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Training of child and adolescent psychiatry fellows in autism and intellectual disability

N Marrus[*],
Washington University School of Medicine, USA

J Veenstra-Vander Weele,
Vanderbilt University, USA

J Hellings,
Ohio State University Nisonger Center, USA

K Stigler,
Indiana University School of Medicine

L Szymanski,
Boston Children's Hospital, USA

B King,
University of Washington School of Medicine and Seattle Children's Hospital, USA

L Carlisle,
University of Washington School of Medicine and Seattle Children's Hospital, USA

E. Cook,
University of Illinois at Chicago, USA

The AACAP Autism and Intellectual Disability Committee, and **JR Pruett Jr**
Washington University School of Medicine, USA

Abstract

Patients with autism spectrum disorders (ASDs) and intellectual disability (ID) can be clinically complex and often have limited access to psychiatric care. Because little is known about post-graduate clinical education in ASD and ID, we surveyed training directors of child and adolescent psychiatry (CAP) fellowship programs. On average, CAP directors reported 3 and 4 hours per year, respectively, of lectures in ASD and ID. Training directors commonly reported that trainees see 1–5 patients with ASD or ID per year for outpatient pharmacological management and inpatient treatment. Forty five percent of directors endorsed needing additional resources for training in ASD and ID, which, coupled with low didactic and clinical exposure, suggests that current training is inadequate.

Corresponding author: Natasha Marrus, Department of Psychiatry, Child and Adolescent Division, Washington University School of Medicine, 660 South Euclid Avenue, Box 8134, St. Louis, MO 63110, USA. marrusn@psychiatry.wustl.edu.

Keywords

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While obtaining child psychiatric services is challenging for the population at large, access is especially limited for children with developmental disabilities such as autism spectrum disorders (ASDs) and intellectual disability (ID) (Chiri and Warfield, 2011). This is particularly concerning given the elevated burden of psychiatric illness in these populations. Children with ID are estimated to have 3–4 times the rate of psychiatric illness compared to the general population (Einfeld et al., 2006), and a recent study showed that 43% of children with ASDs are prescribed psychotropic medications (Mandell et al., 2008). The estimated prevalence of developmental disabilities has risen in the past decade (Boyle et al., 2011), with the prevalence of ASD now estimated at 1 in 88 (CDC, 2012), emphasizing the importance of developing a well-trained workforce.

The scarcity of psychiatric resources for individuals with developmental disabilities is a chronic concern. In 1991, the American Psychiatric Association (APA) Task Force conducted a survey showing that 96% of Department of Mental Health/Department of Mental Retardation facilities in the United States struggled to recruit psychiatrists for individuals with ID (Syzmanski L, 1991). One reason cited for this problem was the lack of psychiatrists with sufficient training. In an accompanying survey of residency directors, the APA Task Force found that 8% of child and adolescent psychiatry (CAP) programs reported no training in ID and that much of the training offered was not mandatory.

Since the 1991 survey, there have been no published investigations of post-graduate psychiatric training in ASD or ID in the United States. Effective training in these conditions is vital to assuring the availability and quality of mental health care for these patients. To investigate current training in ASD and ID, the American Academy of Child and Adolescent Psychiatry (AACAP) Autism and Intellectual Disability Committee designed a web-based survey addressed to training directors of psychiatric residency and fellowship programs. The survey's goal was to provide insights into the evolution of training in ASD and ID and the anticipated expertise of future psychiatrists in these areas.

Methods

Subjects

Training directors from all ACGME-accredited training institutions — 182 general program directors and 124 CAP program directors — were emailed a link to the survey in August 2009. The initial email was followed by two reminders, allowing 5 weeks to respond. Respondents were anonymous, although they had the option of listing their affiliation. Participation was voluntary. Because of the limited response from the general program directors, (17%), only results from CAP program directors are reported.

Survey

The survey consisted of 19 multiple-choice and 5 free-response questions (Table 1) and was entered online using Survey Monkey, a website providing a web link to the survey. Questions focused on 1) educational exposure to ASD and ID through didactics, outpatient cases, and inpatient cases, 2) the nature and size of the programs, and 3) interest in additional resources. Questions regarding outpatient cases asked respondents to distinguish between on-site and off-site cases, where off-site cases referred to school consults or visits to specialty clinics or facilities. ID cases were defined as patients having ID without a coexisting ASD.

Analysis

Data were analyzed in Microsoft Excel (2007). Graphs were created using GraphPad Prism.

Results

Thirty percent of CAP training directors responded (37 respondents), giving an average program size of 8 fellows. All program directors reported lecture-based training, on average 4 hours/year of lectures in ASD and 3 hours/year of lectures in ID.

