ARTICLE

PHENOMENOLOGY, PSYCHOPATHOLOGY, AND SHORT-TERM THERAPEUTIC OUTCOME OF 102 INFANTS AGED 0 TO 12 MONTHS CONSECUTIVELY REFERRED TO A COMMUNITY-BASED 0 TO 3 MENTAL HEALTH CLINIC

SYLVIE VIAUX-SAVELON
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris and CNRS UMR 8189 Psychologie et Neurosciences Cognitives, Paris

DIDIER RABAIN AND ELISABETH AIDANE
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris

PHILIPPE BONNET
CNRS UMR 8189 Psychologie et Neurosciences Cognitives, Paris

MARCELLA MONTES DE OCA, LAURENCE CAMON-SÉNÉCHAL AND MICHÈLE DAVID
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris

FRANCINE COUËTOUX
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris and CNRS UMR 8189 Psychologie et Neurosciences Cognitives, Paris

JAQUELINE WENDLAND
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris and Laboratoire de Psychopathologie et de Neuropsychologie Cliniques, Université Paris Descartes, Paris

PRISCILLE GÉRARDIN
Service Universitaire de Psychiatrie, GH du Rouvray, CHU de Rouen, Rouen

PHILIPPE MAZET
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris

ANTOINE GUEDENEY
Département de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Bichat-Claude Bernard, Paris

Direct correspondence to: David Cohen, Faculté Pierre et Marie Curie, AP-HP, GHU Est, Groupe Hospitalier Pitié-Salpêtrière, 47 bd de l'Hôpital, 75013, Paris, France; e-mail: david.cohen@psl.aphp.fr.

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MIRI KEREN
Département of Psychiatry, Geha Hospital, Tel Aviv University, Tel Aviv

DAVID COHEN
Service de Psychiatrie de l'Enfant et de l'Adolescent, APHP, GH Pitié-Salpêtrière, Paris and CNRS UMR 8189 Psychologie et Neurosciences Cognitives, Paris

ABSTRACT: Infants ages 0 to 1 year consecutively referred for psychiatric treatment during the year 2005 were followed, and variables associated with diagnosis and short-term outcome were assessed. Infants were evaluated using the *Psychiatric Infant Navigator Chart and Evaluation* that includes nosological diagnoses [*Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood,* (DC 0–3), Zero to Three, 1994] as well as risk and protective factors, treatment procedure, and outcomes. Seventy-six percent of the infants had an Axis I diagnosis, with anxiety disorders and a mixed disorder of emotional expressiveness being the most frequent. Twenty-five percent had an Axis II diagnosis. Multiple correspondence analyses showed that two dimensions corresponding grossly to DC 0–3 Axes I and II emerged. They emphasized three clinical profiles characterized by (a) good infant functioning, parent's awareness of their own difficulties, and a good outcome; (b) moderate child symptoms, overinvolved relating, and a good/intermediate outcome; (c) severe child symptoms, underinvolved relating, and a less favorable short-term outcome, signaling the risk for developmental disorders. Among the associated risk factors were cumulative parental stress, maternal psychopathology, and family dysfunction. Clinical implications of these findings indicated that infants under the age of 1 year who are referred for mental health evaluation and intervention are a heterogeneous group in terms of both severity and prognosis. Clinicians should differentiate subgroups of young children to detect those infants at risk for persistent psychopathology.

