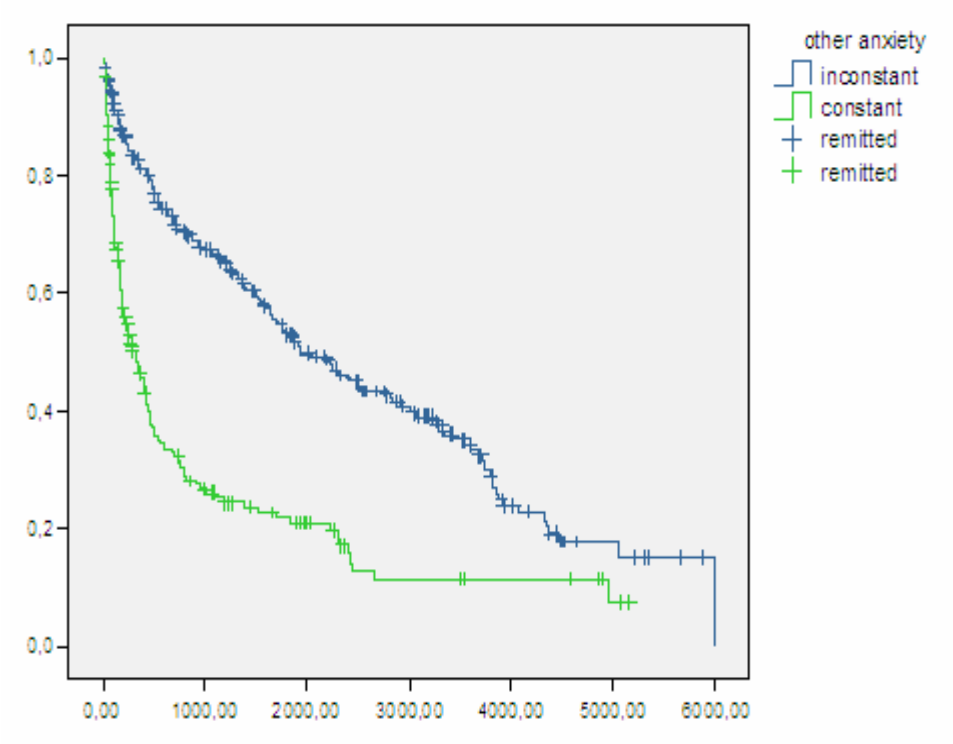
Other anxiety disorder

Kaplan-Meier survival analysis showed significant differences in duration of follow-up in subjects with other anxiety disorder diagnoses as opposed to subjects with inconstant other anxiety disorder diagnoses (Table 20).

Table 20. Other anxiety disorders: Kaplan-Meier Survival analysis of duration of follow-up

Duration of Follow-up				95% Confidence Interval		Log Rank (Mantel-Cox		
Anxiety disorders		Median	Std. Error	Lower Bound	Upper Bound	χ^2	Df	P
Other anxiety disorders	**Inconstant**	1960,000	243,960	1481,839	2438,161			
	Constant	324,000	57,018	212,245	435,755			
	Overall	1217,000	184,930	854,537	1579,463	67,902	1	,000

Figure 11. Survival analysis of duration of follow-up of other anxiety disorder diagnosis by diagnostic constancy



Cox regression

Cox-regression analysis controlling for the effect of gender and age at first evaluation showed that duration of follow up of patients diagnosed with other anxiety disorders was significantly dependent on the constancy of the diagnosis but not on gender or age at first evaluation (Table 21). Having an inconstant other anxiety disorder diagnosis versus having a constant diagnosis increases more than two and a half times the duration of follow-up.

Table 21. Other anxiety disorders: cox regression analysis

		Wald	Gl	Sig.	Exp(B	95,0% Cl Exp(B	
						Lower	Lower
Other anxiety	Inconstant vs constant diagnosis	73,951	1	,000	2,550	2,060	3,156

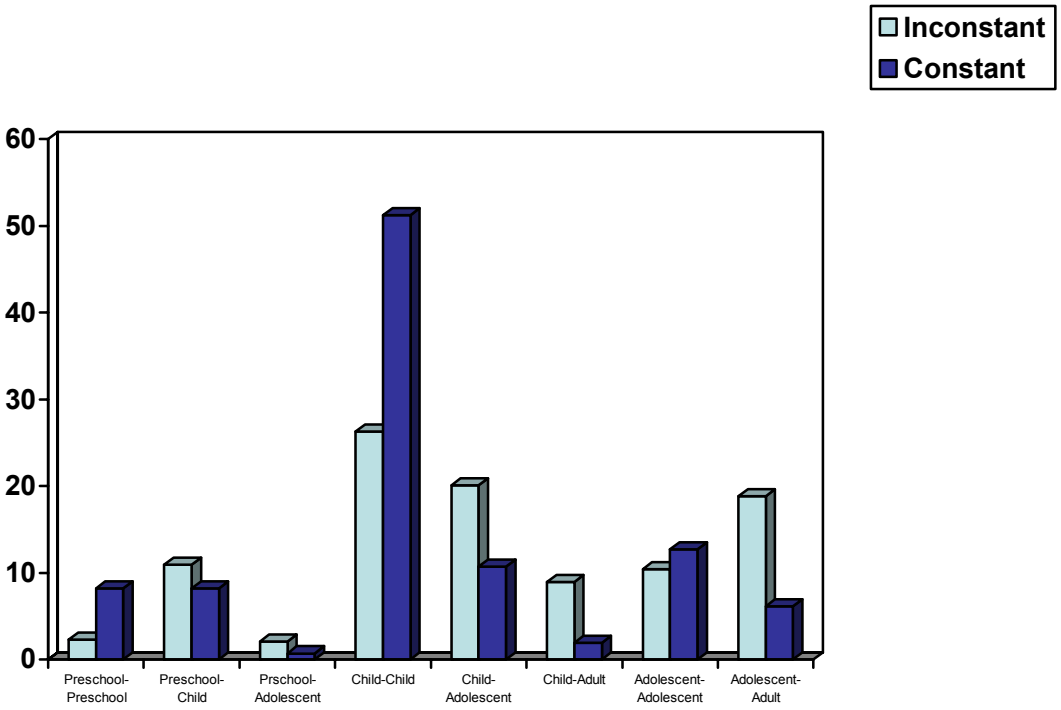
Persistence of anxiety disorders

The impact of diagnostic constancy on persistence of the different anxiety disorders studied across developmental periods was evaluated using Chi-square tests.

Phobic disorders

Persistence of phobic disorders was significantly associated to having an inconstant diagnosis (χ^2= 135,807; df=8; p<0,001). Subjects with inconstant phobic disorder diagnoses were significantly more likely to continue to be followed in a subsequent developmental period than subjects with constant phobic disorder diagnoses (i.e. more children with inconstant phobic disorder diagnoses were continued to be followed during adolescence compared with children with constant phobic disorder diagnoses) (Figure 12).

Figure 12. Percentage of subjects who continued to be followed across different developmental stages by diagnostic constancy: phobic disorder (overall sample)



Results by age at first evaluation and gender

Constant diagnoses of phobic anxiety disorder first evaluated either in infancy, childhood, or adolescence were more likely to remain in the same developmental period than to persist to subsequent developmental stages compared with inconstant diagnoses first evaluated in infancy, childhood, or adolescence (figure 13-18). No sex differences were observed in those first evaluated in childhood or adolescence.

Figure 13. Percentage of female subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: phobic disorder

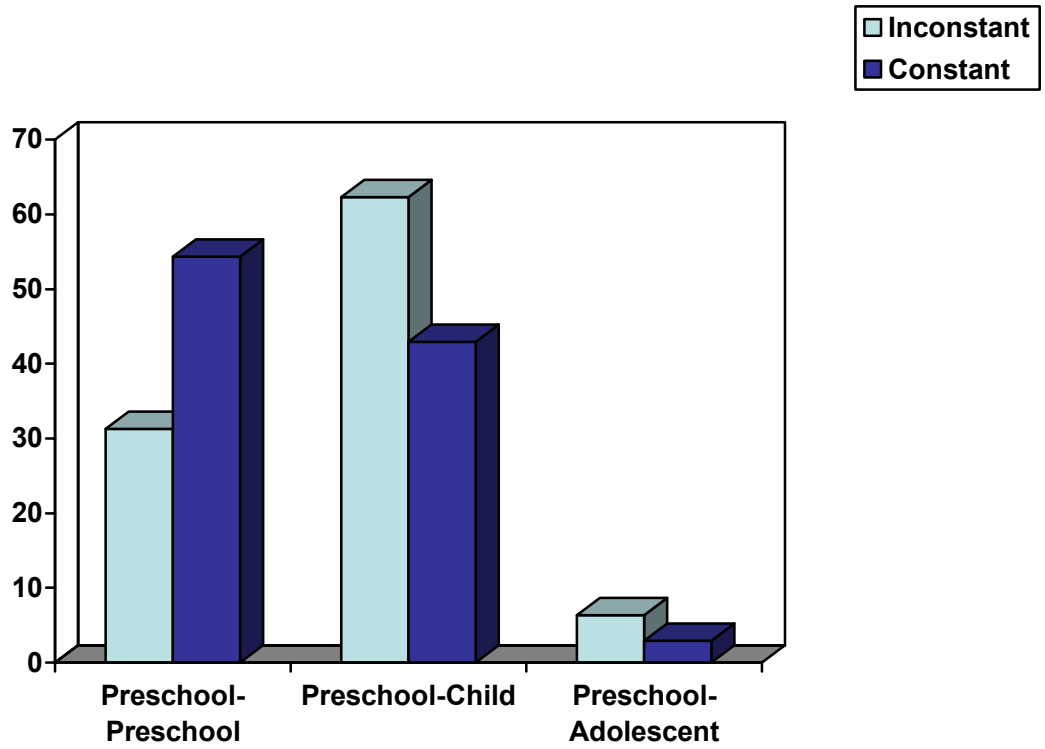


Figure 14. Percentage of male subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: phobic disorder

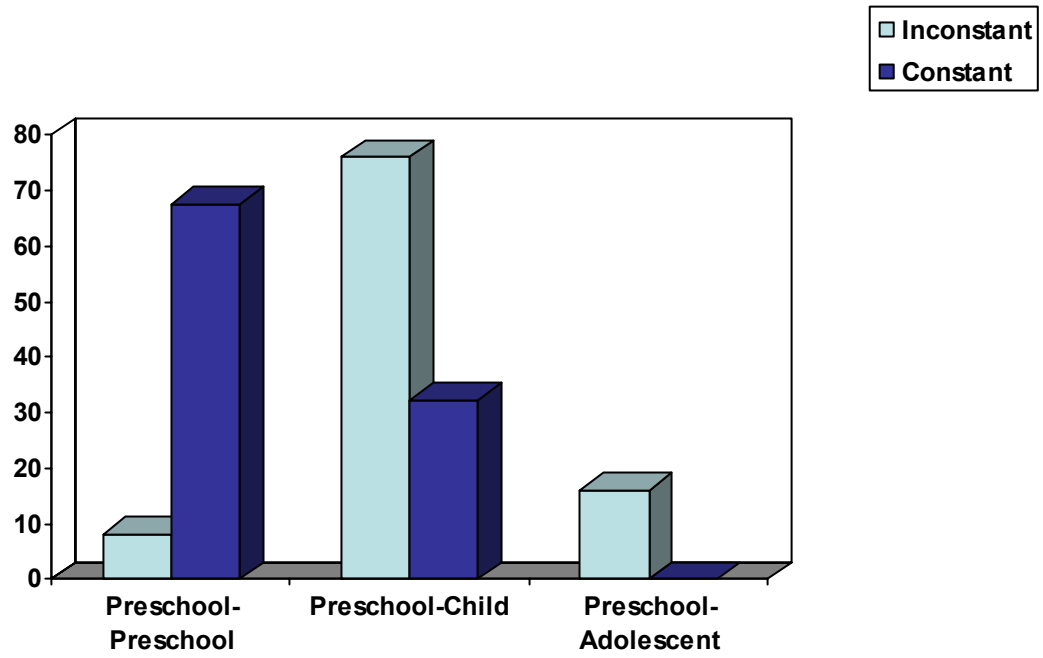


Figure 15. Percentage of female subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: phobic disorder

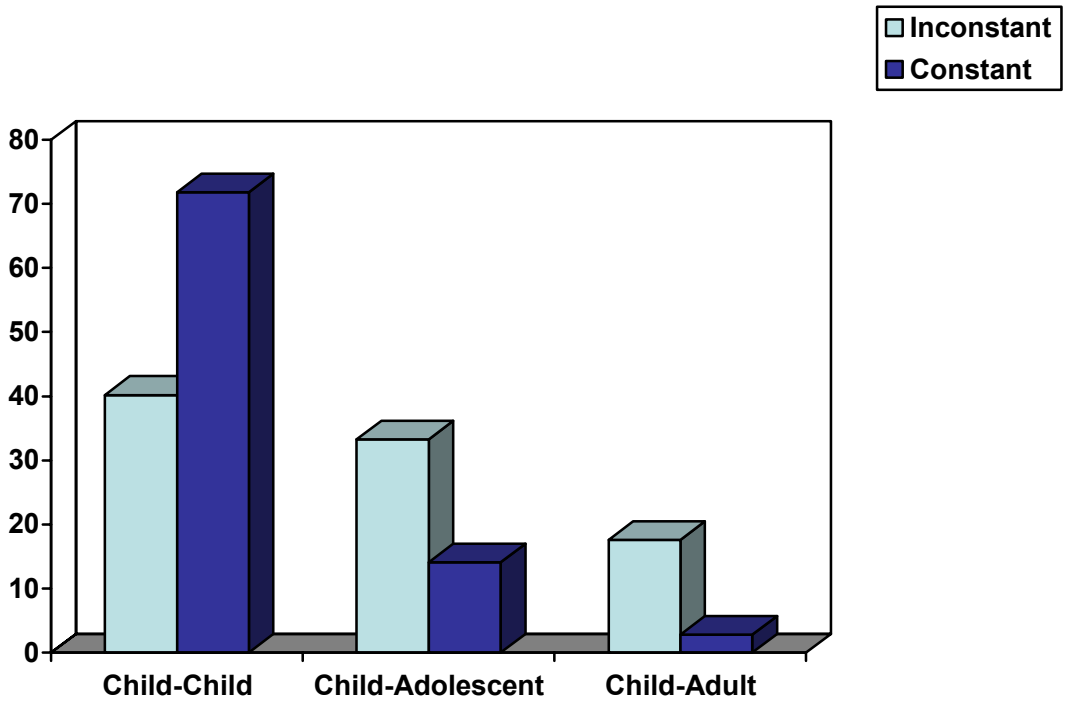


Figure 16. Percentage of male subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: phobic disorder

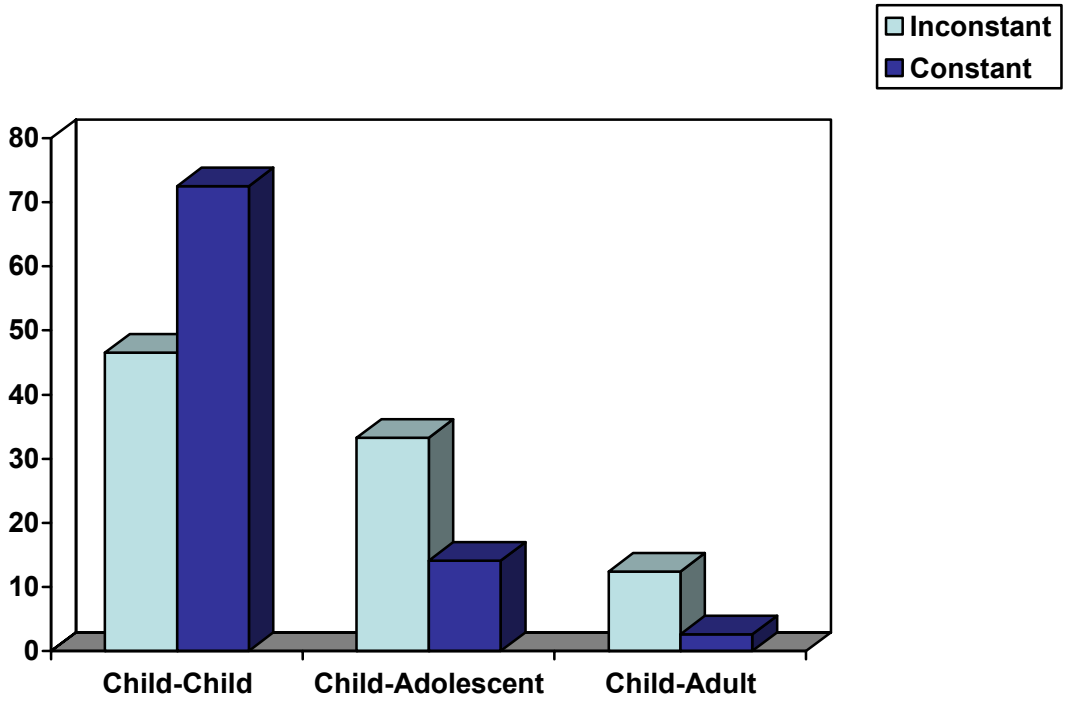


Figure 17. Percentage of female subjects first evaluated in adolescence that continued to be followed in adulthood: phobic disorder

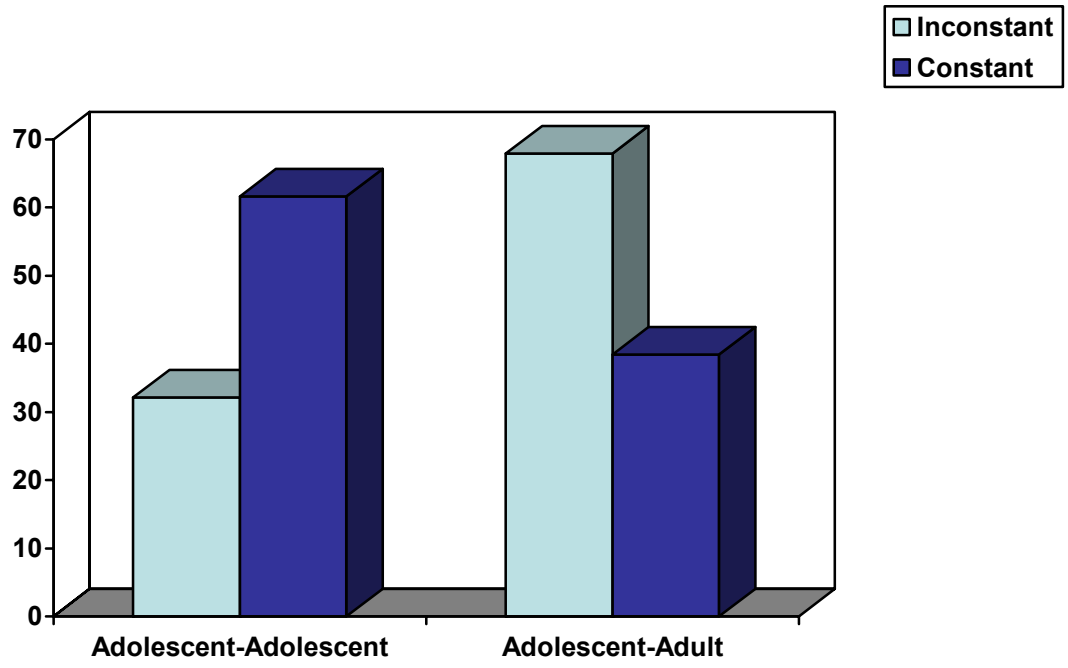
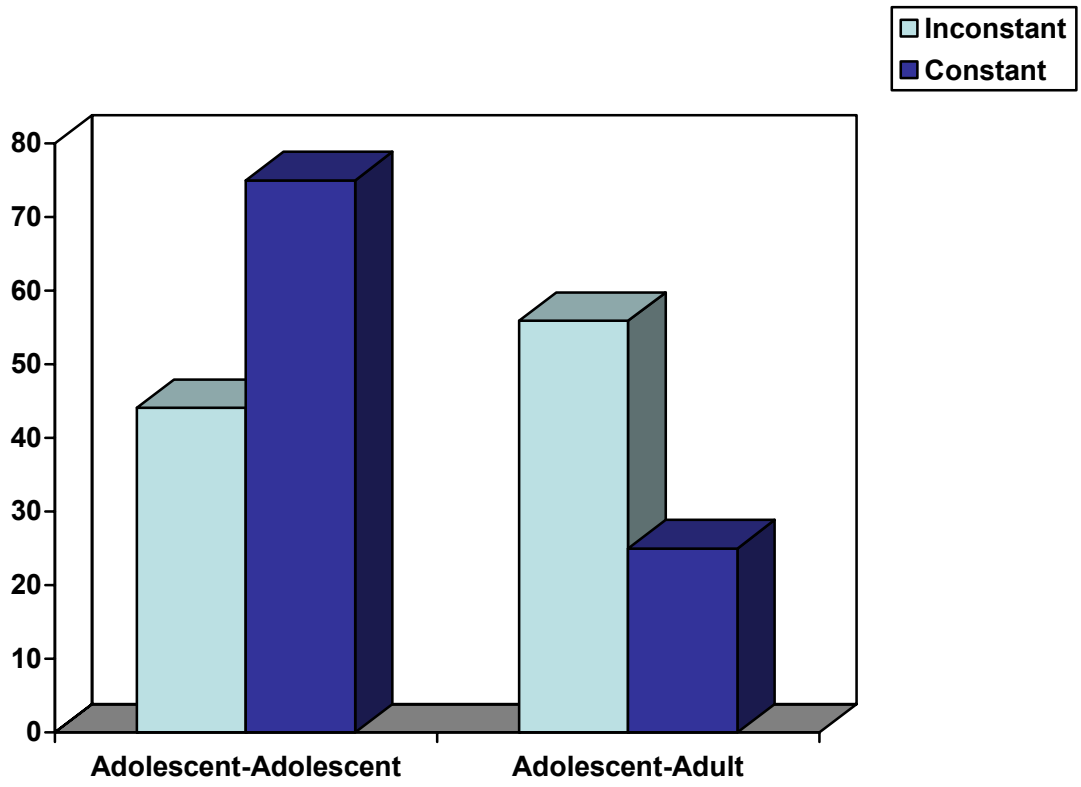


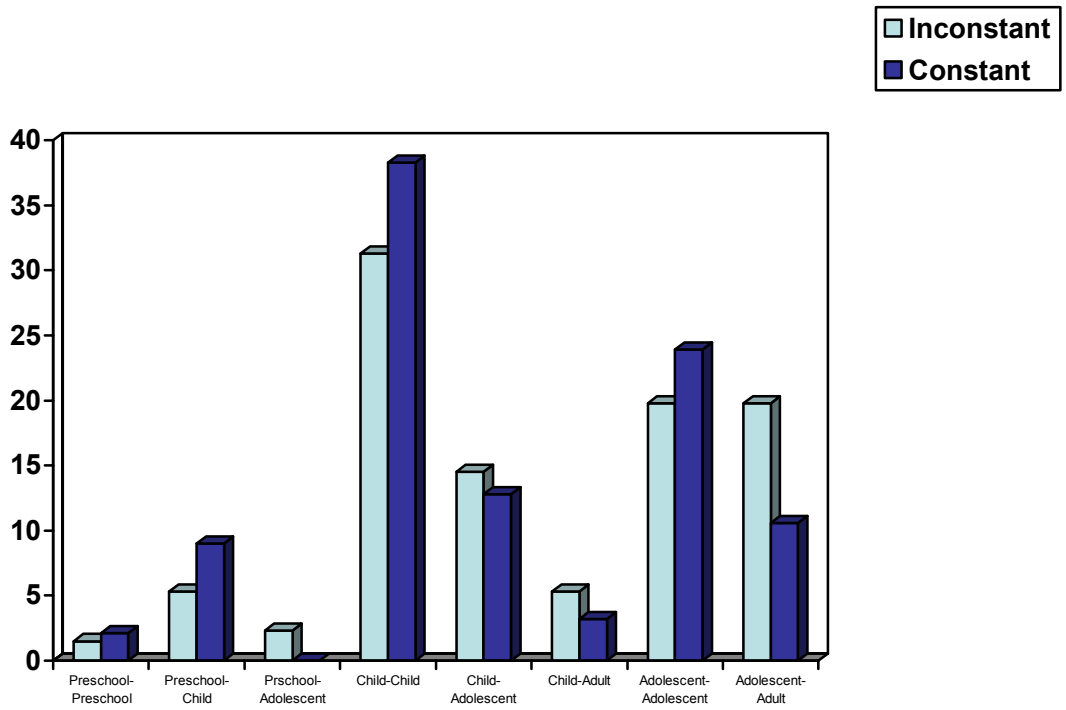
Figure 18. Percentage of male subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: phobic disorder



Social anxiety disorders

Persistence of social anxiety disorders was significantly associated to having an inconstant diagnosis (χ^2=14,101; df=7; p=0.049). Subjects with inconstant social anxiety disorder were significantly more likely to continue to be followed during a subsequent developmental period than subjects with constant social anxiety disorder (i.e. more adolescents with inconstant social anxiety disorder diagnoses were continued to be followed during adulthood compared with adolescents with constant social anxiety disorder) (Figure 19).

Figure 19. Percentage of subjects who continued to be followed across different developmental stages by diagnostic constancy: social anxiety disorder (overall sample)



Results by age at first evaluation and gender

Persistence of social anxiety disorders was significantly associated to having an inconstant diagnosis in adolescent females (Figure 21, Figure 22, Figure 23, Figure 24, Figure 25, and Figure 25). No differences in persistence across developmental stages were found on subjects first evaluated during pre-school years and childhood. Inconstant diagnosis of social anxiety disorder among adolescent males was not more likely to persist across developmental stages compared with constant diagnosis.

Figure 20. Percentage of female subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: social anxiety disorder

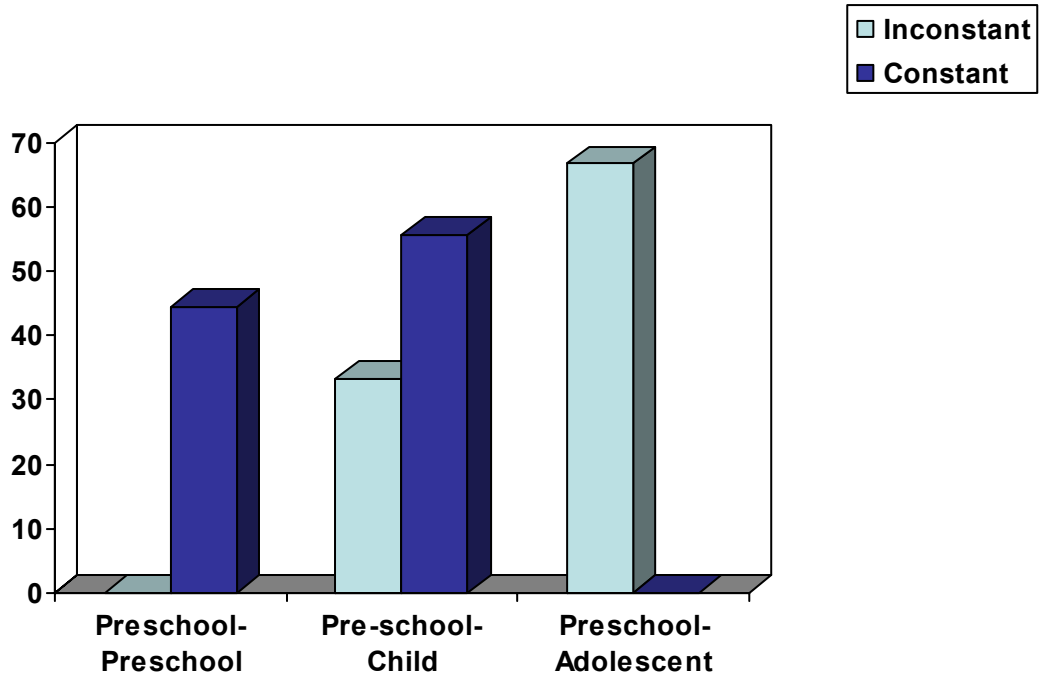


Figure 21. Percentage of male subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: social anxiety disorder

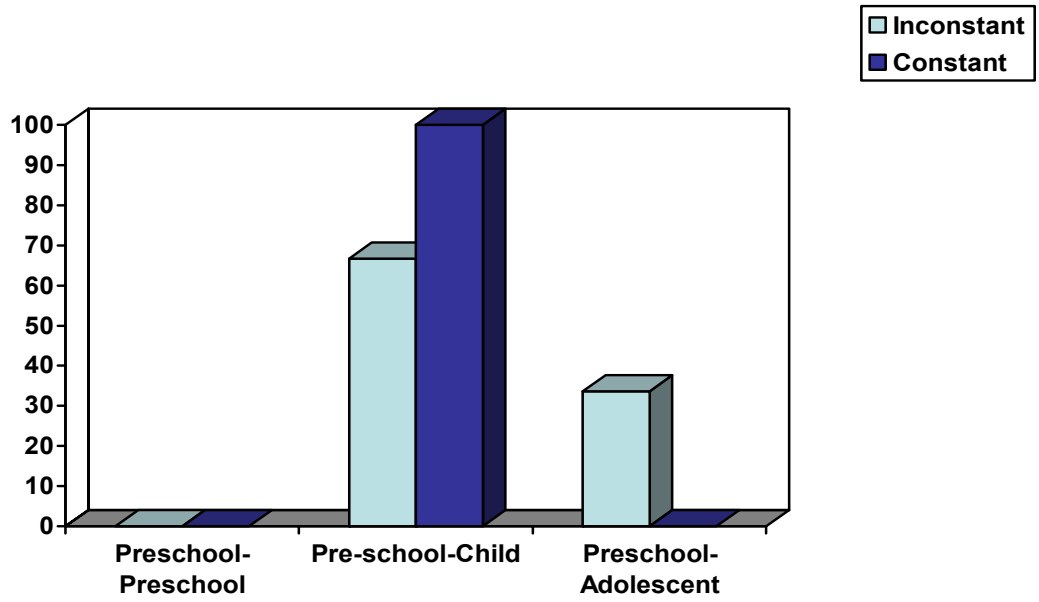


Figure 22. Percentage of female subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: social anxiety disorder

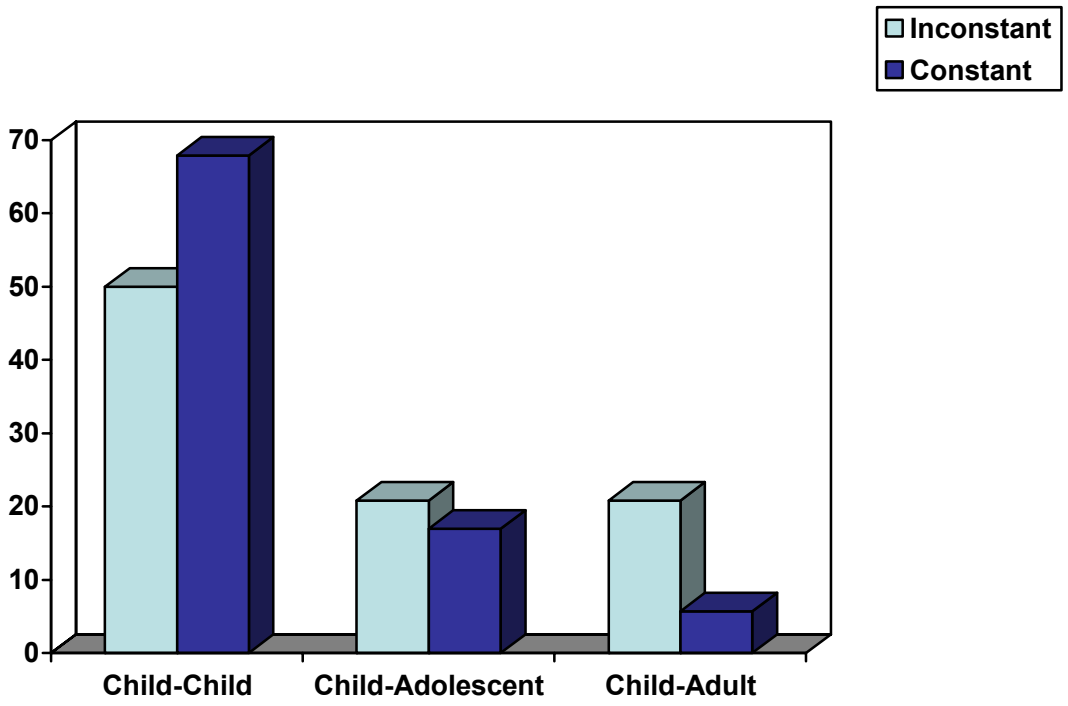


Figure 23. Percentage of male subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: social anxiety disorder

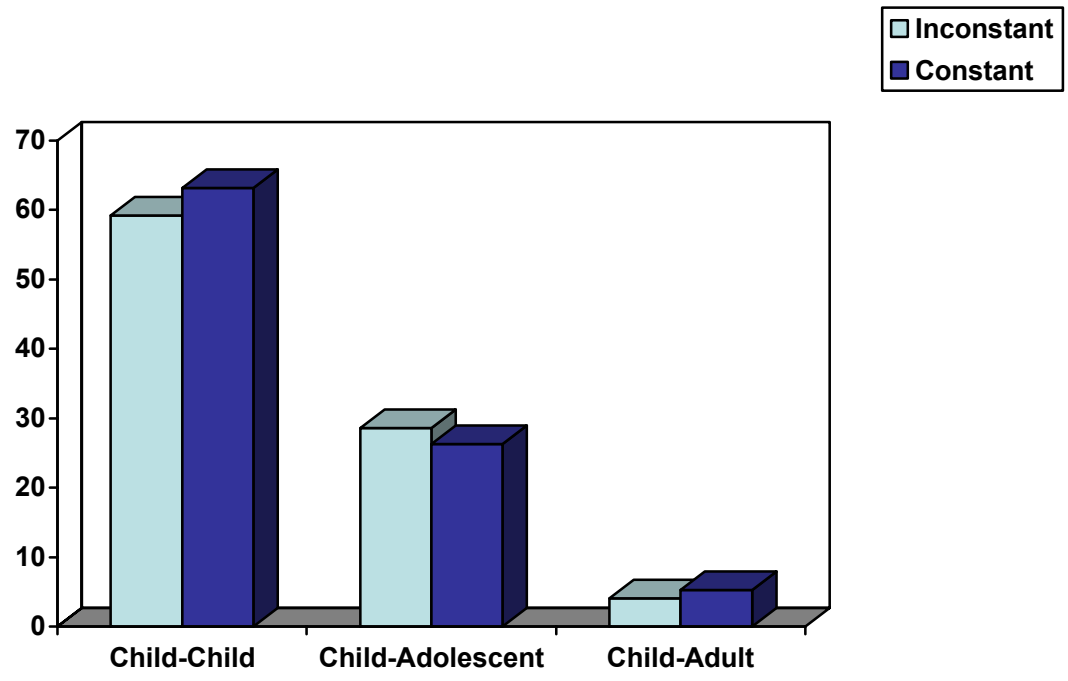


Figure 24. Percentage of female subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: social anxiety disorder