Questions addressed three types of on-site outpatient cases in ASD and ID: pharmacology, combined pharmacology and psychotherapy, and psychotherapy (Supplemental Figure 1). For pharmacology and combined treatment, a substantial proportion of training directors, between 44 and 67%, reported 1–5 cases/year for ASD and ID. Psychotherapy cases were even less common, as 47% of directors reported zero psychotherapy cases/year in either ASD or ID. Over 85% of programs also had off-site cases in ASD and ID. As with on-site outpatients, 1–5 cases/year was the most common single amount of patients (38% for ASD and 36% for ID). All programs directors reported outpatient experiences in ASD and ID.

Training directors endorsed a broad age range of patients equally divided between children (ages 4–12) and adolescents (ages 13–17). Adult patients were uncommon -- over 62% of CAP programs had no patients with ASD or ID over 18.

Training directors were asked about trainees' experiences in hospital settings, including inpatient, emergency room (ER), consult, and residential cases in ASD and ID (Supplemental Figure 2). For inpatient cases, directors most often reported either 1–5 cases/year or 6–10 cases/year, while 1–5 cases/year was the most common amount for ER and consult cases. Over 37% of CAP directors reported zero residential cases in ASD and ID. The number of patients with ASD versus ID was similar both in hospital settings and in outpatient settings.

Respondents were asked whether their program needed additional support, and 43% of CAP programs reported needing more resources. Multiple sites commented on the paucity of specialists, the lack of a clinic for developmental disabilities, and the need for greater funding.

Discussion

To our knowledge, this is the first survey since 1991 to investigate training in ID in US CAP fellowship programs. Our survey extends prior work, both by providing an estimate of educational activities in ASD and ID and by exploring for the first time CAP fellowship training in ASD.

Inclusion of ASD and ID in Curricula

All respondents reported some training in ASD and ID, suggesting improvement since 1991, when 8% of CAP programs reported no training in ID (Syzmanski L, 1991). However, a large percentage of CAP programs reported a low number of cases -- 1–5 cases/year for most types of outpatient and inpatient experiences and no cases/year of psychotherapy for ASD and ID. This limited clinical exposure is likely insufficient for trainees to become proficient in treating these patient groups.

Case numbers for ASD and ID were often similar. This observation is not surprising, given the similar prevalence of ASD and ID, 1% (CDC, 2012) and 2–3% (Hodapp and Dykens, 1996), respectively. As previously mentioned, both conditions have a higher prevalence of comorbid psychiatric disorders than the general population, raising the question of whether the amount of training is proportional to the psychiatric morbidity in these populations.

Implications of Current Training in ASD and ID

The ACGME requires training in developmental disabilities, but the amount is unspecified. Two general psychiatry residency programs have published data on intensified curricula in ID (Reinblatt et al., 2004; Ruedrich et al., 2007). These curricula both improved competence in ID and shared several features: several consecutive weeks of direct patient management in settings enriched for patients with ID, frequent supervision by expert faculty in ID, and extensive didactics. These findings suggest that typical child psychiatry fellowship training in ASD and ID, which by our data appears less rigorous than these programs, is unlikely to foster a sense of competency in these areas. Reservations about competency may deter trainees from working with patients with ASD and ID, whose presentations are often complicated by neurological comorbidities, poorly verbalized symptoms, and atypical treatment responses (King et al., 2009).

A lack of psychiatrists skilled in ASD and ID impedes training of future psychiatrists, as noted by several program directors, and has been cited as a major barrier to psychiatric care (Chiri and Warfield, 2011). Well-trained psychiatrists could relieve a significant need by consulting with primary care providers on developmental screening, early interventions, and behavioral management, thereby improving healthcare delivery and longitudinal outcomes.

Limitations

The primary limitation of these results is the low response rate. Although web-based surveys allow rapid dissemination and data collection, they generally have lower response rates than paper surveys, with an average of 37% (Sheehan, 2001). We cannot predict whether the results would have differed with greater participation; reassuringly, our data for average

CAP program size, 8 trainees, correspond closely to 2009 ACGME data, in which average size was 7 trainees (Hales, 2010).

Low salience of a survey topic is known to reduce response rate (Sheehan, 2001), leading us to speculate that training in developmental disabilities may not be a strong priority in a number of programs. In keeping with this idea, general programs, which do not specialize in childhood-onset disorders, had a response rate of only 17%. The possibility that training in ASD and ID is being overlooked is alarming, particularly given the increasing prevalence of ASD and the fact that children with ASD and ID frequently warrant psychiatric treatment as adults (Esbensen et al., 2009).