RESUMEN: Se les dio seguimiento a infantes de hasta un año de edad que habían sido consecutivamente referidos a tratamiento siquiátrico durante el año 2005, y se evaluaron las variables asociadas con el diagnóstico y el resultado a corto plazo. A los infantes se les evaluó usando *Psychiatric Infant Navigator Chart and Evaluation* que incluye un diagnóstico nosológico (DC 0-3, Clasificación de Diagnóstico de Salud Mental y Trastornos de Desarrollo en la Infancia y la Temprana Niñez, 1994), así como factores de riesgo y protección, procedimiento de tratamiento y resultados. Setenta y seis por ciento de los niños presentaba una diagnosis correspondiente al Eje I, siendo los más frecuentes los trastornos de ansiedad y un trastorno mixto de expresiones emocionales. Veinticinco por ciento presentaba una diagnosis que correspondía al Eje II. Los análisis de correspondencia múltiple muestran la aparición de dos dimensiones que en términos generales correspondían a los Ejes I y II de la clasificación DC 0-3. Tales dimensiones enfatizan tres perfiles clínicos caracterizados por: 1) buen funcionamiento infantil, padres conscientes de sus dificultades, y un buen resultado; 2) síntomas moderados en el niño, involucrado en la relación más de la cuenta, y un resultado entre bueno e intermedio; 3) síntomas severos en el niño, falta de involucramiento en la relación, y un resultado a corto plazo menos favorable, lo cual indica el riesgo de trastornos en el desarrollo. Entre los factores de riesgos asociados estaban el estrés conjunto de los padres, la sicopatología maternal, y la disfunción familiar. Las implicaciones clínicas de estos resultados indican que los infantes menores de un año que son referidos para una evaluación e intervención de su salud mental son un grupo heterogéneo tanto en términos de la severidad como de la prognosis. Los clínicos deben diferenciar los subgrupos de pequeños niños para detectar aquellos infantes bajo riesgo de tener una sicopatología persistente.

RÉSUMÉ: Des bébés âgés de 0 à un an envoyés consulter consécutivement pour traitement psychiatrique durant l'année 2005 ont été suivis et les variables ont été associées avec le diagnostic et les résultats à

court-terme ont été évalués. Les bébés ont été évalués en utilisant la *Psychiatric Infant Navigator Chart and Evaluation* qui inclut des diagnostics nosologiques (DC 0-3, *Diagnostic Classification of Mental Health and Developmental Disorders or Infancy and Early Childhood*, 1994) ainsi que des facteurs de risques et des facteurs protecteurs, la procédure de traitement et les résultats. Soixante seize pourcent des bébés avaient un diagnostic Axis I, avec des troubles de l'anxiété et un trouble mixte d'expression émotionnelle étant les plus fréquents. Vingt cinq pourcent avaient un diagnostic Axis II. De multiples analyses de correspondance montrent que deux dimensions correspondant en gros aux axes I et II de DC-03 ont émergé. Elles mettent en évidence trois profils cliniques caractérisés par : (1) un bon fonctionnement du bébé, les parents étant conscients de leurs propres difficultés, et un bon résultat ; (2) des symtômes modérés chez le bébé, un rapport surfait/trop présent et un résultat bon/intermédiaire ; (3) des symptômes sévères chez le bébé, un rapport moins que présent et un résultat à court terme moins favorable signalant le risque de troubles du comportement. Parmi les facteurs de risque associés se trouvaient le stress parental cumulatif, la psychopathologie maternelle, et la dysfonction familiale. Les implications cliniques pour ces résultats indiquent que les bébés de moins de un an qui sont envoyés consulter pour une évaluation de leur santé mentale et une intervention sont un groupe hétérogène pour ce qui concerne à la fois la sévérité et le prognostic. Les cliniciens devraient différencier des sous-groupes de jeunes enfants afin de détecter les enfants à risque de psychopathologie persistente.

