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Increased frequency and service delivery for children with pervasive developmental disorders

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Many investigators have reported the increasing incidence of pervasive developmental disorders (PDD), noting that this is probably due to more precise diagnoses, as a result of professionals' increased awareness and knowledge, as well as increased public awareness. Child mental health services are usually the first to examine these patients and consequently are required to deal with this increase on a practical basis. The aim of this study is to investigate the factors which may be responsible for this increase in PDD cases in a community mental health centre over a ten year period and to examine whether this has led to a differentiation in service delivery. Consequently, two sets of factors are investigated: factors pertaining to the children themselves, as well as their families and factors related to service provision and delivery. 48 children, aged between 2 and 6 years (Mean: 3,5 yrs) with pervasive developmental disorder, as well as their families are divided into two groups according to year of intake. Data collected from patient files included prenatal and perinatal information; medical the and developmental history; family functioning; and hereditary factors. Data from the Service included professionals involved in each case; number of diagnostic sessions; referral for further examinations; patient's symptoms and level of functioning; cognitive functioning; recommendations and outcome. There was no significant difference in age at intake between groups. The number of cases with pervasive developmental disorder has doubled over a ten year period at our Service. There was no significant difference between groups, with regard to conception, perinatal, developmental and medical histories. There is a trend for increased non-medical referrals. Service delivery has not differentiated over the ten year period. In conclusion, no specific factors were identified to justify the increase in PDD cases at our Service over a ten year period, however the trend for more non-medical referrals seems to imply a rise in public awareness of these disorders. Despite augmented patient intake without the complementary increase in staff, service provision at our setting has remained stable, delivered according to a multidisciplinary model and designed according to individual patient needs.

Key words: pervasive developmental disorders, community services, service provision, frequency

Introduction

Recent investigations on the epidemiology of pervasive developmental disorders (PDD), or more specifically autistic spectrum disorders (ASD), show that the incidence is much higher than previously thought. Child mental health services worldwide report a significant increase in children with these disorders particularly in the past ten years.¹⁻⁸ PDD incidence was reported as being between 9 and 15 in 10,000 births in various parts of the world.⁹⁻¹¹ In a recent article, Fombonne⁴ proposes that the best estimate for the prevalence of all autistic spectrum disorders is close to 0.6%.

Most researchers seem to agree that this significant increase in incidence of PDD is probably due to more precise diagnoses, as a result of professionals' increased awareness and knowledge, increased public awareness, as well as the fact that this diagnostic entity includes more diagnostic categories, such as Asperger's syndrome. Although the possibility of a "true increase" is not entirely ruled out, there is no evidence for this from available data.⁴

While the debate for the causes of this observed increase continues, child mental health services are required to deal with this issue on a practical basis. There is considerable concern about the response of service providers, particularly in the public sector.¹² In many countries, including Greece, this increased demand in service provision is not accompanied by a corresponding increase in funding or support, which is necessary to provide the appropriate early intervention for these patients.^{13,14}

In Greece, these are vital issues, since appropriate services for PDD children were inadequate, even before the increased demand for service delivery of recent years. Service providers and policy makers are still not in tune with demand, and consequently many of these children are not receiving the appropriate intervention at the appropriate time. Community Mental Health Centres are often the first to diagnose these patients and a heavy responsibility is placed on the professionals to direct them to therapeutic and educational settings, which are often difficult to find or already replete.

The Child and Adolescent Unit of the Community Mental Health Centre of Byron-Kessariani is a section of the University of Athens 1st Psychiatric Department, serving the inhabitants of four Athenian municipalities for over 25 years. In the past few years an increase in new cases presenting PDD has been observed.

The aim of this study is to investigate the factors that may be responsible for this increase in PDD cases at our Centre over the past 10 years and to examine whether this has led to a differentiation in service delivery. Consequently, two sets of factors are investigated: factors pertaining to the children themselves, as well as their families and factors related to service provision and delivery.

The hypotheses which were investigated were as follows:

1. The cases with diagnosed PDD will have increased significantly over a ten year period.
2. Children with PDD will now be chronologically younger at intake as a result of increased public and professional awareness of these disorders.
3. Furthermore, over a ten year period, more children with higher functioning PDD will be observed, since these are now more easily identifiable.
4. Their parents will have a more precise demand at intake: more concerned with the child's behaviour and communication, as a result of increased public awareness.
5. Service delivery will be differentiated to meet the increased demand.

