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ORIGINAL RESEARCH

Survey examining the views of Adult Psychiatry Consultants and Senior Registrars regarding ADHD

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Objectives. Attention deficit hyperactivity disorder (ADHD) persists into adulthood in ~2/3 of patients, yet services for adults are lacking in Ireland. This may involve negative attitudes and beliefs as to the validity of ADHD or lack of knowledge and training in its treatment. The objectives of this study are to explore the views of Adult Psychiatrists regarding ADHD knowledge and the treatment options available and pursued in Ireland.

Methods. A questionnaire was constructed based on the stated aims of the study, and was either posted, emailed or handed to 400 Consultants and Senior Registrars throughout the Republic of Ireland between February and December 2011. A total of 92 questionnaires were returned (23%); one was excluded from analysis due to insufficient information entered by the respondent.

Results. Seventy-five per cent of respondents correctly estimated the prevalence rates of adult ADHD to be under 3%, but stated it is currently under-diagnosed (77%). Seventy-four per cent indicated that Adult ADHD should be a diagnostic category in the Diagnostic and Statistical Manual, 5th Edition (DSM V). Sixty-six per cent of respondents were willing to accept referrals of childhood ADHD for ongoing care and a similar number for new ADHD assessments (61%). Less than half (42%) surveyed had actually diagnosed ADHD and of these, only 33% felt confident in managing ADHD in their patients.

Conclusions. Although there is a general willingness to offer services for new and existing ADHD cases and a recognition that Adult ADHD is valid and under-diagnosed, the low confidence levels when treating ADHD and the perception of under-diagnosis suggests a role for further training and links between child and adult services.

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Key words: ADHD, adult, psychiatrist.

Introduction

Attention deficit hyperactivity disorder (ADHD) is one of the most researched disorders in psychiatry with increasing evidence for a neurobiological aetiology with high heritability (Biederman & Faraone, 2002; Arnsten & Rubia, 2012). It is widely considered to be a lifespan developmental disorder; with roots traced back to childhood, and clinical manifestations often persisting into adolescence and adulthood (Schmidt & Peterman, 2008; Vaughan *et al*. 2008).

In a systematic review and meta-regression analysis of over 170 000 individuals aged 18 years or younger (Polanczyk *et al*. 2007), there was a worldwide-pooled prevalence of 5.29% for ADHD. In research conducted by Faraone & Biederman (2005) in adults, the prevalence rate in the community was 2.9%, suggesting continuation to adulthood in 60% of children. In one Irish study (Syed *et al*. 2010), screening of Adult Psychiatry OPD attendees found 24% met criteria for ADHD based on the Adult ADHD Self Report Scale but none were identified as having the disorder. Another Irish study (Fitzgerald, 1999) estimated that 9.1% of a sample of 55 inmates in Mountjoy Prison in Dublin met the criteria for a current diagnosis of ADHD. Despite high adult prevalence rates, it is recognised that services for adult patients with ADHD are under-developed throughout Europe, and are in need of improvement (National Collaborating Centre for Mental Health, 2008; Clark *et al*. 2011; Young *et al*. 2011). Under-developed Adult ADHD services may be due to lack of belief in the validity of ADHD as a disorder (Fitzgerald, 2001a), failure to recognise it, misattributing ADHD symptoms to other mental health disorders or diagnostic uncertainty. However, a study carried out in the United Kingdom ($n = 38$ Adult Psychiatrists) reported high confidence levels in Adult ADHD diagnosis and treatment, but only 10% described actual patient contact (Ahmed *et al*. 2007).

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A mismatch between perceived service need/demand and actual practice was described in this study and in a paper by Nutt *et al*. (2007).

The objectives of this paper are as follows:

– To assess the views of (and the services provided by) Senior Registrars and Consultants working in the subspecialty of Adult Psychiatry in Ireland with regard to ADHD.

To the authors' knowledge, it is the first survey to examine these attitudes and practices in this country.

Method

A questionnaire comprising both open-ended and closed questions was developed to obtain the views of Adult Psychiatrists on ADHD prevalence, symptom expression, diagnostic validity, differential diagnosis, assessment methods and treatment options.

A thorough search of the literature did not identify similar studies using measures or questionnaires which could have evaluated this study's objectives; therefore, a questionnaire was designed by the authors. The items in the questionnaire could certainly be used to evaluate views and service delivery beyond Ireland. As a consequence of this being a new measure, pre-existing psychometric properties such as reliability and validity were not available. A copy of the questionnaire is included in the appendix.

The questionnaires were posted, emailed or handed to 400 Senior Registrars and Consultant Psychiatrists practicing in Ireland between February and December 2011. It was not possible to contact everyone who was eligible due to the lack of a database of Adult Senior Registrars and Consultants and a recent policy adopted by the College of Psychiatry of Ireland regarding anonymity of members.