ZUSAMMENFASSUNG: Säuglinge im Altersbereich von null bis einem Jahr, die 2005 eine psychiatrische Behandlung in Anspruch nahmen, wurden nachuntersucht und entsprechend ihrer Diagnose und des kurzfristigen Behandlungsverlaufs untersucht. Die Kleinkinder wurden mit dem *Psychiatric Infant Navigator Chart and Evaluation* evaluiert. Dies beinhaltete sowohl eine nosologische Diagnose (DC 0-3, Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, 1994) als auch die Erhebung von Risiko- und Schutzfaktoren, dem Prozedere der Behandlung und dem Behandlungserfolg. 76% der Kleinkinder hatte eine Achse 1 Diagnose, von Angststörungen bis kombinierten Störungen des emotionalen Ausdrucks, die am wenigsten auftraten. 25% hatten eine Achse II Diagnose. Multiple Korrespondenzanalysen zeigte in zwei Dimensionen einen starken Zusammenhang zwischen den Achen I und II der DC 0-3. Drei klinische Profile zeichneten sich ab: 1. Gute Funktionen des Säuglings, Eltern, die sich ihrer Herausforderungen bewusst waren und gute Ergebnisse; 2. Moderate kindliche Symptome, überinvolvierte Beziehungen und auch gute Ergebnisse; 3. Schwere kindliche Symptome, unterinvolvierte Beziehungen und weniger günstige, kurzfristige Erfolge mit Hinweisen, die das Risiko einer Entwicklungsverzögerung andeuten. Unter den identifizierten Risikofaktoren befanden sich kumulativ elterlicher Stress, mütterliche Psychopathologie und familiären Dysfunktionen. Die klinischen Konsequenzen der Ergebnisse zeigen, dass Säuglinge unter einem Jahr die zur Klärung und Therapie der seelischen und psychischen Gesundheit vorgestellt werden zu unterschiedliche Gruppen bezüglich Schweregrad und Prognose gehören. Kliniker sollten die Subgruppen der kleinen Kinder unterscheiden und diejenigen, mit dem Risiko einer anhaltenden Psychopathologie erkennen.

抄録：2005 年の 1 年間に精神科治療のために連続的に紹介された 0-1 歳の乳児が追跡調査され、診断と短期の結果に伴う変数が評価された。乳児は the *Psychiatric Infant Navigator Chart and Evaluation* を用いて評価された。これには、疾病分類学的診断（DC 0-3、乳幼児の精神保健と発達障害のための診断分類、1994）ならびに、危険因子と保護因子、治療経過と結果が含まれている。 乳児の 76%は、 I 軸診断を持っていた。その中では、不安障害と、情緒表出の混合性障害が最も多かった。25%が、II 軸診断を持っていた。 多重対応分析から、DC 0-3 の I 軸と II 軸にだいたい対応する二つの次元が現れることが示された。それらの分析は以下のような特徴を持つ 3 つの臨床的なプロフ

ィールを強調した。(1)乳児の機能が良いこと、親が自分自身の困難に気づいていること、そして良い結果、(2)中等度の子どもの症状、過度にかかわりすぎる関係、そして良い／中程度の結果、(3)重い子どもの症状、関わりの少ない関係、そして発達障害への危険性を知らせる、好ましくない短期的な結果。関連する危険因子には、親のストレスの重積、母親の精神病理、および家族機能不全があった。これらの所見の臨床的な意味から、精神保健の評価と介入のために紹介された1歳以下の乳児は、重症度と予後の両方の面で不均一な集団であることが示された。臨床家は、持続する精神病理への危険のある乳児を発見するために、幼い子どもの下位グループを区別するべきである。

* * *

There is a growing need to compare data regarding diagnosis and treatment issues in 0–3 mental health clinics. Such assessments for children 0 to 3 years of age are rare and even less common for children aged 0 to 1 year of age. The few prevalence studies in epidemiological samples have concerned preschoolers and reported rates of psychopathology ranging from 7.8 to 50% (Beernink, Swinkels, & Buitelaar, 2007; Briggs-Gowan, Carter, Skuban, & Horwitz, 2001; Koot & Verhulst, 1991; Skovgaard et al., 2007; Srinah et al., 2005). The number of studies with clinical samples is very limited. Using the *Diagnostic and Statistical Manual of Mental Disorders, fourth edition* (*DSM-IV*; American Psychiatric Association, 1994), Elberling and Skovgaard (2002) described 0- to 3-year-old children referred to child psychiatric departments in the County of Copenhagen in 1998 and 1999 ($N = 159$). The male:female ratio was 1.3:1. Pervasive developmental disorder (PDD) and eating disorders were the most frequent diagnoses in boys and girls, respectively. In children younger than 1 year, the most common diagnosis was Axis-II relational disorder. Keren, Feldman, and Tyano (2001) described a population of 113 referred infants in a community-based infant mental health clinic in Israel. They reported two peaks of referral (0–6 months and 12–18 months) and an increase of referral for disruptive behaviors after the child was 1 year old. For the 0- to 12-month-old children ($N = 41$), the main reasons for referral were eating problems (27%), sleep problems (17%), irritability (17%), and maternal depression (20%). The most common DC 0–3 (1994) diagnoses were combinations of primary infant disorder, parent–child relationship disorder, medical problems, and parental psychopathology. Notably, there were no cases of mixed disorders of emotional expressiveness and anxiety disorders in the first year.