Material and method

Sample

Sample consisted of 48 children between 2 and 6 years of age (Mean age: 3;5 yrs), who had applied to our Service and had been diagnosed with PDD, according to ICD-10 criteria.¹⁵ The children were divided into two groups according to the year of intake:

Group A: Intake in years 1995–1999.

Group B: Intake in years 2000–2004.

In the whole sample (Groups A and B), 18.8% were girls, whilst 81.3% were boys, making the proportion

of girls to boys 1:4. There was no significant difference in the gender distribution of the two groups (Fisher's exact test $p=0.228$).

Materials and procedure

The following data were collected from patient files: gender; age at intake; symptoms referred by parents; prenatal and perinatal information; patient's medical history; developmental history; feeding history; parents' educational and socio-economic status; ethnic background and home language/s; family situation; siblings and order among siblings; hereditary and familial factors; school/nursery; stress-inducing factors; referral source; visits to other doctors/services.

Data from the Service included: professionals involved in each case (child psychiatrist, psychologist, speech therapist, occupational therapist, social worker); number of diagnostic sessions; referral for further examinations (neurological, endocrinological, genetic, audiological); patient's symptoms at the diagnostic procedure (behaviour, attention, communication, language, etc.); level of functioning; cognitive functioning (through IQ testing); recommendations made to the family for his/her remediation; outcome.

All patient files were re-examined at the present time by a child psychiatrist and initial diagnosis was re-confirmed in all cases. Furthermore, the authors certify that there are no known conflicts of interest and certify responsibility for the ensuing manuscript.

Data analysis

Statistical analysis was conducted through SPSS.10. Non parametric tests were used to compare the two groups. Normality criterion for skew and kurtosis was $z < 1.96$.¹⁶ Since this is an exploratory research study, all inferences were based on a $p < 0.05$ level of significance. Further exploratory correlations were calculated in order to examine the relationship between continuous variables. In all cases the analyses were two-tailed.

Results

With regard to the whole sample's ($N=48$) general characteristics, the following were found: Mean age at intake was 41.23 months (3 years 5 months), $SD=13.17$, range between 24–80 months. There was no significant difference in age at intake between Group A and Group B (Mann Whitney $U=203.00$, $p=0.569$).

Group A consisted of 13 children (27.1%) and Group B consisted of 35 children (72.9% of the sample), an increase, which is statistically significant (Binomial test $p=0.002$). The number of children presenting PDD has doubled, since they make up 2.3% of all cases applying to our Service in the past five years, whereas they had made up 1.1% of the cases in the previous 5 years (figure 1). It is worth noting that in 1995 there were no new cases, while in 2003 and 2004 they constitute 43.8% of the whole sample.

There was no significant difference between groups, with regard to conception (Fisher's exact test $p=0.467$), pregnancy ($\chi^2=1.600$, $df=2$, $p=0.449$) and birth ($\chi^2=3.088$, $df=2$, $p=0.214$). Most of the children (95.6%) showed no complications in conception, neither during pregnancy (81.8%). Over half (55.6%) had a normal birth, 37.8% were born through caesarian section, whilst 6.7% presented other complications. Furthermore, 88.6% were full-term babies, and Mean

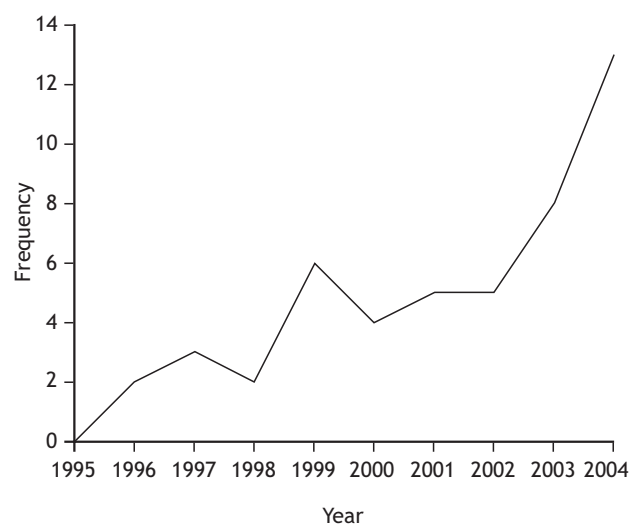


Figure 1. Polygon for number of cases for each year of intake.

birth weight was 3341 grams (SD=387.6, range 2440–4400), 93% of the infants having a birth weight within normal limits. Over half of the sample (52.3%) did not show any perinatal problems: 38.6% had some degree of jaundice, whilst 9.1% had other problems. Two of the infants were placed in an incubator. Otitis media was noted in 47.6% of the sample, while 9.5% had epileptic episodes in their medical histories. No other illnesses or accidents were reported at significantly increased rates.