A total of 92 questionnaires were returned, the majority by post, representing 23% of the Consultants and Senior Registrars contacted. Post marks on the envelopes (and in the case of those returned by email) indicated that there was a good geographical spread of participants thereby aiding the representativeness of the sample. One was excluded from the analysis due to insufficient data entered.

Results

Clinician knowledge base

When asked about the prevalence of ADHD in the population aged 18 and over ($n = 85$), half of the sample estimated prevalence rates to be between 1% and 3% (51.8%) with a quarter (23.5%) believing it to be uncommon (<1%). Sixteen and a half per cent felt it was between 3% and 5% and 8.2% felt it was >5%. Regarding diagnosis in children and adolescents, more than one-third (39.5%) believed Irish diagnostic rates to be too high, while 45.7% believed them to be appropriate. The remainder felt it was under-diagnosed ($n = 81$).

In relation to Adult ADHD, however, 77.1% ($n = 83$) believed it to be under-diagnosed, 13.3% over-diagnosed and 9.6% diagnosed at the appropriate rate. When considering differential diagnoses, the three most frequently cited main disorders were Personality Disorders, Bipolar and Related Disorders and Substance Misuse and Addiction Disorders (Fig. 1).

Service provision

The survey indicated that only 66.3% of services accepted referrals for continuation of childhood treatment ($n = 86$). The majority (67.4%) accepted referrals for new assessment, although 26.7% were unwilling to do so ($n = 86$). Seventy-one per cent of respondents believed that care for ADHD cases should be provided by a tertiary/specialist ADHD adult mental health team ($n = 68$).

Diagnosis and treatment

Despite a willingness to take on referrals, the majority of respondents (57.3%) stated that they had not diagnosed any patients with ADHD/ADD. Of the 37 who had, assessments were generally comprehensive and included interviewing the adult patient's partner (64.9% always), taking a family history (occasionally directly from the patient's parents) and consulting school and college records (25% always). More than a quarter (29.7%) always used standardised questionnaires. The majority initiated psychopharmacology (61.1% sometimes and 8.3% always), with the remaining third rarely (16.7%) or never (13.9%) prescribing. In those who prescribe, the most popular medications prescribed were atomoxetine and methylphenidate (Table 1).

Almost all respondents either sometimes (64.9%) or always (24.3%) recommended psychological treatment. A total of 8.1% never recommended psychological treatments and 2.7% rarely did so. This treatment is typically delivered by a member of the Adult Mental Health team (88%; $n = 37$).

Of the group that said that they had diagnosed patients with ADHD ($n = 37$), the majority felt well informed, describing their knowledge base of treatments as average (70.3%) or excellent (8.1%). A total of 18.9% felt it was poor and 2.7% said they had no knowledge. However, in terms of clinical confidence in management of ADHD ($n = 36$), just over a third perceived themselves to be 'confident' (27.8%) or 'very confident' (5.6%), the vast majority feeling ill-equipped

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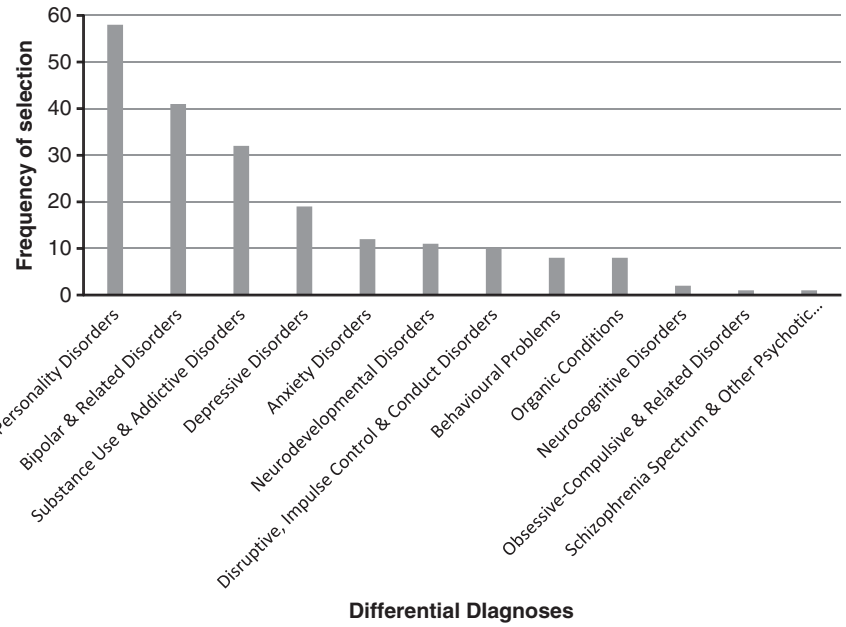

Fig. 1. Differential diagnoses for Adult, attention deficit hyperactivity disorder.