The goals of the present study were (a) to describe DC 0–3 diagnoses in a sample of 0- to 1-year-old children consecutively referred to an infant mental health unit and (b) to assess risk factors associated with the diagnostic and short-term therapeutic outcome.

METHOD

Population and Setting

Infants under 1 year of age and their families were consecutively recruited in an infant mental health unit from January 2005 to December 2005. Referred families were sent to the unit by the prenatal network (well baby center, maternity) with a referral letter describing the reason(s)

for referral, such as signs of infant distress (e.g., feeding and/or sleep problems, irritability, aggressive behavior, inhibited behavior, weariness), signs of parental distress (e.g., anxiety, sadness, feeling of helplessness and incompetence, irritability), and signs of maladaptive interactive patterns (e.g., verbal hostility, lack of physical contact, avoidance, intrusiveness). During the study period, 350 families were referred to the unit. Of these, 102 infants aged 1 year or younger at the time of referral were included in the study.

Diagnostic Procedure and Data Collection

Diagnoses of infants and parents referred to the unit were based on the DC 0–3 (1994). Infants were diagnosed by a child psychiatrist trained to use the classification system. Clinician interrater reliability for the DC 0–3 diagnosis was measured during a French-version validation study in which DR, EA, and AM participated ($\kappa = 0.731$; N. Guedeney et al., 2003). Unless parents refused, the first consultation was always videorecorded and included a period of parent–infant interaction (play or feeding). The clinician was expected to fill in the PsychiatRic Infant Navigator Chart and Evaluation (PRINCE) data collection form (discussed later; Keren et al., 2001). A DC 0–3 diagnosis was given by the psychiatrist in charge of the case (Coauthors D.R., E.A., A.M.) after review of the first consultation via video when necessary. Complex cases were discussed during monthly staff meetings, and a diagnosis was made using a best estimate procedure (i.e., consensus). The DC 0–3 categories are descriptive and identify both representative patterns of symptoms/behaviors and factors that may contribute to the infant's difficulties. The following five axes were systematically assessed: Axis I (infant's primary diagnosis), Axis II (relationship disorders, PIR-GAS), Axis III (physical, neurological, developmental, and mental health diagnoses), Axis IV (acute/chronic psychosocial stressors), and Axis V (current functional-emotional developmental level).

The clinical evaluation was entered into the PRINCE software. The PRINCE is a multilingual, standardized, and computerized evaluation database for infant mental health units (Keren et al., 2001) that helps to formulate the case with both a DC 0–3 diagnosis as well as psychodynamic concepts (e.g., defense, transference, projection, transgenerational transmission). This software is conceptually based on the transactional model of normal and abnormal development of the child. It is comprised of structured questions and allows structured answers as well as free text. The content is divided into four subcharts (i.e., multiaxial clinical assessment, treatment sessions, termination, and summary) for data collection, and the subcharts are stored in a computerized database. Besides the DC 0–3 diagnosis, this program also assesses complete information about pregnancy, perinatal pediatric history, life events and past history of the family, parental psychopathology, and heredity transmission.

The following variables were extracted for statistical purposes from the database: sociodemographics (age, sex, family structure, siblings, and parental education), origin of referral, reasons for referral, parental context (parents' background, parents' evaluation, and mother's psychopathology), infant background, infant clinical data (DC 0–3 diagnoses, pattern of attention, behavior, and interaction), treatment approach (type of intervention, duration, and number of sessions), and outcome. Outcome was defined at the last observation, even for patients and families that were lost, using an adapted Clinical Global Impression-Improvement scale (CGI-I; Guy, 1970) with three levels (good, medium, and poor). A "good outcome" indicates the lack of significant symptoms or presence of a good evolution, a "medium outcome" indicates partial amelioration of symptoms, and a "poor outcome" indicates no or poor improvement.