With regard to feeding histories, no significant differences were found between the two Groups with regard to lactation (Fisher's exact test $p=0.706$), eating solids (Fisher's exact test $p=0.358$) and being selective in food (Fisher's exact test $p=0.226$). As a whole, 70.8% of the newborns were breast fed. Following that, their parents report feeding difficulties in 71.9% of the whole sample, many of the children still being highly selective in food, while a high percentage of the children (21.2%) were still not eating solids.

No significant differences were found between Groups in language development (Fisher's exact test, $p=0.105$). Taking the sample as a whole, 53.2% was reported to have spoken first words at around one year of age and 19.1% after the second year. However, 27.7% of the children were non-verbal at intake. Over one child in five (22.2%) had regressed in their language, and 28.6% were echolalic.

No statistical significance was found between Groups regarding toilet training (Fisher's exact test $p=0.722$). Only 34.1% of the sample was toilet trained at the time of intake. Children in Group B walked earlier (13 months) than those in Group A (15.3 months), a difference which was statistically significant (Mann Whitney $U=98.50$, $p=0.030$).

Half of the sample (50%) was not yet attending nursery or kindergarten classes, at intake. The rest were attending normal nurseries or kindergartens in the catchment's area. No significant differences were found between Groups ($\chi^2=1.214$, $df=2$, $p=0.545$). Most of the children had commenced school after their third birthday. Only 2 of the children had ever been separated for some reason from their parents for any length of time (over one month).

No significant differences were found between Groups with respect to father's ($\chi^2=1.028$, $df=3$, $p=0.794$) or mother's ($\chi^2=0.952$, $df=3$, $p=0.813$) educational levels. Comprehensive data showed the following: the fathers' and mothers' educational levels were low in 20% (Group A) and 12.5% (Group B) of the cases, medium in 17.9% and 17.5% respectively, relatively high (six forms in high school) in 25.6% and 35% respectively and high (further education or university degrees) in 36% and 35% respectively.

Few parents (2%) were unemployed and a high percentage (37.5%) of mothers was housewives. Many parents (20.8% of fathers, 16.7% of mothers) were immigrants. No significant differences were found between Groups regarding father's origin (Fisher's exact test $p=0.425$) or mother's origin (Fisher's exact test $p=0.659$). Almost 19% of the families speak another language than Greek in the home or use two languages. No differences were found in age at intake between Greek and immigrant children (Mann Whitney $U=103.50$, $p=0.403$).

Regarding family's functioning, the majority (95.7%) of the parents live together and 81.8% describe their relationship as good. In 21.4% of the families there is a related problem in the family: 3 children (9.4%) have a sibling with a related problem (learning difficulty, specific language disorder and autism). However, 44.7% of the children do not have siblings, although Group B have significantly more siblings than Group A (Mann Whitney $U=107.50$, $p=0.004$).

Although no significant differences were found between Groups A and B with respect to the paediatrician and other medical services as a main source of referral (Fisher's exact test $p=0.136$), there is an increase in non-medical sources of referral, such as the parents themselves or self-referral, school/nursery and other clients. While medical referrals increase from 12 to 23 from one time period to the next, the non-medical referrals increased from 1 to 11 (table 1). Although this result was not statistically significant, due to the small sample size, it may be seen as a trend. Taking the sample as a whole, 34% of the parents were referred to the Centre by their paediatrician and 40.4% were referred by other medical

Table 1. Referral source for children of Group A and Group B

<i>Referral</i>	<i>Group A</i>	<i>Group B</i>	<i>Total</i>	<i>Percentage</i>
<i>Medical</i>				
Paediatrician	6	10	16	33.3
Other services	6	13	19	39.6
Total	12	23	35	74.5
<i>Non medical</i>				
Self-referral	0	5	5	10.4
Community	0	2	2	4.2
School	1	4	5	10.4
Total	1	11	12	25.5
<i>Missing</i>	0	1	1	2.1
Total	13	35	48	100.0

services. Only 10.4% were referred by their school or nursery, whereas 10.4% of the parents were self-referred.