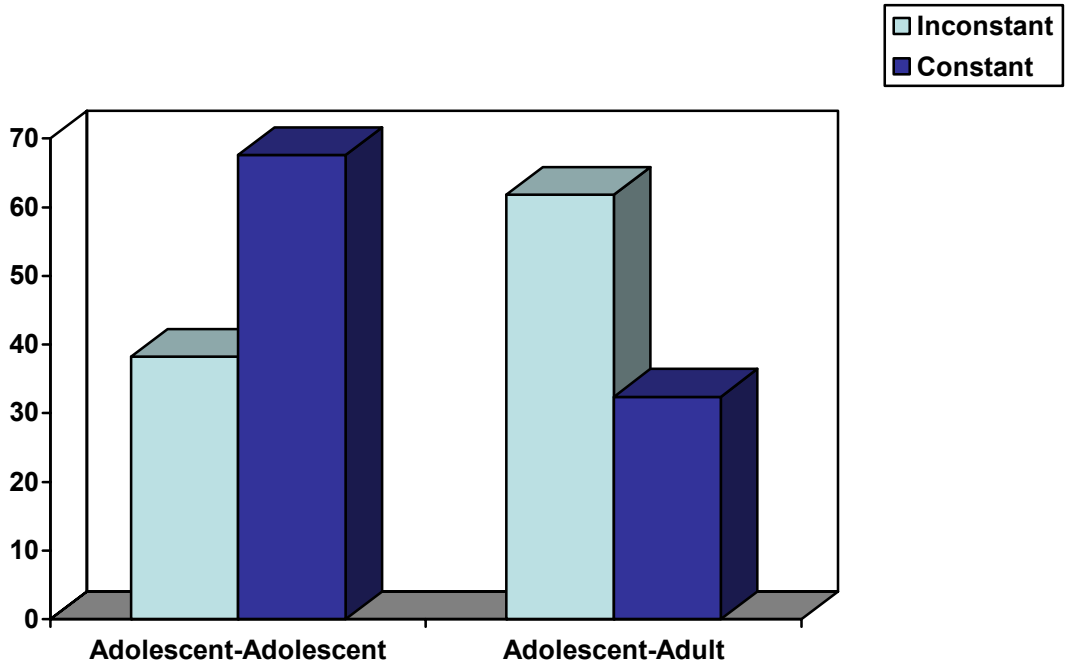
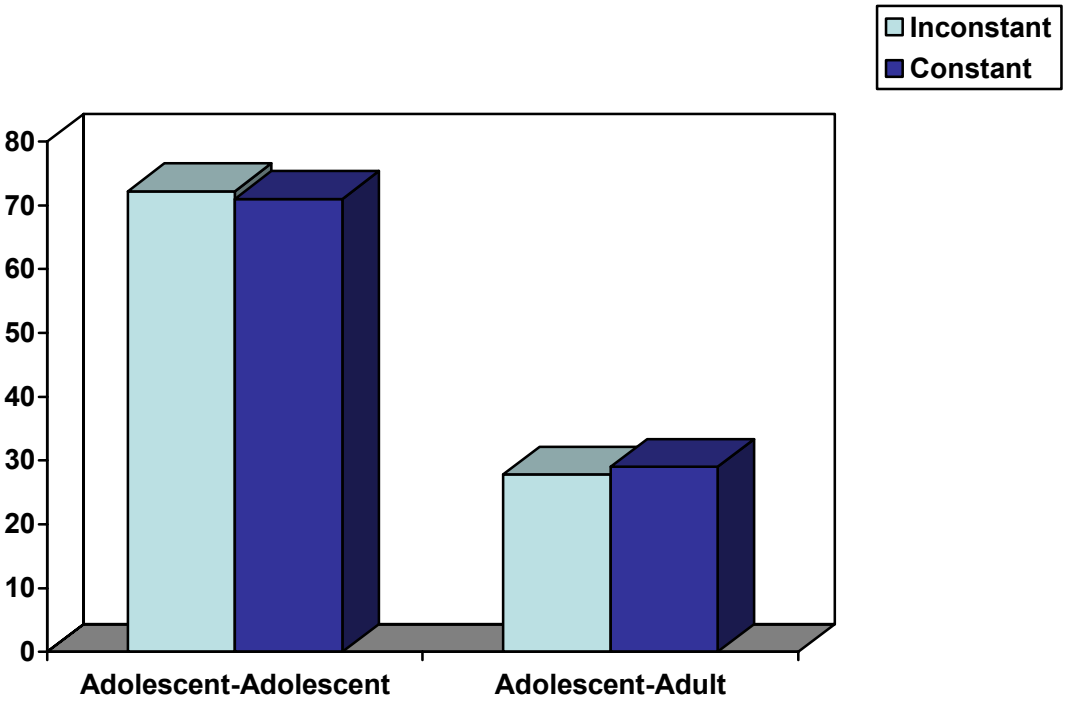


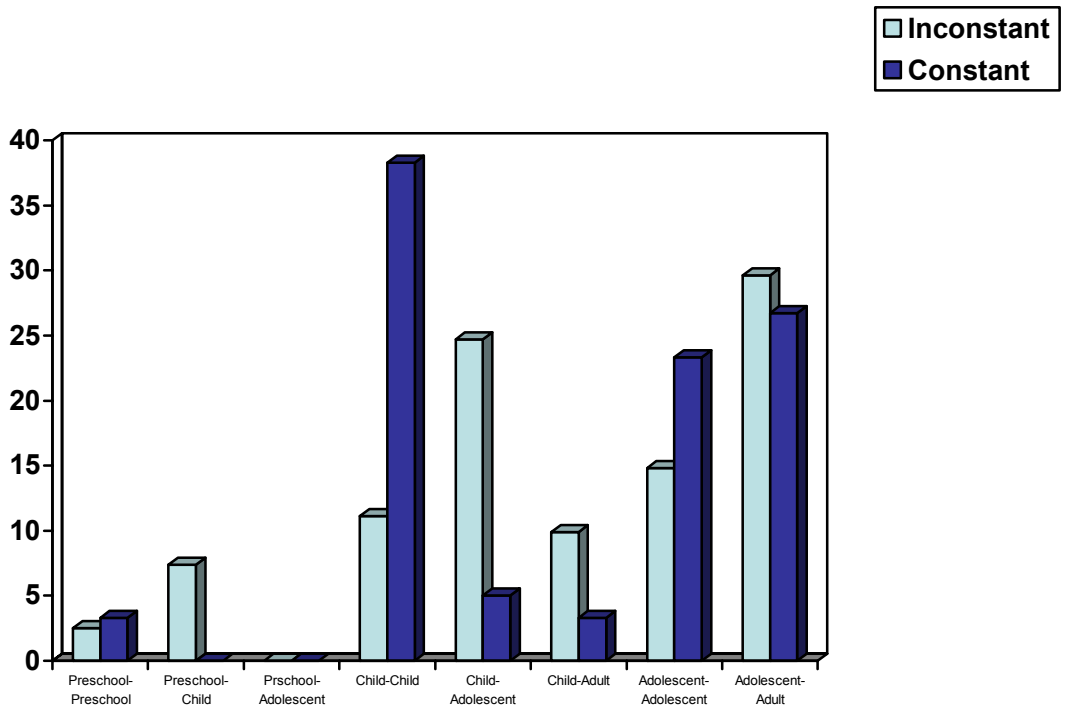
Figure 25. Percentage of male subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: social anxiety disorder



Obsessive compulsive disorder

Persistence of obsessive-compulsive disorder diagnosis was significantly associated to having an inconstant diagnosis (χ^2=27,527; df=6; p<0.001). Subjects with inconstant obsessive-compulsive disorder were significantly more likely to continue to be followed during a subsequent developmental period than subjects with constant obsessive compulsive disorder (i.e. more children with inconstant obsessive compulsive disorder diagnoses were continued to be followed during adolescence compared with children with constant obsessive-compulsive disorder diagnoses) (Figure 26).

Figure 26. Percentage of subjects who continued to be followed across different developmental stages by diagnostic constancy: obsessive-compulsive disorder (overall sample)



Results by age at first evaluation and gender

Although persistence of obsessive compulsive disorder diagnoses was significantly associated to having an inconstant diagnosis, this difference was only statistical in males (Figure 28-32). No differences in persistence across developmental stages were found in female subjects with obsessive compulsive disorder between those first evaluated during childhood and those first evaluated during adolescence.

Figure 27. Percentage of female subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: obsessive-compulsive disorder

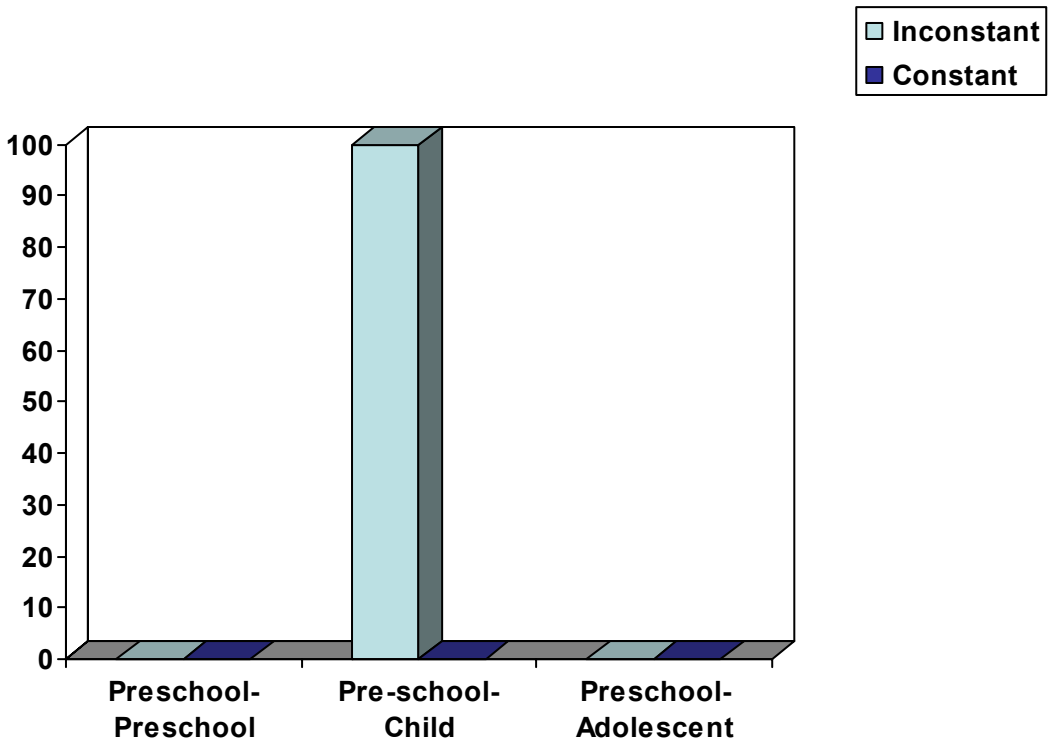


Figure 28. Percentage of male subjects first evaluated in preschool years that continued to be followed in childhood and adolescence by diagnostic constancy: obsessive-compulsive disorder

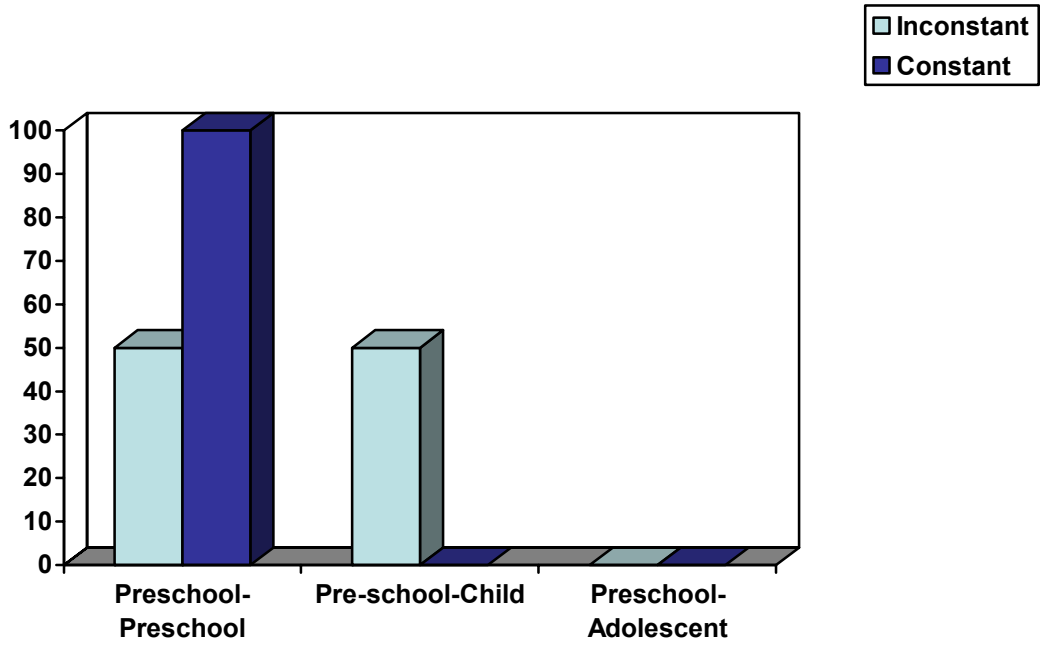


Figure 29. Percentage of female subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: obsessive compulsive disorder

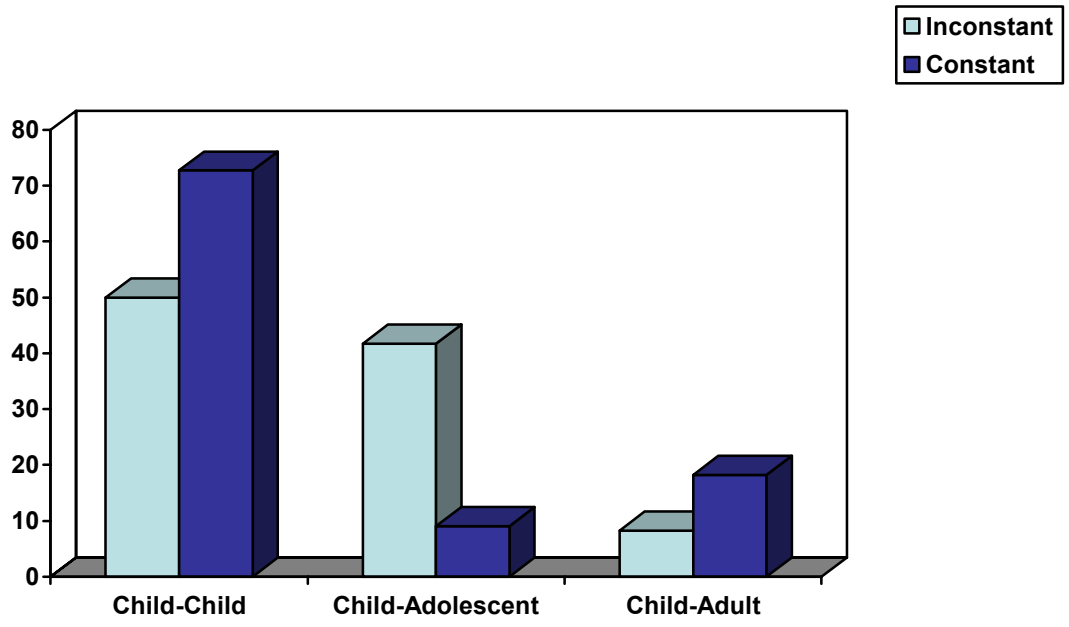


Figure 30. Percentage of male subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: obsessive-compulsive disorder

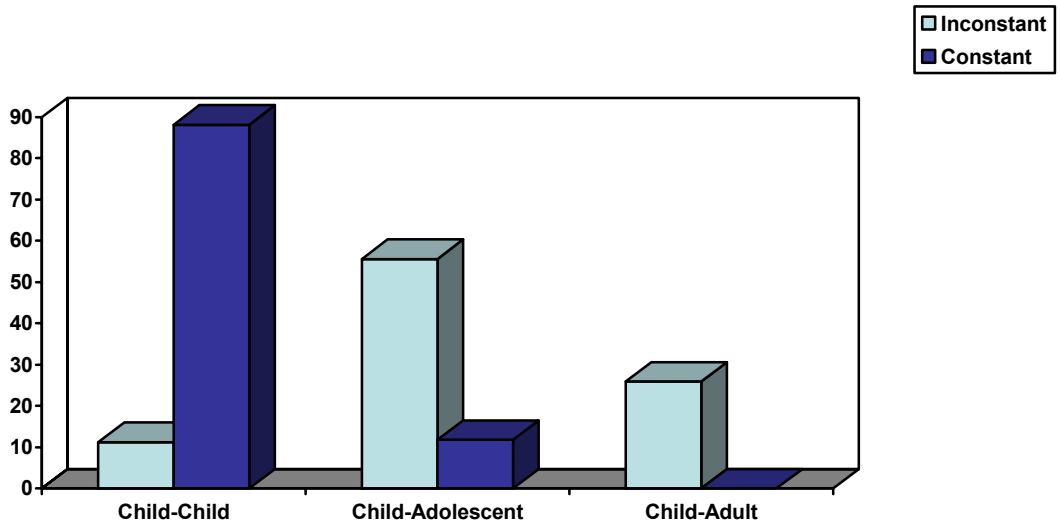


Figure 31. Percentage of female subjects first evaluated in adolescence that continued to be followed in adolescence and adulthood by diagnostic constancy: obsessive-compulsive disorder

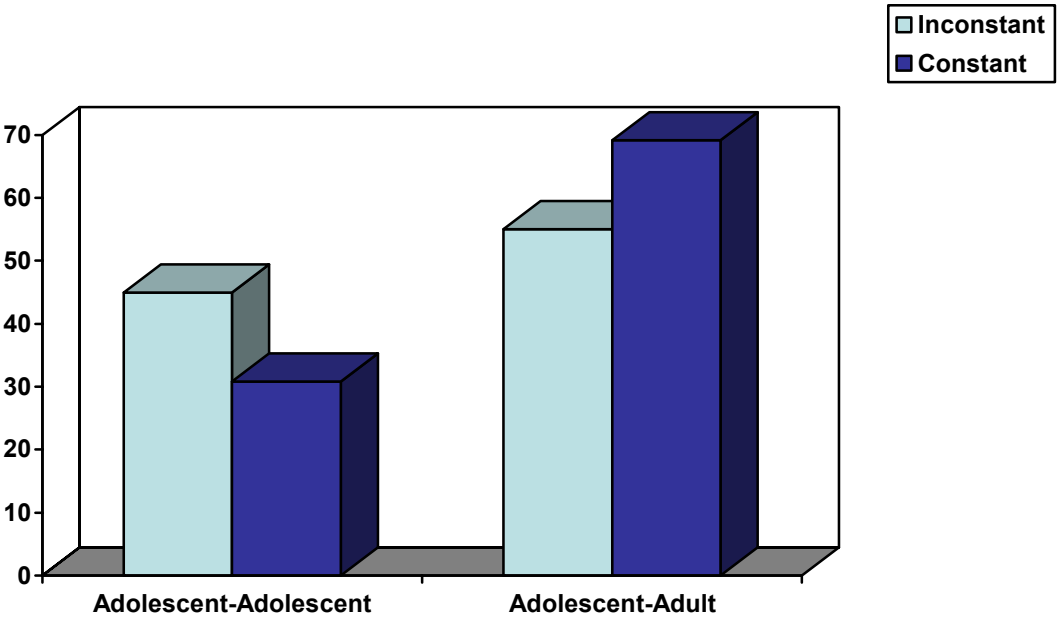
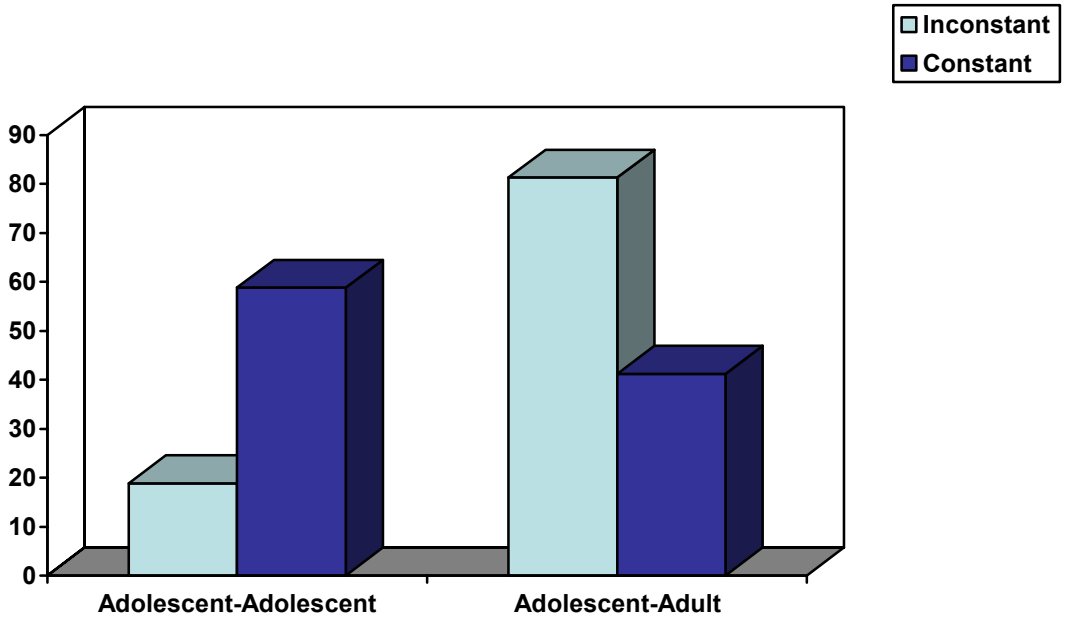


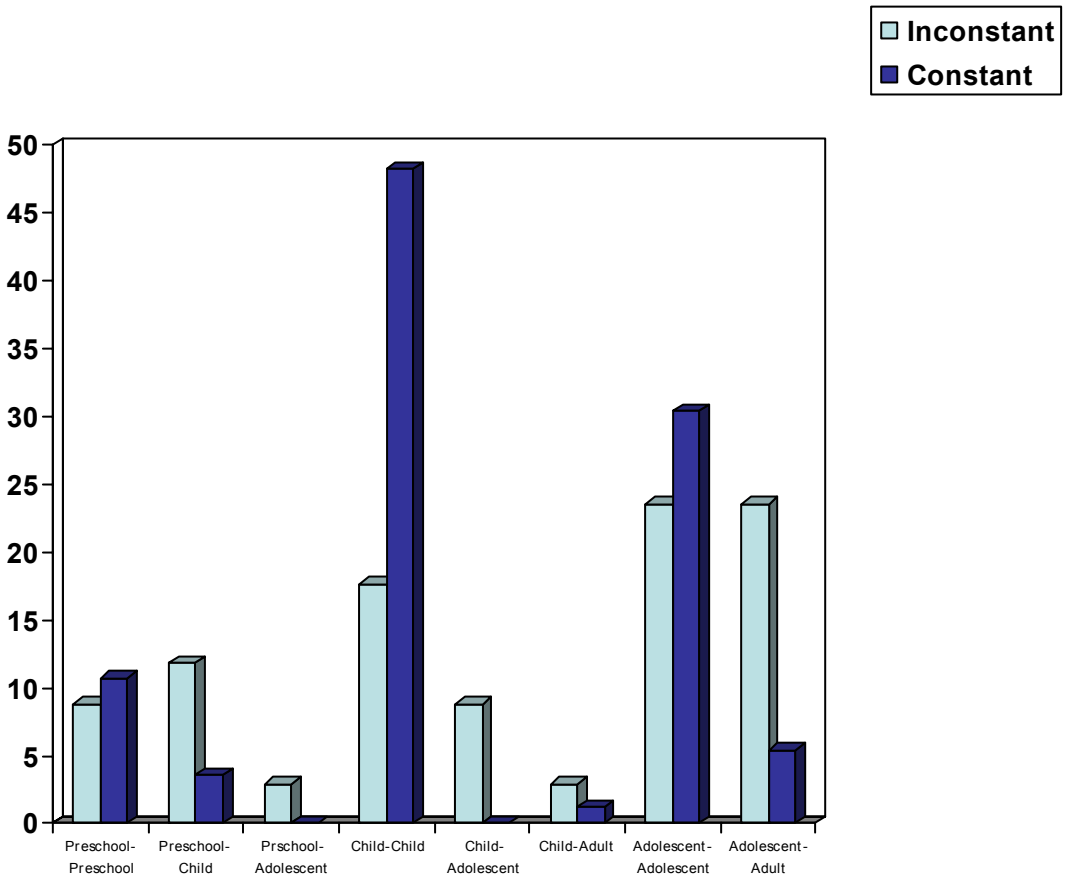
Figure 32. Percentage of male subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: obsessive-compulsive disorder



Stress-related disorder

Persistence of stress-related disorder diagnoses was significantly associated to having an inconstant diagnosis (χ^2=20,383; df=7; p=0.005). Subjects with inconstant stress-related disorder were significantly more likely to continue to be followed during a subsequent developmental period than subjects with constant stress-related disorder (i.e. more children with stress-related disorder diagnoses were continued to be followed during adolescence compared with children with constant stress-related disorder diagnoses) (Figure 33).

Figure 33. Percentage of subjects who continued to be followed across different developmental stages by diagnostic constancy: stress-related disorder (overall sample)



Results by age at first evaluation and gender

Persistence of stress-related disorder diagnoses across different developmental stages was significantly associated to having an inconstant diagnosis, both in females and males first evaluated in childhood. Males but not females with an inconstant diagnosis first evaluated during adolescence showed a significantly greater persistence of the disorder into adulthood (Figure 35, Figure 36, Figure 37, Figure 38, Figure 39, and Figure 39).

Figure 34. Percentage of female subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: stress-related disorder

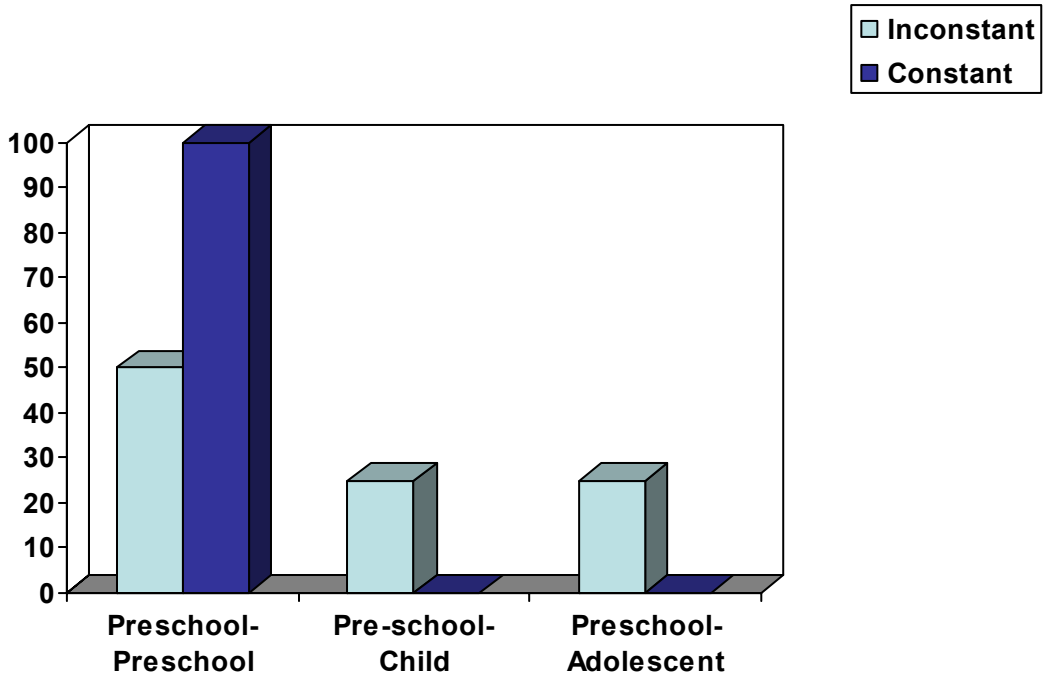


Figure 35. Percentage of male subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: stress-related disorder

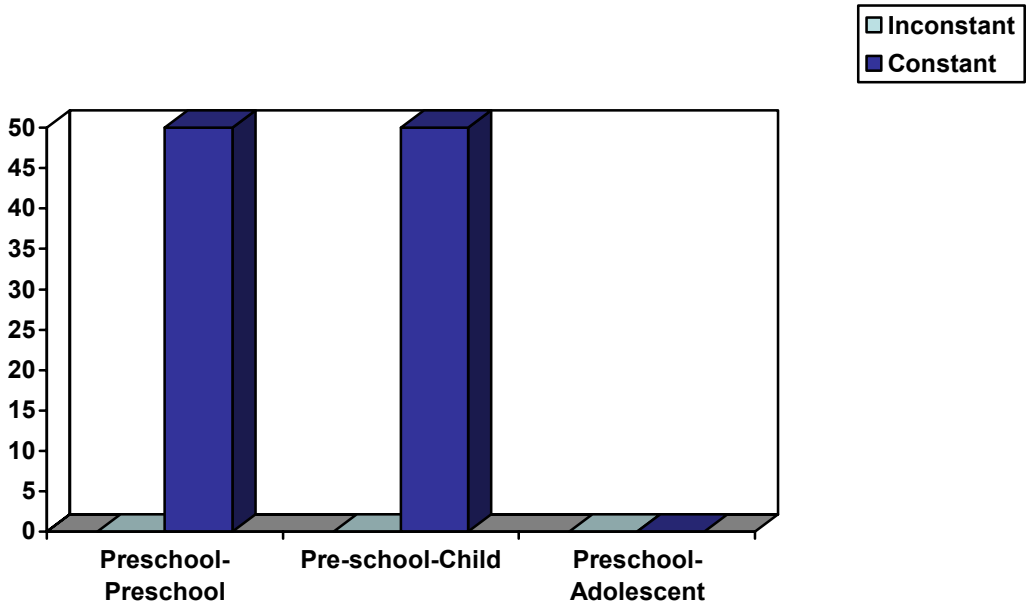


Figure 36. Percentage of female subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: stress-related disorder

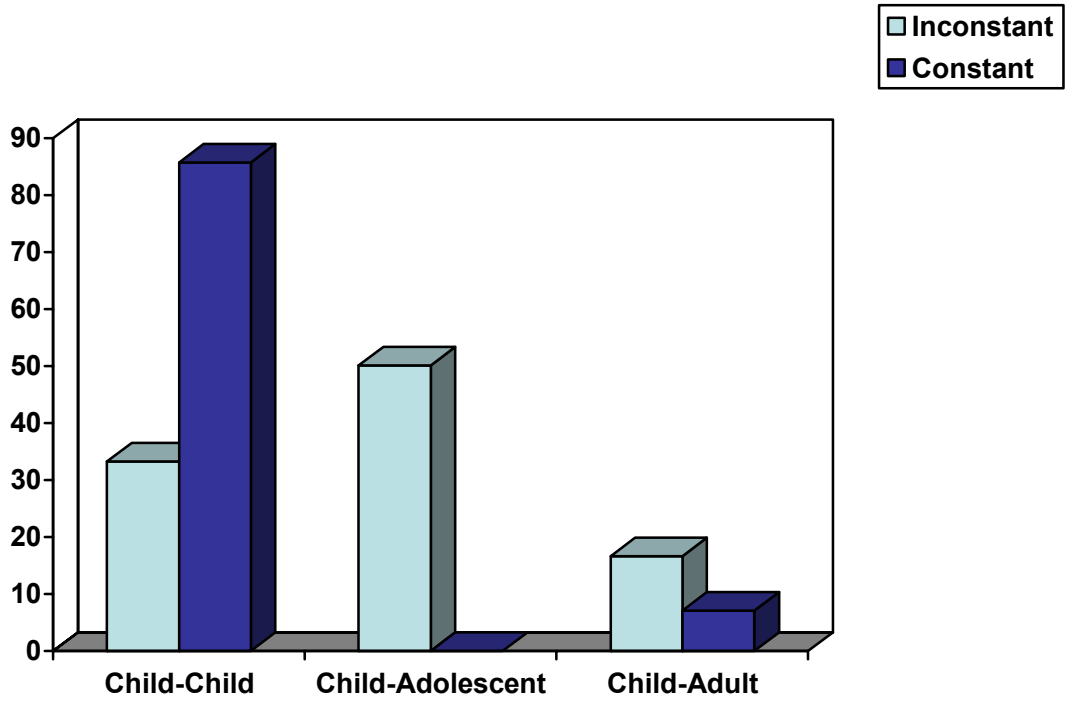


Figure 37. Percentage of male subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: stress-related disorder

