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Impairments, Diagnosis and Treatments Associated with Attention-Deficit/Hyperactivity Disorder (ADHD) in UK Adults: Results from the Lifetime Impairment Survey

M. Pitts [a,*], L. Mangle [b], P. Asherson [c]

[a] Adult ADHD Service, Maudsley Hospital, London, UK
[b] Shire, Basingstoke, UK
[c] MRC Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, King's College London, London, UK

A B S T R A C T

Aim: The Lifetime Impairment Survey assessed how ADHD impairs everyday life, identifying areas most affected.
Methods: This opinion-based survey evaluated experiences, diagnosis and treatment of lifetime impairment in adults with ($n = 89$) and without ($n = 94$) ADHD. Groups were compared using impairment and symptoms scales; higher scores indicate greater impairment.
Results: Mean (standard deviation) age at diagnosis was 18.2 (11.5) years; 47.1% were taking prescription medication for ADHD. Adults with ADHD reported greater impairments than those without for all scales ($p < 0.001$) except the involvement scale.
Conclusion: Greater impairments in adults with than without ADHD suggest a continued impact throughout their daily lives.

BACKGROUND

Attention-deficit/hyperactivity disorder (ADHD) has a worldwide prevalence of 5% in children (Faraone, Sergeant, Gillberg, & Biederman, 2003; Polanczyk, de Lima, Horta, Biederman, & Rohde, 2007). In the UK, a survey conducted in 1999 of approximately 10,500 children between 5 and 15 years of age, 3.6% of boys and 0.9% of girls were diagnosed with ADHD (Ford, Goodman, & Meltzer, 2003). Outcome studies find that ADHD symptoms and impairments persist into adulthood in around 65% of cases (Faraone, Biederman, & Mick, 2006) and a more balanced prevalence of the disorder is generally observed between the sexes (Bernardi et al., 2012; Kessler et al., 2005b; Simon, Czobor, Balint, Meszaros, & Bitter, 2009). The impact of ADHD on everyday life may diminish with age, with many patients developing effective coping mechanisms; nevertheless, ADHD often remains an impairing condition in adults (Asherson et al., 2012; Primich & Iennaco, 2012).

ADHD-related impairments such as poor time management, procrastination and distractibility can affect areas of life, including work, daily activities and social and family relationships, leading to a decreased quality of life (QoL). ADHD in adults is associated with increased accidents, medical resource utilization, antisocial behavior, drug and alcohol abuse and dependency (Asherson et al., 2012). A large national survey in the USA of more than 34,000 adults 18 years and older found that a lifetime history of ADHD was associated with an increased risk of behaviors reflecting a lack of planning and poor self-regulation of behavior, with higher perceived stress levels and lower perceived health and social support (Bernardi et al., 2012). A study exploring the burden of illness and impact on QoL in older adults with ADHD (mean 66 years) concluded that QoL suffered from the accumulative negative impact of ADHD impairments on many aspects of daily life and well-being (Brod, Schmitt, Goodwin, Hodgkins, & Niebler, 2012).

Long-term prospective findings from a 16-year follow-up study provide evidence for the high morbidity associated with ADHD across the life cycle that could not be accounted for by other mental health conditions (Biederman et al., 2012). This study found relatively low rates of co-occurring conditions, perhaps resulting from the early diagnosis and treatment of the patient group. In contrast, cross-sectional studies of ADHD find a high frequency of other diagnoses and co-occurring symptom groups that make important additional contributions to impairment (Kessler et al., 2006; Kooij et al., 2010; Skirrow, Hosang, Farmer, & Asherson, 2012). Approximately 70% of adult patients with ADHD have at least one comorbid disorder (Garcia et al., 2012). These patients have an increased risk of emotional lability, generalized anxiety disorder, post-traumatic stress disorder, specific phobias and personality disorders that contribute to significantly lower psychological health scores (Bernardi et al., 2012; O'Callaghan & Sharma, 2012).

Conflicts of interest: M. Pitts has been a member of a Shire Advisory Board. L. Mangle is an employee of Shire Pharmaceuticals Ltd. P. Asherson is in receipt of research or educational grants from Shire, Janssen-Cilag, Eli-Lilly and Vifor. He has acted as a consultant on behalf of Kings College London for Shire, Janssen-Cilag, Eli-Lilly and Novartis.

* Corresponding Author: M. Pitts, BSc, MSc, Adult ADHD Service, Maudsley Hospital, London, UK.

E-mail addresses: Mark.Pitts@slam.nhs.uk (M. Pitts), lmangle@shire.com (L. Mangle), philip.asherson@kcl.ac.uk (P. Asherson).

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In the UK, the clinical management of ADHD in adults remains a concern because sufficient training of mental health professionals and provision of services have been slow to develop. As a consequence, adults with ADHD continue to go unrecognized or misdiagnosed, with treatments targeted at secondary consequences of ADHD rather than the primary condition. This is a particular concern as the effectiveness of available medical and psychological treatments has been well demonstrated (Kooij et al., 2010; National Institute of Health & Care Excellence, 2009; Nutt et al., 2007).

One important aspect to understanding ADHD in adults is to delineate the types of impairments experienced in daily life. Here we report the findings of the Lifetime Impairment Survey (LIS), a survey of adults with ADHD living in the UK, about current impairments and experiences of the diagnostic and treatment process.