With regard to service delivery, it was found that there were no differences between groups with regard to intake demand (Fisher's exact test, $p>0.05$), and whether the families had previously applied to another service ($\chi^2=2.173$, $df=4$, $p=0.704$). During intake, most parents (93.3%) showed concern about their child's speech development, whereas 47.6% were specifically concerned about their child's communication with the environment, a difference which is statistically significant (Mc Nemar test, $p<0.001$), suggesting that these parents were more aware of their children's communication needs. The parents of four children mentioned that they were worried about their child's regression, either in speech or in feeding. Parents of over half of the children (55.8%) reported behaviour disorders in their children, 31% describing their child as "overactive". None of the parents used the label "autistic" (table 2). Moreover, 40% of the parents of both Groups have visited another service before applying to our Service for help. In fact, 45% of these families have applied to several other mental health settings or doctors.

In our Service, the mean number of sessions for the diagnostic procedure was 4.3 sessions ($SD=1.7$, range 1–9). There was no statistical difference be-

tween Groups (Mann Whitney $U=161.00$, $p=0.146$). Over 70% of the children were examined by three professionals (child psychiatrist, psychologist and speech therapist). No statistical difference was found between Groups in the different professionals who assessed the children (Fisher's exact test, $p>0.05$). Ten children were offered therapeutic intervention at our Service. The median of sessions for these therapies was 39 sessions (range 6–279 sessions). A number (28.3%) of families in both Groups did not comply with our recommendations.

No significant differences were found between Groups regarding the childrens' symptoms at diagnosis ($\chi^2=4.850$, $df=6$, $p=0.563$). Regarding the whole sample, the childrens' symptoms during diagnosis may be described as follows: 91.3% presented stereotypic behaviour, 43.5% presented echolalia, 58.7% had no functional speech, 54.3% made no eye contact, 37% had no symbolic play, 51% presented stereotypic play and the rest had poor and unimaginative play, 60.9% were overactive.

Formal cognitive testing was possible on only 19.1% of the sample, where the non-verbal Merrill-Palmer Test was used. Thirty percent of the children tested had a low non-verbal IQ score (less than 70). An approximate level of functioning, on a five-point scale, was estimated for each case, through all of the accumulated clinical data (table 3). No significant differences were found between Groups with regard to

Table 2. Parental concern during intake for children of Group A and Group B

<i>Parental concern</i>	<i>Group A N (%)</i>	<i>Group B N (%)</i>	<i>Total N (%)</i>
Language delay	12 (92.31)	30 (85.71)	42 (87.5)
Regression	0 (0)	4 (11.43)	4 (8.33)
Communication probs	8 (61.54)	12 (34.29)	20 (41.67)
Behaviour probs	6 (46.15)	18 (51.43)	24 (50.0)
Overactivity	3 (23.08)	10 (28.57)	13 (27.08)

N.B. Some parents did not provide answers to all questions because they were non-applicable

Table 3. Level of functioning for children of Group A and Group B

<i>Level of functioning</i>	<i>Group A N (%)</i>	<i>Group B N (%)</i>	<i>Total N (%)</i>
1. Very high	0 (0)	0 (0)	0 (0)
2. High	2 (16.67)	6 (17.65)	8 (17.39)
3. Moderate	6 (50)	12 (35.29)	18 (39.13)
4. Low	2 (16.67)	14 (41.18)	16 (34.78)
5. Very low	2 (16.67)	2 (5.88)	5 (10.87)
Total percentage	12 (26.09)	34 (73.91)	46 (100.0)

their level of functioning (Mann Whitney $U=194.00$, $p=0.791$). The lower the child's level of functioning, the earlier his/her parents apply to our Service for help (Spearman's correlation, $r_s=0.44$, $df=44$, $p=0.002$).

The following recommendations were made after completion of the diagnostic procedure: 44.4% were advised to attend normal school with supplementary special therapies on a one-to-one basis, 38.9% were advised to attend a more specialised therapeutic setting and 13.9% were advised to attend a special school. No significant differences were found in the recommendations made to the parents of Group A and Group B ($\chi^2=0.420$, $df=2$, $p=0.811$).