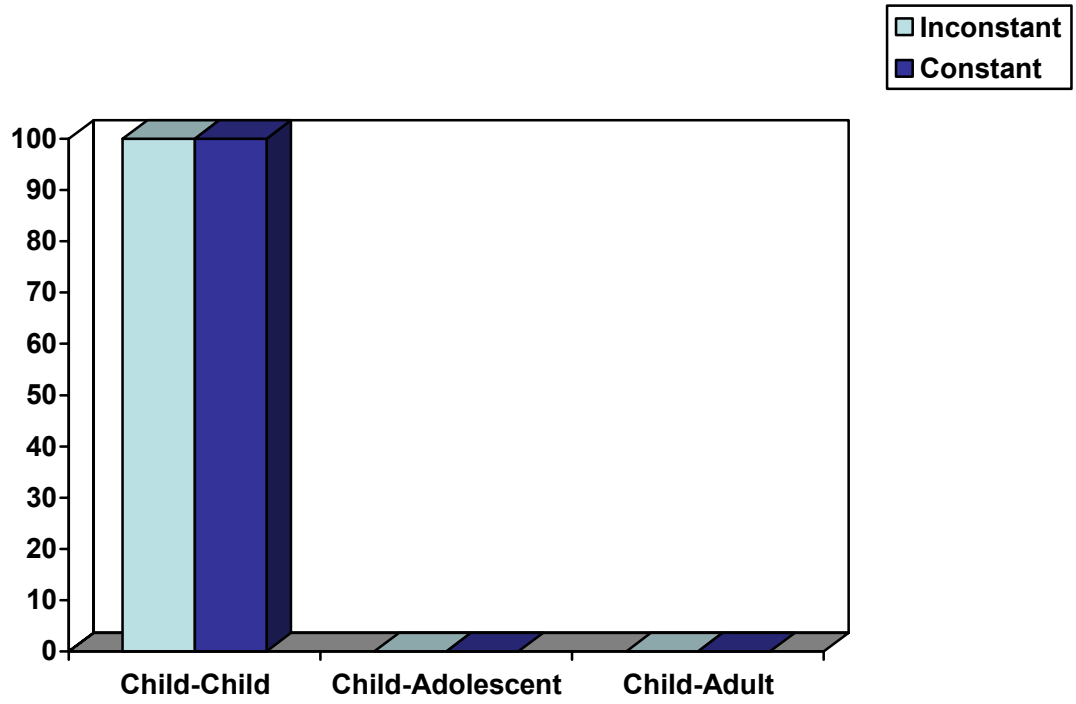


Figure 38. Percentage of female subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: stress-related disorder

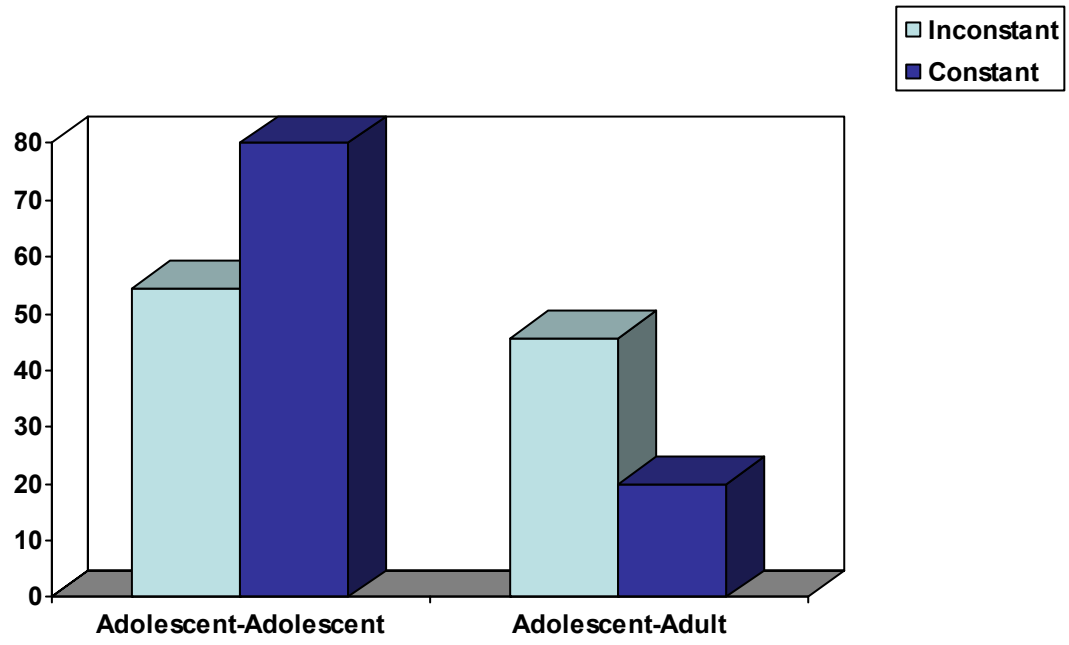
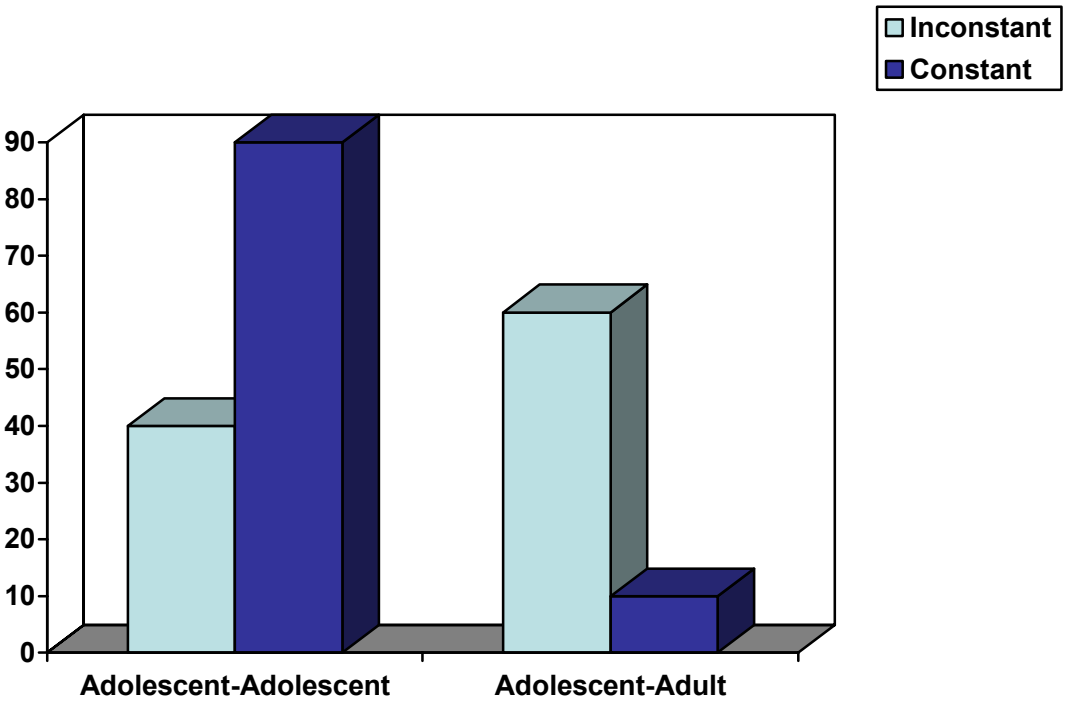


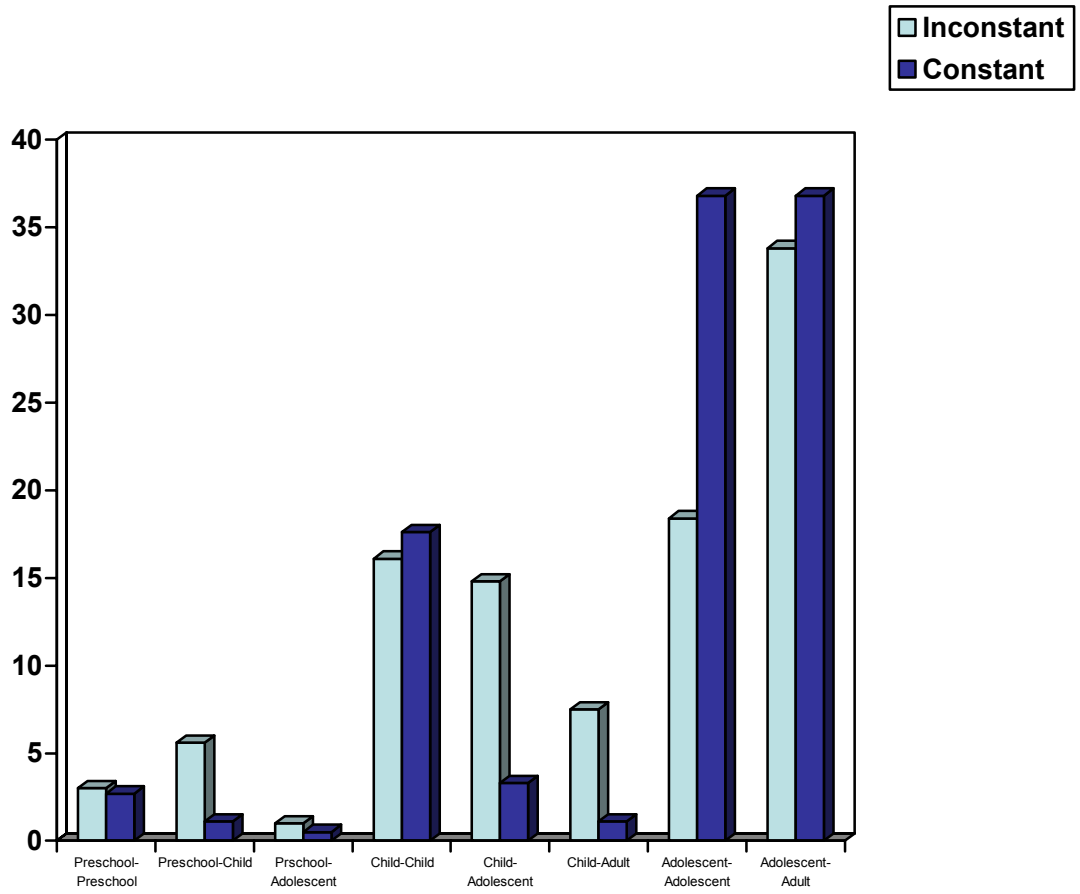
Figure 39. Percentage of male subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: stress-related disorder



Other anxiety disorders

Persistence of other anxiety disorder diagnoses was significantly associated to having an inconstant diagnosis (χ^2=48,662; df=8; p<0.001). Subjects with inconstant anxiety disorder were significantly more likely to continue to be followed during a subsequent developmental period than subjects with constant other anxiety disorder (i.e. more children with other anxiety disorder diagnoses were continued to be followed during adolescence compared with children with constant other anxiety disorder diagnoses) (Figure 40).

Figure 40. Percentage of subjects who continued to be followed across different developmental stages by diagnostic constancy: other anxiety disorder (overall sample)



Results by age at first evaluation and gender

Persistence of other anxiety disorder diagnosis across different developmental stages was significantly associated to having an inconstant diagnosis in females first evaluated in childhood and adolescence. Males with an inconstant other anxiety disorder did not show a greater persistence of the disorder during other developmental stages nor a greater continuity into adulthood (Figure 41-46).

Figure 41. Percentage of female subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: other anxiety disorder

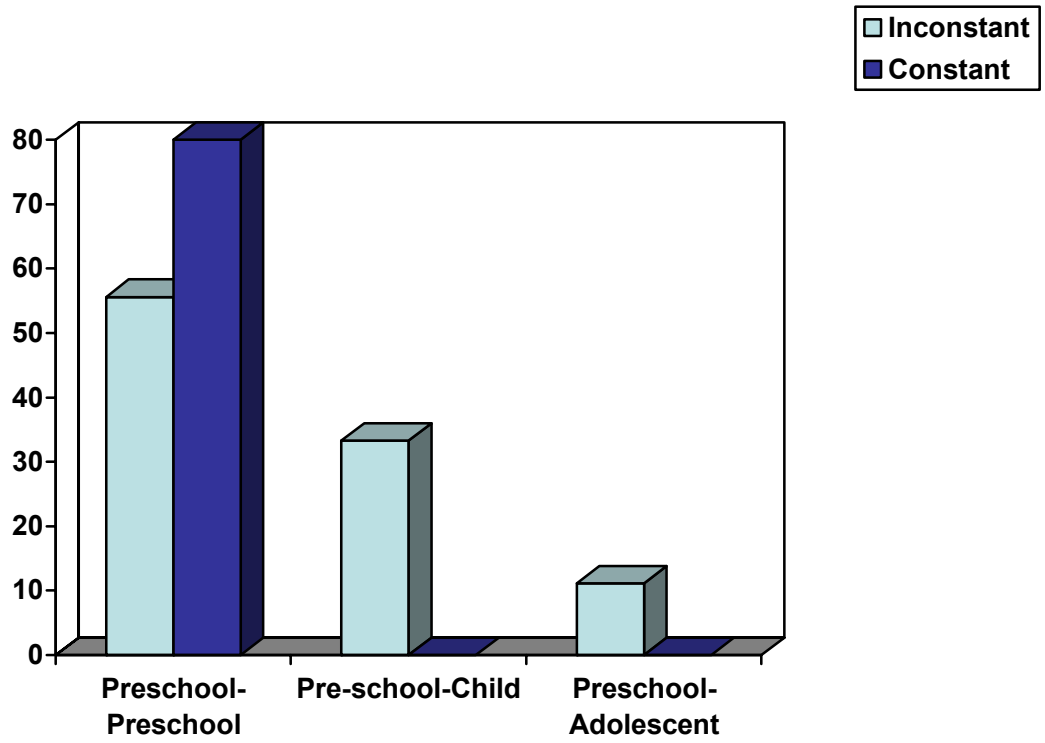


Figure 42. Percentage of male subjects first evaluated in pre-school years that continued to be followed in childhood and adolescence by diagnostic constancy: other anxiety disorder

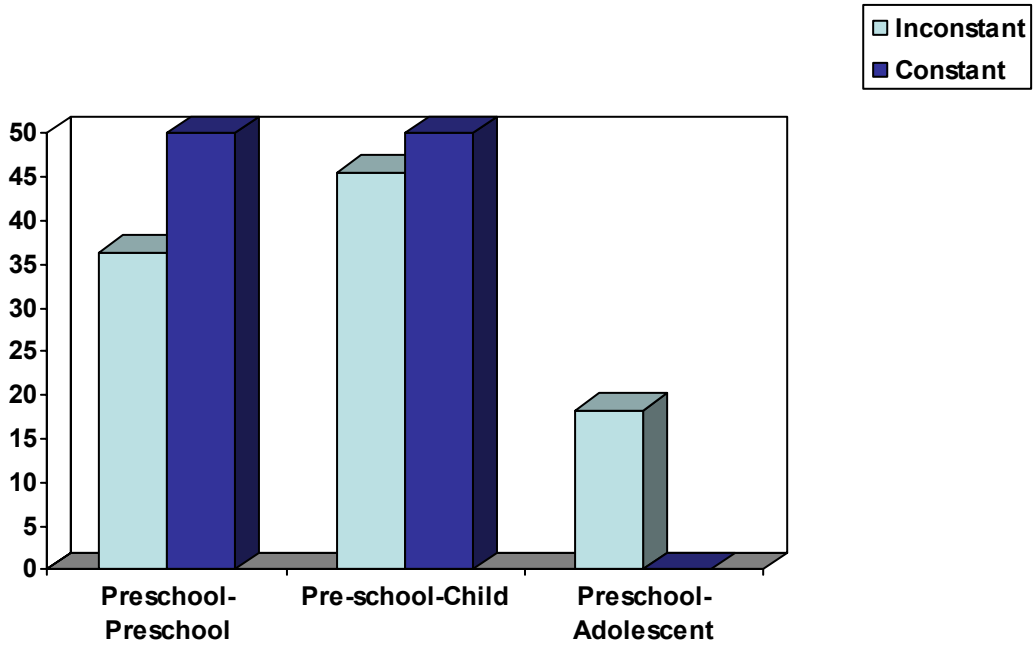


Figure 43. Percentage of female subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: other anxiety disorder

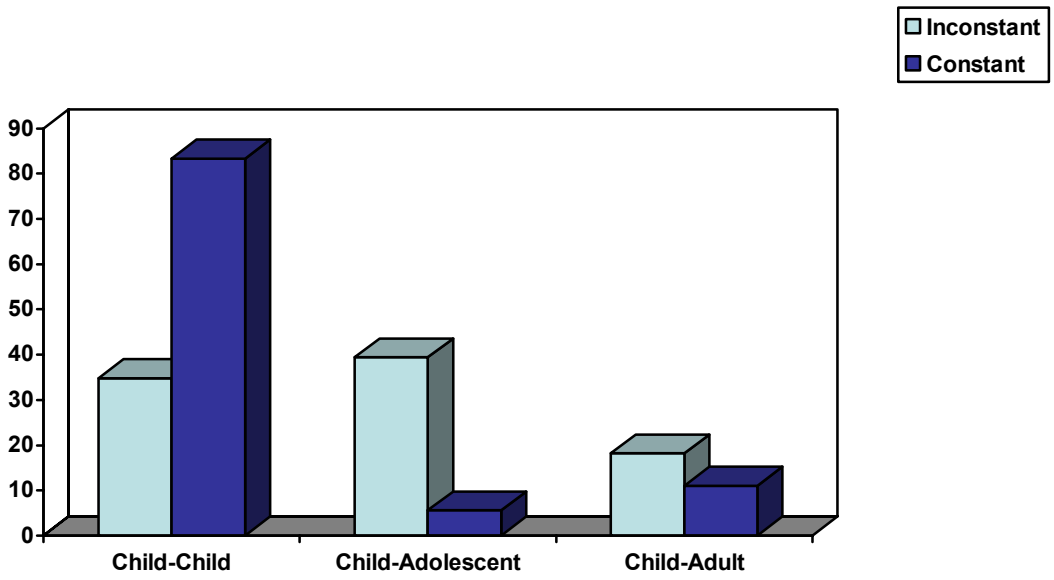


Figure 44. Percentage of male subjects first evaluated in childhood that continued to be followed in adolescence and adulthood by diagnostic constancy: other anxiety disorder

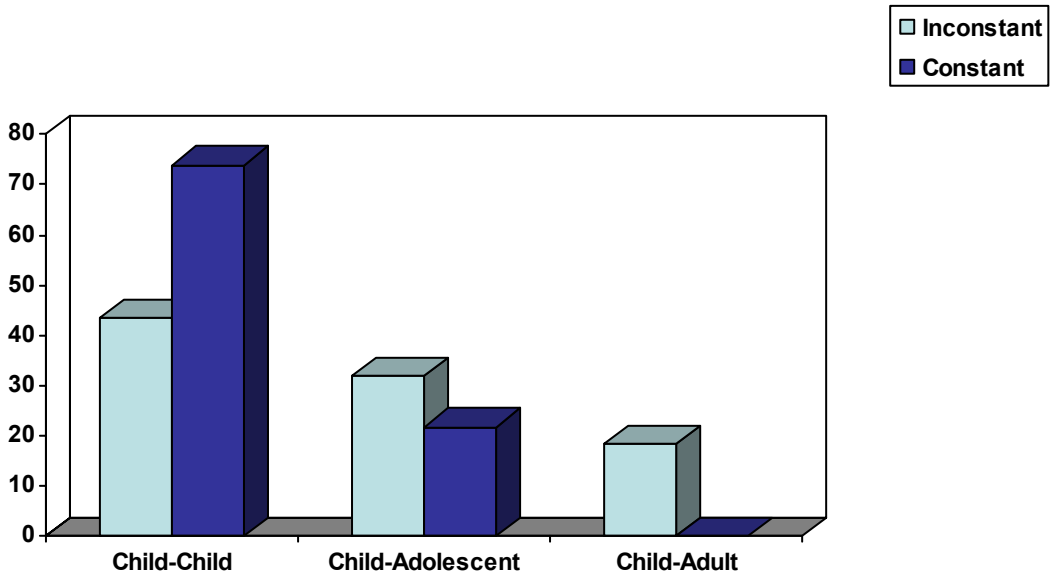


Figure 45. Percentage of female subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: other anxiety disorder

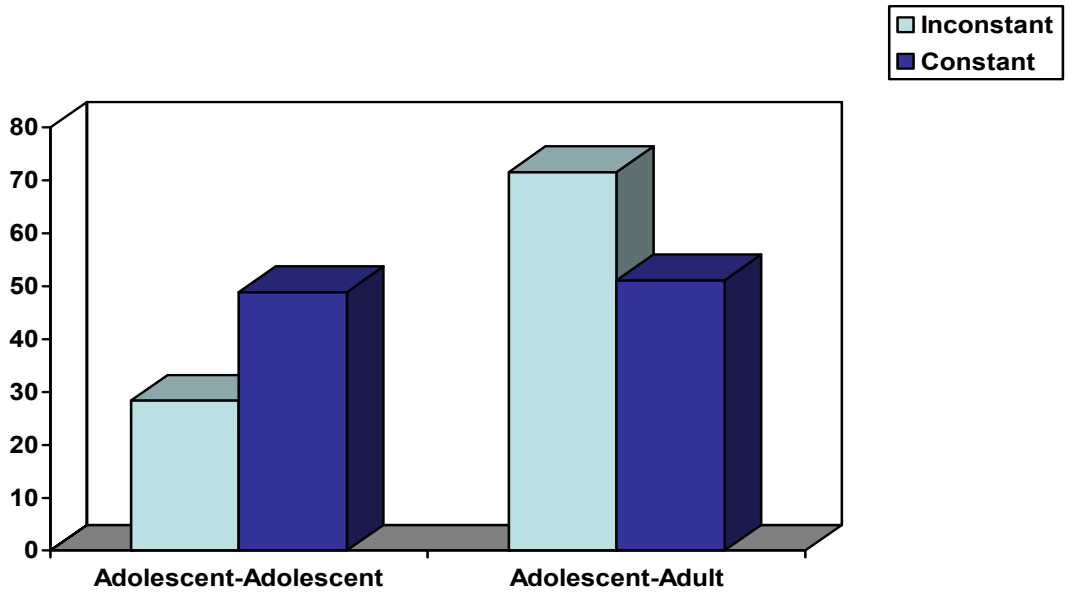
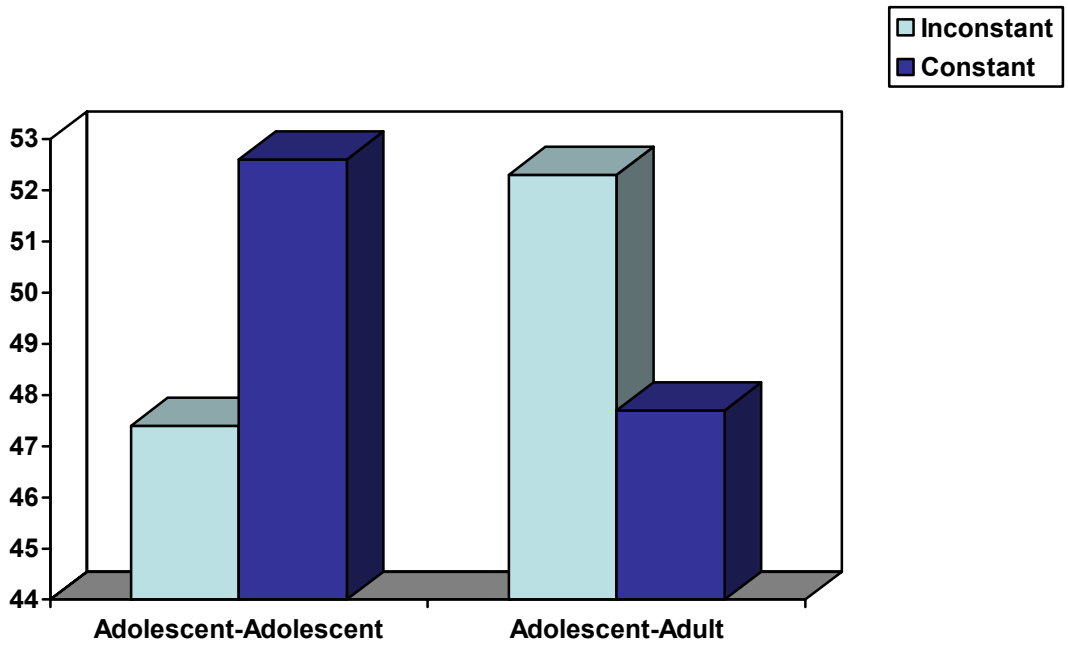


Figure 46. Percentage of male subjects first evaluated in adolescence that continued to be followed in adulthood by diagnostic constancy: other anxiety disorder



Continuity into adulthood

Results with regard to the effect of gender, age at first evaluation, and stability of the diagnosis on the proportion of subjects evaluated in childhood and adolescence who continued to be followed as adults in specialized care are presented in Table 22. We do not present data from those subjects whose first psychiatric evaluation occurred during infancy given that the majority of them were not adults at the end of the study.

Table 22. Continuity of anxiety disorder into adulthood by age at first evaluation and diagnostic constancy

Females	Age at first evaluation	Inconstant diagnosis (%)	Constant diagnosis (%)	Total (%)	χ^2	df	P
Phobic disorders	Childhood	18 (17.6)	6 (2.8)	24 (7.5)	42.7	6	<0.001
	Adolescence	53 (67.9)	28 (38.4)	81 (53.6)	13.2	1	<0.001
Social anxiety disorders	Childhood	5 (20.8)	3 (5.7)	8 (10.4)	7.4	4	0.114
	Adolescence	21 (61.8)	11 (32.4)	32 (47.1)	5.9	1	0.015
Obsessive compulsive disorder	Childhood	1 (8.3)	2 (18.2)	3 (13.0)	3.24	2	0.197
	Adolescence	11 (55.0)	9 (69.2)	20 (60.6)	0.6	1	0.651
Stress-related disorders	Childhood	1 (16.7)	1 (7.1)	2 (10.0)	9.4	3	0.024
	Adolescence	5 (45.5)	2 (20.0)	7 (33.3)	1.5	1	0.217
Other anxiety disorders	Childhood	12 (18.2)	2 (11.1)	14 (16.7)	14.1	3	0.003
	Adolescence	73 (71.6)	46 (51.1)	119 (62.0)	8.4	1	0.004
Males							
Phobic disorders	Childhood	16 (12.4)	7 (2.6)	23 (5.8)	42.0	5	<0.001
	Adolescence	19 (55.9)	14 (25.0)	33 (36.7)	8.6	1	0.003
Social anxiety disorders	Childhood	2 (4.1)	3 (5.3)	5 (4.7)	1.3	4	0.840
	Adolescence	5 (27.8)	9 (29.0)	14 (28.6)	0.1	1	0.925
Obsessive compulsive disorder	Childhood	7 (25.9)	--	7 (15.9)	--	--	--
	Adolescence	13 (81.3)	7 (41.2)	20 (60.6)	5.5	1	<0.001
Stress-related disorders	Childhood	--	--	--	--	--	--
	Adolescence	3 (60.0)	1 (10.0)	4 (26.7)	4.2	1	0.046
Other anxiety disorder	Childhood	11 (18.3)	--	11 (13.3)	--	--	--
	Adolescence	30 (52.6)	21 (47.7)	51 (50.5)	0.2	1	0.625

Number of visits to the mental health outpatient services during follow up by diagnostic constancy

We explored whether diagnostic constancy influences the number of visits to the mental health outpatient facilities among patients with childhood anxiety disorders. We used t-tests to compare both groups. We present data for the different anxiety disorders studied.

Phobic disorders

Children and adolescent of both sexes with inconstant diagnosis of phobic disorder had a significantly greater number of visits to the mental health outpatient facilities (Table 23).

Table 23. Visits to mental health facilities by diagnostic constancy: phobic disorders

Age at first evaluation	Sex	Phobic disorder	N	Mean	t	Df	P
Preschool Child: 2-5 years	Female	Inconstant	16	24.56	2.06	15.58	0.056
		Constant	35	8.91			
	Male	Inconstant	25	20.96	2.03	29.80	0.051
		Constant	34	11.15			
Child: 6-12 years	Female	Inconstant	102	17.70	4.63	134.73	<0.001
		Constant	216	10.14			
	Male	Inconstant	129	21.63	6.60	160.41	<0.001
		Constant	269	10.09			
Adolescent: 13-18 years	Female	Inconstant	78	20.96	2.54	145.19	0.012
		Constant	73	13.92			
	Male	Inconstant	34	30.47	2.33	43.71	0.024
		Constant	56	13.23			

Social anxiety disorders

Among those first evaluated in childhood, female subjects with inconstant diagnosis were more likely to visit more frequently the mental health facilities compared with those female subjects first evaluated in childhood with constant diagnoses (Table 24).

Among those first evaluated in adolescence, no sex differences were observed and having an inconstant social anxiety disorder diagnosis was significantly associated with a higher service use.

Table 24. Visits to mental health facilities by diagnostic constancy: social anxiety disorders

Age at first evaluation	Sex	Social anxiety disorder	N	Mean	t	Df	P
Preschool Child: 2-5 years	Female	Inconstant	3	45.67	1.01	2.054	0.417
		Constant	9	12.11			
	Male	Inconstant	3	24.00	0.050	5	0.962
		Constant	4	23.25			
Child: 6-12 years	Female	Inconstant	24	24.58	2.30	75	0.024
		Constant	53	13.34			
	Male	Inconstant	49	20.18	1.03	104	0.303
		Constant	57	16.47			
Adolescent: 13-18 years	Female	Inconstant	34	23.21	3.04	37.87	0.004
		Constant	34	9.59			
	Male	Inconstant	18	19.94	2.64	20.91	0.015
		Constant	31	10.16			

Obsessive compulsive disorder

Both females and males first evaluated in childhood with inconstant diagnoses visited the mental health facilities more frequently than their counterparts with constant diagnoses (table 25).

Among those evaluated during adolescence only males with inconstant diagnoses showed a greater likelihood of visiting the mental health facilities more frequently than those with a constant diagnosis.

Table 25. Visits to mental health facilities by diagnostic constancy: obsessive-compulsive disorder

Age at first evaluation	Sex	OCD	N	Mean	t	Df	P
Preschool Child: 2-5 years	Female	Inconstant	2	55.00	--	--	--
		Constant	0	.			
	Male	Inconstant	4	17.50	1.75	4	0.155
		Constant	2	3.50			
Child: 6-12 years	Female	Inconstant	12	38.83	2.75	21	0.012
		Constant	11	14.73			
	Male	Inconstant	27	27.78	2.15	42	0.037
		Constant	17	12.76			
Adolescent: 13-18 years	Female	Inconstant	20	22.95	-0.63	31	0.533
		Constant	13	28.00			
	Male	Inconstant	16	52.81	3.12	18.08	0.006
		Constant	17	14.94			

Stress-related anxiety disorders

Although higher figures were observed among subjects with inconstant stress-related disorder diagnosis, not significant differences with regard to the number of visits to the mental health facilities was found (Table 26).

Table 26. Visits to mental health facilities by diagnostic constancy: stress-related disorder

Age at first evaluation	Sex	Stress-related disorder	N	Mean	t	Df	P
Preschool Child: 2-5 years	Female	Inconstant	4	22.00	1.72	3.18	0.178
		Constant	4	7.50			
	Male	Inconstant	2	11.00	0.83	2	0.493
		Constant	2	8.00			
Child: 6-12 years	Female	Inconstant	6	17.50	1.52	5.13	0.186
		Constant	14	6.50			
	Male	Inconstant	6	8.50	-0.15	20	0.881
		Constant	16	9.00			
Adolescent: 13-18 years	Female	Inconstant	11	12.82	1.66	19	0.113
		Constant	10	6.60			
	Male	Inconstant	5	56.00	1.35	4.00	0.248
		Constant	10	5.50			

Other anxiety disorder

Subjects first evaluated in childhood and adolescence with an inconstant diagnosis of other anxiety disorder were more likely to visit the mental health facilities more frequently than those with constant diagnosis (Table 27).

Table 27. Visits to mental health facilities by diagnostic constancy: other anxiety disorder

Age at first evaluation	Sex	Other anxiety disorders	N	Mean	t	Df	P
Preschool Child: 2-5 years	Female	Inconstant	9	28.11	1.29	12	0.219
		Constant	5	8.40			
	Male	Inconstant	11	14.36	-0.37	11	0.717
		Constant	2	18.50			
Child: 6-12 years	Female	Inconstant	66	21.94	4.27	77.08	<0.001
		Constant	18	8.78			
	Male	Inconstant	60	22.37	4.19	72.53	<0.001
		Constant	23	7.83			
Adolescent: 13-18 years	Female	Inconstant	102	21.28	4.29	173.28	<0.001
		Constant	90	11.80			
	Male	Inconstant	57	29.16	1.70	95.89	0.091
		Constant	44	17.05			

DISCUSSION

The stability of phobic, social anxiety and stress-related anxiety disorders diagnoses in children and adolescents in this study was much higher than the figures reported in previous studies. These anxiety disorders seem to persist during long periods of time and show high rates of temporal consistency during a follow-up period of up to 14 years. The diagnostic stability of OCD and other anxiety disorder was lower than the stability of the rest of the anxiety disorders studied. There were no gender effects on diagnostic stability. The duration of follow-up seems to be influenced by the diagnostic constancy.

Psychiatric diagnosis at the first evaluation

More than 65% of the subjects received an anxiety disorder diagnosis at their first psychiatric/psychological evaluation. This is consistent with the temporal relationship between the onset of specific anxiety disorders and subsequent development of other psychiatric disorders that has been reported in several studies among children and adolescents (202-210).

The proportions of the different anxiety disorders groups differed depending on the age at first diagnosis. Obsessive-compulsive disorder and other anxiety disorders were more commonly diagnosed during the first evaluation in adolescence than in infancy or childhood. Phobic disorders and social anxiety disorders were more frequently diagnosed during the first evaluation during childhood. This is in agreement with findings from epidemiological studies that have examined the incidence of anxiety disorders in youth (211).

Diagnostic stability of anxiety disorders

The stability of all ICD-10 anxiety disorder categories was considerably high as measured by their temporal consistency, diagnostic stability, and probability of diagnostic change. Our findings are in agreement with results of some (212-214), but not all (215;216) clinical and epidemiological studies that have evaluated the temporal diagnostic consistency of anxiety symptoms in children and adolescents. Thus, while the former investigations showed fair to moderate values of diagnostic stability of anxiety disorders, the latter showed poor diagnostic stability. The reasons for this improved diagnostic temporal stability are unclear, but may be due to the large sample size, extensive duration of follow-up, high number of assessments, diagnostic criteria, or socio-demographic variables. On the other hand, treating psychiatrists/psychologists often had access to past records and diagnoses, and may have been inclined to keep the previous diagnosis rather than assign a different one. However, this is not supported by the fact that we found strikingly low values of diagnostic temporal stability of chronic mental disorder diagnoses using similar methodology in an adult sample treated by the same team of psychiatrists and psychologists (217).

Diagnostic stability of pediatric anxiety disorders could be partially explained by genetic, biological, and developmental factors. Converging findings from twin and family studies suggest that genetic mechanisms underlie the risk for internalizing disorders and a greater risk for recurrence is reported in early onset internalizing disorders (218). This increased probability of recurrence could result in the observed higher levels of temporal stability in children and adolescents. On the other hand, epidemiologic and clinic-based

studies (219-223) have shown that anxiety disorders usually have the earliest age of onset compared with other childhood psychiatric disorders, which has been related to “developmental readiness” to manifest anxiety disorders in the face of natural or experimental stressful conditions (224). It could be argued that youth with significant genetic and biological predisposition for development of anxiety disorders and living under stressful circumstances might be at higher risk for presenting more persistent and/or recurrent anxiety disorders and also for being referred to specialized treatment. These factors all may have contributed to the high levels of diagnostic stability observed here. Following a similar line of reasoning, it may be that children with early onset anxiety disorders are exhibiting a phenotype reflecting genotypes with higher penetrance and thus contributing to a more stable clinical presentation.