Similarly, therapeutic alliance was estimated by the clinician in charge of the case using a dichotomous variable (poor/good) taking into account the number of appointments honored ("good" = >75%).

Statistical Analysis

After a descriptive analysis of the data, two multiple correspondence analyses were performed (Le Roux & Rouanet, 2004) using the SAS package. This exploratory method was chosen because regression analysis was not possible given the sample size and number of variables. This analysis does not measure statistical significance. The first analysis assessed possible clinical profiles and their association with sociodemographics, parental context, and outcome variables. The second centered on therapeutic profiles. In the first analysis, the active variables were extracted from the infant's clinical exam (sleep disorders, eating disorders, inconsolable crying, regulatory problems, attention, behavioral impairment, behavior quality, affective tone, and psychological involvement) as well as DC 0–3 Axis I and Axis II diagnoses. Those 10 active variables represented 29 active modalities. Modalities of sociodemographic, parental, and outcome variables were entered as supplementary elements. They did not contribute to the analysis and the axis construction but were used as independent variables. In the second analysis, the active variables centered on the treatment modalities [e.g., type of intervention, treatment duration, number of sessions (grouped as "1 to 5 consultations," "5 to 10 consultations," and "more than 10 consultations"), type of professional (nursery nurse, psychologist, perinatal worker, or occupational therapist), self-group, parent–baby psychotherapy, therapeutic alliance] and represented 26 active modalities. As in the preceding analysis, modalities of sociodemographics, parental context, and outcome variables were entered as supplementary elements.

RESULTS

Characteristics of the Population

The total population included 102 infants (56% boys, 44% girls; *M* age = 4.3 (±3.4) months; first sibling position: 68%) and 170 parents. Of these, 50% were referred before the age of 3 months (Figure 1). Overall, family structure was rather stable (married: 67%). The academic level was higher than the mean (high school or university: 75%). Psychopathology in the mother was frequent (depression: 45%, anxiety disorder: 29%, borderline: 20%). We found a frequent history of trauma (mother's or father's grief: 47%, parental separation: 44%, being orphaned: 7%) in the parental background. Parents also frequently declared having suffered from affective deprivation (39%), sexual abuse (13%), and physical abuse (23%). Infant neonatal history also was frequent (pregnancy delivery complications: 43%, prematurity: 14%, intensive care: 16%, early separations: 21%, perinatal stress: 57%).

Referral Characteristics, DC 0–3 Diagnosis, and Treatment

Table 1 summarizes referral characteristics, DC 0–3 diagnosis, and outcome. Reasons for referral were varied. Roughly 76% of the infants had an Axis I diagnosis, with anxiety disorders and mixed disorder of emotional expressiveness being the most frequently observed. One fourth of infants had no Axis I diagnosis and exhibited relationship disturbances (Axis II) or parental