Table 1. *List of medications prescribed in Adult ADHD*

Medication	Number (%)
Atomoxetine	78.8
Methylphenidate	63.6
Dexamphetamine	9.1
Clonidine	9.1
SSRI	42.4
Other	Examples included clomipramine, bupropion and risperidone

ADHD, attention deficit hyperactivity disorder.

in managing ADHD, believing themselves to be only 'somewhat' (50%) or 'not at all' (16.7%) confident. χ^2 analysis revealed that there was an association between diagnosing ADHD and confidence levels, $[\chi^2(3,\ n = 83) = 12.16,\ p = .007]$ suggesting that those who had not diagnosed ADHD were less likely to feel confident in managing cases.

Discussion

Overall, Adult Psychiatrists completing the questionnaire were aware of the existence of ADHD in adulthood, estimating a prevalence rate of less than 3%, but the majority recognising that it was most likely under-diagnosed in Ireland. In contrast, almost half the participants felt that ADHD was diagnosed at an appropriate rate in childhood.

Personality disorders were by far the most popular differential diagnosis considered when an adult presented with ADHD-like symptoms, with almost 60 clinicians choosing them. Diagnostic similarities with Borderline Personality Disorder (Emotionally Unstable subtype) include impulsivity, emotional instability, relationship difficulties and anger often associated with both. Antisocial personality disorder shares the presentation of anger and forensic difficulties. Bipolar affective disorder, considered to be important as a differential by 41 respondents, is also frequently considered by child and adolescent psychiatrists and is not uncommon to be present as a co-existing disorder (Wozniak *et al*. 1995; Biederman *et al*. 2004; Soutullo *et al*. 2009). Shared symptoms include restlessness, over-activity, sleep disturbance, mood lability, racing thoughts, impulsivity and impaired concentration, particularly in the manic/hypomanic phases. When diagnosing in childhood, anxiety disorders commonly feature as a differential or again as a co-morbid condition, and were a feature in between 15% and 50% of young people (Bird *et al*. 1988; Bird *et al*. 1993; Cohen *et al*. 1993; Steinhausen *et al*. 2006).

In terms of service provision, there was a general willingness and recognition of a need to accept referrals of either existing ADHD cases (66%) or new assessments (67%). Despite these encouraging figures, ~71% felt that care should be provided by a specialist tertiary service. This, coupled with respondents' own admission, in which 67% of clinicians were only 'somewhat' or 'not' confident in managing the disorder, and less than half (43%) had diagnosed the disorder, may explain why a large majority feel the

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disorder is being under-diagnosed. The need to obtain an accurate history of past and current symptoms and ideally a collateral history from parents can make confident diagnosis in practice difficult (Kirley & Fitzgerald, 2002).

Importantly (but probably not surprisingly), there was an association between those who had never diagnosed Adult ADHD and a perceived lack of confidence in managing it, where one is likely to influence the other. This suggests that it is imperative that adequate clinical training in the management of Adult ADHD is provided in higher specialist training programmes in Adult Psychiatry. One new initiative is a special interest position in an Adult ADHD clinic run in Trinity College Dublin where either a Child or Adult Psychiatry Senior Registrar work with the Adult Psychiatrist in managing ADHD in 3rd level students. This placement should be evaluated for effectiveness and practicality to see whether it could (or should) be run in other adult mental health settings. Another initiative was a booklet produced by the Irish ADHD Support Group (HADD) entitled *3rd Level Guide for Students with ADHD*, which is free to download from their website (Reilly, 2009).

In those who had diagnosed and treated Adult ADHD, 70% rated their knowledge base as 'average', and typically followed best practice principles in terms of assessment, reference to diagnostic criteria and treatment, in accordance with ADHD guidelines (Dulcan, 1997; National Collaborating Centre for Mental Health, 2008; Forbes *et al*. 2009). The majority collected collateral histories and initiated a multi-modal treatment approach. Almost all recommended or provided psychological treatment (89%). Sixty-one per cent initiated psychopharmacology, the recommended first-line treatment for adults with moderate to severe impairment (National Collaborating Centre for Mental Health, 2008). The National Institute for Health and Clinical Excellence (NICE) guideline recommend methylphenidate as the drug of first choice for both children and adults, with initiation of atomoxetine being recommended for cases where there is a concern regarding possible substance misuse or diversion. The use of antipsychotics such as risperidone is specifically not recommended (National Collaborating Centre for Mental Health, 2008). Respondents to this survey cited atomoxetine use more often than methylphenidate (79% *v*. 64% citing their use). This may reflect the fact that atomoxetine has a licence in Ireland for continuation of treatment in adults when a young person continues to have symptoms into adulthood and has responded to that drug. Overall, however, medications for treatment of adults with ADHD are unlicensed, so it would be advisable to inform patients of this prior to commencement (Fitzgerald, 2001b).