Diagnostic stability of specific anxiety disorder diagnoses

OCD and “other” anxiety disorders (which includes generalized anxiety disorder and panic disorder) showed the lowest diagnostic stability whereas phobic and social anxiety disorders showed the highest diagnostic stability.

The relatively higher diagnostic stability of phobic disorders is in agreement with results from clinical and epidemiological studies. Last et al (225) reported that a small proportion of subjects with simple phobia developed a new psychiatric disorder during the follow up. Similarly, Pine et al (226) found that subjects with simple phobia and social anxiety tended to have a stable course of illness.

Our results regarding obsessive compulsive disorder are in agreement with findings from an outpatient study of youngsters with obsessive compulsive disorder reporting that 71% met criteria for a different psychiatric disorder during

follow-up (mean follow-up time=11.2 years (227). A diagnosis of obsessive compulsive disorder may significantly increase the likelihood of suffering from additional psychopathology, partly explaining the higher rate of unstable course of obsessive compulsive disorder found in our study. OCD also showed the lowest rates of retrospective consistency among all the anxiety disorders studied, which may reflect clinicians' difficulty in identifying OCD symptoms during the first evaluation. Should this finding be replicated, it would demonstrate the need for better assessment of this disorder among youth evaluated in psychiatric outpatient services.

The lower prospective and retrospective consistency and diagnostic stability of "other" anxiety disorder diagnoses -which includes diagnoses such as generalized anxiety disorder and panic disorder- may suggest the difficulties that clinicians encounter when evaluating children and adolescent with such diagnoses. Given that diagnostic validity decreases with the number of digits employed in the ICD-10, it is conceivable to think that the diagnostic stability of generalized anxiety disorder and panic disorder would result in even lower figures. Alternatively, clinicians in our sample may have severally underdiagnosed generalized anxiety disorder and panic disorder and may have used the "other" anxiety disorder category (ICD-10 F41) as a residual category instead of using the more narrowed diagnosis categories for unspecified anxiety disorders ICD-10 F41.8 or F41.9. In this case, these unspecified anxiety disorders would be the ones who show the low diagnostic stability values in our sample and not major diagnoses such generalized anxiety disorder and panic disorder.

Nevertheless, the fact that the two disorders with the lowest diagnostic stability (OCD and other anxiety disorders) showed the highest prevalence of psychiatric comorbidities appears not to be just a coincidence. This finding may imply that for subjects who suffer from OCD or from other anxiety disorders there may be an “heterotypic continuity”(228) of the disorder. The heterotypic continuity is defined as the continuation of symptoms that are identified as different diagnoses at different time points which may be a sign of either an underlying predisposition to develop diverse disorders at different ages or an underlying disorder that has different clinical expression across development (229). The fact that a considerable number of subjects belonging to OCD and “other” anxiety disorders groups received diagnoses of other categories of anxiety disorders but also of other non-anxiety disorders such as affective disorder, eating disorder, or personality disorder may be in line with this notion of heterotypic continuity. This concept could also help explain why clinicians were not able to adequately capture the clinical presentation of these disorders during the first evaluation, which is reflected on the low retrospective consistency. Nevertheless, this requires further examination. As Caron and Rutter (230) indicated, comorbidity can occur for many reasons including but not limited to: artifact of clinical samples, errors in the nosology, ascertainment bias, overlapping diagnostic criteria, nosological subdivision of syndromes, or if a disorder is a an early manifestation or a component of the other.

On the other hand, homotypic continuity of a disorder is defined as retention of the same diagnosis at different assessment points. The presence of such continuity during development suggests that the disorder has similar clinical manifestations over time. Our study reflects a high degree of

developmental homotypic continuity for phobic, social anxiety, and stress-related disorders. This finding, in agreement with a previous report conducted in a large epidemiological sample (231), underscores the notion that these anxiety disorders are not merely an epiphenomenon or precursor of other forms of psychopathology as previously reported (232-243), but rather constitute psychiatric disorders with enduring clinical manifestations.

Duration of follow up, persistence of anxiety disorders and service use

Although the average follow-up was found to be relatively short in children and adolescent with anxiety disorders treated in specialized care, having an inconstant anxiety disorder (versus having a constant anxiety disorder significantly increased the median duration of follow-up. This is an important clinical finding because it suggests that clinicians may be confident that the majority of subjects with a clear diagnosis of an anxiety disorder would respond to treatment fairly well and will have a relatively short duration of follow-up. Developmental differences between youth and adults however indicate that several months may be of the utmost importance for the appropriate achievements of children and adolescents. Thus, disorders that are present for a relatively short period of time (months) might indeed have an important impact on significant areas such as school, peer relationships, family, and social interactions and must be taken into account when interpreting these findings. On the other hand, difficulty in identifying or correctly treating pediatric anxiety disorders may be related to the occurrence of inconstant anxiety disorders. Clinicians should be aware of discrepant diagnoses when evaluating children and adolescents, since inconstant anxiety disorders may have a longer duration

of follow up and may increase the likelihood of suffering from other psychiatric disorders and may be associated with greater service use.

Strengths and weaknesses.

This is the largest longitudinal study evaluating the diagnostic stability of anxiety disorders in youngsters using three complementary indices and the first in evaluate the impact that diagnostic stability may have in duration of follow-up and continuity in adulthood. However, several limitations require consideration. ICD-10 diagnoses were established clinically, possibly affecting accuracy. Clinicians who assigned the diagnoses were not specifically trained to maintain inter-rater reliability. However, improved inter-rater reliability would have been likely to further increase, rather than decrease, diagnostic stability by reducing random error. This study has the limitations of most large-scale surveys. It is possible that patients with the most unstable diagnoses moved or sought treatment elsewhere, thus confounding diagnostic stability through alternate pathways of treatment-seeking. However, rates of annual residential changes to other provinces in Spain or other countries among young people is estimated at less than 2% (244). Given that most Spaniards receive medical and mental heath care in public services (245) it is unlikely that many patients sought treatment in other settings. Given that we intentionally selected subjects with 3 or more visits to pediatric psychiatric clinics, the results of this investigation may not be generalized to those subjects with more transient and less impairing disorders. We based our estimations on the notion that the follow-up of the patients was the result of a single episode of a disorder. Given the characteristics of our dataset, we could not take into consideration in our analysis the possibility that some patients may have been followed for

independent episodes that not only could be distant in time but also of different nature. This limitation however would have resulted in decreasing rather than increasing the diagnostic stability of the anxiety disorder diagnoses studied. Further studies are needed to determine the diagnostic stability of anxiety disorder diagnoses on single episodes until their clinical remission. Given that kappa values take into account stable positive cases and stable negative cases but also remitted cases and new cases, low kappa values may be observed if a high number of new or remitted cases occurred (246) and thus not necessarily reflect lack of diagnostic stability. Others have used a dimensional approach to determine the stability of anxiety symptomatology over time. The dimensional approach has the advantage that allows measuring severity level, which is something we were unable to determine in our investigation. Regrettably, we do not have data about the severity of the anxiety symptoms and therefore we cannot determine whether diagnostic stability is influenced by severity of anxiety symptomatology. Similarly, we did not control for this variable in the comparisons of the duration of illness or continuity over time between subjects with and without diagnostic constancy, which is an important limitation. Future studies incorporating measures of anxiety symptoms over time besides clinical categorical data could result in an improvement in our understanding about the precise course of illness that those with and without diagnostic constancy have.

Despite all these limitations, the high degree of diagnostic stability found for the majority of the anxiety disorders studied and the notable impact of diagnostic constancy on the persistence of the anxiety disorders disorders are remarkable.

Summary

Phobic, social anxiety, and stress-related disorder diagnoses in children and adolescents treated in community outpatient services have considerable long-term diagnostic stability. This supports the notion that these anxiety disorders are not merely an epiphenomenon or precursor of other disorders such as depression as previously stated (247;248), but rather constitute psychiatric disorders with long lasting clinical manifestations.

In this sample OCD and “other” anxiety disorder such as generalized anxiety disorder and panic disorder disorders have relatively lower long-term diagnostic stability and higher level of psychiatric comorbidity, especially with mood disorders. This may reflect the fact that these disorders are hard to diagnose.

The duration of follow-up was significantly influenced by diagnostic constancy. At least in our sample, having an inconstant anxiety disorder diagnosis versus having a constant anxiety diagnosis increases the likelihood of being followed for a longer period of time in mental health outpatient services.

If these findings were replicated in future investigations, this information could be useful to develop more appropriate diagnostic ascertainment as well as treatment recommendations and interventions among children and adolescents suffering from anxiety disorders.

CONCLUSIONS

1. Anxiety disorders in children and adolescents treated in metropolitan outpatient psychiatric settings may have a considerably high diagnostic stability.

2. Results of diagnostic stability of childhood anxiety disorders appears to be similar regardless of the methods used to measure diagnostic stability.

3. Diagnostic stability is not homogenous and varies among the different childhood anxiety disorders.

4. Phobic, social anxiety, and stress-related disorder diagnoses in children and adolescents treated in community outpatient services may have notable long-term diagnostic stability ranging from good to excellent values.

5. Obsessive-compulsive disorder and “other” anxiety disorder such as generalized anxiety disorder and panic disorder disorders may have relatively lower long-term diagnostic stability (ranging from moderate to good values).

6. Diagnostic stability of the anxiety disorders appears not to be greatly influenced by sex.

7. Subjects with inconstant anxiety disorder diagnoses have higher prevalence of comorbid diagnoses than those with constant diagnoses.

8. The duration of follow-up of children and adolescents with anxiety disorders is significantly influenced by diagnostic constancy.

9. Having an inconstant anxiety disorder diagnosis versus having a constant anxiety diagnosis may increase the likelihood of being followed for a longer period of time in mental health outpatient services.

10. Further studies using similar methodology are needed to confirm and extend these findings with regard to diagnostic stability and persistence of the anxiety disorders with onset in childhood and adolescence.

11. Additional studies that combine categorical and dimensional data are specially needed to determine the impact that level and severity of anxiety symptomatology may have on diagnostic stability and on the persistence of the disorder over time.

CONCLUSIONES

1. Los trastornos de ansiedad de inicio en la etapa infantil y la adolescencia que son tratados en dispositivos psiquiátricos ambulatorios en áreas metropolitanas podrían tener una considerable estabilidad diagnóstica.

2. Los valores de estabilidad diagnóstica no parecen verse afectados de forma significativa por los diferentes métodos de determinación empleados en su cálculo.

3. La estabilidad diagnóstica no es homogénea y varía entre los diversos tipos de trastornos de ansiedad de inicio en la infancia y la adolescencia.

4. Los trastornos fóbicos, de ansiedad social y los trastornos por estrés diagnosticados en niños y adolescentes en dispositivos psiquiátricos ambulatorios podrían tener una notable estabilidad diagnóstica a largo plazo y podría alcanzar valores comprendidos entre buena y excelente estabilidad.

5. El trastorno obsesivo-compulsivo y otros trastornos de ansiedad como el trastorno de ansiedad generalizada y el trastorno de pánico presentarían una relativa menor estabilidad diagnóstica a largo plazo (con valores comprendidos entre niveles moderados a buenos).

6. Los valores de la estabilidad diagnóstica de los trastornos de ansiedad de inicio en la infancia y adolescencia no parecen verse afectados de forma significativa por el sexo.

7. Los pacientes con diagnósticos inconstantes de trastornos de ansiedad presentan una mayor prevalencia de trastornos comórbidos.

8. La duración del seguimiento en niños con trastornos de ansiedad se ve influida significativamente por la constancia diagnóstica y no depende tanto de la edad de la primera evaluación ni del sexo del paciente.

9. El tener un diagnóstico inconstante frente al tener un diagnóstico constante podría incrementar la probabilidad de presentar un seguimiento en los servicios de salud mental por un período de tiempo significativamente más prolongado.

10. Son necesarios nuevos estudios que utilicen similar metodología que confirmen y extiendan estos hallazgos en relación a la estabilidad diagnóstica y persistencia de los trastornos de ansiedad de inicio en la infancia y en la adolescencia.

11. Estudios adicionales que combinen datos categóricos con resultados dimensionales son especialmente necesarios con objeto de determinar el impacto que la severidad de la sintomatología ansiosa puede tener en las

variables de estabilidad diagnóstica y en la persistencia de lso trastornos de ansiedad de inicio en la infancia y en la adolescencia a lo largo del tiempo.

Appendix 1

Servicios de Salud Mental

Madrid

FECHA:____/____/____ **Nº HISTORIA:**

Nº SEGURIDAD SOCIAL: ___ / _____

APELLIDOS: 1º: _____ **2º:**_____

NOMBRE: _____ **Nº D.N.I.:** _____

DOMICILIO: _____ **C. POSTAL:** _____

TELÉFONO: _____/_____

FECHA DE NACIMIENTO: _____/_____/_____ **HOMBRE:** _____ **MUJER:** _____

ESTADO CIVIL:

SOLTERO/A:	_____S
CASADO/A:	_____C
DIVORCIADO/A:	_____D
SEPARADO/A:	_____X
VIUDO/A:	_____V

TIPO DE CONVIVENCIA:

SOLO/A:	_____01
CON CÓNYUGE:	_____02
CON PAREJA:	_____03
CON PADRES:	_____04
SOLO CON PADRE:	_____05
SOLO CON MADRE:	_____06
CON HIJOS:	_____07
CON OTROS FAMIL:	_____08
EN INSTITUCIÓN:	_____09
OTROS:	_____00

TIPO DE ESTUDIOS:

ANALFABETO/A:	_____01
SIN ESTUDIOS:	_____02
ESTUDIOS PRIMARIOS:	_____03
GRADUADO ESCOLAR:	_____04
BACHILLER:	_____05
COU:	_____06
TITUL. UNIVERSITARIO:	_____07
LICEN. UNIVERSITARIO:	_____08
OTROS:	_____09

OCUPACIÓN O PROFESIÓN:

SIN TRABAJO	_____00
PROFESIONALES Y TÉCNICOS:	_____01
DIRECTIVOS:	_____02
PERSONAL ADMINISTRATIVO:	_____03
VENDEDORES Y COMERCIANTES:	_____04
HOSTELERÍA Y SERV. DE SEGURIDAD:	_____05
AGRICULTURA Y GANADERÍA:	_____06
PERSONAL DE INDUSTRIA, CONSTRUCCIÓN Y TRANSPORTE:	_____07
OTROS:	_____08
PERSONAL FUERZAS ARMADAS:	_____09

SITUACIÓN LABORAL:

TRABAJANDO :	_____02
BUSCANDO PRIMER EMPLEO:	_____03
PARADO CON SUBSIDIO:	_____04
PARADO SIN SUBSIDIO:	_____05
RETIRADO, PENSIONISTA, JUBILADO:	_____06
ESTUDIANDO:	_____08
DEDICADO LABORES DEL HOGAR:	_____09
INCAPACIDAD LABORAL TRANS.:	_____10
INCAPACIDAD PERMANENTE:	_____11

NOMBRE DEL CONSULTORIO: _____

NOMBRE DEL MÉDICO DE CABECERA: _____

¿HA TENIDO CONTACTO CON PSIQUIÁTRA O PSICÓLOGO ANTERIORMENTE?:

SI: _____ **¿DE QUÉ TIPO?:** PARTICULAR: _____ A; AMBULATORIO: _____ A; HOSPITALARIO: _____ H NO: _____

SOLO PARA NIÑOS MENORES DE 16 AÑOS

ESCOLARIZACIÓN:

EN GUARDERÍA: _____01
NO ASISTE A GUARDERÍA: _____02
EN EDAD Y NO ESCOLARIZADO: _____03
ESCOLARIZADO EN CURSO
CORRESPONDIENTE A SU EDAD: _____04
ESCOLARIZADO PERO RETRASADO
EN CURSO: _____05

ORIGEN DE LA DEMANDA:

PETICIÓN DE LA FAMILIA: _____01
PETICIÓN DE LA ESCUELA: _____02
PETICIÓN DEL MEDICO _____03
PETICIÓN DE UNA INSTITUCIÓN: _____04
OTROS: _____06

Nº DE HERMANOS: _____ **POSICIÓN QUE OCUPA: _____**

DATOS DEL PADRE:

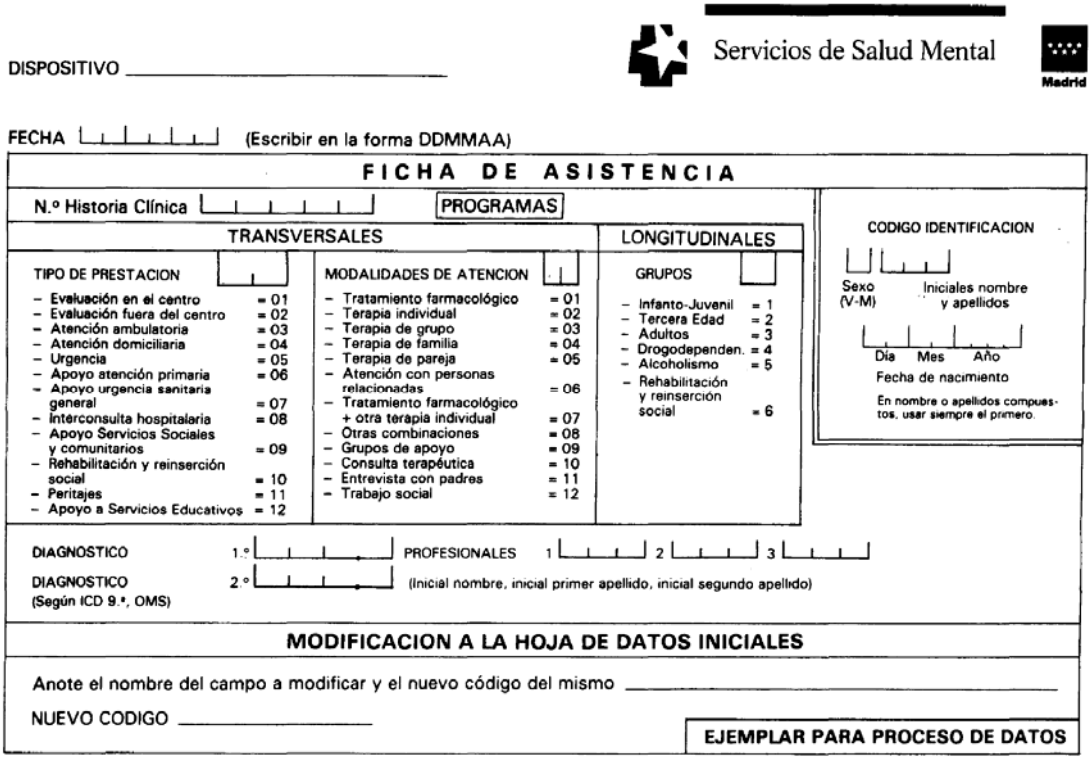
SITUACIÓN LABORAL: _____ (*)
OCUPACIÓN: _____ (**)
NIVEL DE ESTUDIOS: _____ (***)
FECHA NACIMIENTO: _____/_____/_____

DATOS DE LA MADRE:

SITUACIÓN LABORAL: _____ (*)
OCUPACIÓN: _____ (**)
NIVEL DE ESTUDIOS: _____ (***)
FECHA NACIMIENTO: _____/_____/_____

(*) Véase SITUACIÓN LABORAL
(**) Véase OCUPACIÓN O PROFESIÓN
(***) Véase TIPO DE ESTUDIOS

(*), (*), (***) INDÍQUESE EN TODOS CON NUMERACIÓN



DISPOSITIVO _____

Servicios de Salud Mental

Madrid

FECHA ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋ (Escribir en la forma DDMMAA)

FICHA DE ASISTENCIA

N.º Historia Clínica ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋

PROGRAMAS

TRANSVERSALES

TIPO DE PRESTACION ⌊_⌋

- Evaluación en el centro = 01
- Evaluación fuera del centro = 02
- Atención ambulatoria = 03
- Atención domiciliaria = 04
- Urgencia = 05
- Apoyo atención primaria = 06
- Apoyo urgencia sanitaria general = 07
- Interconsulta hospitalaria = 08
- Apoyo Servicios Sociales y comunitarios = 09
- Rehabilitación y reinserción social = 10
- Peritajes = 11
- Apoyo a Servicios Educativos = 12

MODALIDADES DE ATENCION ⌊_⌋⌊_⌋

- Tratamiento farmacológico = 01
- Terapia individual = 02
- Terapia de grupo = 03
- Terapia de familia = 04
- Terapia de pareja = 05
- Atención con personas relacionadas = 06
- Tratamiento farmacológico + otra terapia individual = 07
- Otras combinaciones = 08
- Grupos de apoyo = 09
- Consulta terapéutica = 10
- Entrevista con padres = 11
- Trabajo social = 12

LONGITUDINALES

GRUPOS ⌊_⌋

- Infanto-Juvenil = 1
- Tercera Edad = 2
- Adultos = 3
- Drogodependen. = 4
- Alcoholismo = 5
- Rehabilitación y reinserción social = 6

CODIGO IDENTIFICACION

⌊_⌋⌊_⌋⌊_⌋⌊_⌋

Sexo (V-M) — Iniciales nombre y apellidos

⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋

Día Mes Año

Fecha de nacimiento

En nombre o apellidos compuestos, usar siempre el primero.

DIAGNOSTICO 1.º ⌊_⌋⌊_⌋⌊_⌋⌊_⌋

DIAGNOSTICO 2.º ⌊_⌋⌊_⌋⌊_⌋⌊_⌋

(Según ICD 9.ª, OMS)

PROFESIONALES 1 ⌊_⌋⌊_⌋⌊_⌋ 2 ⌊_⌋⌊_⌋⌊_⌋ 3 ⌊_⌋⌊_⌋⌊_⌋

(Inicial nombre, inicial primer apellido, inicial segundo apellido)

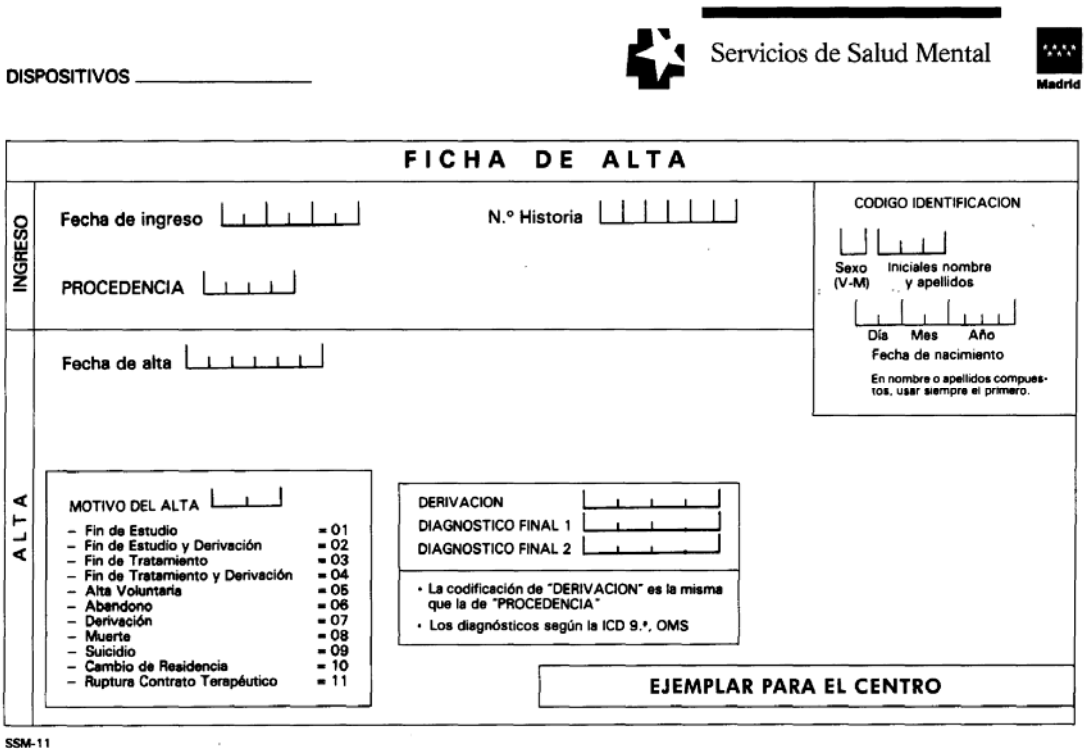
MODIFICACION A LA HOJA DE DATOS INICIALES

Anote el nombre del campo a modificar y el nuevo código del mismo _____

NUEVO CODIGO _____

EJEMPLAR PARA PROCESO DE DATOS

· ¿Acude el paciente a la cita? (S/N) ☐


DISPOSITIVOS _____
Servicios de Salud Mental
Madrid
FICHA DE ALTA
INGRESO
Fecha de ingreso
N.º Historia
PROCEDENCIA
CODIGO IDENTIFICACION
Sexo (V-M)
Iniciales nombre y apellidos
Día Mes Año
Fecha de nacimiento
En nombre o apellidos compuestos, usar siempre el primero.
ALTA
Fecha de alta
MOTIVO DEL ALTA
- Fin de Estudio = 01
- Fin de Estudio y Derivación = 02
- Fin de Tratamiento = 03
- Fin de Tratamiento y Derivación = 04
- Alta Voluntaria = 05
- Abandono = 06
- Derivación = 07
- Muerte = 08
- Suicidio = 09
- Cambio de Residencia = 10
- Ruptura Contrato Terapéutico = 11
DERIVACION
DIAGNOSTICO FINAL 1
DIAGNOSTICO FINAL 2
• La codificación de "DERIVACION" es la misma que la de "PROCEDENCIA"
• Los diagnósticos según la ICD 9.ª, OMS
EJEMPLAR PARA EL CENTRO
SSM-11

Appendix 2

ICD-10 childhood anxiety disorders diagnostic criteria:

Phobic anxiety disorders

F40.0 Agoraphobia

A. Marked and consistently manifest fear in or avoidance of at least two of the following situations:
(1) crowds;
(2) public places;
(3) travelling alone;
(4) travelling away from home.

B. Symptoms of anxiety in the feared situation at some time since the onset of the disorder, with at least two symptoms present together, on at least one occasion, from the list below, one of which must have been
from items (1) to (4):

- *Autonomic arousal symptoms*
  (1) Palpitations or pounding heart, or accelerated heart rate.
  (2) Sweating.
  (3) Trembling or shaking.
  (4) Dry mouth (not due to medication or dehydration).
  Symptoms concerning chest and abdomen
  (5) Difficulty breathing.
  (6) Feeling of choking.
  (7) Chest pain or discomfort.
  (8) Nausea or abdominal distress (e.g. churning in stomach).
- *Symptoms concerning brain and mind*
  (9) Feeling dizzy, unsteady, faint or light-headed.
  (10) Feelings that objects are unreal (derealization), or that one's self is distant or "not really here"(depersonalization).
  (11) Fear of losing control, going crazy, or passing out.

(12) Fear of dying.

- *General symptoms*

(13) Hot flushes or cold chills.

(14) Numbness or tingling sensations.

C. Significant emotional distress due to the avoidance or the anxiety symptoms, and a
recognition that these are excessive or unreasonable.

D. Symptoms are restricted to or predominate in the feared situations or when thinking about them.

E. Most commonly used exclusion criteria: criterion A is not due to delusions, hallucinations, or other symptoms of disorders such as organic mental disorders (F0), schizophrenia and related disorders (F20-F29), affective disorders (F30-F39), or obsessive compulsive disorder (F42), and are not secondary to cultural beliefs.

F40.2 Specific (isolated) phobias

A. Either (1) or (2):

(1) marked fear of a specific object or situation not included in agoraphobia (F40.0) or social phobia (F40.1);

(2) marked avoidance of such objects or situations.

Among the most common objects or situations are animals, birds, insects, heights, thunder, flying, small enclosed spaces, sight of blood or injury, injections, dentists and hospitals.

B. Symptoms of anxiety in the feared situation at some time since the onset of the disorder, as defined in criterion B for F40.0 (Agoraphobia).

C. Significant emotional distress due to the symptoms or the avoidance, and a recognition that these are excessive or unreasonable.

D. Symptoms are restricted to the feared situation, or when thinking about it. If desired, the specific phobias may be subdivided as follows:

- animal type (e.g. insects, dogs)
- nature-forces type (e.g. storms, water)
- blood, injection and injury type
- situational type (e.g. elevators, tunnels)
- other type

F40.8 Other phobic anxiety disorders

F40.9 Phobic anxiety disorder, unspecified

F93.1 Phobic anxiety disorder of childhood

A. A persistent or recurrent fear (phobia) that is developmentally phase-appropriate (or was so at the time of onset) but which is abnormal in degree and which is associated with significant social impairment.

B. Absence of generalized anxiety disorder of childhood (F93.80).

C. The disorder does not occur as part of a broader disturbance of emotions, conduct, personality or of a pervasive developmental disorder, psychotic disorder or psychoactive substance use disorder.

D. Duration of at least four weeks.

Social anxiety disorders

F40.1 Social phobias

A. Either (1) or (2):

(1) marked fear of being the focus of attention, or fear of behaving in a way that will be embarrassing or humiliating;

(2) marked avoidance of being the focus of attention or situations in which there is fear of behaving in an embarrassing or humiliating way. These fears are manifested in social situations, such as eating or

speaking in public; encountering known individuals in public; or entering or enduring small group situations, such as parties, meetings and classrooms.

B. At least two symptoms of anxiety in the feared situation at some time since the onset of the disorder, as defined in criterion B for F40.0 (Agoraphobia) and in addition one of the following symptoms:

(1) Blushing.

(2) Fear of vomiting.

(3) Urgency or fear of micturition or defecation.

C. Significant emotional distress due to the symptoms or to the avoidance.

D. Recognition that the symptoms or the avoidance are excessive or unreasonable.

E. Symptoms are restricted to or predominate in the feared situation or when thinking about it.

F. Most commonly used exclusion criteria: Criteria A and B are not due to delusions, hallucinations, or other symptoms of disorders such as organic mental disorders (F0), schizophrenia and related disorders (F20-F29), affective disorders (F30-F39), or obsessive compulsive disorder (F42), and are not secondary to cultural beliefs.

F93.2 Social anxiety disorder of childhood

A. Persistent anxiety in social situations in which the child is exposed to unfamiliar people, including peers, as manifested by socially avoidant behaviour.

B. Self-consciousness, embarrassment, or overconcern about the appropriateness of his or her behaviour when interacting with unfamiliar figures.

C. Significant interference with social (including peer) relationships that are restricted; when new or forced social situations are experienced, they cause marked distress and discomfort as manifested by crying, lack of spontaneous speech, or withdrawal from the social situation.

D. Has satisfying social relationships with familiar figures (family members or peers the subject knows well).

E. Onset generally coincides with a developmental phase where these anxiety reactions are considered appropriate. The abnormal degree, persistence over time and associated impairment must be manifest
before the age of six.

F. Absence of generalized anxiety disorder of childhood (F93.80).

G. The disorder does not occur as part of broader disturbances of emotions, conduct, personality, or of a
pervasive developmental disorder, psychotic disorder or psychoactive substance use disorder.

H. Duration of at least four weeks.

Obsessive compulsive disorder

A. Either obsessions or compulsions (or both), present on most days for a period of at least two weeks.

B. Obsessions (thoughts, ideas or images) and compulsions (acts) share the following
features, all of which must be present:
(1) They are acknowledged as originating in the mind of the patient, and are not imposed by outside persons or influences.

(2) They are repetitive and unpleasant, and at least one obsession or compulsion must be present that is acknowledged as excessive or unreasonable.

(3) The subject tries to resist them (but if very long-standing, resistance to some

obsessions or compulsions may be minimal). At least one obsession or compulsion must be present which is unsuccessfully resisted.

(4) Carrying out the obsessive thought or compulsive act is not in itself pleasurable. (This should be distinguished from the temporary relief of tension or anxiety).

C. The obsessions or compulsions cause distress or interfere with the subject's social or individual functioning, usually by wasting time.

D. Most commonly used exclusion criteria: not due to other mental disorders, such as

schizophrenia and related disorders (F2), or mood [affective] disorders (F3).

The diagnosis may be specified by the following four character codes:

F42.0 Predominantly obsessional thoughts and ruminations

F42.1 Predominantly compulsive acts

F42.2 Mixed obsessional thoughts and acts

F42.8 Other obsessive-compulsive disorders

F42.9 Obsessive-compulsive disorder, unspecified

Stress related disorders

F43.0 Acute stress reaction

A. Exposure to an exceptional mental or physical stressor.

B. Criterion A is followed by an immediate onset of symptoms (within one hour).

C. Two groups of symptoms are given; the acute stress reaction is graded as:

F43.00 Mild if only (1) is fulfilled;
F43.01 Moderate for (1) plus any two symptoms of (2), and
F43.02 Severe for either - (1) plus any four from (2) or dissociative stupor.

(1) The criteria B, C and D for generalized anxiety disorder (F41.1).
(2) a) withdrawal from expected social interaction;
b) narrowing of attention;
c) apparent disorientation;
d) anger or verbal aggression;
e) despair or hopelessness;
f) inappropriate or purposeless over-activity;
g) uncontrollable and excessive grief (judged by local cultural standards).

D. If the stressor is transient or can be relieved, the symptoms must begin to diminish after not more than eight hours. If the stressor continues, the symptoms must begin to diminish after not more than 48 hours.

E. Most commonly used exclusion criteria: without the current presence of any other mental or behavioural disorder in ICD-10, (except for F41.1 (generalized anxiety disorder), and F60 (personality disorders)), and not within three months of the end of an episode of any other mental or behavioural disorder.

F43.1 Post-traumatic stress disorder

A. Exposure to a stressful event or situation (either short or long lasting) of exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone.

B. Persistent remembering or "reliving" the stressor by intrusive flash backs, vivid memories, recurring dreams, or by experiencing distress when exposed to circumstances resembling or associated with the stressor.

C. Actual or preferred avoidance of circumstances resembling or associated with the stressor (not present before exposure to the stressor).

D. Either (1) or (2):

(1) Inability to recall, either partially or completely, some important aspects
of the period of exposure to the stressor

(2) Persistent symptoms of increased psychological sensitivity and arousal (not present before exposure to the stressor) shown by any two of the following:

a) difficulty in falling or staying asleep;

b) irritability or outbursts of anger;

c) difficulty in concentrating;

d) hyper-vigilance;

e) exaggerated startle response.