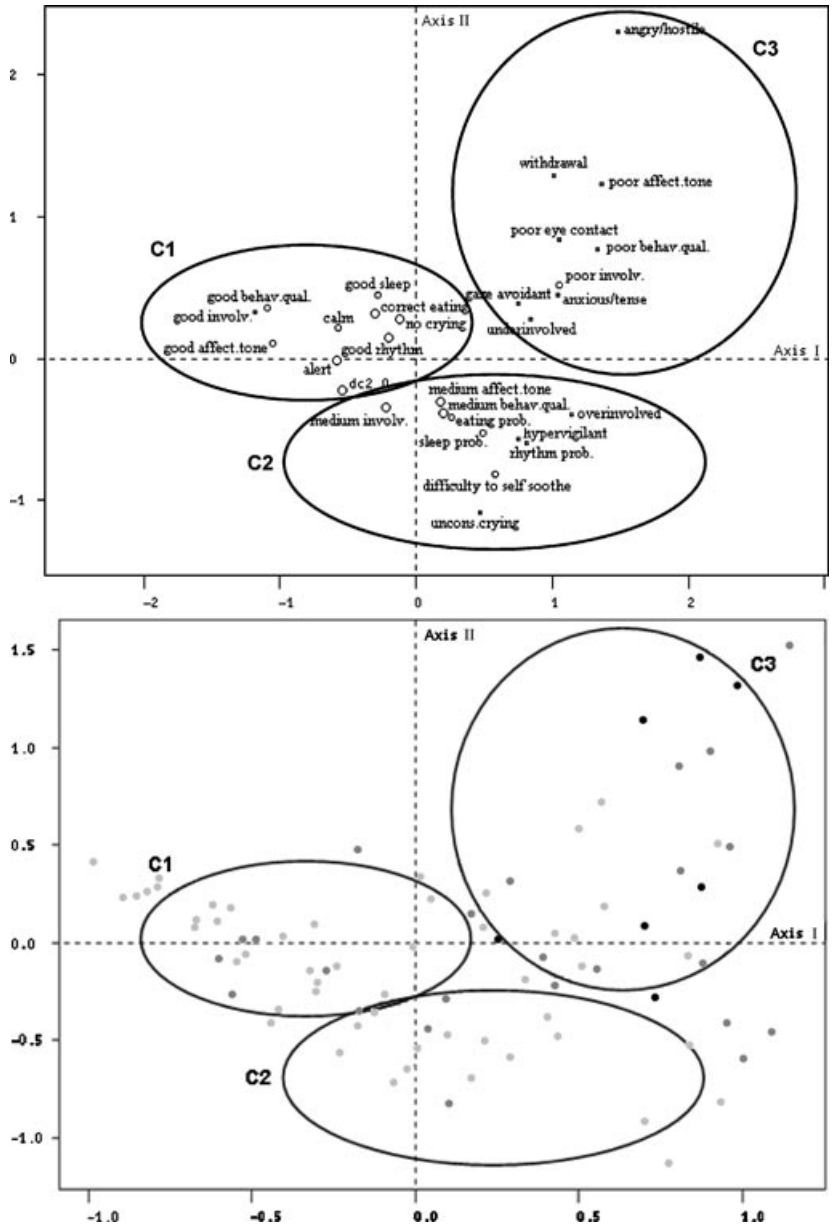

FIGURE 1. Cloud of clinical modalities on the 1–2 Axis plane according to the DC 0–3 clinical profiles (A, top); cloud of individuals sorted by CGI-I outcome (light gray = good, dark gray = moderate, and black = poor improvement) (B, bottom). Two dimensions explain more than 90% of the variance in the multiple correspondence analysis of the clinical variables. The horizontal dimension explains 75% of the variance and corresponds to the child symptomatic dimension (A). This dimension is oriented from the left (no symptoms) to the right (severe impairments). The vertical dimension explains 18% of the variance and is related to the relationship. This dimension is oriented from an overinvolved (bottom) to an underinvolved (top) relationship. Three clinical profiles were distinguished according to severity (Ellipses C1, C2, and C3).

TABLE 1. *Referral and DC 0–3 Diagnosis* ($N = 102$)

Referral	%
Setting of referral	
Well-baby clinic	44
Maternity	26
Other (pediatrician, perinatal network, parents' initiative)	30
Reasons of referral at first consultation*	
Sleep disorders	28
Anxiety–fears	26
Cry	14
Parental skill problem	14
Postpartum depression	39
Eating problem	18
Parental conflicts	15
Neonatal problems	6
Principal reason of referral	
Postpartum depression	28
Sleep disorders	21
Eating problems	12
DC 0–3 diagnosis	
Axis I: Primary diagnosis	
Traumatic stress disorder	3
Anxiety disorder	32
Mixed disorder of emotional expressiveness	17
Adjustment disorder	3
Regulatory disorder	4
Sleep behavior disorder	3
Eating behavior disorder	9
Other diagnosis	6
No diagnosis	23
Axis II: Relationship disturbance (PIRGAS > 40)	
Overinvolved	9
Underinvolved	16
Anxious/Tense	5
Angry/Hostile	5
No trouble	66
Infant pattern	
Sleep disorder	53
Eating disorder	39
Inconsolable cry	21
Rhythm problem	20
Attention: hypervigilant/gaze-avoidant/poor eye contact/adapted	22/8/12/59
Behavior: calm/difficulty to self-soothe/withdrawal	55/33/12
Interaction pattern	
Behavior quality: suitable/partially suitable/nonsuitable	28/57/12
Affective tone: suitable/partially suitable/nonsuitable	26/61/13
Psychological involvement: suitable/partially suitable/nonsuitable	15/57/28