Discussion

This study confirms that the frequency of children with PDD applying to our Service in the past ten years has increased significantly. New cases with PDD applying to our Service increased approximately 100% from one five year period to the other, whereas in the same period, the general rise in new cases was 28%. Consequently, although cases with PDD con-

sisted of 1.13% of all new cases from 1995–1999, they increased to 2.3% of new cases from 2000–2004.

Research in other countries has shown similar results.^{17,18,11} In particular, Baker's¹⁸ research in a public service for children and adolescents in Australia, shows similar results to those presented in this study: in 1989, 17 new cases of autism increased to 45 cases in 1997.

Most researchers have identified factors, such as improved screening tools, changes in diagnostic criteria and increased public awareness to justify this increase, although they do not completely rule out the possibility of a "true" increase. Our study, whose subjects were the clinical cases presenting themselves at a community mental health centre, attempts to investigate some of the factors which may have attributed to this rise in frequency of new cases with PDD.

If the rise in frequency could be attributed to improved diagnostic tools, changes in criteria and increased public awareness, one would have expected that these would be reflected in service delivery at our Centre. For instance, the increase could

have been a result of more sophisticated diagnostic tools, more experienced or specialized personnel or a much more sophisticated referral system, in the form of a more sensitized and aware school system or community, who would be more capable of identifying these disorders.

Although our results show that referrals from school (10% of the cases) or from the parents themselves (15% of the cases) did not change significantly over time, there appeared to be an increase in non-medical referrals from one time period to the next, which however was not statistically significant due to the small sample. Consequently, it could be argued that there is a tendency in the last few years for increased awareness of these issues by parents, schools and other community members. Furthermore, there is an indication that parents are more aware of children's developmental milestones, since the children in Group B walked significantly earlier than those in Group A, indicating that those parents were not appeased by this developmental milestone.

Our second and third hypotheses were not confirmed by our data: the children in Group B were not significantly younger at intake, nor did these children have a higher level of functioning than those in Group A (table 3), something which would have reflected a true increase in public awareness of these issues. It is interesting to note that most children from both groups are referred by their pediatrician or other medical sources, which refer children equally from all levels of functioning. Children who are referred by the school seem to

have a higher level of functioning and are older, but owing to the sample size, no significant difference was found (table 4).

Conversely, many of the parents came to our Service principally with the demand that their child was "language delayed", and not concerning the child's communication, behaviour or social skills. To compound this finding, a large number of families (40%) had already visited other services concerning their child's problem and more than one family in four (28%) discontinued their co-operation with our Service of their own accord, although this rate is lower than that observed for the rest of the patients attending our Service, which is at 45.7%.¹⁹ It appears that many families are not able to accept the diagnosis of PDD easily, and at this relatively early stage in their child's life, they are still unable to come to terms with the severity of their child's problem. In Greece, the national medical system allows the patient to seek a second or even third medical opinion from various public medical services (Community Health Centres, Paediatric Hospitals, etc.) or even from private practitioners.

In this study, family and environmental factors, which possibly contributed to the child's disorder, were also investigated. Some researchers have suggested that prenatal and perinatal risk factors, as well as adverse environmental factors, may contribute negatively to an already sensitive biochemical make-up, something which may partly explain the rising frequency in these cases.^{20,21} Furthermore, these children may have family histories of mental illness, substance abuse and domestic violence.²²

Table 4. Crosstabulation between level of functioning and referral source for children who are referring by the school

Count		Referral					Total
		1	2	3	4	5	
Level of functioning	2	1	3		3		7
	3	1	5		2	10	18
	4	3	5			8	16
	5		3	1			4
Total		5	16	1	5	18	45

1: Self-referral, 2: Paediatrician, 3: Community, 4: School, 5: Other services

In our study we focused on stress-inducing events or adverse family functioning as a possible compounding factor in these disorders. However, our results showed a remarkable lack of stressful factors in our sample's children and their families. Most of the families live harmoniously together, with no blatant socio-economic problems and no other reported stress-inducing factors. Although there are a relatively large number of immigrant families in our sample, this seems to reflect the evolutions in greek society.