E. Criteria B, C and D all occurred within six months of the stressful event, or the end of a period of stress. (For some purposes, onset delayed more than six months may be included but this should be clearly specified separately.)

F43.8 Other reactions to severe stress

F43.9 Reaction to severe stress, unspecified

Other anxiety disorders

F41.0 Panic disorder [episodic paroxysmal anxiety]

A. Recurrent panic attacks, that are not consistently associated with a specific situation or object, and often occurring spontaneously (i.e. the episodes are unpredictable). The panic attacks are not associated with marked exertion or with exposure to dangerous or life-threatening situations.

B. A panic attack is characterized by all of the following:

(a) it is a discrete episode of intense fear or discomfort;

(b) it starts abruptly;

(c) it reaches a crescendo within a few minutes and lasts at least some minutes;

(d) at least four symptoms must be present from the list below, one of which must be from items (1) to (4):

Autonomic arousal symptoms

(1) Palpitations or pounding heart, or accelerated heart rate.

(2) Sweating.

(3) Trembling or shaking.

(4) Dry mouth (not due to medication or dehydration).

Symptoms concerning chest and abdomen

(5) Difficulty breathing.

(6) Feeling of choking.

(7) Chest pain or discomfort.

(8) Nausea or abdominal distress (e.g. churning in stomach).

Symptoms concerning brain and mind

(9) Feeling dizzy, unsteady, faint or light-headed.

(10) Feelings that objects are unreal (derealization), or that one's self is distant or "not really here" (depersonalization).

(11) Fear of losing control, going crazy, or passing out.

(12) Fear of dying.

General symptoms

(13) Hot flushes or cold chills.

(14) Numbness or tingling sensations.

C. Most commonly used exclusion criteria: not due to a physical disorder, organic mental disorder (F0), or other mental disorders such as schizophrenia and related disorders, (F20-29), affective disorders (F30-39), or somatoform disorders (F45). The range of individual variation of both content and severity is so great that two grades, moderate and severe, may be specified, if desired, with a fifth character:

F41.1 Generalized anxiety disorder

A. A period of at least six months with prominent tension, worry and feelings of apprehension, about every-day events and problems.

B. At least four symptoms out of the following list of items must be present, of which at least one from items (1) to (4).

Autonomic arousal symptoms

(1) Palpitations or pounding heart, or accelerated heart rate.

(2) Sweating.

(3) Trembling or shaking.

(4) Dry mouth (not due to medication or dehydration).

Symptoms concerning chest and abdomen

(5) Difficulty breathing.

(6) Feeling of choking.

(7) Chest pain or discomfort.

(8) Nausea or abdominal distress (e.g. churning in stomach).

Symptoms concerning brain and mind

(9) Feeling dizzy, unsteady, faint or light-headed.

(10) Feelings that objects are unreal (derealization), or that one's self is distant or "not really here" (depersonalization).

(11) Fear of losing control, going crazy, or passing out.

(12) Fear of dying.

General symptoms

(13) Hot flushes or cold chills.

(14) Numbness or tingling sensations.

Symptoms of tension

(15) Muscle tension or aches and pains.

(16) Restlessness and inability to relax.

(17) Feeling keyed up, or on edge, or of mental tension.

(18) A sensation of a lump in the throat, or difficulty with swallowing.

Other non-specific symptoms

(19) Exaggerated response to minor surprises or being startled.

(20) Difficulty in concentrating, or mind going blank, because of worrying or anxiety.

(21) Persistent irritability.

(22) Difficulty getting to sleep because of worrying.

C. The disorder does not meet the criteria for panic disorder (F41.0), phobic anxiety disorders (F40.-), obsessive-compulsive disorder (F42.-) or hypochondriacal disorder (F45.2).

D. Most commonly used exclusion criteria: not sustained by a physical disorder, such as hyperthyroidism, an organic mental disorder (F0) or psychoactive substance-related disorder (F1), such as excess consumption of amphetamine-like substances, or withdrawal from benzodiazepines.

F93.80 Generalized anxiety disorder of childhood

A. A period of at least one month with recurrence of excessive, disproportionate and intrusive anxieties or worries, as indicated by at least three of the following:

(1) Excessive concerns about the quality of one's performance in areas such as schoolwork, sports, and other regular activities.

(2) Excessive concerns about physical health (despite an evident good health, or, if hurt or sick, concerns that go beyond a normal apprehension) or about being injured.

(3) Excessive concerns or anticipatory worries in relation to particular non-health themes (money or financial well-being, punctuality, appearance, catastrophes, disasters, etc.).

(4) Free floating anxiety unrelated to specific situations.

(5) A frequent need for reassurance that persists in spite of several appropriate attempts to reassure the child.

(6) Marked feelings of tension, inability to relax or to concentrate, nervousness, difficulty getting to sleep, autonomic symptoms (such as palpitations, sweating, dry mouth, etc.).

(7) Recurrent somatic complaints (headaches, stomachaches, etc.) for which no physical basis can be demonstrated.

B. The multiple anxieties and worries occur across at least two situations, activities, contexts or circumstances. Generalized anxiety does not present as

discrete paroxysmal episodes (as in panic disorder), nor are the main worries confined to single, major thoughts (as in separation anxiety disorder) or situations (as in social anxiety disorder or phobic disorder in childhood). When more focused anxiety is identified in the broader context of a generalized anxiety, generalized anxiety disorder takes precedence over other anxiety disorders.

C. Onset in childhood or adolescence (below age 18).

D. The symptoms in A interfere daily in a significant way with the child's activities.

E. The disorder does not occur as part of a broader disturbance of emotions, conduct, personality, or of a pervasive developmental disorder, psychotic disorder or psychoactive substance use disorder.

F41.2 Mixed anxiety and depressive disorder

There are so many possible combinations of comparatively mild symptoms for these disorders that specific criteria are not given, other than those already in the diagnostic guidelines. It is suggested that researchers wishing to study patients with these disorders should arrive at their own criteria within the guidelines, depending upon the setting and purpose of their study.

F41.3 Other mixed anxiety disorders

F41.8 Other specified anxiety disorders

F41.9 Anxiety disorder, unspecified

Related articles

Demographic and clinical features of adolescents and young adults with alcohol-related disorders admitted to the Psych¬iatric Emergency Room

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Demographic and clinical features of adolescents and young adults with alcohol-related disorders admitted to the Psychiatric Emergency Room

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Abstract: Objectives. To determine the incidence of alcohol related problems (ARP) among adolescents admitted to the Psychiatric Emergency Room (PER) and to describe the demographic and clinical characteristics. Methods. The study was a retrospective review of admissions to the PER, where we reviewed the psychiatric records of all of the 14-30-year-olds admitted to the PER during the three-month period between April 1st, 2003 and June 30th, 2003. Demographic and clinical data of subjects with and without ARP were compared. Results: During the three-month time period, 108 patients between the age of 14 and 30 were admitted to the PER. 14 (13.2%) of these had ARP, and ARP tended to occur more in males (χ^2=3.81;df=1;p=0.05). The number of psychiatric diagnoses among those who had ARP was significantly higher than among those who did not have ARP (t=-3.12;df=104;p=0.002). ARP were found to be associated with personality disorder and misuse of other substances. 37.5% of those adolescents and young adults with ARP had a personality disorder, while 13% of those without ARP had a personality disorder (χ^2=4.64;df=1;p=0.03). 50% of those with ARP consumed (an)other substance/s, while 12.0% of those patients without ARP consumed (an)other substance/s (χ^2=12.48;df=1;p<0.001). Of the female adolescents and young adults with ARP, 50% were admitted to PER after an episode of self-poisoning. Conclusion. ARP in young adults admitted to the PER for acute psychiatric care are associated with greater psychiatric comorbidity, especially personality disorders. In females, ARP may be associated with an increased risk for self-poisoning. Adequate detection of ARP in the PER could promote earlier specific interventions specifically tailored to ARP among adolescents and young adults.

Keywords: Adolescent, alcohol, emergency service, comorbidity, US

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Received: February 01, 2005. ***Revision:*** February 27, 2005. ***Acceptance:*** February 27, 2005.

INTRODUCTION

Adolescence is an important transitional period during which the initiation of alcohol use most commonly occurs. In a survey conducted in Spain by the National Program of Drugs (1), it was shown that 27.2% of the adolescents (15 to 19 years old) started consuming alcohol before the

age of 15 years. Of those adolescents and young adults aged 15-29 years, 29.2% have had at least one episode of alcohol intoxication during the last year. Problematic alcohol use was shown to be as high as 12.5% among adolescents and young adults. Similar results have been reported in other Western countries. Almost 30% of high school students in the United States have reported having had their first drink of alcohol before the age of 13 years (2). By the time students graduate from high school, over 80% will have begun drinking alcohol (3). A study conducted by Lewinsohn et al (4) reported that a substantial proportion (17%) of US adolescents have serious problems with drinking and 6% met criteria for a diagnosis of DSM-IV alcohol abuse or dependence. Early use of alcohol increases the risk for developing a number of important mental health and social problems (5). Specifically, one study reported a rate of 80% of comorbid disorders among adolescents and young adults with alcohol related problems (ARP) (6). Depressive disorder, anxiety disorder, posttraumatic stress disorder, conduct disorder, oppositional defiant disorder, antisocial personality disorder and polysubstance abuse have been associated with ARP among adolescent and young adults (7-10).

ARP are frequent among patients evaluated by medical emergency services. This is especially true for those presenting with trauma (11). Indeed, ARP may be a factor in emergency room admissions for self-poisoning, injuries, loss of consciousness, as well as other medical conditions. In one study of adolescents evaluated in the emergency room, injury was the most common condition at admission among those with ARP (12).

ARP are also frequent among patients examined for psychiatric emergencies. In adult subjects evaluated in the psychiatric emergency room, prevalence rates of alcohol dependence varied between 17-37.5% (11,13-15). ARP adult patients were more often males, unemployed and with comorbid disorders such as depressive disorder, anxiety disorder, personality disorder or other substance related disorder compared to non-ARP patients. Those with ARP also presented more frequently with suicide attempts.

Little is known about the prevalence of ARP in adolescent and young adult populations admitted to the psychiatric emergency room. To our knowledge only two studies have investigated this relationship (16,17). Both studies reported a similar prevalence rate of ARP (17%) among adolescents and young adults admitted to a psychiatric emergency room. Conduct disorder, personality disorder, other substance related disorder and affective disorder were also present among this population.

The purposes of our study were to determine the prevalence of ARP among the adolescents and young adults that came to the psychiatric emergency room and to describe the demographic and clinical characteristics of this population. We examined all of the admissions at the psychiatric emergency room over a period of three months. We hypothesized that adolescents and young adults assessed at the psychiatric emergency room who have ARP would be more impaired than those adolescents and young adults who do not have ARP.

METHODS

The study was conducted at the Puerta de Hierro Hospital in Madrid, Spain, a university tertiary general hospital that receives psychiatric emergencies from a catchment area covering about 600,000 inhabitants, mainly from the northern districts of Madrid. The first triage is done by an emergency department nurse, when the patient arrive. Those patients, who are

intoxicated upon arrival are first evaluated by emergency medical services. A psychiatric assessment is conducted in the psychiatric emergency room, a subdivision of the Emergency Department complex, only if the treating medical physician requests it. Psychiatric interviews at the emergency room are conducted by residents under the direct supervision of psychiatrists.

Our study was a retrospective review of presentations at the psychiatric emergency room, in which we reviewed the psychiatric records and collected data for a three-month period. We included all adolescents and young adults between the ages of 14 and 30 years (inclusive), regardless of alcohol consumption. We defined subjects with alcohol related problem (ARP) as those with a diagnosis of alcohol intoxication, alcohol abuse or alcohol dependence. Those subjects who did not receive such diagnoses were included among the non-ARP group. All diagnoses obtained from psychiatric records were classified as toxic, psychotic, affective, anxiety and personality disorders and others, according to ICD-10 criteria.

Statistical analysis

Clinical and demographic characteristics of subjects with ARP and subjects without ARP were compared. Chi square tests and T-tests for independent samples were calculated as appropriate. All analyses were performed using the Statistical Package for the Social Sciences for PC, version 11.0 and used two-tailed tests with the alpha level set at 0.05.

RESULTS

There were 479 psychiatric emergency room admissions from April 1, 2003 to June 30, 2003. Of these 479 patients, one hundred twenty-nine (26.9%) were between 14 and 30 years of age. Nine males, including one with ARP, and nine females, including one with ARP, made repeated visits to the psychiatric emergency room during the study interval. Because diagnoses of these 18 patients did not change substantially over the period of study, we include data only from the first presentation to the emergency room. Therefore, 108 patients were included in this study.

Table 1. *Age and gender of adolescents and young adults with or without alcohol-related problems assessed at the Psychiatric Emergency Room*

		AGE			
		min	max	mean	SD
Subjects without alcohol-related problems	males	14	30	24.83	4.53
	females	15	30	22.40	4.27
	all	14	30	23.46	4.52
Subjects with alcohol-related problems	males	17	29	24.50	3.69
	females	22	28	25.00	2.58
	all	17	29	24.64	3.32
All subjects	males	14	30	24.71	4.32
	females	15	30	22.59	4.21
	all	14	30	23.61	4.37

Of the 129 visits, 36 (28.3%) were recorded as related to anxiety disorders, 25 (19.7%) to substance-related disorders, 23 (18.1%) to major affective disorders, 21 (16.5%) to personality disorders, 15 (11.8%) to psychotic disorders and 14 (11%) to other diagnoses. Of the 108 patients, 14 (13.2%) had ARP, of whom 10 (71.4%) were male. Demographic data related to age and gender is shown in Table 1. There was no statistical difference in regard to age between those adolescents and young adults

Table 2. *Demographic and clinical characteristics of adolescents and young adults with or without alcohol-related problems assessed at the Psychiatric Emergency Room*

	Adolescents and young adults with ARP assessed at the psychiatric ER		Adolescents and young adults without ARP assessed at the psychiatric ER		Analysis		
Variable	N (Mean)	% (SD)	N (Mean)	% (SD)	df	χ^2 (τ)	p
Demographic							
Age (years)	(24.64)	(3.32)	(23.46)	(4.52)	104	(-0.94)	0.35
Gender (% males)	10	71.4	40	43.5	1	3.81	0.051
% immigrants	4	28.6	15	16.3	1	1.24	0.27
Clinical Features							
Number of diagnoses	(1.79)	(0.43)	(1.29)	(0.56)	104	(-3.12)	0.002
Other-than-alcohol-substance-related disorder	7	50	11	12	1	12.48	<0.001
Psychotic disorder	--	--	11	12	1	1.87	0.17
Major affective disorder	2	14.3	17	18.5	1	0.15	0.70
Anxiety disorder	2	14.3	29	31.5	1	1.75	0.19
Personality disorder	5	35.7	12	13	1	4.64	0.03
Self-poisoning	2	14.3	14	15.7	1	0.02	0.89
Self-harm behavior	2	14.3	8	8.9	1	0.41	0.52
Admitted to hospital	2	14.3	13	14.1	1	0.00	0.99
Psychopharmacology treatment (% treated before admitted to ER)	6	42.9	49	56.3	1	0.88	0.35
Frequency of presentations	(1.31)	(0.85)	(1.19)	(0.47)	102	(-7.70)	0.63

Table 3. *Demographic and clinical features of adolescents and young adults with alcohol-related problems admitted to the Psychiatric Emergency Room*

Cases	Age	Gender	Day of the week	Time	Referred by	Medications (total daily doses)	Diagnoses	Did patient ask for a referral to treat ARP	Number of ER visits
1	17	Male	Saturday	8pm	Police	None	▪ Polysubstance abuse (alcohol and cannabis) ▪ Behavior dyscontrol	No	1
2	21	Male	Friday	1am	Self-referred	None	▪ Alcohol intoxication ▪ Self-harm behavior	No	1
3	22	Female	Tuesday	8pm	Psychiatrist	Risperidone 3mg Lithium 1000mg Sertraline 100mg Clorazepate 20mg	▪ Polysubstance abuse (cocaine, alcohol and cannabis) ▪ Personality disorder not otherwise specified	No	1
4	22	Male	Friday	5am	Police	Olanzapine 7.5mg Clorazepate 20mg Lormetazepam 2mg	▪ Polysubstance abuse (cocaine, alcohol and cannabis) ▪ Personality disorder not otherwise specified	No	1
5	24	Female	Friday	8pm	Self-referred	Risperidone 3mg Lorazepam 5mg Biperidene 4mg	▪ Alcohol dependence ▪ Borderline personality disorder	No	1
6	24	Male	Sunday	6pm	Self-referred	None	▪ Polysubstance abuse (heroine, cocaine, alcohol and cannabis)	No	1
7	25	Male	Tuesday	9pm	Self-referred	None	▪ Alcohol abuse ▪ Anxiety disorder	Yes	1
8	25	Male	Thursday Saturday	0am 4pm	Emergency services (2)	Gabapentine 300mg Sertraline 100mg Clorazepate 75mg Lormetazepam 2mg	▪ Polysubstance intoxication (heroine, cocaine, alcohol) ▪ Polysubstance abuse (cocaine and alcohol)	No (Thursday) Yes (Saturday)	2
9	26	Female	Thursday	1am	Emergency services	Venlafaxine 225mg Alprazolam 3mg	▪ Alcohol intoxication ▪ Depressive disorder ▪ Self-poisoning	No	1
10	26	Male	Sunday Thursday Friday Saturday	10pm 11pm 11pm 8pm	Emergency services (4)	Olanzapine 10mg Topiramate 300mg Alprazolam 1.5mg	▪ Polysubstance abuse (alcohol and cannabis) ▪ Borderline personality disorder	No	4
11	28	Female	Wednesday Friday	4am 3am	Emergency services Self-referred	None	▪ Polysubstance intoxication (heroine, cocaine, alcohol) ▪ Polysubstance abuse (cocaine and alcohol) ▪ Self-poisoning (1)	No	2
12	28	Male	Saturday	1am	Self-referred	None	▪ Alcohol dependence disorder ▪ Panic attack disorder	No	1
13	28	Male	Tuesday	10pm	Self-referred	None	▪ Polysubstance abuse (cocaine, alcohol and cannabis)	No	1
14	29	Male	Sunday	2pm	Police	None	▪ Alcohol dependence ▪ Alcohol intoxication	No	1

with or without ARP (t=-0.94;df=104; p=0.35). However, in regard to gender, there was a trend towards a higher prevalence of ARP in males (χ^2=3.81; df=1;p=0.05).

The clinical features of adolescents and young adults with and without ARP are presented in Table 2. 42.9% of those patients with ARP (6 patients) were on psychotropic medications at their time of their admissions to the psychiatric emergency room whereas 57.1% (49 patients) of those without ARP were on psychotropic medications, but the difference was not statistically significant (χ^2=0.88;df=1; p=0.35). Patients who had ARP were more likely to have an additional diagnosis. The number of diagnoses among those who had ARP was significantly higher than among those who did not have ARP (t=-3.12; df=104;p=0.002). The percentage of those adolescents and young adults who had ARP and a comorbid personality disorder (35.7%) was higher compared to the percentage of those who did not have ARP but had a personality disorder (13%), (χ^2=4.64;df=1;p=0.03). Among those patients with ARP, the prevalence of misuse of substances other than alcohol was higher: 50% of the ARP patients consumed (an)other substance/s whereas 12.0% of the non-ARP group consumed (an)other substance/s (χ^2=12.48;df=1;p<0.001). There were no statistical differences regarding psychotic, affective and anxiety disorders among those who had ARP and those who did not. Regarding self-harm behavior, 14.3% of the patients with ARP and 8.9% of the patients without ARP reported self-injurious behavior, but we did not find a significant difference when comparing self-injurious behavior between the two groups (χ^2=0.41;df=1;p=0.52). Similarly, self-poisoning did not reveal any statistical difference between the two groups (χ^2=0.19;df=1;p=0.89). But we did notice that all of the self-poisoning events among the ARP patients occurred in females. In the subgroup of female adolescents and young adults who had ARP, 50% were admitted after self-poisoning.

DISCUSSION

This study indicates that a substantial number of admissions to the psychiatric emergency are for adolescents and young adults. Among those adolescents and young adults admitted at the psychiatric emergency room, 13.2% had ARP. ARP tended to occur more often in males and were mostly found not as an isolated diagnosis, but rather associated with comorbid diagnoses, such as personality disorders and other -substance-related problems.

The prevalence of ARP among adolescents and young adults admitted to the psychiatric emergency room during the study period was similar, although slightly lower, than those reported in previous studies of adolescents (16,17). Problematic alcohol consumption has been shown to occur in 12.5% of Spanish adolescents and young adults (1), while among the same age population in the US, the prevalence has been shown to be as high as 17% (4). The European Alcohol Action Plan 2000-2005 of the World Health Organization has shown that the main trends in youth drinking patterns are 1) greater experimentation with alcohol among children and 2) an increase in high risk drinking patterns, such as “binge drinking” and drunkenness among adolescents and young adults (18). ARP have also been shown to play an important role in motor vehicle accidents and other injuries (19). ARP are associated with an increased risk of suicide, as well as delinquent and high risk sexual behavior (19). Moreover, the costs of alcohol to society are estimated at between 2% and 5% of the gross national product (GNP) (18). Emergency services in general and the

psychiatric emergency services in particular could be the first health resource for adolescents and young adults who have ARP. Indeed, cases reported in our sample may represent the tip of the iceberg, because usually only the most severely ill patients go to an Emergency Room.

An exhaustive evaluation of ARP among adolescents and young adults attending psychiatric emergency services could result in an increase in the number of patients who could benefit from specific programs in order to reduce the impact of ARP on society. Addressing specific demographic and clinical characteristics of adolescents and young adults who have ARP at the psychiatric emergency room could help psychiatrists develop a better detection of ARP.

Our finding that male adolescents and young adults have more ARP than females was consistent with previously reported studies. In a study conducted by Hulse et al (16) in an Australian emergency department showed that 61% of ARP patients were male. Similarly, a study conducted by Lejoyeux et al (11) in the psychiatric emergency room found that 64% of ARP patients were male. Thus, this finding may be consistent across a number of countries and cultures.

We found that among those adolescents and young adults who had ARP, there was a higher frequency of comorbid personality disorders and other-substance-related disorders, when compared to those adolescents and young adults who did not have ARP. The majority of studies reporting on the association between personality disorders and ARP have been conducted in adult samples. Given that adolescence is a vulnerable and high-risk period for initiating ARP, some authors have reported the importance of investigating the association between personality disorders and ARP among adolescents and young adults (22). Youth with antisocial personality disorder and borderline personality disorder have been found to report a greater frequency of ARP and also a greater frequency of other-than-alcohol-substance related problems than those without personality disorder (23). Moreover, adolescents and young adults with problematic use of one psychoactive substance also present problematic use of other licit or illicit drugs (24) and alcohol has been shown to be the gateway to other substances in adolescence (6). Results of a study that addressed adolescent alcohol use development and young adult outcomes revealed the tendency of adolescents highly involved in ARP at one point in time to be involved subsequently in ARP (22). Chronic and increased binge drinking have been associated with difficulties in transitioning to young adulthood. Adolescents may seek out an environment that sustains and promotes more ARP and facilitates the acquisition of other psychoactive substances (22). This chronic exposure to alcohol involves not only environmental but also neurobiological changes (25) that condition the outcomes of those with ARP during adulthood.

In a study conducted by Rohde et al (6), more than 80% of adolescents with ARP had another psychiatric disorder. Depressive disorders, anxiety disorders, post-traumatic stress disorder, conduct disorder, oppositional defiant disorder, antisocial personality disorder and polysubstance abuse have all been associated with ARP among adolescents and young adults (6,7,9). Gender may play an important role with respect to comorbidity of these disorders among adolescents and young adults who have ARP (6,7). For instance, it has been reported that there are higher rates of major depression in adolescent females with ARP and other substance-related problems than in males with the same

condition (26,27). Interestingly, in our sample all self-poisonings among those, who had ARP occurred in females. Female adolescents and young adults may be more prone to depression and suicidality than males (28). Therefore, alcohol and other drugs may represent a form of self-medication that is more frequent among females than among males (27). Theoretical models and research studies suggest that anxiety disorders and posttraumatic stress disorders are also more relevant to the etiology of alcohol disorders among females than among males (10,28,29). By contrast, conduct disorder, oppositional defiant disorder, antisocial personality disorder and polysubstance abuse are more frequent among male adolescents and young adults. Childhood antisocial and aggressive behaviors have been shown to predate and predict later ARP (7). Impulsivity and aggressive traits are thought to be discernible in early childhood and, as genetically heritable temperament, may contribute to the development of conduct problems in childhood as well as ARP in adolescence and antisocial personality disorder in adulthood (30). In this way, disruptive behavior disorder characteristics and substance abuse have been described as facets of a single construct, a problem behavior syndrome (31), which requires global attention. Further research studies on comorbidity among adolescents and young adults with ARP attending the psychiatry emergency room are needed.

Methodological limitations of our study may affect the accuracy of its findings. The small sample size, the retrospective nature of this emergency psychiatric record review, brief documentation in these records, limited evaluation of psychosocial functioning and outcomes for this group of adolescents and young adults are limitations of this study. The short duration of the study, with only a three-month period, could produce seasonality effects that limit our findings. The study was also open to classification bias as categorization was primarily based on clinical assessment rather than on a toxicological screen of urine or blood. Besides, an ability to gather collateral information is usually limited in emergency room settings.

The health, social and economic costs of ARP among adolescents and young people impose a substantial burden on society. Distinct demographic and clinical characteristics may allow the emergency psychiatrist to improve detection of ARP. Further studies that evaluate high risk populations at the psychiatric emergency rooms are needed. The adequate detection of ARP could promote earlier specific interventions tailored to ARP among adolescents and young adults.

REFERENCES

1. Observatorio Español sobre Drogas. Informe nº6. Plan Nacional Sobre Drogas, 2003.
2. Esposito-Smythers C, Spirito A. Adolescent substance use and suicidal behavior: a review with implications for treatment research. Alcohol Clin Exp Res 2004;28(5 Suppl):77S-88S.
3. Infofacts. High School and Young Trends. National Institute on Drug Abuse. Nat Inst Health, US Depart Health Human Services, 2004.
4. Lewinsohn PM, Rohde P, Seeley JR. Alcohol consumption in high school adolescents: frequency of use and dimensional structure of associated problems. Addiction 1996;91(3):375-90.
5. Brown SA, Tapert SF. Adolescence and the trajectory of alcohol use: basic to clinical studies. Ann N Y Acad Sci 2004;1021:234-44.
6. Rohde P, Lewinsohn PM, Seeley JR. Psychiatric comorbidity with problem-

atic alcohol use in high school students. J Am Acad Child Adolesc Psychiatry 1996;35(1):101-9.
7. Clark DB, Pollock N, Bukstein OG, Mezzich AC, Bromberger JT, Donovan JE. Gender and comorbid psychopathology in adolescents with alcohol dependence. J Am Acad Child Adolesc Psychiatry 1997; 36(9):1195-1203.
8. Read JP, Brown PJ, Kahler CW. Substance use and posttraumatic stress disorders: symptom interplay and effects on outcome. Addict Behav 2004;29(8):1665-72.
9. Shrier LA, Harris SK, Kurland M, Knight JR. Substance use problems and associated psychiatric symptoms among adolescents in primary care. Pediatrics 2003;111(6 Pt 1):e699-e705.
10. Zimmermann P, Wittchen HU, Hofler M, Pfister H, Kessler RC, Lieb R. Primary anxiety disorders and the development of subsequent alcohol use disorders: a 4-year community study of adolescents and young adults. Psychol Med 2003;33(7):1211-22.
11. Lejoyeux M, Boulenguiez S, Fichelle A, McLoughlin M, Claudon M, Ades J. Alcohol dependence among patients admitted to psychiatric emergency services. Gen Hosp Psychiatry 2000; 22(3):206-12.
12. Hulse GK, Robertson SI, Tait RJ. Adolescent emergency department presentations with alcohol- or other drug-related problems in Perth, Western Australia. Addiction 2001;96(7): 1059-67.
13. Breslow RE, Klinger BI, Erickson BJ. Acute intoxication and substance abuse among patients presenting to a psychiatric emergency service. Gen Hosp Psychiatry 1996;18(3):183-91.
14. Chastang F, Rioux P, Dupont I, Kovess V, Zarifian E. [Prospective study of attempted suicide]. Encephale 1997;23(2):100-4.
15. Szuster RR, Schanbacher BL, McCann SC. Characteristics of psychiatric emergency room patients with alcohol- or drug-induced disorders. Hosp Community Psychiatry 1990;41(12):1342-5.
16. Reichler BD, Clement JL, Dunner DL. Chart review of alcohol problems in adolescent psychiatric patients in an emergency room. J Clin Psychiatry 1983;44(9):338-9.
17. Rosenberg CM, Dolinsky H. Drug and alcohol use by young people attending a psychiatric emergency service. Br J Addict Alcohol Other Drugs 1972; 67(3):189-94.
18. The European Charter on Alcohol. Declaration on Young People and Alcohol, 2001. World Health Org Regional Office Europe, 2005.
19. Woolfenden S, Dossetor D, Williams K. Children and adolescents with acute alcohol intoxication/self-poisoning presenting to the emergency department. Arch Pediatr Adolesc Med 2002;156(4):345-8.
20. Holly A, Wittchen HU. Patterns of use and their relationship to DSM-IV abuse and dependence of alcohol among adolescents and young adults. Eur Addict Res 1998;4(1-2):50-7.
21. Wittchen HU, Nelson CB, Lachner G. Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. Psychol Med 1998;28(1):109-26.
22. Duncan SC, Alpert A, Duncan TE, Hops H. Adolescent alcohol use development and young adult outcomes. Drug Alcohol Depend 1999; 49:39-48.
23. Serman N, Johnson J.G, Geller P.A., Kanost R.E, Zacharapoulou H. Per-

sonality disorders associated with substance abuse among american and greek adolescents. Adolescence 2002; 37(148):841-54.

24. Boys A, Farrell M, Taylor C, Marsden J, Goodman R, Brugha T et al. Psychiatric morbidity and substance use in young people aged 13-15 years: results from the Child and Adolescent Survey of Mental Health. Br J Psychiatry 2003;182:509-17.
25. Volkow ND, Li TK. Drug addiction: the neurobiology of behaviour gone awry. Nat Rev Neurosci 2004;5 (12):963-70.
26. Bukstein OG, Glancy LJ, Kaminer Y. Patterns of affective comorbidity in a clinical population of dually diagnosed adolescent substance abusers. J Am Acad Child Adolesc Psychiatry 1992;31(6):1041-5.
27. Hovens JG, Cantwell DP, Kiriakos R. Psychiatric comorbidity in hospitalized adolescent substance abusers. J Am Acad Child Adolesc Psychiatry 1994;33(4):476-83.
28. Light JM, Grube JW, Madden PA, Gover J. Adolescent alcohol use and suicidal ideation: a nonrecursive model. Addict Behav 2003;28(4):705-24.
29. Cloninger CR. Neurogenetic adaptive mechanisms in alcoholism Science 1987;236(4800):410-6.
30. Soloff PH, Lynch KG, Moss HB. Serotonin, impulsivity, and alcohol use disorders in the older adolescent: a psychobiological study. Alcohol Clin Exp Res 2000;24(11):1609-19.
31. Donovan JE, Jessor R. Structure of problem behavior in adolescence and young adulthood. J Consult Clin Psychol 1985;53(6):890-904.

Word count of text: (4308)

Tables: 5

Figures: 3

Diagnostic stability of anxiety disorders in infants, children and adolescents: a 13-year-follow-up study of 1,869 patients (1992-2005)

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Funding

There were no study sponsors. Dr Carballo´s work was supported by an Alicia Koplowitz Foundation Fellowship in Child and Adolescent Psychiatry. Dr. Baca is the Lilly Suicide scholar at Columbia University.

ABSTRACT (<300)

Context: Few epidemiological and clinical studies have provided information regarding diagnostic stability of psychiatric disorder diagnoses in children and adolescents. These investigations are limited by sample size and assessment points.

Objective: To examine the long-term stability of anxiety diagnoses starting with pre-school age children through adolescence evaluated at multiple time points.

Design and Setting: Prospective cohort study of all children and adolescents receiving psychiatric care at all pediatric psychiatric clinics belonging to two catchment areas in Madrid, Spain, between January 1, 1992 and April 30, 2006.

Patients: Patients were selected from among 24,163 children and adolescents who received psychiatric care. Patients had to have a diagnosis of an ICD-10 anxiety disorder during at least one of the consultations.

Main outcome measures: Three complementary indices of diagnostic stability: temporal consistency, diagnostic constancy, and probability of diagnostic change, were calculated.

Results: 1,869 subjects were included. Prospective consistency ranged from 66.4% for other anxiety disorders to 78.6% for stress-related disorders. Obsessive-compulsive disorder (OCD) and other anxiety disorders had lower retrospective consistency and diagnostic constancy rates than phobic, social anxiety, and stress-related disorders. Kappa values for phobic, social anxiety, and stress related ranged from 60% to 80%. Kappa values for OCD and “other” anxiety disorders ranged from 50% to 60%. No significant sex differences were observed on the diagnostic stability of the anxiety

disorder categories studied. Diagnostic stability measures for phobic, social anxiety, and "other" anxiety disorder diagnoses varied depending on the age at first evaluation. Psychiatric comorbidity was more prevalent among those with inconstant diagnoses. **Conclusions**: In this clinical pediatric outpatient sample it appears that phobic, social anxiety, and stress-related disorder diagnoses in children and adolescents treated in community outpatient services have considerable long-term diagnostic stability.

TEXT

INTRODUCTION

Diagnostic stability is defined by the presence of an unchanged diagnosis at successive patient evaluations(249;250). Diagnostic stability over time offers a foundation from which to predict course and outcome of a disorder(251) and provide evidence-based treatment. Few studies have examined the stability of major psychiatric disorders in adult (252-267) and pediatric psychiatric clinical populations[3,20-39]. Since diagnostic instability may result in inappropriate or even harmful treatment interventions(268), there is a clinical need to study diagnostic stability of childhood psychiatric diagnoses. Anxiety disorders are among the most prevalent psychiatric disorders identified in children(138;140;269-275). These disorders are associated with the development of subsequent psychiatric disorders leading to significant psychosocial impairment (276-287), and yet are understudied, underreported, and poorly understood(138;140;288;289). A study conducted examining diagnoses among adolescents (N=351) admitted to a psychiatric inpatient unit showed during the 15-19 years of follow-back(290) that ICD-9 anxiety disorders were the most stable diagnoses. However, other prospective studies have not replicated these findings and have yielded conflicting results(291-294). Thus, while Beidel et al (295) and Cohen et al[(296)] in epidemiological samples found anxiety disorders to have moderate diagnostic stability, Cantwell et al(297) showed that diagnoses such DSM-III-R diagnoses such as separation anxiety and overanxious disorders lacked predictive validity. Similarly, Mattanah et al(298) found anxiety disorders to have low temporal diagnostic stability. Overall, temporal diagnostic stability of anxiety disorders is reported to range from low to moderate among youth.