CGI-I = Clinical Global Impression–Improvement; PIRGAS = Parent–Infant Relationship Global Assessment Scale.
*possibly associated.

pathology (e.g., postpartum depression). The interaction modalities (Axis II) were typically under- rather than overinvolved; in most cases, no relational disorder was present.

The most frequent types of therapeutic interventions were dyadic consultations without the father (54%) or dyadic consultations with the father present occasionally (28%). Triadic consultations were done in only 17% of cases. In 37% of the cases, parent–baby therapy was conducted; this therapeutic intervention indicates consistent psychodynamic work therapy with the family. Therapeutic approaches with other participants were used with individuals or small groups with a pediatric nurse (46%), psychologist (15.7%), occupational therapist (5%), and postnatal network (21%) according to difficulties of the infant, the parents, or in the relationship. In 90% of the cases, the duration of treatment was less than 1 year; 51% of infants had only two to five sessions, 16% received longer treatment ($\geq$10 sessions). A good therapeutic alliance was present in 80% of the cases. The outcome of the modified CGI-I was good/moderate/poor in 67.6, 25.5, and 6.9% of the cases, respectively.

Clinical Profiles Based on DC 0–3 Axes I and II and Associated Variables

Two main factors explaining more than 90% of the variance emerged from the first multiple-correspondence analyses on the infant clinical-exam variables. As can be seen in Figure 1A, the horizontal dimension (Axis 1) explaining 74% of the variance corresponds to the child symptomatic dimension. An evolution can be observed from no symptoms (on the left) to severe impairment (on the right). The vertical dimension (Axis 2) explaining 18% of the variance concerns relationship characteristics and evolves from overinvolved (bottom) to underinvolved (top). Three clinical profiles could be distinguished. The first one presented a better clinical profile (C1, Figure 1A), with no infant symptoms. These referrals were due to parental psychopathology or trauma and diagnosis on Axis II. Cases with the second profile presented mixed symptomatology (C2, Figure 1A), with moderate child clinical symptoms and overinvolved relating. The last profile was characterized by severe clinical symptoms and underinvolved relating (C3, Figure 1A). This third profile corresponds to (a) developmental difficulties at risk for becoming a developmental disorder or (b) parents with severe attachment trouble, underinvolvement in the relationship, or both.

Then we studied variables associated with the two main clinical dimensions and/or the three clinical profiles described earlier. Parental background—in particular, parental stress—contributed to 21% of the variance on the clinical symptoms/horizontal dimension and 18% of the variance on the interaction/vertical dimension. This influence was even more important when combined with cumulative stress (e.g., being an orphan, trauma, mother's grief, father's grief, separation, deprivation, sexual abuse, or physical abuse). When parents presented more than three stressors in their background, the infant's clinical profile tended to be severe (Profile C3); however, the infant's clinical profile also could be severe without prenatal stress. With regard to the mother's psychopathology, maternal depression and borderline personality disorder most significantly influenced the clinical profiles; these characteristics explained 12.7 and 11%, respectively, of the variance in the clinical symptoms/horizontal dimension. Finally, conjugal conflict and father's absence contributed to the horizontal dimension of clinical symptoms' variance by 8.8 and 7.4%, respectively. Of note, sex, age, family structure, siblings, parental education, parental migration, other parent background, mother psychopathology, and birth complications did not show any notable association with the infant's clinical profile.

As expected, the CGI-I outcome explained 21% of the variance. As shown in Figure 1B, a good outcome (light gray) was noted primarily for patients with Profiles C1 or C2. Only 7 patients showed a poor outcome (black); all of these patients belonged to the third/severe infant clinical profile.