Our fifth hypothesis concerned our Service itself and its contribution to this increase in frequency, for instance, whether there are new members in the professional team, more specialized diagnostic tools or indeed any differences in the diagnostic procedure.²³ However, yet again the results of our study did not confirm this: the clinicians are the same people they were 10 years ago, although inevitably more experienced. No new diagnostic tools are being used. The diagnostic procedure has not changed and is strictly multidisciplinary. Even the mean number of diagnostic sessions has remained stable over the years (4.3 sessions) despite the increased demand. In fact, our study highlights the fact that even though our clinical team has been working in the community for over twenty years and the number of patients is on a constant increase, service delivery has not changed during these years. In a study examining service delivery for these disorders in the USA, it was observed that there was a 40% decrease in mean service days for these disorders over the past few years.²⁴

Most of the patients (70%) were examined by a child psychiatrist, psychologist and speech therapist only. More than 20% of the total sample was offered therapy intervention at our Service. These were usually cases who presented other coexistent factors,

such as inadequate parental care, stressful life events or other compounding medical factors, which needed further investigation.

In conclusion, this study offers some preliminary data on the observed rise in frequency of patients with pervasive developmental disorders applying to our community-based service. Although the number of cases in our study is relatively small, it is representative of the frequency in our catchments area, which consists of approximately 600,000 inhabitants in the inner Athens urban area.

Our data does not indicate any reasons for this increase, however the only plausible explanation, which may only be described as a tendency, is that of increased public awareness. On the other hand, our study shows that, despite the increase in patient intake without the complementary increase in staff at our Service, services are still delivered according to our original multidisciplinary model of conduct and according to individual patient needs. Neither more sensitive diagnostic tools, nor more inclusive diagnostic criteria seemed to play a part in this increased diagnosis.

Limitations

Our study reports data from a specific community mental health service and therefore a considerable limitation is that our sample consists of few cases. More research is necessary to generalize these findings with larger samples and in other areas and in other services throughout Greece. Epidemiological studies are necessary tools for service providers, but longitudinal research is also necessary since it allows the evaluation of service delivery and provision with respect to individual patient needs, something which is urgently needed by the clinician in the first line.

Αυξημένη προσέλευση και παροχή υπηρεσιών σε παιδιά με διάχυτες αναπτυξιακές διαταραχές