While these previous studies have provided detailed information about the diagnostic stability of anxiety disorders, they are limited by small sample size and few assessment points. In addition, the use of fixed predetermined time intervals between assessment points may have contributed to the occurrence of recall bias. Given the paucity of information regarding diagnostic stability of anxiety disorders, we aimed to evaluate their long-term stability in a large sample of pre-schoolers, children and adolescents who were evaluated at multiple time points in psychiatric clinical settings. This study provided a unique opportunity to shed light on the question of how stable do pediatric anxiety diagnoses remain over time. We hypothesized that anxiety disorders would show low to moderate levels of diagnostic stability as has been reported in previous studies.

METHODS

Source of Data

Beginning in 1986, public mental health centers in the province of Madrid, Spain have recorded all psychiatric visits in a regional registry (Registro Acumulativo de Casos de la Comunidad de Madrid). From 1986 to 1992, diagnoses were coded according to the *International Classification of Diseases, Ninth Revision* (ICD–9). Since 1992, diagnoses were coded according to *International Classification of Diseases, Tenth Revision* (ICD-10). A unique identifying number(299) assigned to individual service users ensured patient anonymity and remained unchanged throughout all medical contacts (300;301)

Data extraction

We extracted regional registry data regarding all psychiatric visits to all pediatric psychiatric clinics belonging to two catchment areas in Madrid. ICD-9 codes were converted to ICD-10 codes using guidelines published by the World Health Organization(302).

Participants

This prospective cohort included all preschoolers (2-5 years), children (6-12 years) and adolescents (13-18 years) who received psychiatric care in two catchment areas of the province of Madrid between 1 January 1992 and 30 April 2006 due to any psychiatric reason. These age groups were defined according to the National Library of Medicine and the National Institutes of Health's classification of ages. Inclusion criteria for this study were: (1) diagnosis of an ICD-10 anxiety disorder during at least one of the consultations, (2) age 2-18 years at first diagnosis of an ICD-10 anxiety disorder, (3) evaluated by a psychiatrist/psychologist on at least three occasions, and (4) psychiatric diagnosis documented during at least 80% of the subject's visits. Institutional Review Boards at "Fundacion Jimenez Diaz" and "12 de Octubre" Hospitals approved the study.

Setting

Services were rendered at psychiatric outpatient centers that are part of the Spanish National Health Service, which is financed by taxes and provides coverage free of charge for all Spanish citizens and legal immigrants.

Variables

Diagnoses were made by treating psychiatrists/psychologists according to ICD-9 or ICD-10, depending on the assessment date. Treating clinicians had standard clinical training in diagnostic assessment and were hired by the National Mental Health System to specifically treat the children and adolescent population. Responsible psychiatrists/psychologists had an extended experience evaluating and treating children and adolescents with at least a required 4-year minimum experience. Psychiatrists/psychologists recorded a maximum of 2 diagnoses per patient per visit for administrative purposes and were blind to the study process.

We grouped anxiety disorder diagnoses according to the following categories: phobic disorders (F40.0, F40.2, F40.8, F40.9, or F93.1); social anxiety disorders (F40.1 or F93.2); obsessive-compulsive disorder (OCD) (F42); stress-related disorders (F43.0, F43.1, F43.8 or F43.9); and "other" anxiety disorders (F41, F41.0, F41.1, F41.2, F41.3, F41.8, F41.9 or F93.0) which, among others, included generalized anxiety disorder and panic disorder. We also included in the analyses non-anxiety ICD-10 psychiatric disorder diagnoses and adult anxiety diagnoses (not included in the groups mentioned above) (Table 1) for comparison purposes.

Analytic strategy

Diagnostic stability

We examined three complementary indices of diagnostic stability:

A) Temporal consistency is the presence or absence of a particular disorder at two different time points (39). Three measures of temporal consistency are presented for each category of anxiety disorders (303). The first, "prospective consistency", is the proportion of individuals in a category at the first evaluation who remain in the same category at their last evaluation. This would correspond to positive predictive value if the last diagnosis were the gold standard. It is clinically useful because it indicates the extent to which a diagnosis given at the initial evaluation will be present at the last evaluation, thus directing clinical treatment.

The second, "retrospective consistency", is the proportion of individuals with a diagnosis assigned at the last evaluation that had received the same diagnosis at the first evaluation. This is conceptually similar to sensitivity and as with prospective consistency, high values indicate good temporal consistency of the diagnosis. Thus, if a diagnosis made by a clinician at the last evaluation -when more information has become

available- coincides with the diagnosis given at the initial evaluation, it could be argued that the initial clinical presentation was adequately captured and diagnosed.

However, prospective and retrospective consistency rates fail to account for the fact that new cases may develop after initial presentation and other cases may remit (39), which is corrected by the use of the third measure of temporal consistency, the kappa coefficient (196). The kappa coefficient is the agreement between diagnoses at first and last evaluations and measures the agreement correcting for the effect of chance. We adopted the guidelines for the interpretation of kappa coefficients from Altman(197): <0.20, poor agreement; 0.21-0.40, fair agreement; 0.41-0.60, moderate agreement; 0.61-0.80 good agreement; and 0.81-1.00 very good agreement.

B) Diagnostic constancy: Because prospective and retrospective consistency and the kappa coefficient rely only on two evaluations, they often fail to reflect the diagnostic process through multiple evaluations that is more characteristic of routine clinical practice(304). To capture this process, we also measured the proportion of patients who received the same diagnosis in at least 75% of the evaluations. From a clinical perspective, this measure would better assess the stability of the diagnoses throughout successive clinical encounters than the diagnostic information obtained at two distant time points (up to 13 years in our study). Subjects who received anxiety disorder diagnoses within the same category (i.e., within the "phobic disorders" category) in at least 75% of evaluations were categorized as having a constant anxiety disorder.

C) Probability of diagnostic change: We used First-order Markov Models to discern what diagnoses are more likely to be made in a next visit for patients previously diagnosed with an anxiety disorder.

A First-order Markov Model represents a process in which the future is independent from the past and depends only on the current state (in this case, the current diagnosis).

For making a prediction at time *t*, the relevant information is the state at time *t* (in this case, the diagnosis at time *t*) and no further information on how the process developed before time *t* is needed. The Markov model calculates the probabilities of diagnostic change from one given diagnosis to the following diagnosis.

Markov model results can be interpreted to mean that: a) subjects who have received a diagnosis with high transition probability to the same diagnosis in Markov Models would have a high likelihood of receiving the same diagnosis in the next visit; conversely b) subjects who have received a diagnosis with low transition probability towards the same diagnosis in Markov Models would have a low likelihood of receiving the same diagnosis in the next visit.

Comorbidity

We calculated the prevalence of comorbid psychiatric diagnoses that were identified during subsequent assessments for the children and adolescents with an anxiety diagnosis. There was a very small percentage of subjects with a comorbid diagnosis at baseline. No individual comorbid diagnosis was present at baseline in more than 1% of subjects with anxiety disorders (i.e. 0.7% of subjects with phobic disorder diagnosis had a comorbid eating disorder diagnosis at baseline, 0.3% of subjects with "other" anxiety disorder diagnosis had a comorbid eating disorder at baseline). There was no age effect or sex effect in the prevalence of comorbid psychiatric disorders at baseline.

Statistical analysis

We compared temporal consistency measures of different anxiety disorder diagnoses using Wald's method (197) to calculate confidence intervals for each measure of temporal consistency (Statistical Package for the Social Sciences, version 14.0). We conservatively considered two confidence intervals that share a boundary or do not overlap to be significantly different from one another. We also compared the prevalence

of comorbid psychiatric diagnoses between those with and without a constant anxiety disorder diagnosis using Fisher´s Exact Test. All these comparisons were performed two-tailed.

RESULTS

Characteristics of the sample

Of the 23,163 youth in the registry, 1,869 met inclusion criteria and had 27,945 psychiatric/psychological consultations. Subjects were evaluated 15.0 times on average (range 3-204). The distribution of the sample by sex and age at first evaluation is shown in Figure 1. Initially 8.8% of the sample was evaluated between 2 and 6 years, 57.5% between 6 and 12 years, and 33.7% between 13 and 18 years.

Although the proportions of females (50.7%) and males (49.3%) were similar, differences between sexes were found after stratification by age at first evaluation (χ^2=46.7, df=2, p<0.001). Significantly more males (55.2%) than females (44.4%) were initially diagnosed with an anxiety disorder during childhood followed by significantly more females (61.6%) than males (38.4%) diagnosed with an anxiety disorder during adolescence. The proportions of females (49.4%) and males (50.6%) who received an initial anxiety disorder diagnosis during preschool years were not significantly different.

Temporal consistency of anxiety disorder diagnoses

Overall sample

Prospective consistency ranged from 66.4% for other anxiety disorders to 78.6% for stress-related disorders (Table 2). Retrospective consistency for anxiety disorder categories ranged from 52.2% for OCD to 82.1% for stress-related disorders. OCD and "other" anxiety disorders had significantly lower overall retrospective consistency than phobic, social anxiety, and stress-related disorders. Kappa values ranged from 54.4% in "other" anxiety disorders to 79.5% in stress-related disorders.

Sample stratified by age

Consistency of ICD-10 anxiety disorders by age at first evaluation is shown in Table 3. Prospective consistency rates for phobic disorders were significantly higher in those first evaluated during childhood compared with those first evaluated during adolescence.

There were no significant age effects on the prospective consistency rates for obsessive-compulsive, social anxiety, stress-related, and "other" anxiety disorders.

Retrospective consistency rates for OCD and "other" anxiety disorders were significantly lower than for phobic, social anxiety, and stress-related disorders among those first evaluated in childhood.

Retrospective consistency rates for OCD were significantly lower than for phobic and social anxiety disorders among those first evaluated in adolescence. Retrospective consistency rates for "other" anxiety disorders were significantly lower than for social anxiety disorders among those first evaluated in adolescence.

Kappa values for those first evaluated in childhood ranged from 42.2% in "other" anxiety disorders to 82.3% in stress-related disorders. Kappa values for those first evaluated in adolescence ranged from 55.3% in "other" anxiety disorders to 72.9% in stress-related disorders.

Sample stratified by sex

Consistency of ICD-10 anxiety disorders by sex is shown in Table 2. Prospective consistency rates for the majority of the anxiety disorder categories were similar in females and males. Both sexes showed prospective consistency rates in the range of 70-80%, the only exception being "other" anxiety disorders with rates of 68.4% for females and 63.5% for males.

Retrospective consistency rates for both sexes were also between 70-80%, the only exceptions being OCD and "other" anxiety disorders with rates of 65.7% and 55.8% in females and of 43.6% and 58.1% in males, respectively.

Kappa values for phobic, social anxiety, and stress-related disorders were similar for both sexes and were in the range of 60-80%. "Other" anxiety disorders in both sexes and OCD in males had the lowest kappa values of all the anxiety disorders and were in the range of 50-60%.

Diagnostic constancy of anxiety disorder diagnoses

Overall sample

The proportions of patients that remained within the same diagnostic category during at least 75% of evaluations are presented in Table 4. OCD and "other" anxiety disorders were significantly less constant than the remaining anxiety disorder categories.

Sample stratified by age

Only the diagnostic constancies of phobic disorders and "other" anxiety disorders were significantly different between those first evaluated in childhood compared with those first evaluated in adolescence. Phobic disorder diagnoses were significantly more constant in those first evaluated in childhood while "other" anxiety disorders were significantly more constant in those first evaluated in adolescence.

Sample stratified by gender

No significant sex differences were observed on the diagnostic constancy of the anxiety disorder categories studied.

Diagnostic constancy and comorbid psychiatric diagnoses

Subjects with a constant diagnosis had different prevalence of comorbid psychiatric disorder diagnoses during follow-up than subjects with an inconstant diagnosis. Those with inconstant phobic, social anxiety, OCD, stress-related, and "other" anxiety disorder

diagnoses had higher prevalence of comorbid diagnoses than those with constant diagnoses. More than 20% of those with inconstant diagnoses of OCD, stress related, and "other" anxiety disorder and slightly less than 15% of those with inconstant diagnoses of phobic and social anxiety disorder had a comorbid mood disorder. The prevalence of eating disorders among those with an inconstant anxiety disorder ranged from 10.7% among those with inconstant social anxiety disorder to 27.5% for those with inconstant OCD.

Probability of diagnostic changes

The first Markov Model included the whole sample (Figure 2). The highest transition probabilities are distributed on the diagonal of Figure 2. This means that the most probable transitions were within the same diagnostic category. In other words, the probability of receiving a diagnosis within the same diagnostic category during the next consultation was higher than the probability of receiving a diagnosis within a different category. Among all anxiety disorder categories, the probability of transition to the same category was ≥80%. This indicates that on average, there was less than 20% probability of changing diagnoses (switching from one category to another) from one visit to the next.

The second model (Figure 3) included patients who had received the anxiety disorder diagnosis in at least 75% of the evaluations ("constant diagnosis" group). This is an interesting model, since the "constant diagnosis" group includes all patients who have consistently been assigned the diagnosis of an anxiety disorder by most of the clinicians who have assessed them. The most probable transitions across diagnostic blocks were from other diagnoses to anxiety disorders, but not from anxiety disorders to other diagnoses. This indicates that patients who receive a constant diagnosis of anxiety disorder may have previously received other psychiatric diagnoses, but once they

receive a constant diagnosis of anxiety disorder they do not switch to any other diagnostic block. The psychiatric diagnoses that these individuals had previously received may reflect the most common differential diagnosis of anxiety disorders observed in clinical practice.

DISCUSSION

The stability of phobic, social anxiety and stress-related anxiety disorders in children and adolescents in this study was much higher than the figures reported in previous studies. These anxiety disorders seem to persist during long periods of time and show high rates of temporal consistency during a follow-up period of up to 14 years. The diagnostic stability of OCD was lower than the stability of other anxiety disorders. There were no gender effects on diagnostic stability.

Diagnostic stability of anxiety disorders

The stability of all ICD-10 anxiety disorder categories was considerably high as measured by their temporal consistency, diagnostic constancy, and probability of diagnostic change. Our findings are in agreement with results of some (305-308), but not all(309;310) clinical and epidemiological studies that have evaluated the temporal diagnostic consistency of anxiety symptoms in children and adolescents. Thus, while the former investigations showed fair to moderate values of diagnostic stability of anxiety disorders, the latter showed poor diagnostic stability. The reasons for this improved diagnostic stability are unclear, but may be due to the large sample size, extensive duration of follow-up, high number of assessments, diagnostic criteria, or socio-demographic variables. On the other hand, treating psychiatrists/psychologists often had access to past records and diagnoses, and may have been inclined to keep the previous diagnosis rather than assign a different one. However, this is not supported by the fact that we found strikingly low values of diagnostic stability of chronic mental

disorder diagnoses using similar methodology in an adult sample treated by the same team of psychiatrists and psychologists(311).

Diagnostic stability of pediatric anxiety disorders could be partially explained by genetic, biological, and developmental factors. Converging findings from twin and family studies suggest that genetic mechanisms underlie the risk for internalizing disorders and a greater risk for recurrence is reported in early onset internalizing disorders (312). This increased probability of recurrence could result in the observed higher levels of diagnostic stability in children and adolescents. On the other hand, epidemiologic and clinic-based studies (313-317) have shown that anxiety disorders usually have the earliest age of onset compared with other childhood psychiatric disorders, which has been related to "developmental readiness" to manifest anxiety disorders in the face of natural or experimental stressful conditions (318). It could be argued that youth with significant genetic and biological predisposition for development of anxiety disorders and living under stressful circumstances might be at higher risk for presenting more persistent and/or recurrent anxiety disorders and also for being referred to specialized treatment. These factors all may have contributed to the high levels of diagnostic stability observed here. Following a similar line of reasoning, it may be that children with early onset anxiety disorders are exhibiting a phenotype reflecting genotypes with higher penetrance and thus contributing to a more stable clinical presentation.

Diagnostic stability of specific anxiety disorder diagnoses

OCD and "other" anxiety disorders (which includes generalized anxiety disorder and panic disorder) showed the lowest diagnostic stability whereas phobic and social anxiety disorders showed the highest diagnostic stability.

The relatively higher diagnostic stability of phobic disorders is in agreement with results from clinical and epidemiological studies. Last et al (319) reported that a small proportion of subjects with simple phobia developed a new psychiatric disorder during the follow up. Similarly, Pine et al (320) found that subjects with simple phobia and social anxiety tended to have a stable course of illness.

Our results regarding obsessive compulsive disorder are in agreement with findings from an outpatient study of youngsters with obsessive compulsive disorder reporting that 71% met criteria for a different psychiatric disorder during follow-up (mean follow-up time=11.2 years) (321). A diagnosis of obsessive compulsive disorder may significantly increase the likelihood of suffering from additional psychopathology, partly explaining the higher rate of unstable course of obsessive compulsive disorder found in our study. OCD also showed the lowest rates of retrospective consistency among all the anxiety disorders studied, which may reflect clinicians' difficulty in identifying OCD symptoms during the first evaluation. Should this finding be replicated, it would demonstrate the need for better assessment of this disorder among youth evaluated in psychiatric outpatient services.

The lower prospective and retrospective consistency and diagnostic stability of "other" anxiety disorder diagnoses -which includes diagnoses such as generalized anxiety disorder and panic disorder- may suggest the difficulties that clinicians encounter when evaluating children and adolescent with such diagnoses. Given that diagnostic validity decreases with the number of digits employed in the ICD-10, it is conceivable to think that the diagnostic stability of generalized anxiety disorder and panic disorder would result in even lower figures. Alternatively, clinicians in our sample may have underdiagnosed generalized anxiety disorder and panic disorder and may have used the "other" anxiety disorder category (ICD-10 F41) as a residual category

instead of using the more specific diagnostic categories for unspecified anxiety disorders ICD-10 F41.8 or F41.9. In this case, these unspecified anxiety disorders- but not major diagnoses such as generalized anxiety disorder and panic disorder- would be the ones with low diagnostic stability values in our sample.

Nevertheless, the fact that the two disorders with the lowest diagnostic stability (OCD and other anxiety disorders) showed the highest prevalence of psychiatric comorbidities appears not to be just a coincidence. This finding may imply that for subjects who suffer from OCD or from "other" anxiety disorders there may be an "heterotypic continuity"(322) of the disorder. The heterotypic continuity is defined as the continuation of symptoms that are identified as different diagnoses at different time points which may be a sign of either an underlying predisposition to develop diverse disorders at different ages or an underlying disorder that has different clinical expression across development (323). The fact that a considerable number of subjects belonging to OCD and the "other" anxiety disorders group received diagnoses of other categories of anxiety disorders but also of other non-anxiety disorders such as affective disorder, eating disorder, or personality disorder may be in line with this notion of heterotypic continuity. This concept could also help explain why clinicians were not able to adequately capture the clinical presentation of these disorders during the first evaluation, which is reflected on the low retrospective consistency. Nevertheless, this requires further examination.

On the other hand, homotypic continuity of a disorder is defined as retention of the same diagnosis at different assessment points. The presence of such continuity during development suggests that the disorder has similar clinical manifestations over time. Our study reflects a high degree of developmental homotypic continuity for phobic, social anxiety, and stress-related disorders. This finding, in agreement with a

episode of a disorder. Given the characteristics of our dataset, we could not take into consideration in our analysis the possibility that some patients may have been followed for independent episodes that not only could be distant in time but also of different nature. This limitation however would have resulted in decreasing rather than increasing the diagnostic stability of the anxiety disorder diagnoses studied. Further studies are needed to determine the diagnostic stability of anxiety disorder diagnoses on single episodes until their clinical remission. Given that kappa values take into account stable positive cases and stable negative cases but also remitted cases and new cases, low kappa values may be observed if a high number of new or remitted cases occurred(337) and thus not necessarily reflect lack of diagnostic stability.

Despite all these limitations, the high degree of diagnostic stability found for the majority of the anxiety disorders studied is remarkable.

CONCLUSION

Phobic, social anxiety, and stress-related disorder diagnoses in children and adolescents treated in community outpatient services have considerable long-term diagnostic stability. This supports the notion that these anxiety disorders are not merely an epiphenomenon or precursor of other disorders such as depression, but rather constitute psychiatric disorders with long lasting clinical manifestations.

In this sample OCD and “other” anxiety disorders such as generalized anxiety disorder and panic disorder have relatively lower long-term diagnostic stability and higher level of psychiatric comorbidity, especially with mood disorders. This may reflect the fact that these disorders are hard to diagnose.

If these findings were replicated in future investigations, this information could be useful to develop more appropriate diagnostic ascertainment as well as treatment

previous report conducted in a large epidemiological sample(324), underscores the notion that these anxiety disorders are not merely an epiphenomenon or precursor of other forms of psychopathology as have been previously reported(325-336), but rather constitute psychiatric disorders with enduring clinical manifestations. The impact of homotypic and heterotypic continuity in subjects with anxiety disorder diagnoses on variables such as persistence of the disorder over time, duration of follow up or service use has not been studied yet and clearly is an area that deserves further research.

Strengths and weaknesses.

This is the largest longitudinal study evaluating the diagnostic stability of anxiety disorders in youngsters using three complementary indices. However, several limitations require consideration. ICD-10 diagnoses were established clinically, possibly affecting accuracy. Clinicians who assigned the diagnoses were not specifically trained to maintain inter-rater reliability. However, improved inter-rater reliability would have been likely to further increase, rather than decrease, diagnostic stability by reducing random error. This study has the limitations of most large-scale surveys. It is possible that patients with the most unstable diagnoses moved or sought treatment elsewhere, thus confounding diagnostic stability through alternate pathways of treatment-seeking. However, rates of annual residential changes to other provinces in Spain or other countries among young people is estimated at less than 2% ("National Statistics Institute" (INE); http://www.ine.es). Given that most Spaniards receive medical and mental heath care in public services it is unlikely that many patients sought treatment in other settings. Given that we intentionally selected subjects with 3 or more visits to pediatric psychiatric clinics, the results of this investigation may not be generalized to those subjects with more transient and less impairing disorders. We based our estimations on the notion that the follow-up of the patients was the result of a single

recommendations and interventions among children and adolescents suffering from anxiety disorders.

ACKNOWLEDGEMENTS

Dr. Baca-Garcia reports no competing interests

Dr. Carballo reports no competing interests

Dr. Blanco reports no competing interests

Dr. Perez-Rodriguez reports no competing interests.

Dr. Jimenez Arriero reports no competing interests

Dr. Ferre-Navarrete reports no competing interests

Prof. Artes-Rodriguez reports no competing interests

The members of the Group for the Study of Evolution of Diagnosis report no competing interests

Dr Rynn reports no competing interests

Dr. Shaffer reports no competing interests

Dr. Oquendo reports no competing interests

There are no conflicts of interest.

Dr. Baca-Garcia had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

REFERENCES

(1) Fennig S, Kovasznay B, Rich C et al. Six-month stability of psychiatric diagnoses in first-admission patients with psychosis. *Am J Psychiatry* 1994;151:1200-1208.

(2) Whitty P, Clarke M, McTigue O et al. Diagnostic stability four years after a first episode of psychosis. *Psychiatr Serv* 2005;56:1084-1088.

(3) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. *Am J Psychiatry* 1995;152:889-894.

(4) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I et al. Diagnostic stability of psychiatric disorders in clinical practice. *Br J Psychiatry* 2007;190:210-216.

(5) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I et al. Diagnostic stability and evolution of bipolar disorder in clinical practice: a prospective cohort study. *Acta Psychiatr Scand* 2007;115:473-480.

(6) Barkow K, Heun R, Wittchen HU, Bedirhan UT, Gansicke M, Maier W. Mixed anxiety-depression in a 1 year follow-up study: shift to other diagnoses or remission? *J Affect Disord* 2004;79:235-239.

(7) Culverhouse R, Bucholz KK, Crowe RR et al. Long-term stability of alcohol and other substance dependence diagnoses and habitual smoking: an evaluation after 5 years. *Arch Gen Psychiatry* 2005;62:753-760.

(8) Grilo CM, Sanislow CA, Gunderson JG et al. Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. *J Consult Clin Psychol* 2004;72:767-775.

(9) Kessing LV. Diagnostic stability in bipolar disorder in clinical practise as according to ICD-10. *J Affect Disord* 2005;85:293-299.

(10) Kessing LV. Diagnostic stability in depressive disorder as according to ICD-10 in clinical practice. *Psychopathology* 2005;38:32-37.

(11) Lieb R, Zimmermann P, Friis RH, Hofler M, Tholen S, Wittchen HU. The natural course of DSM-IV somatoform disorders and syndromes among adolescents and young adults: a prospective-longitudinal community study. *Eur Psychiatry* 2002;17:321-331.

(12) McGlashan TH, Grilo CM, Sanislow CA et al. Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: toward a hybrid model of axis II disorders. *Am J Psychiatry* 2005;162:883-889.

(13) Mojtabai R, Susser ES, Bromet EJ. Clinical characteristics, 4-year course, and DSM-IV classification of patients with nonaffective acute remitting psychosis. *Am J Psychiatry* 2003;160:2108-2115.

(14) Rufino AC, Uchida RR, Vilela JA, Marques JM, Zuardi AW, Del-Ben CM. Stability of the diagnosis of first-episode psychosis made in an emergency setting. *Gen Hosp Psychiatry* 2005;27:189-193.

(15) Schimmelmann BG, Conus P, Edwards J, McGorry PD, Lambert M. Diagnostic stability 18 months after treatment initiation for first-episode psychosis. *J Clin Psychiatry* 2005;66:1239-1246.

(16) Schwartz JE, Fennig S, Tanenberg-Karant M et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. *Arch Gen Psychiatry* 2000;57:593-600.

(17) Shea MT, Stout R, Gunderson J et al. Short-term diagnostic stability of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. *Am J Psychiatry* 2002;159:2036-2041.

(18) Tsuang MT, Woolson RF, Winokur G, Crowe RR. Stability of psychiatric diagnosis. Schizophrenia and affective disorders followed up over a 30- to 40-year period. *Arch Gen Psychiatry* 1981;38:535-539.

(19) Veen ND, Selten JP, Schols D et al. Diagnostic stability in a Dutch psychosis incidence cohort. *Br J Psychiatry* 2004;185:460-464.

(20) Helgeland MI, Torgersen S. Stability and prediction of schizophrenia from adolescence to adulthood. *Eur Child Adolesc Psychiatry* 2005;14:83-94.

(21) Hollis C. Adult outcomes of child- and adolescent-onset schizophrenia: diagnostic stability and predictive validity. *Am J Psychiatry* 2000;157:1652-1659.

(22) Jarbin H, von Knorring AL. Diagnostic stability in adolescent onset psychotic disorders. *Eur Child Adolesc Psychiatry* 2003;12:15-22.

(23) Maziade M, Gingras N, Rodrigue C et al. Long-term stability of diagnosis and symptom dimensions in a systematic sample of patients with onset of schizophrenia in childhood and early adolescence. I: nosology, sex and age of onset. *Br J Psychiatry* 1996;169:361-370.

(24) McClellan J, McCurry C. Early onset psychotic disorders: diagnostic stability and clinical characteristics. *Eur Child Adolesc Psychiatry* 1999;8 Suppl 1:I13-I19.

(25) Bernstein DP, Cohen P, Velez CN, Schwab-Stone M, Siever LJ, Shinsato L. Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. *Am J Psychiatry* 1993;150:1237-1243.

(26) Chanen AM, Jackson HJ, McGorry PD, Allot KA, Clarkson V, Yuen HP. Two-year stability of personality disorder in older adolescent outpatients. *J Personal Disord* 2004;18:526-541.

(27) Grilo CM, Becker DF, Edell WS, McGlashan TH. Stability and change of DSM-III-R personality disorder dimensions in adolescents followed up 2 years after psychiatric hospitalization. *Compr Psychiatry* 2001;42:364-368.

(28) Meijer M, Goedhart AW, Treffers PD. The persistence of borderline personality disorder in adolescence. *J Personal Disord* 1998;12:13-22.

(29) Chawarska K, Klin A, Paul R, Volkmar F. Autism spectrum disorder in the second year: stability and change in syndrome expression. *J Child Psychol Psychiatry* 2007;48:128-138.

(30) Starr E, Szatmari P, Bryson S, Zwaigenbaum L. Stability and change among high-functioning children with pervasive developmental disorders: a 2-year outcome study. *J Autism Dev Disord* 2003;33:15-22.

(31) August GJ, Braswell L, Thuras P. Diagnostic stability of ADHD in a community sample of school-aged children screened for disruptive behavior. *J Abnorm Child Psychol* 1998;26:345-356.

(32) Fergusson DM, Horwood LJ, Lynskey MT. The stability of disruptive childhood behaviors. *J Abnorm Child Psychol* 1995;23:379-396.

(33) Lavigne JV, Cicchetti C, Gibbons RD, Binns HJ, Larsen L, DeVito C. Oppositional defiant disorder with onset in preschool years: longitudinal stability and pathways to other disorders. *J Am Acad Child Adolesc Psychiatry* 2001;40:1393-1400.

(34) Harrington R, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression. I. Psychiatric status. *Arch Gen Psychiatry* 1990;47:465-473.

(35) Kovacs M, Feinberg TL, Crouse-Novak M, Paulauskas SL, Pollock M, Finkelstein R. Depressive disorders in childhood. II. A longitudinal study of the risk for a subsequent major depression. *Arch Gen Psychiatry* 1984;41:643-649.

(36) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. *J Am Acad Child Adolesc Psychiatry* 1989;28:691-700.

(37) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. *J Child Psychol Psychiatry* 1993;34:869-877.

(38) Pettit JW, Morgan S, Paukert AL. The stability of axis I diagnoses in youth across multiple psychiatric hospitalizations. *Child Psychiatry Hum Dev* 2005;36:53-71.

(39) Valevski A, Ratzoni G, Sever J et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. *J Adolesc* 2001;24:625-633.

(40) Bernstein GA, Borchardt CM. Anxiety disorders of childhood and adolescence: a critical review. *J Am Acad Child Adolesc Psychiatry* 1991;30:519-532.

(41) Canino G, Shrout PE, Rubio-Stipec M et al. The DSM-IV rates of child and adolescent disorders in Puerto Rico: prevalence, correlates, service use, and the effects of impairment. *Arch Gen Psychiatry* 2004;61:85-93.

(42) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch Gen Psychiatry* 2003;60:837-844.

(43) Costello EJ, Egger HL, Angold A. The developmental epidemiology of anxiety disorders: phenomenology, prevalence, and comorbidity. *Child Adolesc Psychiatr Clin N Am* 2005;14:631-48, vii.

(44) Fergusson DM, Horwood LJ, Lynskey MT. Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. *J Am Acad Child Adolesc Psychiatry* 1993;32:1127-1134.

(45) Freeman JB, Garcia AM, Leonard HL. Anxiety disorders. In: Lewis M, ed. *Child and Adolescent Psychiatry: A Comprehensive Textbook*. 3rd ed. Lippincott Williams & Wilkins; 2002.

(46) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. *J Am Acad Child Adolesc Psychiatry* 2001;40:1086-1093.

(47) Zahn-Waxler C, Klimes-Dougan B, Slattery MJ. Internalizing problems of childhood and adolescence: prospects, pitfalls, and progress in understanding the development of anxiety and depression. *Dev Psychopathol* 2000;12:443-466.

(48) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. *Am J Psychiatry* 2001;158:1693-1700.

(49) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. *J Am Acad Child Adolesc Psychiatry* 2004;43:1107-1114.

(50) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. *J Child Psychol Psychiatry* 2004;45:874-883.

(51) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. *Psychother Psychosom* 2004;73:158-165.

(52) King SM, Iacono WG, McGue M. Childhood externalizing and internalizing psychopathology in the prediction of early substance use. *Addiction* 2004;99:1548-1559.

(53) Last CG, Hansen C, Franco N. Anxious children in adulthood: a prospective study of adjustment. *J Am Acad Child Adolesc Psychiatry* 1997;36:645-652.

(54) Manicavasagar V, Silove D, Curtis J, Wagner R. Continuities of separation anxiety from early life into adulthood. *J Anxiety Disord* 2000;14:1-18.

(55) Orvaschel H, Lewinsohn PM, Seeley JR. Continuity of psychopathology in a community sample of adolescents. *J Am Acad Child Adolesc Psychiatry* 1995;34:1525-1535.

(56) Perkonigg A, Pfister H, Stein MB et al. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. *Am J Psychiatry* 2005;162:1320-1327.

(57) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. *J Child Psychol Psychiatry* 2000;41:657-665.

(58) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. *Arch Gen Psychiatry* 2001;58:251-256.

(59) Stewart SE, Geller DA, Jenike M et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. *Acta Psychiatr Scand* 2004;110:4-13.

(60) Cohen P, Cohen J, Kasen S et al. An epidemiological study of disorders in late childhood and adolescence--I. Age- and gender-specific prevalence. *J Child Psychol Psychiatry* 1993;34:851-867.

(61) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. *J Abnorm Child Psychol* 1996;24:257-269.

(62) Cohen J. A coefficient of agreement for nominal scales. *Educational and Psychological Measurement* 1960;20:37-46.

(63) Altman DG, Machin D, ryant TN, Gardner MJ. *Statistics with Confidence: Confidence Intervals and Statistical Guidelines*. 2nd ed. London: BMJ Books, 2000.

(64) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. *J Child Psychol Psychiatry* 1993;34:869-877.

(65) Kovacs M, Devlin B. Internalizing disorders in childhood. *J Child Psychol Psychiatry* 1998;39:47-63.

(66) Giaconia RM, Reinherz HZ, Silverman AB, Pakiz B, Frost AK, Cohen E. Ages of onset of psychiatric disorders in a community population of older adolescents. *J Am Acad Child Adolesc Psychiatry* 1994;33:706-717.

(67) Keller MB, Lavori PW, Wunder J, Beardslee WR, Schwartz CE, Roth J. Chronic course of anxiety disorders in children and adolescents. *J Am Acad Child Adolesc Psychiatry* 1992;31:595-599.