Future Directions

An overarching concern from our findings is that not only do many child psychiatrists have insufficient training in ASD and ID, but only a minority of programs prioritizes education in these conditions, leaving growing numbers of patients and families to struggle with unmet psychiatric need. Research evaluating fund of knowledge in trainees and practicing psychiatrists is urgently needed to inform more comprehensive curricula, so that psychiatrists gain rather than lose ground in their ability to serve these patients. Examining trainees' perception of their capabilities and attitudes towards ASD and ID could stimulate ideas about how to build interest in ASD and ID, and surveys investigating barriers to collaboration between psychiatrists and primary care providers could improve access to care. Finally, greater advocacy from psychiatrists, training institutions, and the public is needed so that fellowship and residency programs can obtain the funding and resources necessary to advance training in ASD and ID.

Conclusion

Individuals with ASD and ID represent a clinically challenging group faced with elevated psychiatric need and reduced access to care. Limitations in access have been perpetuated by longstanding deficiencies in psychiatric training, and our results suggest that many trainees receive inadequate clinical exposure to these patients. Without increasing training opportunities, there will likely remain a shortage of psychiatrists to deliver efficient, quality care to individuals with ASD and ID.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Psychiatry Training Program Survey

1. Form completed by:

   a) child and adolescent psychiatry fellowship program director b) general psychiatry program director

2. How many trainees are in your program?

3. If general program, how many FTE months per year of child/adolescent care for your trainees?

   a) 0 b)1–2 c)3–4 d) 5–6 e)7–8 f)9–10 g)11–12

4. Number of hours per year in formal lectures on autism/pervasive developmental disorders? *

5. Number of hours per year in formal lectures on intellectual disability (mental retardation)? *

6. Number of hours per year in formal lectures on DSM-IVTR learning disorders (reading disorder, mathematics disorder, disorder of written expression, LD-NOS)? *

7. Number of hours per year in informal didactics (small group or individual supervision, informal didactic teaching in clinic or on rounds) on autism/pervasive developmental disorders? *

8. Number of hours per year in informal didactics (small group or individual supervision, informal didactic teaching in clinic or on rounds) on intellectual disability? *

9. Estimated total number of ON-SITE (i.e., excluding school consults, visits to specialty clinics/facilities, etc.) outpatient cases with any diagnosis seen by each trainee per year?

   a)0 b)1–10 c)11–20 d)21–30 e)31–40 f)41–50 g)51–60 h)61–70 i)71–80 j)81–90 k)91–100 l)>100

10. Estimated number of each trainee's ON-SITE outpatient cases per year involving patients with autism/pervasive developmental disorders? **

    a) psychopharmacology only

11. Estimated number of each trainee's ON-SITE outpatient cases per year involving patients with intellectual disability (ID) without autism/PDD? **

    a) psychopharmacology only

12. Estimated number of each trainee's ON-SITE outpatient cases per year involving patients with autism/pervasive developmental disorders: **

    a) age < 4 years old b) age 4 to <13 c) age 13 to <18 d) adult (age 18+)

13. Estimated number of each trainee's ON-SITE outpatient cases per year involving patients with intellectual disability without autism/PDD: **

    a) age < 4 years old b) age 4 to <13 c) age 13 to <18 d) adult (age 18+)

14. Estimated number of each trainee's OFF-SITE cases per year for patients with autism/pervasive developmental disorders and/or intellectual disability without autism/PDD? **

    a) PDD b) ID

15. Estimated number of each trainee's total outpatient cases per year involving patients with DSM-IVTR learning disorders? **

    a) on-site b) off-site

16. Estimated total number of inpatient cases seen by each trainee per year? ***

    a) inpatient b) ER c) consult d) residential

17. Estimated number of each trainee's inpatient cases per year involving care/consultation for patients with autism/pervasive developmental disorders? **

    a) inpatient b) ER c) consult d) residential

18. Estimated number of each trainee's inpatient cases per year involving care/consultation for patients with intellectual disability without autism/PDD? **

    a) inpatient b) ER c) consult d) residential

19. Research work for trainees in autism and ID: **

    a) # trainees/year involved b) #medical or other students/year involved

20. Electives for trainees in autism and ID: **

a) # trainees/year involved b) #medical or other students/year involved

21. What resources are needed to improve the training of residents in autism & ID at your institution?

22. Please list other opportunities your program offers for trainees to get exposure to autism & ID:

23. Program name (optional):

24. Other comments:

Content includes the full text of the survey, which respondents viewed in a user-friendly, web-based format.

* Number of hours: a) 0, b)1–3, c)4–5, d)>5

** Cases/year: a)0, b)1–5, c)6–10, d)11–15, e)16–20, f)21–25, g)26–30, h)31–35, i)36–40, j)41–45, k)46+

*** Cases/year: a)0, b)1–10, c)11–20, d)21–20, e)31–40, f)41–50, g)51–60, h)61–70, i)71–80, j)81–90, k)>90