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Σε πολλές έρευνες έχει αναφερθεί η αύξηση της συχνότητας των περιστατικών με διάχυτη αναπτυξιακή διαταραχή και οι περισσότεροι ερευνητές συμφωνούν ότι αυτή η αύξηση πιθανόν να οφείλεται σε ακριβέστερη διάγνωση που είναι αποτέλεσμα της αυξημένης γνώσης και ευαισθητοποίησης των επαγγελματιών υγείας για αυτή τη διαγνωστική οντότητα, καθώς και της αυξημένης ευαισθητοποίησης του κοινού. Παρόλο που δεν έχουν αποκλεισθεί άλλες αιτίες για αυτή την αύξηση, δεν υπάρχει καμιά σαφής ένδειξη από τις έρευνες αυτή τη στιγμή. Οι υπηρεσίες ψυχικής υγείας παιδιών είναι συνήθως οι πρώτες που καλούνται να διαγνώσουν αυτά τα περιστατικά και συνεπώς να τα αντιμετωπίσουν σε πρακτικό επίπεδο. Στην Ελλάδα οι υπηρεσίες που εξυπηρετούν τα παιδιά με διάχυτη αναπτυξιακή διαταραχή και τις οικογένειες τους ήταν ανεπαρκείς, ακόμα πριν από την αυξημένη ζήτηση για παροχή υπηρεσιών των τελευταίων χρόνων. Πολλά από αυτά τα περιστατικά και οι οικογένειες τους δεν τυγχάνουν της κατάλληλης παρέμβασης έγκαιρα. Οι επαγγελματίες στα κέντρα κοινωνικής ψυχικής υγιεινής φέρουν μεγάλη ευθύνη στην καθοδήγηση αυτών των ασθενών στα κατάλληλα θεραπευτικά και εκπαιδευτικά πλαίσια, που στο δημόσιο τομέα είναι δυσεύρετα ή δεν έχουν διαθέσιμες θέσεις. Ο σκοπός της μελέτης αυτής είναι η διερεύνηση των παραγόντων που μπορεί να οδηγούν σε αυτήν την παρατηρηθείσα αύξηση σε ένα κοινοτικό κέντρο ψυχικής υγείας κατά τη διάρκεια μιας δεκαετίας, καθώς και οι πιθανές επιπτώσεις της στην παροχή υπηρεσιών. Στην παρούσα έρευνα μελετήθηκαν δύο ξεχωριστές ενότητες: παράγοντες που αφορούν τα παιδιά και τις οικογένειες τους και παράγοντες που αφορούν την παροχή υπηρεσιών της συγκεκριμένης υπηρεσίας. 48 παιδιά (2–6 ετών, μέση ηλικία 3,5 έτη) με τη διάγνωση της διάχυτης αναπτυξιακής διαταραχής χωρίστηκαν σε δύο ομάδες ανάλογα με το χρόνο παραπομπής τους. Τα εξής στοιχεία συνελέγησαν από τους φακέλους των ασθενών που τηρούνται στην υπηρεσία: φύλο, ηλικία κατά την παραπομπή, συμπτώματα σύμφωνα με τους γονείς, προγεννητικά και περιγεννητικά συμβάντα, ιατρικό και αναπτυξιακό ιστορικό του παιδιού, εκπαίδευση και κοινωνικο-οικονομική κατάσταση των γονέων, εθνικότητα, οικογενειακή κατάσταση και λειτουργία, κληρονομικοί παράγοντες, στρεσογόνα γεγονότα, πηγή παραπομπής, πληροφορίες για το σχολείο και άλλες υπηρεσίες που ήδη είχαν επισκεφθεί. Τα στοιχεία από την υπηρεσία αφορούν τους επαγγελματίες ψυχικής υγείας που ενεπλάκησαν σε κάθε περιστατικό (παιδοψυχίατρος, ψυχολόγος, κοινωνικός λειτουργός, λογοπεδικός, εργοθεραπευτής), τον αριθμό των διαγνωστικών συνεδριών, την παραπομπή για άλλες ιατρικές εξετάσεις (νευρολογική, ενδοκρινολογική, γενετική, ακουσολογική), τα συμπτώματα του παιδιού κατά τη διαγνωστική φάση (συμπεριφορά, επικοινωνία, λόγος, κ.ά), το επίπεδο λειτουργίας και τη γνωστική λειτουργία, τις προτάσεις στους γονείς για την παρέμβαση και την έκβαση. Δεν υπήρχε στατιστικά σημαντική διαφορά ανάμεσα στις δύο ομάδες όσον αφορά την ηλικία του παιδιού κατά την παραπομπή. Τα περιστατικά με διάχυτη αναπτυξιακή διαταραχή έχουν διπλασιαστεί κατά τη διάρκεια μιας δεκαετίας. Παρόλ' αυτά δεν υπάρχει κάποια σαφής ένδειξη για την αιτία αυτής της αύξησης στους παράγοντες που διερευνήθηκαν, εκτός από μια τάση για μη ιατρικές παραπομπές. Η παροχή υπηρεσιών δεν έχει διαφοροποιηθεί μέσα σ' αυτό το χρονικό διάστημα. Συμπερασματικά, δεν εντοπίστηκαν συγκεκριμένοι παράγοντες που θα μπορούσαν να αιτιολογήσουν την αύξηση των παιδιών με διάχυτη αναπτυξιακή διαταραχή στην συγκεκριμένη υπηρεσία κατά τη διάρκεια μιας δεκαετίας. Η τάση για μη-ιατρικές παραπομπές ίσως να δείχνει μια μεγαλύτερη ευαισθητοποίηση του κοινού. Παρόλο που τα περιστατικά στην υπηρεσία έχουν διπλασιαστεί, χωρίς την παράλληλη αύξηση του αριθμού των επαγγελματιών που εργάζονται σ' αυτή, η παροχή υπηρεσιών έχει παραμείνει σταθερή, σύμφωνα με το διεπιστημονικό μοντέλο, και βασίζεται στις ειδικές ανάγκες του κάθε ασθενούς και της οικογένειάς του.