Profiles of Treatment and Associated Variables

Therapeutic proposal variables included in the second analysis were the type of therapeutic intervention, treatment duration, number of consultations, type of professional (nurse, psychologist, prenatal worker, or occupational therapist), parent–baby psychotherapy, and therapeutic alliance. Two main dimensions emerged to explain 89% of the variance. The first dimension represented 78% of the variance and summarized the time variables (duration of treatment and number of sessions). The second dimension represented 11% of the variance and included the type of therapeutic intervention. In sum, this analysis provided results that are consistent with expectation: the longer the duration of healthcare, the more therapeutic action observed. Using the two therapeutic dimensions and the dependent variables described previously revealed that only parental background contributed to the variance; parental trauma represented 14% of the variance on the second dimension. With regard to the outcome, a poor outcome was associated with brief interventions. A moderate outcome was associated with brief and moderate interventions. A good outcome was associated with moderate and long interventions.

DISCUSSION

Based on the review of the existing literature, the current study is the first one to our knowledge that focuses on infants younger than 1 year of age. The results show that the clinical profiles of infants younger than 1 year differ from those of 2- to 3-year-old children (Keren et al., 2001; Guédeney et al., 2003; Skovgaard et al., 2007). They also support the view that the two age groups are not on the same continuum (Figure 1). Three clinical profiles related to the outcomes were clearly distinguishable. The first profile, which lacked infant symptoms, was associated with the population of mothers or parents who sought help for their own symptoms, worries, and difficulties. This profile was correlated with good outcomes; the dyad was reactive, and therapeutic alliance was easily achieved. The second profile, in which mixed infant and relationship symptoms were noted, was associated with parents who partially recognized their infants' difficulties and tried to support their infants by overinvolved relating. This population was found to have a favorable or unfavorable outcome depending in part on the duration of the therapeutic intervention. The third profile, which had the most severe symptoms, was associated with risk for developmental disorders or delays; however, such problems could not be confirmed over such a short study period. Parental relationships in this profile were primarily underinvolved, and parental psychopathology (e.g., depression, borderline, or attachment disorders) was frequently noted. However, this profile also included cases of developmental difficulty without parental problems. These infants may be at risk for more severe psychopathology (pervasive developmental disorders or mental retardation), as proposed by studies that have focused on sustained withdrawal behavior in infants (Dollberg, Feldman, Keren, & Guedeney, 2006; A. Guedeney, Foucault, Bougen, Larroque, & Mentré, 2007). With regard to the associated variables, the most striking observations were (a) the poor specificity of the effect of parental/maternal

psychopathology on both outcome and clinical profiles and (b) the nonspecific predictive value of parental trauma. For example, maternal psychopathology (including maternal depression) did not interact with the infant's clinical profile in this sample. The variability in the impact of maternal depression on child development and behavior (Cohn, Campbell, Matias, & Hopkins, 1990; Field, Healy, & Goldstein, 1988) is highlighted. Only parental trauma influenced the outcome. As in other psychopathology (Field et al., 2003) and animal models (Meaney & Szyf, 2005), the accumulation of trauma was more significant than was the nature of the trauma itself.

This study has several limitations, including (a) the presence of biased referrals (e.g., ambulatory, higher socioeconomic status); (b) the lack of standardized treatment; (c) the lack of interrater reliability for this sample; (d) the use of an earlier version of the DC 0–3 that was revised in 2005 because of issues regarding the establishment of reliability (Emde & Wise, 2003) [e.g., in the French validation study, when "blind" diagnosis established from record forms were compared with those established by clinical consensus, κ coefficients ranged from 0.49 to 0.56 (N. Guedeney et al., 2003)]; (e) the use of correspondence analysis that does not permit the calculation of statistical significance; (f) the lack of external validity for the outcome assessment (not blind); and (g) the lack of a control group (e.g., infants aged 1 year and older). Therefore, this study should be regarded as a descriptive preliminary investigation and a useful starting point for more rigorous research in this important area. It was established that three clinical profiles and outcomes could be distinguished in this sample of children younger than 1 year of age. These preliminary findings emphasize the importance of early intervention, particularly for children at risk for persistent psychopathology.

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