(68) Kovacs M, Gatsonis C, Paulauskas SL, Richards C. Depressive disorders in childhood. IV. A longitudinal study of comorbidity with and risk for anxiety disorders. *Arch Gen Psychiatry* 1989;46:776-782.

(69) Last CG, Perrin S, Hersen M, Kazdin AE. DSM-III-R anxiety disorders in children: sociodemographic and clinical characteristics. *J Am Acad Child Adolesc Psychiatry* 1992;31:1070-1076.

(70) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. *J Am Acad Child Adolesc Psychiatry* 1996;35:1502-1510.

(71) Pine DS, Cohen P, Gurley D, Brook J, Ma Y. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Arch Gen Psychiatry* 1998;55:56-64.

(72) Wewetzer C, Jans T, Muller B et al. Long-term outcome and prognosis of obsessive-compulsive disorder with onset in childhood or adolescence. *Eur Child Adolesc Psychiatry* 2001;10:37-46.

FIGURE LEGENDS

Figure 1. Sex distribution of the sample by age at first evaluation.

Figure 2. Markov's model.

Legend Figure 2: The y-axis (origin state) represents "prior" diagnostic states (diagnosis received at the previous consultation), and the x-axis (destination state) represents "next" diagnostic states (diagnosis received at the following consultation). The values of the transitions from one state to another can be represented as an image in which the color of the pixels reflects the probability of each transition. For example, if a patient has been previously diagnosed with an organic mental disorder (on the y-axis), the probability of being diagnosed with an organic mental disorder in the next visit (on the x-axis) would be about 0.40 (on the diagonal).

Figure 3. Markov´s model of "constant diagnosis" group (patients who received the anxiety disorder diagnosis in at least 75% of the evaluations).

TABLES

Table 1. ICD-10 psychiatric disorder diagnoses included in the analysis

ICD-10 Psychiatric Diagnosis Code	ICD-10 Psychiatric Diagnosis
F00-09	Organic, including symptomatic, mental disorders
F10-F19	Mental and behavioral disorders due to psychoactive substance use
F20-29	Schizophrenia, schizotypal and delusional disorders
F30-39	Mood (affective) disorders
F40.0, F40.2, F40.8, F40.9, F93.1	Phobic disorders
F40.1, F93.2	Social anxiety disorders
F42	Obsessive-compulsive disorder
F43.0, F43.1, F43.8, F43.9	Stress-related disorders
F41, F41.0, F41.1, F41.2, F41.3, F41.8, F41.9, F93.0	"Other" anxiety disorders
F43.2	Adjustment disorders
F45	Somatoform disorders
F48	Other neurotic disorders
F50	Eating disorders
F51, F52, F53, F54, F55	Non-organic sleep and/or other physiological dysfunction disorders
F60-69	Disorders of adult personality and behavior
F70-79,	Mental retardation
F80-89	Disorders of psychological development
F90, F91, F92	Disruptive behavior disorders including hyperkinetic disorders, conduct disorders , and mixed disorders of conduct and emotions (F92)
F93.3, F93.8, F93.9, F94, F98	Other emotional and/or behavioral disorders with onset in childhood
F95	Tics disorders

Table 2. Temporal consistency of ICD-10 anxiety disorder diagnoses by sex (n=1,869)

Females	**First evaluation (n)**	**Prosp. Cons. (%)**	**95%CI**	**Retrosp. Cons. (%)**	**95%CI**	**First vs Last evaluation (κ[1]) (%)**	**95%CI**
Phobic	393	75.9	(71.7-80.1)	78.9	(74.8-83.1)	62.0	(56.9-67.1)
Social anxiety	118	70.3	(62.0-78.5)	83.0	(75.6-90.3)	73.1	(66.1-80.0)
OCD	31	74.1	(58.7-89.5)	65.7	(49.9-81.4)	68.6	(55.6-81.6)
Stress-related	37	73.0	(58.7-87.3)	77.1	(63.2-91.1)	74.0	(62.4-85.5)
"Other"	146	68.4	(60.9-76.0)	55.8	(48.5-63.1)	53.6	(46.5-60.7)
Males							
Phobic	408	79.1	(75.1-83.0)	78.9	(74.8-83.1)	61.7	(56.6-66.8)
Social anxiety	111	73.8	(65.7-82.0)	74.5	(66.4-82.6)	70.7	(63.5-77.8)
OCD	32	75.0	(59.9-90.0)	43.6	(30.5-56.7)	53.1	(40.2-65.9)
Stress-related	33	84.8	(72.6-97.1)	87.0	(76.0-98.9)	85.6	(76.4-94.8)
"Other"	107	63.5	(54.4-72.6)	58.1	(49.1-67.0)	55.3	(46.9-63.5)
Total							
Phobic	801	77.5	(74.6-80.4)	78.6	(75.7-81.4)	61.8	(58.2-65.4)
Social anxiety	229	72.0	(66.2-77.8)	78.5	(73.0-84.1)	71.9	(66.8-76.8)
OCD	63	74.6	(63.8-85.3)	52.2	(41.9-62.5)	59.8	(50.5-69.1)
Stress-related	70	78.6	(69.0-81.2)	82.1	(72.9-91.2)	79.5	(72.0-87.0)
"Other"	253	66.4	(60.5-72.2)	56.5	(50.9-62.2)	54.4	(49.0-59.8)

[1]All Kappa (κ) statistics are significant (P<0.001).

Prosp. Cons.= Prospective consistency (%)

Retrosp. Cons. = Retrospective consistency (%)

Table 3. Temporal consistency of ICD-10 anxiety disorder diagnoses by age at first evaluation (n=1,869)

Preschoolers	First evaluation (n)	Prosp. Cons. (%)	95% CI	Retrosp. Cons. (%)	95%CI	First vs Last evaluation (κ^1) (%)	95%CI
Phobic	73	86.3	(78.4-94.1)	67.7	(58.2-77.2)	51.9	(39.3-64.5)
Social anxiety	14	64.2	(39.1-89.3)	75.0	(50.0-99.4)	66.6	(45.0-88.1)
OCD	4	50.0	(10.0-98.9)	100.0	(100.0-100.0)	66.1	(22.2-100.0)
Stress-related	6	100.0	(100.0-100.0)	85.7	(59.7-100.0)	92.0	(76.3-100.0)
"Other"	11	66.4	(60.5-72.2)	56.5	(50.9-62.2)	39.2	(12.6-65.8)
Children							
Phobic	549	80.8	(77.5-84.1)	80.0	(76.6-83.3)	59.8	(54.9-64.5)
Social anxiety	128	76.5	(69.2-83.9)	74.8	(67.3-82.2)	72.3	(65.8-78.8)
OCD	27	85.1	(71.7-98.5)	50.0	(35.5-64.4)	61.8	(48.5-75.0)
Stress-related	35	82.8	(70.3-95.3)	82.8	(70.3-95.6)	82.3	(72.4-92.1)
"Other"	60	60.0	(47.6-72.3)	37.5	(27.8-47.1)	42.2	(32.0-52.2)
Adolescents							
Phobic	179	63.6	(56.6-70.7)	80.2	(73.7-86.8)	61.3	(54.2-68.3)
Social anxiety	87	66.6	(56.7-76.5)	86.5	(78.4-94.7)	72.0	(63.5-80.3)
OCD	32	68.7	(52.6-84.8)	52.3	(37.2-67.4)	57.0	(43.1-70.7)
Stress-related	29	68.9	(52.1-85.8)	80.8	(64.3-95.6)	72.9	(59.3-86.4)
"Other"	182	69.7	(63.1-76.4)	67.1	(60.5-73.8)	55.3	(48.1-62.4)

[1]All Kappa (κ) statistics are significant (P<0.001).

Prosp. Cons.= Prospective consistency (%)

Retrosp. Cons. = Retrospective consistency (%)

Table 4. Percentage of children and adolescents who received the same diagnosis in at least 75% of the evaluations (diagnostic constancy) by sex and age at first diagnosis (n=1,869)

Preschoolers	Female (%)	95%CI	Male (%)	95%CI	Total (%)	95%CI
Phobic disorders	68.6	(56.7-80.4)	57.6	(48.3-66.8)	62.7	(53.6-71.7)
Social anxiety disorders	75.0	(42.9-100.0)	57.1	(34.8-79.3)	68.4	(47.5-89.3)
Obsessive compulsive disorder	--	--	33.3	(6.0-65.9)	25.0	(0.0-55.0)
Stress-related disorders	50.0	(1.0-98.9)	50.0	(21.7-78.2)	45.5	(33.4-57.4)
"Other"	35.7	(9.6-61.7)	15.4	(01.7-28.9)	25.9	(9.3-42.4)
Children						
Phobic disorders	68.3	(63.6-72.8)	67.5	(64.0-70.9)	67.8	(64.4-71.2)
Social anxiety disorders	68.8	(60.0-77.6)	53.8	(46.5-60.9)	60.1	(53.0-67.2)
Obsessive compulsive disorder	47.8	(33.0-62.5)	38.6	(26.9-50.2)	41.8	(29.9-53.6)
Stress-related disorders	70.0	(50.8-89.1)	72.7	(59.2-86.1)	71.4	(57.7-85.0)
"Other"	21.7	(12.8-30.5)	27.7	(20.9-34.5)	24.7	(18.1-31.2)
Adolescents						
Phobic disorders	48.3	(38.0-58.6)	62.5	(56.1-68.3)	53.5	(47.2-59.8)
Social anxiety disorders	50.0	(36.0-63.9)	63.3	(54.5-72.0)	55.6	(46.5-64.5)
Obsessive compulsive disorder	39.4	(22.7-56.0)	51.5	(39.4-63.5)	45.5	(33.4-57.4)
Stress-related disorders	47.6	(22.3-72.8)	66.7	(51.2-82.0)	55.6	(39.3-71.7)
"Other"	46.9	(37.1-56.6)	43.6	(37.8-49.2)	45.7	(40.0-51.4)
Total						
Phobic disorders	62.5	(58.4-66.5)	65.6	(62.7-68.4)	64.1	(61.1-66.9)
Social anxiety disorders	61.1	(53.6-68.6)	56.8	(51.3-62.2)	58.9	(53.5-64.3)
Obsessive compulsive disorder	41.4	(30.7-51.9)	43.4	(35.1-51.5)	42.6	(34.3-50.7)
Stress-related disorders	57.1	(41.9-72.2)	68.3	(58.6-77.9)	62.2	(52.2-72.2)
"Other"	39.1	(32.2-45.9)	35.0	(30.7-39.2)	37.4	(33.1-41.7)

Table 5. Proportion of individuals with comorbid non-anxiety ICD psychiatric disorder diagnoses by anxiety disorder category and diagnostic stability

Anxiety disorder category	Phobic		Social-Anxiety		OCD		Stress-related		"Others"	
Diagnostic constancy	**Inconstant (%)**	**Constant (%)**	**Inconstant (%)**	**Constant (%)**	**Inconstant (%)**	**Constant (%)**	**Inconstant (%)**	**Constant (%)**	**Inconstant (%)**	**Constant (%)**
Organic, including symptomatic, mental disorders	0.5	0.3	--	--	1.2	--	--	--	0.3	1.1
Mental and behavioural disorders due to psychoactive substance use	1.8*	0.4	2.3	0.5	4.9	3.3	--	1.8	3.3*	0.5
Schizophrenia, schizotypal and delusional disorders	2.6**	0.6	3.1	1.1	2.5	--	5.9	--	5.9*	0.5
Mood (affective) disorders	14.8*	2.6	13.0*	3.7	23.5	13.3	20.6**	--	23.3**	6.6
Phobic disorder	100.0	100.0	6.0**	0.6	8.1**	1.0	1.8*	0.1	24.2**	2.5
Social Anxiety disorder	13.7*	4.8	100.0	100.0	4.6	1.6	--	--	7.6	2.1
Obsessive-compulsive disorder	38.3**	11.7	11.1*	--	100.0	100.0	--	--	39.7*	20.0
Stress-related disorders	20.6*	1.8	--	--	--	--	100.0	100.0	17.6*	1.8
"Other" anxiety disoders	32.8**	5.5	4.6*	--	12.1*	3.8	2.3	--	100.0	100.0
Eating disorders	13.3**	3.2	10.7	2.7	27.5	1.7	14.7	1.8	11.1*	3.3
Disorders of adult personality and behavior	5.7**	1.5	15.3	6.4	13.6	3.3	5.9	--	9.5	6.0
Mental retardation	1.0	0.1	2.3	0.5	1.2	--	2.9	--	3.6**	--
Disorders of psychological development	8.9**	1.3	15.3	6.9	2.5	3.3	2.9	--	8.2	1.1

*** Fisher Exact Test (2-tailed), p<0.05**

**** Fisher Exact Test (2-tailed), p<0.01**

FIGURES

Figure 1.

Figure 2.

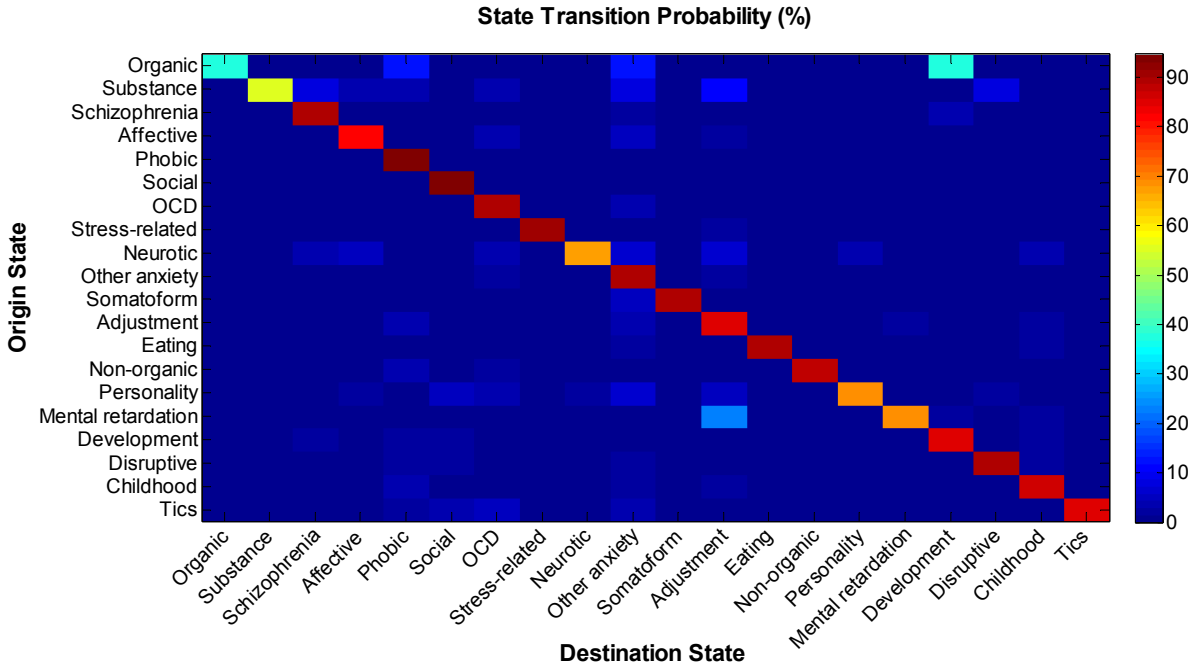
State Transition Probability (%)
Origin State
Organic
Substance
Schizophrenia
Affective
Phobic
Social
OCD
Stress-related
Neurotic
Other anxiety
Somatoform
Adjustment
Eating
Non-organic
Personality
Mental retardation
Development
Disruptive
Childhood
Tics
Destination State
90
80
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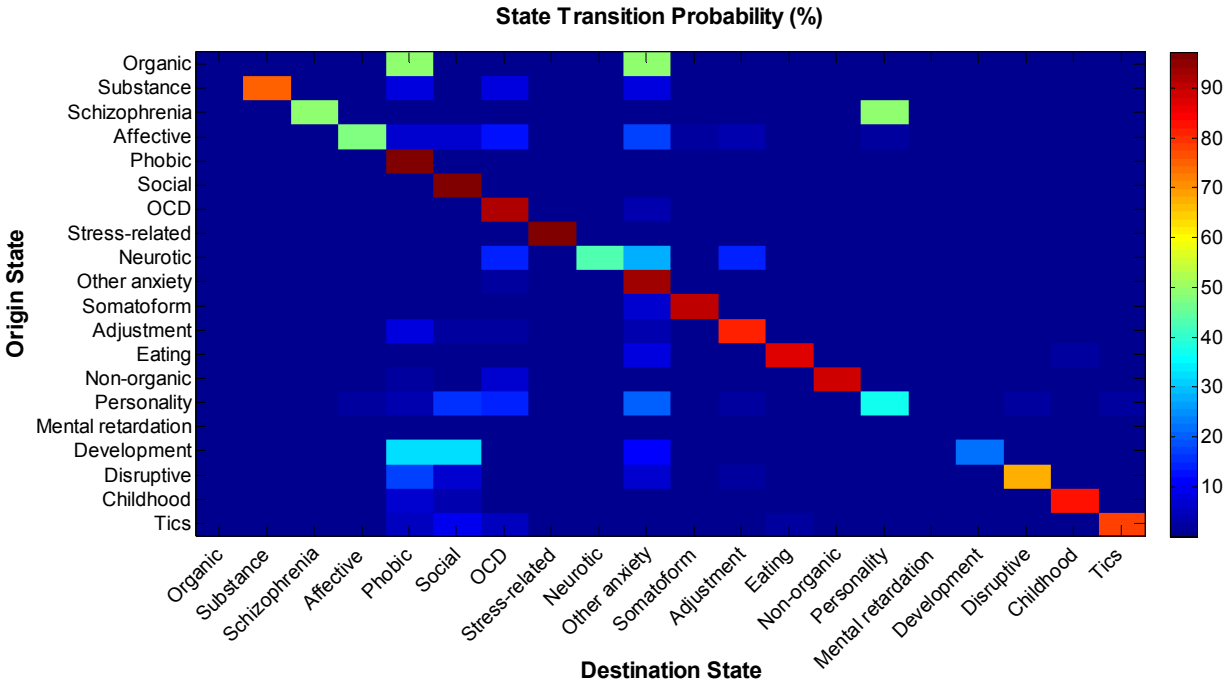
Figure 3.


State Transition Probability (%)
Origin State
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Personality
Mental retardation
Development
Disruptive
Childhood
Tics
Destination State
90
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10

TABLES

FIGURES

Reference List

(1) Fennig S, Kovasznay B, Rich C, Ram R, Pato C, Miller A, et al. Six-month stability of psychiatric diagnoses in first-admission patients with psychosis. Am J Psychiatry 1994 Aug;151(8):1200-8.

(2) Whitty P, Clarke M, McTigue O, Browne S, Kamali M, Larkin C, et al. Diagnostic stability four years after a first episode of psychosis. Psychiatr Serv 2005 Sep;56(9):1084-8.

(3) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(4) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(5) Barkow K, Heun R, Wittchen HU, Bedirhan UT, Gansicke M, Maier W. Mixed anxiety-depression in a 1 year follow-up study: shift to other diagnoses or remission? J Affect Disord 2004 Apr;79(1-3):235-9.

(6) Culverhouse R, Bucholz KK, Crowe RR, Hesselbrock V, Nurnberger JI, Jr., Porjesz B, et al. Long-term stability of alcohol and other substance dependence diagnoses and habitual smoking: an evaluation after 5 years. Arch Gen Psychiatry 2005 Jul;62(7):753-60.

(7) Grilo CM, Sanislow CA, Gunderson JG, Pagano ME, Yen S, Zanarini MC, et al. Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. J Consult Clin Psychol 2004 Oct;72(5):767-75.

(8) Kessing LV. Diagnostic stability in bipolar disorder in clinical practise as according to ICD-10. J Affect Disord 2005 Apr;85(3):293-9.

(9) Kessing LV. Diagnostic stability in depressive disorder as according to ICD-10 in clinical practice. Psychopathology 2005 Jan;38(1):32-7.

(10) Lieb R, Zimmermann P, Friis RH, Hofler M, Tholen S, Wittchen HU. The natural course of DSM-IV somatoform disorders and syndromes among adolescents and young adults: a prospective-longitudinal community study. Eur Psychiatry 2002 Oct;17(6):321-31.

(11) McGlashan TH, Grilo CM, Sanislow CA, Ralevski E, Morey LC, Gunderson JG, et al. Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: toward a hybrid model of axis II disorders. Am J Psychiatry 2005 May;162(5):883-9.

(12) Mojtabai R, Susser ES, Bromet EJ. Clinical characteristics, 4-year course, and DSM-IV classification of patients with nonaffective acute remitting psychosis. Am J Psychiatry 2003 Dec;160(12):2108-15.

(13) Rufino AC, Uchida RR, Vilela JA, Marques JM, Zuardi AW, Del-Ben CM. Stability of the diagnosis of first-episode psychosis made in an emergency setting. Gen Hosp Psychiatry 2005 May;27(3):189-93.

(14) Schimmelmann BG, Conus P, Edwards J, McGorry PD, Lambert M. Diagnostic stability 18 months after treatment initiation for first-episode psychosis. J Clin Psychiatry 2005 Oct;66(10):1239-46.

(15) Schwartz JE, Fennig S, Tanenberg-Karant M, Carlson G, Craig T, Galambos N, et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. Arch Gen Psychiatry 2000 Jun;57(6):593-600.

(16) Shea MT, Stout R, Gunderson J, Morey LC, Grilo CM, McGlashan T, et al. Short-term diagnostic stability of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. Am J Psychiatry 2002 Dec;159(12):2036-41.

(17) Tsuang MT, Woolson RF, Winokur G, Crowe RR. Stability of psychiatric diagnosis. Schizophrenia and affective disorders followed up over a 30- to 40-year period. Arch Gen Psychiatry 1981 May;38(5):535-9.

(18) Veen ND, Selten JP, Schols D, Laan W, Hoek HW, van dT, I, et al. Diagnostic stability in a Dutch psychosis incidence cohort. Br J Psychiatry 2004 Dec;185:460-4.

(19) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(20) Helgeland MI, Torgersen S. Stability and prediction of schizophrenia from adolescence to adulthood. Eur Child Adolesc Psychiatry 2005 Mar;14(2):83-94.

(21) Hollis C. Adult outcomes of child- and adolescent-onset schizophrenia: diagnostic stability and predictive validity. Am J Psychiatry 2000 Oct;157(10):1652-9.

(22) Jarbin H, von Knorring AL. Diagnostic stability in adolescent onset psychotic disorders. Eur Child Adolesc Psychiatry 2003 Jan;12(1):15-22.

(23) Maziade M, Gingras N, Rodrigue C, Bouchard S, Cardinal A, Gauthier B, et al. Long-term stability of diagnosis and symptom dimensions in a systematic sample of patients with onset of schizophrenia in childhood and early adolescence. I: nosology, sex and age of onset. Br J Psychiatry 1996 Sep;169(3):361-70.

(24) McClellan J, McCurry C. Early onset psychotic disorders: diagnostic stability and clinical characteristics. Eur Child Adolesc Psychiatry 1999;8 Suppl 1:I13-I19.

(25) Bernstein DP, Cohen P, Velez CN, Schwab-Stone M, Siever LJ, Shinsato L. Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. Am J Psychiatry 1993 Aug;150(8):1237-43.

(26) Chanen AM, Jackson HJ, McGorry PD, Allot KA, Clarkson V, Yuen HP. Two-year stability of personality disorder in older adolescent outpatients. J Personal Disord 2004 Dec;18(6):526-41.

(27) Grilo CM, Becker DF, Edell WS, McGlashan TH. Stability and change of DSM-III-R personality disorder dimensions in adolescents followed up 2 years after psychiatric hospitalization. Compr Psychiatry 2001 Sep;42(5):364-8.

(28) Meijer M, Goedhart AW, Treffers PD. The persistence of borderline personality disorder in adolescence. J Personal Disord 1998;12(1):13-22.

(29) Chawarska K, Klin A, Paul R, Volkmar F. Autism spectrum disorder in the second year: stability and change in syndrome expression. J Child Psychol Psychiatry 2007 Feb;48(2):128-38.

(30) Starr E, Szatmari P, Bryson S, Zwaigenbaum L. Stability and change among high-functioning children with pervasive developmental disorders: a 2-year outcome study. J Autism Dev Disord 2003 Feb;33(1):15-22.

(31) August GJ, Braswell L, Thuras P. Diagnostic stability of ADHD in a community sample of school-aged children screened for disruptive behavior. J Abnorm Child Psychol 1998 Oct;26(5):345-56.

(32) Fergusson DM, Horwood LJ, Lynskey MT. The stability of disruptive childhood behaviors. J Abnorm Child Psychol 1995 Jun;23(3):379-96.

(33) Lavigne JV, Cicchetti C, Gibbons RD, Binns HJ, Larsen L, DeVito C. Oppositional defiant disorder with onset in preschool years: longitudinal stability and pathways to other disorders. J Am Acad Child Adolesc Psychiatry 2001 Dec;40(12):1393-400.

(34) Harrington R, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression. I. Psychiatric status. Arch Gen Psychiatry 1990 May;47(5):465-73.

(35) Kovacs M, Feinberg TL, Crouse-Novak M, Paulauskas SL, Pollock M, Finkelstein R. Depressive disorders in childhood. II. A longitudinal study of the risk for a subsequent major depression. Arch Gen Psychiatry 1984 Jul;41(7):643-9.

(36) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(37) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(38) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(39) Pettit JW, Morgan S, Paukert AL. The stability of axis I diagnoses in youth across multiple psychiatric hospitalizations. Child Psychiatry Hum Dev 2005;36(1):53-71.

(40) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(41) Roberts RE, Attkisson CC, Rosenblatt A. Prevalence of psychopathology among children and adolescents. Am J Psychiatry 1998 Jun;155(6):715-25.

(42) Roberts RE, Roberts CR, Xing Y. Rates of DSM-IV psychiatric disorders among adolescents in a large metropolitan area. J Psychiatr Res 2006 Nov 13.

(43) Anderson JC, Williams S, McGee R, Silva PA. DSM-III disorders in preadolescent children. Prevalence in a large sample from the general population. Arch Gen Psychiatry 1987 Jan;44(1):69-76.

(44) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(45) Cohen P, Cohen J, Kasen S, Velez CN, Hartmark C, Johnson J, et al. An epidemiological study of disorders in late childhood and adolescence--I. Age- and gender-specific prevalence. J Child Psychol Psychiatry 1993 Sep;34(6):851-67.

(46) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(47) Fergusson DM, Horwood LJ, Lynskey MT. Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. J Am Acad Child Adolesc Psychiatry 1993 Nov;32(6):1127-34.

(48) Kashani JH, McGee RO, Clarkson SE, Anderson JC, Walton LA, Williams S, et al. Depression in a sample of 9-year-old children, Prevalence and associated characteristics. Arch Gen Psychiatry 1983 Nov;40(11):1217-23.

(49) Lewinsohn PM, Rohde P, Klein DN, Seeley JR. Natural course of adolescent major depressive disorder: I. Continuity into young adulthood. J Am Acad Child Adolesc Psychiatry 1999 Jan;38(1):56-63.

(50) McGee R, Feehan M, Williams S, Partridge F, Silva PA, Kelly J. DSM-III disorders in a large sample of adolescents. J Am Acad Child Adolesc Psychiatry 1990 Jul;29(4):611-9.

(51) Reinherz HZ, Giaconia RM, Lefkowitz ES, Pakiz B, Frost AK. Prevalence of psychiatric disorders in a community population of older adolescents. J Am Acad Child Adolesc Psychiatry 1993 Mar;32(2):369-77.

(52) Velez CN, Johnson J, Cohen P. A longitudinal analysis of selected risk factors for childhood psychopathology. J Am Acad Child Adolesc Psychiatry 1989 Nov;28(6):861-4.

(53) Carlson GA, Bromet EJ, Driessens C, Mojtabai R, Schwartz JE. Age at onset, childhood psychopathology, and 2-year outcome in psychotic bipolar disorder. Am J Psychiatry 2002 Feb;159(2):307-9.

(54) Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. Arch Gen Psychiatry 2003 Jul;60(7):709-17.

(55) Moffitt TE, Caspi A, Harrington H, Milne BJ. Males on the life-course-persistent and adolescence-limited antisocial pathways: follow-up at age 26 years. Dev Psychopathol 2002;14(1):179-207.

(56) Rosario-Campos MC, Leckman JF, Mercadante MT, Shavitt RG, Prado HS, Sada P, et al. Adults with early-onset obsessive-compulsive disorder. Am J Psychiatry 2001 Nov;158(11):1899-903.

(57) Weissman MM, Wolk S, Goldstein RB, Moreau D, Adams P, Greenwald S, et al. Depressed adolescents grown up. JAMA 1999 May 12;281(18):1707-13.

(58) Weissman MM, Wolk S, Wickramaratne P, Goldstein RB, Adams P, Greenwald S, et al. Children with prepubertal-onset major depressive disorder and anxiety grown up. Arch Gen Psychiatry 1999 Sep;56(9):794-801.

(59) Wickramaratne PJ, Greenwald S, Weissman MM. Psychiatric disorders in the relatives of probands with prepubertal-onset or adolescent-onset major depression. J Am Acad Child Adolesc Psychiatry 2000 Nov;39(11):1396-405.

(60) Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. Arch Gen Psychiatry 2003 Jul;60(7):709-17.

(61) Fennig S, Kovasznay B, Rich C, Ram R, Pato C, Miller A, et al. Six-month stability of psychiatric diagnoses in first-admission patients with psychosis. Am J Psychiatry 1994 Aug;151(8):1200-8.

(62) Whitty P, Clarke M, McTigue O, Browne S, Kamali M, Larkin C, et al. Diagnostic stability four years after a first episode of psychosis. Psychiatr Serv 2005 Sep;56(9):1084-8.

(63) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(64) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(65) Barkow K, Heun R, Wittchen HU, Bedirhan UT, Gansicke M, Maier W. Mixed anxiety-depression in a 1 year follow-up study: shift to other diagnoses or remission? J Affect Disord 2004 Apr;79(1-3):235-9.

(66) Culverhouse R, Bucholz KK, Crowe RR, Hesselbrock V, Nurnberger JI, Jr., Porjesz B, et al. Long-term stability of alcohol and other substance dependence diagnoses and habitual smoking: an evaluation after 5 years. Arch Gen Psychiatry 2005 Jul;62(7):753-60.

(67) Grilo CM, Sanislow CA, Gunderson JG, Pagano ME, Yen S, Zanarini MC, et al. Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. J Consult Clin Psychol 2004 Oct;72(5):767-75.

(68) Kessing LV. Diagnostic stability in bipolar disorder in clinical practise as according to ICD-10. J Affect Disord 2005 Apr;85(3):293-9.

(69) Kessing LV. Diagnostic stability in depressive disorder as according to ICD-10 in clinical practice. Psychopathology 2005 Jan;38(1):32-7.

(70) Lieb R, Zimmermann P, Friis RH, Hofler M, Tholen S, Wittchen HU. The natural course of DSM-IV somatoform disorders and syndromes among adolescents and young adults: a prospective-longitudinal community study. Eur Psychiatry 2002 Oct;17(6):321-31.

(71) McGlashan TH, Grilo CM, Sanislow CA, Ralevski E, Morey LC, Gunderson JG, et al. Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: toward a hybrid model of axis II disorders. Am J Psychiatry 2005 May;162(5):883-9.

(72) Mojtabai R, Susser ES, Bromet EJ. Clinical characteristics, 4-year course, and DSM-IV classification of patients with nonaffective acute remitting psychosis. Am J Psychiatry 2003 Dec;160(12):2108-15.

(73) Rufino AC, Uchida RR, Vilela JA, Marques JM, Zuardi AW, Del-Ben CM. Stability of the diagnosis of first-episode psychosis made in an emergency setting. Gen Hosp Psychiatry 2005 May;27(3):189-93.

(74) Schimmelmann BG, Conus P, Edwards J, McGorry PD, Lambert M. Diagnostic stability 18 months after treatment initiation for first-episode psychosis. J Clin Psychiatry 2005 Oct;66(10):1239-46.

(75) Schwartz JE, Fennig S, Tanenberg-Karant M, Carlson G, Craig T, Galambos N, et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. Arch Gen Psychiatry 2000 Jun;57(6):593-600.

(76) Shea MT, Stout R, Gunderson J, Morey LC, Grilo CM, McGlashan T, et al. Short-term diagnostic stability of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. Am J Psychiatry 2002 Dec;159(12):2036-41.

(77) Tsuang MT, Woolson RF, Winokur G, Crowe RR. Stability of psychiatric diagnosis. Schizophrenia and affective disorders followed up over a 30- to 40-year period. Arch Gen Psychiatry 1981 May;38(5):535-9.

(78) Veen ND, Selten JP, Schols D, Laan W, Hoek HW, van dT, I, et al. Diagnostic stability in a Dutch psychosis incidence cohort. Br J Psychiatry 2004 Dec;185:460-4.

(79) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(80) Helgeland MI, Torgersen S. Stability and prediction of schizophrenia from adolescence to adulthood. Eur Child Adolesc Psychiatry 2005 Mar;14(2):83-94.

(81) Hollis C. Adult outcomes of child- and adolescent-onset schizophrenia: diagnostic stability and predictive validity. Am J Psychiatry 2000 Oct;157(10):1652-9.

(82) Jarbin H, von Knorring AL. Diagnostic stability in adolescent onset psychotic disorders. Eur Child Adolesc Psychiatry 2003 Jan;12(1):15-22.

(83) Maziade M, Gingras N, Rodrigue C, Bouchard S, Cardinal A, Gauthier B, et al. Long-term stability of diagnosis and symptom dimensions in a systematic sample of patients with onset of schizophrenia in childhood and early adolescence. I: nosology, sex and age of onset. Br J Psychiatry 1996 Sep;169(3):361-70.

(84) Bernstein DP, Cohen P, Velez CN, Schwab-Stone M, Siever LJ, Shinsato L. Prevalence and stability of the DSM-III-R personality disorders in a community-based survey of adolescents. Am J Psychiatry 1993 Aug;150(8):1237-43.

(85) Chanen AM, Jackson HJ, McGorry PD, Allot KA, Clarkson V, Yuen HP. Two-year stability of personality disorder in older adolescent outpatients. J Personal Disord 2004 Dec;18(6):526-41.

(86) Grilo CM, Becker DF, Edell WS, McGlashan TH. Stability and change of DSM-III-R personality disorder dimensions in adolescents followed up 2 years after psychiatric hospitalization. Compr Psychiatry 2001 Sep;42(5):364-8.