Λέξεις ευρετηρίου: διάχυτες αναπτυξιακές διαταραχές, κοινοτικές υπηρεσίες, παροχή υπηρεσιών, συχνότητα

References

1. Chakrabarti S, Fombonne E. Pervasive developmental disorders in preschool children. *J Am Med Assoc* 2001, 285: 3093–3099
2. Chakrabarti S, Fombonne E. Pervasive developmental disorders in preschool children: confirmation of high prevalence. *Am J Psychiat* 2005, 162:1133–1141
3. Fombonne E. The prevalence of autism. *J Am Med Assoc* 2003, 289:1–3
4. Fombonne E. The changing epidemiology of autism. *J Appl Res Intellect* 2005, 18:281–294
5. Yeargin-Allsopp M, Rice C, Karapurkar T, Doernberg N, Boyle C, Murphy C. Prevalence of autism in a US metropolitan area. *J Am Med Assoc* 2003, 289:49–55
6. Eapen V, Mabrouk AA, Zoubeidi T, Yunis F. Prevalence of pervasive developmental disorders in preschool children in the UAE. *J Trop Pediatrics* 2007, 53:202–205
7. Oliveira G, Ataíde A, Marques C, Miguel TS, Coutinho AM, Mota-Vieira L et al. Epidemiology of autism spectrum disorder in Portugal: prevalence, clinical characterization, and medical conditions. *Dev Med Child Neurol* 2007, 49:726–733
8. Montiel-Nava C, Pena, JA. Epidemiological findings of pervasive developmental disorders in a Venezuelan study. *Autism* 2008, 12:191–202
9. Webb EVJ, Lobo S, Hervas A, Scourfield J, Fraser WI. The changing prevalence of autistic spectrum disorder in children attending mainstream schools in a Welsh education authority. *Dev Med Child Neurol* 1997, 45:377–384
10. Croen LA, Grether JK, Hoogstrate J, Selvin S. The changing prevalence of autism in California. *J Autism Dev Disord* 2002, 32:207–215
11. Lauritsen MB, Pedersen CB, Mortensen PB. The incidence and prevalence of pervasive developmental disorders: a Danish population-based study. *Psychol Med* 2004, 34:1339–1346
12. Bryson SA, Corrigan SK, McDonald TP, Holmes C. Characteristics of children with autism spectrum disorders who received services through community mental health centers. *Autism* 2008, 12:65–82
13. Cassidy A, McConkey R, Truesdale-Kennedy M, Slevin E. Preschoolers with autism spectrum disorders: the impact on families and the supports available to them. *Early Child Dev Care* 2008, 178:115–128
14. Corsello CM. Early intervention in autism. *Infant Young Child* 2005, 18:74–85
15. World Health Organization. International Classification of Diseases. 10th edition (ICD-10). *Mental and behavioural disorders, clinical descriptions and diagnostic guidelines*. Geneva: WHO, 1992
16. Tabachnick BG, Fidell LS. *Using multivariate statistics*. NY, HarperCollins, 1996
17. Gillberg C, Steffenburg S, Schaumann H. Is autism more common now than ten years ago? *Br J Psychiat* 1991, 158: 403–409
18. Baker HC. A comparison study of autism spectrum disorder referrals 1997 and 1989. *J Autism Dev Disord* 2002, 32:121–125
19. Lazaratou H, Anagnostopoulos DC, Vlassopoulos M, Tzavara C, Zelios G. Treatment compliance and early termination of therapy: a comparative study. *Psychother Psychosom* 2005, 90:5:1–9
20. Kolevzon A, Gross R, Reichenberg A. Prenatal and perinatal risk factors for autism. *Arch Pediat Adol Med* 2007, 161:326–333
21. Larsson HJ, Eaton WW, Madsen KM, Vestergaard M, Olesen AV, Agerbo E et al. Risk factors for autism: perinatal factors, parental psychiatric history, and socioeconomic status. *Am J Epidemiol* 2005, 161:916–925
22. Mandell DS, Walrath CM, Manteuffel B, Sgro G, Pinto-Martin J. Characteristics of children with autistic spectrum disorders served in comprehensive community-based mental health settings. *J Autism Dev Disord* 2005, 35:313–321
23. Spence SJ, Sharifi P, Wiznitzer M. Autism spectrum disorder: Screening, diagnosis and medical evaluation. *Semin Pediat Neurol* 2004, 11:186–195
24. Ruble LA, Heflinger CA, Renfrew JW, Saunders RC. Access and service use by children with autism spectrum disorders in medicaid managed care. *J Autism Dev Disord* 2005, 35:3–13

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