Limitations

Although a reasonable number took part in this study, it still only represented 23% of all Adult Senior Registrars and Consultants in Ireland, and as Psychiatry such may not be representative of the views and experiences of the majority. Postal markings allowed the authors to confirm both rural and urban responses throughout Ireland. It was evident from the email responses that there were similar numbers of Consultants and Senior Registrars who participated, although the absence of a category on the questionnaire to identify this meant that it was not possible to make that differentiation from the postal responses.

The convenience selection cannot out rule biases in the opinions or practices of respondents, which may work in either direction, where those most disbelieving of ADHD may reply, or those with a special clinical interest in the area. As such this study should be considered a pilot study reporting on the attitudes and practices of the participants. However, despite the relatively small numbers of participants, it represents a much larger study than the 38 respondents who participated in the UK study (Ahmed *et al*. 2007).

Conclusions

Despite the view by many that ADHD in childhood is over-diagnosed, there is an acknowledgement that Adult ADHD does exist, has a prevalence of between 1% and 3% but is under-diagnosed. When treated in adult mental health services, clinical management follows best practice. The reported lack of confidence in its management (which had a statistically significant association with those who had not diagnosed it in practice), suggests a need for better collaboration between child and adult mental health services, along with dedicated training opportunities in ADHD. This would make it far less likely that there will remain a sizeable number of adults with the disorder who have not been diagnosed either through a lack of service provision or clinician awareness.

A Working Group consisting of representatives from Child, Learning Disability and Adult Psychiatry had been developed in 2010 in collaboration with the College of Psychiatry of Ireland to help guide policy and service delivery. Re-establishment of this group would certainly appear worthwhile based on this study's findings.

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Appendix: ADHD Questionnaire

Survey on Adult ADHD:

With increasing diagnosis of ADHD in children, and the need for continued treatment into adulthood in many, we would really value your opinion on this issue. If returning via email, please highlight your answer by changing the text to bold, otherwise circle response as applicable. Thank you very much for completing this brief survey.

1. In your opinion, should Adult ADHD/ADD be a diagnostic category in the DSM-V? (*please circle one response on each line or highlight in* ***bold*** *as applicable:*)

Yes No _____

2. Please list the core clinical features of this disorder:

3. Please list commonly occurring additional features of Adult ADHD:

4. What is your main differential diagnosis if not ADHD:

5. Does your service accept referrals from Child and Adolescent Mental Health Services, Paediatricians or GPs of 18-year-olds with a diagnosis of ADHD for ***continuation*** of treatment?

Yes No _____

6. Does your service accept referral letters requesting ***assessment*** for possible ADHD?

Yes No _____

7. Have you diagnosed any of your patients with ADHD/ADD?

Yes No _____

8. If **YES**: how often do you do each of the following, if at all? (*please circle one response on each line or highlight in* ***bold*** *as applicable:*)

Interview the adult patient's partner? *Always Sometimes Rarely Never*

Standardised questionnaires? *Always Sometimes Rarely Never*

School or College records? *Always Sometimes Rarely Never*

Other? (please specify:) _____

9. Do you initiate psychopharmacology? *Always Sometimes Rarely Never*

10. What medications have you prescribed? *(please circle or highlight in* ***bold*** *as applicable from the choices given below:*)

Methylphenidate	Dexamphetamine	Atomoxetine	SSRI	Clonidine	Bupropion

What are your thoughts on this? _____

11. Do you recommend psychological treatments? *Always Sometimes Rarely Never*

12. Who delivers this?

You Member of your team Other public service (*please specify*:) _____
_____Other private service (*please specify*:) _____

13. What is your knowledge of the evidence base for the above ADHD treatment in adults?

Excellent Average Poor I don't know anything about it

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14. How confident are you in managing these cases? *(please circle or highlight in **bold** as applicable:*)

Very Confident *Confident* *Somewhat confident* *Not at all confident*

15. If you feel that public general adult mental health services are not appropriate for these cases, where should care be provided? *(please circle or highlight in **bold** as applicable)*

GP

Private Consultant Adult Psychiatrist

Private Consultant Child Psychiatrist

Tertiary Adult Mental Health Team specializing in Adult ADHD treatment

Other (please state):

16. What percentage of the general population ≥18 years of age do you feel may have a diagnosis, or a possible diagnosis suggestive of ADHD? (please circle *or highlight in **bold** as applicable*:)

<1% 1–3% 3–5% >5%

17. In Ireland, in your opinion, is ***Child*** *ADHD*

Underdiagnosed? *Appropriately diagnosed?* *Overdiagnosed?*

18. In Ireland, in your opinion, is ***Adult*** *ADHD*

Underdiagnosed? *Appropriately diagnosed?* *Overdiagnosed?*

Thank you so much for your time.

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