(87) Chawarska K, Klin A, Paul R, Volkmar F. Autism spectrum disorder in the second year: stability and change in syndrome expression. J Child Psychol Psychiatry 2007 Feb;48(2):128-38.

(88) Starr E, Szatmari P, Bryson S, Zwaigenbaum L. Stability and change among high-functioning children with pervasive developmental disorders: a 2-year outcome study. J Autism Dev Disord 2003 Feb;33(1):15-22.

(89) August GJ, Braswell L, Thuras P. Diagnostic stability of ADHD in a community sample of school-aged children screened for disruptive behavior. J Abnorm Child Psychol 1998 Oct;26(5):345-56.

(90) Fergusson DM, Horwood LJ, Lynskey MT. The stability of disruptive childhood behaviors. J Abnorm Child Psychol 1995 Jun;23(3):379-96.

(91) Lavigne JV, Cicchetti C, Gibbons RD, Binns HJ, Larsen L, DeVito C. Oppositional defiant disorder with onset in preschool years: longitudinal stability and pathways to other disorders. J Am Acad Child Adolesc Psychiatry 2001 Dec;40(12):1393-400.

(92) Harrington R, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression. I. Psychiatric status. Arch Gen Psychiatry 1990 May;47(5):465-73.

(93) Kovacs M, Feinberg TL, Crouse-Novak M, Paulauskas SL, Pollock M, Finkelstein R. Depressive disorders in childhood. II. A longitudinal study of the risk for a subsequent major depression. Arch Gen Psychiatry 1984 Jul;41(7):643-9.

(94) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(95) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(96) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(97) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(98) Roberts RE, Attkisson CC, Rosenblatt A. Prevalence of psychopathology among children and adolescents. Am J Psychiatry 1998 Jun;155(6):715-25.

(99) Roberts RE, Roberts CR, Xing Y. Rates of DSM-IV psychiatric disorders among adolescents in a large metropolitan area. J Psychiatr Res 2006 Nov 13.

(100) Anderson JC, Williams S, McGee R, Silva PA. DSM-III disorders in preadolescent children. Prevalence in a large sample from the general population. Arch Gen Psychiatry 1987 Jan;44(1):69-76.

(101) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(102) Cohen P, Cohen J, Kasen S, Velez CN, Hartmark C, Johnson J, et al. An epidemiological study of disorders in late childhood and adolescence--I. Age- and gender-specific prevalence. J Child Psychol Psychiatry 1993 Sep;34(6):851-67.

(103) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(104) Fergusson DM, Horwood LJ, Lynskey MT. Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. J Am Acad Child Adolesc Psychiatry 1993 Nov;32(6):1127-34.

(105) Kashani JH, McGee RO, Clarkson SE, Anderson JC, Walton LA, Williams S, et al. Depression in a sample of 9-year-old children, Prevalence and associated characteristics. Arch Gen Psychiatry 1983 Nov;40(11):1217-23.

(106) Lewinsohn PM, Rohde P, Klein DN, Seeley JR. Natural course of adolescent major depressive disorder: I. Continuity into young adulthood. J Am Acad Child Adolesc Psychiatry 1999 Jan;38(1):56-63.

(107) McGee R, Feehan M, Williams S, Partridge F, Silva PA, Kelly J. DSM-III disorders in a large sample of adolescents. J Am Acad Child Adolesc Psychiatry 1990 Jul;29(4):611-9.

(108) Reinherz HZ, Giaconia RM, Lefkowitz ES, Pakiz B, Frost AK. Prevalence of psychiatric disorders in a community population of older adolescents. J Am Acad Child Adolesc Psychiatry 1993 Mar;32(2):369-77.

(109) Velez CN, Johnson J, Cohen P. A longitudinal analysis of selected risk factors for childhood psychopathology. J Am Acad Child Adolesc Psychiatry 1989 Nov;28(6):861-4.

(110) Carlson GA, Bromet EJ, Driessens C, Mojtabai R, Schwartz JE. Age at onset, childhood psychopathology, and 2-year outcome in psychotic bipolar disorder. Am J Psychiatry 2002 Feb;159(2):307-9.

(111) Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back

of a prospective-longitudinal cohort. Arch Gen Psychiatry 2003 Jul;60(7):709-17.

(112) Rosario-Campos MC, Leckman JF, Mercadante MT, Shavitt RG, Prado HS, Sada P, et al. Adults with early-onset obsessive-compulsive disorder. Am J Psychiatry 2001 Nov;158(11):1899-903.

(113) Weissman MM, Wolk S, Goldstein RB, Moreau D, Adams P, Greenwald S, et al. Depressed adolescents grown up. JAMA 1999 May 12;281(18):1707-13.

(114) Weissman MM, Wolk S, Wickramaratne P, Goldstein RB, Adams P, Greenwald S, et al. Children with prepubertal-onset major depressive disorder and anxiety grown up. Arch Gen Psychiatry 1999 Sep;56(9):794-801.

(115) Wickramaratne PJ, Greenwald S, Weissman MM. Psychiatric disorders in the relatives of probands with prepubertal-onset or adolescent-onset major depression. J Am Acad Child Adolesc Psychiatry 2000 Nov;39(11):1396-405.

(116) Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. Arch Gen Psychiatry 2003 Jul;60(7):709-17.

(117) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(118) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(119) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(120) Fennig S, Kovasznay B, Rich C, Ram R, Pato C, Miller A, et al. Six-month stability of psychiatric diagnoses in first-admission patients with psychosis. Am J Psychiatry 1994 Aug;151(8):1200-8.

(121) Whitty P, Clarke M, McTigue O, Browne S, Kamali M, Larkin C, et al. Diagnostic stability four years after a first episode of psychosis. Psychiatr Serv 2005 Sep;56(9):1084-8.

(122) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(123) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(124) Anderson JC, Williams S, McGee R, Silva PA. DSM-III disorders in preadolescent children. Prevalence in a large sample from the general population. Arch Gen Psychiatry 1987 Jan;44(1):69-76.

(125) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(126) Cohen P, Cohen J, Kasen S, Velez CN, Hartmark C, Johnson J, et al. An epidemiological study of disorders in late childhood and adolescence--I. Age- and gender-specific prevalence. J Child Psychol Psychiatry 1993 Sep;34(6):851-67.

(127) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(128) Fergusson DM, Horwood LJ, Lynskey MT. Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. J Am Acad Child Adolesc Psychiatry 1993 Nov;32(6):1127-34.

(129) Kashani JH, McGee RO, Clarkson SE, Anderson JC, Walton LA, Williams S, et al. Depression in a sample of 9-year-old children, Prevalence and associated characteristics. Arch Gen Psychiatry 1983 Nov;40(11):1217-23.

(130) Lewinsohn PM, Rohde P, Klein DN, Seeley JR. Natural course of adolescent major depressive disorder: I. Continuity into young adulthood. J Am Acad Child Adolesc Psychiatry 1999 Jan;38(1):56-63.

(131) McGee R, Feehan M, Williams S, Partridge F, Silva PA, Kelly J. DSM-III disorders in a large sample of adolescents. J Am Acad Child Adolesc Psychiatry 1990 Jul;29(4):611-9.

(132) Reinherz HZ, Giaconia RM, Lefkowitz ES, Pakiz B, Frost AK. Prevalence of psychiatric disorders in a community population of older adolescents. J Am Acad Child Adolesc Psychiatry 1993 Mar;32(2):369-77.

(133) Velez CN, Johnson J, Cohen P. A longitudinal analysis of selected risk factors for childhood psychopathology. J Am Acad Child Adolesc Psychiatry 1989 Nov;28(6):861-4.

(134) Kim-Cohen J, Caspi A, Moffitt TE, Harrington H, Milne BJ, Poulton R. Prior juvenile diagnoses in adults with mental disorder: developmental follow-back of a prospective-longitudinal cohort. Arch Gen Psychiatry 2003 Jul;60(7):709-17.

(135) Costello EJ, Egger H, Angold A. 10-year research update review: the epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. J Am Acad Child Adolesc Psychiatry 2005 Oct;44(10):972-86.

(136) Murray CJL. Global Burden of Disease 2000 project: aims, methods and data sources. 2001. World Health Organization.

Ref Type: Generic

(137) Bernstein GA, Borchardt CM. Anxiety disorders of childhood and adolescence: a critical review. J Am Acad Child Adolesc Psychiatry 1991 Jul;30(4):519-32.

(138) Freeman JB, Garcia AM, Leonard HL. Anxiety disorders. In: Lewis M, editor. Child and Adolescent Psychiatry: A Comprehensive Textbook. 3rd ed. Lippincott Williams & Wilkins; 2002.

(139) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(140) Zahn-Waxler C, Klimes-Dougan B, Slattery MJ. Internalizing problems of childhood and adolescence: prospects, pitfalls, and progress in understanding the development of anxiety and depression. Dev Psychopathol 2000;12(3):443-66.

(141) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(142) American Psychiatric Association. Diagnostic and statistical manual of mental disorders (3º ed.). 1980. American Psychiatric Association.

Ref Type: Generic

(143) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(144) Last CG, Hersen M, Kazdin A, Orvaschel H, Perrin S. Anxiety disorders in children and their families. Arch Gen Psychiatry 1991 Oct;48(10):928-34.

(145) Wittchen HU, Essau CA, Krieg JC. Anxiety disorders: similarities and differences of comorbidity in treated and untreated groups. Br J Psychiatry Suppl 1991 Sep;(12):23-33.

(146) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(147) Bruckl TM, Wittchen HU, Hofler M, Pfister H, Schneider S, Lieb R. Childhood separation anxiety and the risk of subsequent psychopathology: Results from a community study. Psychother Psychosom 2007;76(1):47-56.

(148) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. Am J Psychiatry 2001 Oct;158(10):1693-700.

(149) Famularo R, Fenton T, Augustyn M, Zuckerman B. Persistence of pediatric post traumatic stress disorder after 2 years. Child Abuse Negl 1996 Dec;20(12):1245-8.

(150) Famularo R, Fenton T, Kinscherff R, Augustyn M. Psychiatric comorbidity in childhood post traumatic stress disorder. Child Abuse Negl 1996 Oct;20(10):953-61.

(151) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. J Am Acad Child Adolesc Psychiatry 2004 Sep;43(9):1107-14.

(152) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. J Child Psychol Psychiatry 2004 May;45(4):874-83.

(153) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. Psychother Psychosom 2004 May;73(3):158-65.

(154) King SM, Iacono WG, McGue M. Childhood externalizing and internalizing psychopathology in the prediction of early substance use. Addiction 2004 Dec;99(12):1548-59.

(155) Manicavasagar V, Silove D, Curtis J, Wagner R. Continuities of separation anxiety from early life into adulthood. J Anxiety Disord 2000 Jan;14(1):1-18.

(156) Orvaschel H, Lewinsohn PM, Seeley JR. Continuity of psychopathology in a community sample of adolescents. J Am Acad Child Adolesc Psychiatry 1995 Nov;34(11):1525-35.

(157) Perkonigg A, Pfister H, Stein MB, Hofler M, Lieb R, Maercker A, et al. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. Am J Psychiatry 2005 Jul;162(7):1320-7.

(158) Pine DS, Cohen P, Gurley D, Brook J, Ma Y. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. Arch Gen Psychiatry 1998 Jan;55(1):56-64.

(159) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. J Child Psychol Psychiatry 2000 Jul;41(5):657-65.

(160) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. Arch Gen Psychiatry 2001 Mar;58(3):251-6.

(161) Stewart SE, Geller DA, Jenike M, Pauls D, Shaw D, Mullin B, et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. Acta Psychiatr Scand 2004 Jul;110(1):4-13.

(162) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(163) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(164) World Health Organization. International Statistical Classification of Diseases and Related Health Problems. 1997. **World Health Organization**.

Ref Type: Generic

(165) Wittchen HU, Lieb R, Pfister H, Schuster P. The waxing and waning of mental disorders: evaluating the stability of syndromes of mental disorders in the population. Compr Psychiatry 2000 Mar;41(2 Suppl 1):122-32.

(166) American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. 1994. American Psychiatric Association.

Ref Type: Generic

(167) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(168) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. J Abnorm Child Psychol 1996 Jun;24(3):257-69.

(169) Silverman WK, Nelles WB. The Anxiety Disorders Interview Schedule for Children. J Am Acad Child Adolesc Psychiatry 1988 Nov;27(6):772-8.

(170) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(171) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(172) Bosquet M, Egeland B. The development and maintenance of anxiety symptoms from infancy through adolescence in a longitudinal sample. Dev Psychopathol 2006;18(2):517-50.

(173) Achenbach TM, Edelbrock C. The child behavior checklist and revised child behavior profile. 1991. University Associates in Psychiatry.

Ref Type: Generic

(174) Kaufman J, Birmaher B, Brent D, Rao U, Flynn C, Moreci P, et al. Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL): initial reliability and validity data. J Am Acad Child Adolesc Psychiatry 1997 Jul;36(7):980-8.

(175) Visser JH, van der EJ, Koot HM, Verhulst FC. Continuity of psychopathology in youths referred to mental health services. J Am Acad Child Adolesc Psychiatry 1999 Dec;38(12):1560-8.

(176) Achenbach TM. Manual for the Youth Self Report and 1991 profile. 1991. University of Vermont.

Ref Type: Generic

(177) Achenbach TM. Manual for the Teacher's Report Form and 1991 profile. 1991. University of Vermont.

Ref Type: Generic

(178) Hofstra MB, van der EJ, Verhulst FC. Continuity and change of psychopathology from childhood into adulthood: a 14-year follow-up study. J Am Acad Child Adolesc Psychiatry 2000 Jul;39(7):850-8.

(179) Achenbach T. Young Adult Self Report. 1997. University of Vermont, Department of Psychiatry.

Ref Type: Generic

(180) Achenbach T. Manual for the Young Adult Self-Report and Young Adult Behavior Checklist. 1997. University of Vermont, Department of Psychiatry.

Ref Type: Generic

(181) Keller MB, Lavori PW, Wunder J, Beardslee WR, Schwartz CE, Roth J. Chronic course of anxiety disorders in children and adolescents. J Am Acad Child Adolesc Psychiatry 1992 Jul;31(4):595-9.

(182) Keller MB, Lavori PW, Wunder J, Beardslee WR, Schwartz CE, Roth J. Chronic course of anxiety disorders in children and adolescents. J Am Acad Child Adolesc Psychiatry 1992 Jul;31(4):595-9.

(183) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(184) Last CG, Hansen C, Franco N. Anxious children in adulthood: a prospective study of adjustment. J Am Acad Child Adolesc Psychiatry 1997 May;36(5):645-52.

(185) Pine DS, Cohen P, Gurley D, Brook J, Ma Y. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. Arch Gen Psychiatry 1998 Jan;55(1):56-64.

(186) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(187) Essau CA, Conradt J, Petermann F. Course and outcome of anxiety disorders in adolescents. J Anxiety Disord 2002;16(1):67-81.

(188) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(189) Costello EJ, Angold A, Burns BJ, Stangl DK, Tweed DL, Erkanli A, et al. The Great Smoky Mountains Study of Youth. Goals, design, methods, and the prevalence of DSM-III-R disorders. Arch Gen Psychiatry 1996 Dec;53(12):1129-36.

(190) World Health Organization. International Statistical Classification of Diseases, Version 9 (ICD-9). World Health Organization; 1978.

(191) World Health Organization (1992). Tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10). World Health Organization; 1992.

(192) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(193) Basurte Villamor I. Análisis de itinerarios y coste en salud mental en un area metropolitana de madrid durante 5 años. Departamento de Psiquiatría. Universidad Complutense; 2006.

(194) National Library of Medicine and the National Institutes of Health's. http://www ncbi nlm nih gov/sites/entrez 2007

(195) Schwartz JE, Fennig S, Tanenberg-Karant M, Carlson G, Craig T, Galambos N, et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. Arch Gen Psychiatry 2000 Jun;57(6):593-600.

(196) Cohen J. A coefficient of agreement for nominal scales. Educational and Psychological Measurement 1960;20:37-46.

(197) Altman DG, Machin D, ryant TN, Gardner MJ. Statistics with Confidence: Confidence Intervals and Statistical Guidelines. 2nd ed. London: BMJ Books; 2000.

(198) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(199) Duda R., Hart P., Stork D. Pattern Classification. Second Edition ed. John Wiley & Sons,Inc; 2001.

(200) Rabiner L, Juang B. An introduction to hidden Markov models. ASSP Magazine, IEEE 1986;3(Issue 1, Part 1):4-16.

(201) Patten SB. Markov models of major depression for linking psychiatric epidemiology to clinical practice. Clin Pract Epidemol Ment Health 2005;1-2.

(202) Colman I, Wadsworth ME, Croudace TJ, Jones PB. Forty-year psychiatric outcomes following assessment for internalizing disorder in adolescence. Am J Psychiatry 2007 Jan;164(1):126-33.

(203) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(204) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. Am J Psychiatry 2001 Oct;158(10):1693-700.

(205) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. J Am Acad Child Adolesc Psychiatry 2004 Sep;43(9):1107-14.

(206) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. J Child Psychol Psychiatry 2004 May;45(4):874-83.

(207) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. Psychother Psychosom 2004 May;73(3):158-65.

(208) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. J Child Psychol Psychiatry 2000 Jul;41(5):657-65.

(209) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. Arch Gen Psychiatry 2001 Mar;58(3):251-6.

(210) Stewart SE, Geller DA, Jenike M, Pauls D, Shaw D, Mullin B, et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. Acta Psychiatr Scand 2004 Jul;110(1):4-13.

(211) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(212) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. J Abnorm Child Psychol 1996 Jun;24(3):257-69.

(213) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(214) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(215) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(216) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(217) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(218) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(219) Giaconia RM, Reinherz HZ, Silverman AB, Pakiz B, Frost AK, Cohen E. Ages of onset of psychiatric disorders in a community population of older adolescents. J Am Acad Child Adolesc Psychiatry 1994 Jun;33(5):706-17.

(220) Keller MB, Lavori PW, Wunder J, Beardslee WR, Schwartz CE, Roth J. Chronic course of anxiety disorders in children and adolescents. J Am Acad Child Adolesc Psychiatry 1992 Jul;31(4):595-9.

(221) Kovacs M, Gatsonis C, Paulauskas SL, Richards C. Depressive disorders in childhood. IV. A longitudinal study of comorbidity with and risk for anxiety disorders. Arch Gen Psychiatry 1989 Sep;46(9):776-82.

(222) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(223) Last CG, Perrin S, Hersen M, Kazdin AE. DSM-III-R anxiety disorders in children: sociodemographic and clinical characteristics. J Am Acad Child Adolesc Psychiatry 1992 Nov;31(6):1070-6.

(224) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(225) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(226) Pine DS, Cohen P, Gurley D, Brook J, Ma Y. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. Arch Gen Psychiatry 1998 Jan;55(1):56-64.

(227) Wewetzer C, Jans T, Muller B, Neudorfl A, Bucherl U, Remschmidt H, et al. Long-term outcome and prognosis of obsessive-compulsive disorder with onset in childhood or adolescence. Eur Child Adolesc Psychiatry 2001 Mar;10(1):37-46.

(228) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(229) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(230) Caron C, Rutter M. Comorbidity in child psychopathology: concepts, issues and research strategies. J Child Psychol Psychiatry 1991 Nov;32(7):1063-80.

(231) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(232) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. Am J Psychiatry 2001 Oct;158(10):1693-700.

(233) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. J Am Acad Child Adolesc Psychiatry 2004 Sep;43(9):1107-14.

(234) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. J Child Psychol Psychiatry 2004 May;45(4):874-83.

(235) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. Psychother Psychosom 2004 May;73(3):158-65.

(236) King SM, Iacono WG, McGue M. Childhood externalizing and internalizing psychopathology in the prediction of early substance use. Addiction 2004 Dec;99(12):1548-59.

(237) Last CG, Hansen C, Franco N. Anxious children in adulthood: a prospective study of adjustment. J Am Acad Child Adolesc Psychiatry 1997 May;36(5):645-52.

(238) Manicavasagar V, Silove D, Curtis J, Wagner R. Continuities of separation anxiety from early life into adulthood. J Anxiety Disord 2000 Jan;14(1):1-18.

(239) Orvaschel H, Lewinsohn PM, Seeley JR. Continuity of psychopathology in a community sample of adolescents. J Am Acad Child Adolesc Psychiatry 1995 Nov;34(11):1525-35.

(240) Perkonigg A, Pfister H, Stein MB, Hofler M, Lieb R, Maercker A, et al. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. Am J Psychiatry 2005 Jul;162(7):1320-7.

(241) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. J Child Psychol Psychiatry 2000 Jul;41(5):657-65.

(242) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. Arch Gen Psychiatry 2001 Mar;58(3):251-6.

(243) Stewart SE, Geller DA, Jenike M, Pauls D, Shaw D, Mullin B, et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. Acta Psychiatr Scand 2004 Jul;110(1):4-13.

(244) Instituto Nacional de Estadistica "National Statistics Institute". http://www ine es 2007

(245) Ministerio de Salud y Consumo. http://www msc es/estadEstudios/estadisticas/docs/FOLLETO-BAJA PDF 2007

(246) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(247) Coryell W. Anxiety secondary to depression. Psychiatr Clin North Am 1990 Dec;13(4):685-98.

(248) Coryell W, Endicott J, Winokur G. Anxiety syndromes as epiphenomena of primary major depression: outcome and familial psychopathology. Am J Psychiatry 1992 Jan;149(1):100-7.

(249) Fennig S, Kovasznay B, Rich C, Ram R, Pato C, Miller A, et al. Six-month stability of psychiatric diagnoses in first-admission patients with psychosis. Am J Psychiatry 1994 Aug;151(8):1200-8.

(250) Whitty P, Clarke M, McTigue O, Browne S, Kamali M, Larkin C, et al. Diagnostic stability four years after a first episode of psychosis. Psychiatr Serv 2005 Sep;56(9):1084-8.

(251) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(252) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(253) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Lopez-Castroman J, Fernandez del Moral AL, Jimenez-Arriero MA, et al. Diagnostic stability and evolution of bipolar disorder in clinical practice: a prospective cohort study. Acta Psychiatr Scand 2007 Jun;115(6):473-80.

(254) Barkow K, Heun R, Wittchen HU, Bedirhan UT, Gansicke M, Maier W. Mixed anxiety-depression in a 1 year follow-up study: shift to other diagnoses or remission? J Affect Disord 2004 Apr;79(1-3):235-9.

(255) Culverhouse R, Bucholz KK, Crowe RR, Hesselbrock V, Nurnberger JI, Jr., Porjesz B, et al. Long-term stability of alcohol and other substance dependence diagnoses and habitual smoking: an evaluation after 5 years. Arch Gen Psychiatry 2005 Jul;62(7):753-60.

(256) Grilo CM, Sanislow CA, Gunderson JG, Pagano ME, Yen S, Zanarini MC, et al. Two-year stability and change of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. J Consult Clin Psychol 2004 Oct;72(5):767-75.

(257) Kessing LV. Diagnostic stability in bipolar disorder in clinical practise as according to ICD-10. J Affect Disord 2005 Apr;85(3):293-9.

(258) Kessing LV. Diagnostic stability in depressive disorder as according to ICD-10 in clinical practice. Psychopathology 2005 Jan;38(1):32-7.

(259) Lieb R, Zimmermann P, Friis RH, Hofler M, Tholen S, Wittchen HU. The natural course of DSM-IV somatoform disorders and syndromes among adolescents and young adults: a prospective-longitudinal community study. Eur Psychiatry 2002 Oct;17(6):321-31.

(260) McGlashan TH, Grilo CM, Sanislow CA, Ralevski E, Morey LC, Gunderson JG, et al. Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: toward a hybrid model of axis II disorders. Am J Psychiatry 2005 May;162(5):883-9.

(261) Mojtabai R, Susser ES, Bromet EJ. Clinical characteristics, 4-year course, and DSM-IV classification of patients with nonaffective acute remitting psychosis. Am J Psychiatry 2003 Dec;160(12):2108-15.

(262) Rufino AC, Uchida RR, Vilela JA, Marques JM, Zuardi AW, Del-Ben CM. Stability of the diagnosis of first-episode psychosis made in an emergency setting. Gen Hosp Psychiatry 2005 May;27(3):189-93.

(263) Schimmelmann BG, Conus P, Edwards J, McGorry PD, Lambert M. Diagnostic stability 18 months after treatment initiation for first-episode psychosis. J Clin Psychiatry 2005 Oct;66(10):1239-46.

(264) Schwartz JE, Fennig S, Tanenberg-Karant M, Carlson G, Craig T, Galambos N, et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. Arch Gen Psychiatry 2000 Jun;57(6):593-600.

(265) Shea MT, Stout R, Gunderson J, Morey LC, Grilo CM, McGlashan T, et al. Short-term diagnostic stability of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. Am J Psychiatry 2002 Dec;159(12):2036-41.

(266) Tsuang MT, Woolson RF, Winokur G, Crowe RR. Stability of psychiatric diagnosis. Schizophrenia and affective disorders followed up over a 30- to 40-year period. Arch Gen Psychiatry 1981 May;38(5):535-9.

(267) Veen ND, Selten JP, Schols D, Laan W, Hoek HW, van dT, I, et al. Diagnostic stability in a Dutch psychosis incidence cohort. Br J Psychiatry 2004 Dec;185:460-4.

(268) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(269) Bernstein GA, Borchardt CM. Anxiety disorders of childhood and adolescence: a critical review. J Am Acad Child Adolesc Psychiatry 1991 Jul;30(4):519-32.

(270) Canino G, Shrout PE, Rubio-Stipec M, Bird HR, Bravo M, Ramirez R, et al. The DSM-IV rates of child and adolescent disorders in Puerto Rico: prevalence, correlates, service use, and the effects of impairment. Arch Gen Psychiatry 2004 Jan;61(1):85-93.

(271) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(272) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(273) Costello EJ, Egger HL, Angold A. The developmental epidemiology of anxiety disorders: phenomenology, prevalence, and comorbidity. Child Adolesc Psychiatr Clin N Am 2005 Oct;14(4):631-48, vii.

(274) Fergusson DM, Horwood LJ, Lynskey MT. Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. J Am Acad Child Adolesc Psychiatry 1993 Nov;32(6):1127-34.

(275) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(276) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. Am J Psychiatry 2001 Oct;158(10):1693-700.

(277) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. J Am Acad Child Adolesc Psychiatry 2004 Sep;43(9):1107-14.

(278) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. J Child Psychol Psychiatry 2004 May;45(4):874-83.

(279) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. Psychother Psychosom 2004 May;73(3):158-65.

(280) King SM, Iacono WG, McGue M. Childhood externalizing and internalizing psychopathology in the prediction of early substance use. Addiction 2004 Dec;99(12):1548-59.

(281) Last CG, Hansen C, Franco N. Anxious children in adulthood: a prospective study of adjustment. J Am Acad Child Adolesc Psychiatry 1997 May;36(5):645-52.

(282) Manicavasagar V, Silove D, Curtis J, Wagner R. Continuities of separation anxiety from early life into adulthood. J Anxiety Disord 2000 Jan;14(1):1-18.

(283) Orvaschel H, Lewinsohn PM, Seeley JR. Continuity of psychopathology in a community sample of adolescents. J Am Acad Child Adolesc Psychiatry 1995 Nov;34(11):1525-35.

(284) Perkonigg A, Pfister H, Stein MB, Hofler M, Lieb R, Maercker A, et al. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. Am J Psychiatry 2005 Jul;162(7):1320-7.

(285) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. J Child Psychol Psychiatry 2000 Jul;41(5):657-65.

(286) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. Arch Gen Psychiatry 2001 Mar;58(3):251-6.

(287) Stewart SE, Geller DA, Jenike M, Pauls D, Shaw D, Mullin B, et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. Acta Psychiatr Scand 2004 Jul;110(1):4-13.

(288) Costello EJ, Egger HL, Angold A. The developmental epidemiology of anxiety disorders: phenomenology, prevalence, and comorbidity. Child Adolesc Psychiatr Clin N Am 2005 Oct;14(4):631-48, vii.

(289) Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry 2001 Sep;40(9):1086-93.

(290) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(291) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(292) Cohen P, Cohen J, Kasen S, Velez CN, Hartmark C, Johnson J, et al. An epidemiological study of disorders in late childhood and adolescence--I. Age- and gender-specific prevalence. J Child Psychol Psychiatry 1993 Sep;34(6):851-67.

(293) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(294) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. J Abnorm Child Psychol 1996 Jun;24(3):257-69.

(295) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. J Abnorm Child Psychol 1996 Jun;24(3):257-69.

(296) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(297) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(298) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(299) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(300) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(301) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Lopez-Castroman J, Fernandez del Moral AL, Jimenez-Arriero MA, et al. Diagnostic stability and evolution of bipolar disorder in clinical practice: a prospective cohort study. Acta Psychiatr Scand 2007 Jun;115(6):473-80.

(302) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(303) Schwartz JE, Fennig S, Tanenberg-Karant M, Carlson G, Craig T, Galambos N, et al. Congruence of diagnoses 2 years after a first-admission diagnosis of psychosis. Arch Gen Psychiatry 2000 Jun;57(6):593-600.

(304) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(305) Beidel DC, Fink CM, Turner SM. Stability of anxious symptomatology in children. J Abnorm Child Psychol 1996 Jun;24(3):257-69.

(306) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(307) Valevski A, Ratzoni G, Sever J, Apter A, Zalsman G, Shiloh R, et al. Stability of diagnosis: a 20-year retrospective cohort study of Israeli psychiatric adolescent inpatients. J Adolesc 2001 Oct;24(5):625-33.

(308) Cohen P, Cohen J, Brook J. An epidemiological study of disorders in late childhood and adolescence--II. Persistence of disorders. J Child Psychol Psychiatry 1993 Sep;34(6):869-77.

(309) Cantwell DP, Baker L. Stability and natural history of DSM-III childhood diagnoses. J Am Acad Child Adolesc Psychiatry 1989 Sep;28(5):691-700.

(310) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.

(311) Baca-Garcia E, Perez-Rodriguez MM, Basurte-Villamor I, Fernandez del Moral AL, Jimenez-Arriero MA, Gonzalez de Rivera JL, et al. Diagnostic stability of psychiatric disorders in clinical practice. Br J Psychiatry 2007 Mar;190:210-6.

(312) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(313) Giaconia RM, Reinherz HZ, Silverman AB, Pakiz B, Frost AK, Cohen E. Ages of onset of psychiatric disorders in a community population of older adolescents. J Am Acad Child Adolesc Psychiatry 1994 Jun;33(5):706-17.

(314) Keller MB, Lavori PW, Wunder J, Beardslee WR, Schwartz CE, Roth J. Chronic course of anxiety disorders in children and adolescents. J Am Acad Child Adolesc Psychiatry 1992 Jul;31(4):595-9.

(315) Kovacs M, Gatsonis C, Paulauskas SL, Richards C. Depressive disorders in childhood. IV. A longitudinal study of comorbidity with and risk for anxiety disorders. Arch Gen Psychiatry 1989 Sep;46(9):776-82.

(316) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(317) Last CG, Perrin S, Hersen M, Kazdin AE. DSM-III-R anxiety disorders in children: sociodemographic and clinical characteristics. J Am Acad Child Adolesc Psychiatry 1992 Nov;31(6):1070-6.

(318) Kovacs M, Devlin B. Internalizing disorders in childhood. J Child Psychol Psychiatry 1998 Jan;39(1):47-63.

(319) Last CG, Perrin S, Hersen M, Kazdin AE. A prospective study of childhood anxiety disorders. J Am Acad Child Adolesc Psychiatry 1996 Nov;35(11):1502-10.

(320) Pine DS, Cohen P, Gurley D, Brook J, Ma Y. The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. Arch Gen Psychiatry 1998 Jan;55(1):56-64.

(321) Wewetzer C, Jans T, Muller B, Neudorfl A, Bucherl U, Remschmidt H, et al. Long-term outcome and prognosis of obsessive-compulsive disorder with onset in childhood or adolescence. Eur Child Adolesc Psychiatry 2001 Mar;10(1):37-46.

(322) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(323) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(324) Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003 Aug;60(8):837-44.

(325) Crum RM, Pratt LA. Risk of heavy drinking and alcohol use disorders in social phobia: a prospective analysis. Am J Psychiatry 2001 Oct;158(10):1693-700.

(326) Foley DL, Pickles A, Maes HM, Silberg JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. J Am Acad Child Adolesc Psychiatry 2004 Sep;43(9):1107-14.

(327) Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. J Child Psychol Psychiatry 2004 May;45(4):874-83.

(328) Goodwin RD, Fergusson DM, Horwood LJ. Panic attacks and the risk of depression among young adults in the community. Psychother Psychosom 2004 May;73(3):158-65.

(329) King SM, Iacono WG, McGue M. Childhood externalizing and internalizing psychopathology in the prediction of early substance use. Addiction 2004 Dec;99(12):1548-59.

(330) Last CG, Hansen C, Franco N. Anxious children in adulthood: a prospective study of adjustment. J Am Acad Child Adolesc Psychiatry 1997 May;36(5):645-52.

(331) Manicavasagar V, Silove D, Curtis J, Wagner R. Continuities of separation anxiety from early life into adulthood. J Anxiety Disord 2000 Jan;14(1):1-18.

(332) Orvaschel H, Lewinsohn PM, Seeley JR. Continuity of psychopathology in a community sample of adolescents. J Am Acad Child Adolesc Psychiatry 1995 Nov;34(11):1525-35.

(333) Perkonigg A, Pfister H, Stein MB, Hofler M, Lieb R, Maercker A, et al. Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. Am J Psychiatry 2005 Jul;162(7):1320-7.

(334) Pine DS, Cohen E, Cohen P, Brook JS. Social phobia and the persistence of conduct problems. J Child Psychol Psychiatry 2000 Jul;41(5):657-65.

(335) Stein MB, Fuetsch M, Muller N, Hofler M, Lieb R, Wittchen HU. Social anxiety disorder and the risk of depression: a prospective community study of adolescents and young adults. Arch Gen Psychiatry 2001 Mar;58(3):251-6.

(336) Stewart SE, Geller DA, Jenike M, Pauls D, Shaw D, Mullin B, et al. Long-term outcome of pediatric obsessive-compulsive disorder: a meta-analysis and qualitative review of the literature. Acta Psychiatr Scand 2004 Jul;110(1):4-13.

(337) Mattanah JJ, Becker DF, Levy KN, Edell WS, McGlashan TH. Diagnostic stability in adolescents followed up 2 years after hospitalization. Am J Psychiatry 1995 Jun;152(6):889-94.