The aim of the LIS was to assess the degree to which ADHD impairs patients' everyday lives and identify the areas of life most affected by the condition (Caci et al., 2011, 2013; Hervas et al., 2011). Based on a previously published US survey conducted in adults with ADHD (Biederman et al., 2006), this survey was conducted across six European countries (France, Germany, Italy, the Netherlands, Spain and the UK). Data were collected from parents and caregivers of children with ADHD and adults with ADHD, and compared with corresponding children/adults without ADHD. Here we focus on the UK data alone from adults with ADHD compared with those without the disorder.

METHODS

The LIS was a large, online opinion-based survey designed to evaluate the extent of lifetime impairment in individuals with ADHD. The responses obtained from adults with ADHD regarding their current situation and experiences were compared with those obtained from adults without ADHD. The full methodology has been published elsewhere (Caci et al., 2013) and is described briefly below.

Recruitment and Study Population

Adults were recruited by email invitation from GfK Global Online Panel (GfK Healthcare, London) using their independent consumer database of 487,533 volunteer members (130,203 in the UK) who had agreed to participate in market research. Panel members are continuously enrolled using a variety of recruitment techniques, e.g. Website advertisements and search engines. Adults enrolled were informed about their rights and responsibilities, and completed a demographic profiling survey. Separate consent is not obtained for each survey adults participate in; however, survey participation is voluntary and panellists may exit a survey at any time. To maintain confidentiality, individuals were de-identified. In exchange for participation, adults were invited to nominate a charity to which a donation would be made on their behalf and had the opportunity to enter a prize draw.

Adults with and without ADHD were identified using information collected during demographic profiling regarding whether they had ever been diagnosed with ADHD by a doctor or other healthcare professional. Final allocation to the ADHD group was based on the response to a question in the survey on whether a doctor or other healthcare professional had ever made a diagnosis of ADHD, attention deficit disorder or hyperkinetic disorder. A minimum number of 100 participants per group in each country were obtained. This study was not powered to allow formal comparisons between groups (with and without ADHD; statistical testing was exploratory only) and no formal sample calculations were performed. All *p*-values reported are nominal, without correction for multiple comparisons.

Survey Design and Data Analysis

The survey was designed for the purpose of this study by a Steering Committee of psychiatrists and psychologists specializing in ADHD (including Author 3 and representatives from the study sponsor [Shire Development, LLC]) and was conducted in accordance with industry guidelines (British Healthcare Business Intelligence Association, 2012; European Pharmaceutical Market Research Association, 2012; Market Research Society, 2012; World Association of Research Professionals, 2012) by an independent market research organization (GfK Healthcare, London). Ethics committee approvals were not required.

Adults with and without ADHD answered questions regarding their current and past experiences, organized into four sections: screening and classification (e.g. demographics and health); impairment and general well-being in childhood/adolescence; impairment in adulthood (e.g. impact on work, social life and relationships); and ADHD diagnosis and treatment.

Questions about impairment and well-being were combined into 10 scales evaluating the level of difficulties currently encountered by participants in different areas. Separate retrospective recall scales were used to ascertain how adults remembered their previous school and childhood/adolescent experiences. Items were grouped into scales by the Steering Committee based on face-validity and expert consensus. As necessary, scales were reversed so that higher scores indicated greater impairment (e.g. the work impairment scale).

Adults who gave impossible/implausible answers (e.g. a time to diagnosis greater than age) were excluded from the analysis. Adults with and without ADHD were compared using *t*-tests for continuous data and chi-squared tests for categorical data. To create graphs, top-two box comparisons (e.g. combining responses 'strongly agree' and 'somewhat agree') were used to show differences between groups for some individual items within the scales. Mean impairment and symptoms scale scores were calculated for all adults who answered at least half of the questions in a particular scale; only adults with scores on all applicable scales were included in scale-related analyses.

RESULTS

Characteristics of Participants

A total of 210 adults (105 with and 105 without ADHD) from the UK responded to the survey. Exclusion of respondents who provided implausible or impossible answers (16 with and 11 without ADHD; 12.9% overall) yielded a sample of 89 adults with ADHD (51.7% males) and 94 adults without ADHD (43.6% males). Their demographics and background characteristics are shown in Table 1.

Adults with ADHD were significantly younger compared with adults without ADHD (mean age [standard deviation (SD)] 32.1 [11.5] years vs. 45.6 [15.0] years, respectively; $p < 0.001$) at the time of completing the survey and group differences were therefore adjusted using age as a covariate. Mean (SD) age at diagnosis was 18.2 (11.5) years.

Participants with ADHD tended to live in urban or suburban areas (91.9%), whereas those without ADHD were more likely to live in rural areas (25.6%; $p < 0.01$). Additionally, participants with ADHD were more likely to have children (53.9%, 1–4 per family) than those without ADHD (4.4%; $p < 0.001$). A significantly higher percentage of adults with ADHD earned ≥£50,000 than those without (29.6% vs. 10.8%; $p < 0.05$) and 11.1% earned ≥£80,000 (compared with only 1.2% in those without ADHD); 10.6% adults without ADHD were retired compared with none of the adults with ADHD (Table 1).

Table 2 shows the reported psychiatric diagnoses. The majority of respondents without ADHD also had no other psychiatric diagnosis (69.1%). Adults with ADHD reported a mean (SD) of 3.2 (3.5) comorbid conditions (median 2.0). The most frequently reported comorbidities by adults with ADHD were: depression (60.7% vs. 19.1% adults without ADHD); insomnia or other sleep disorders (46.1% vs. 7.4% adults without ADHD) and anxiety disorder(s) (40.4% vs. 5.3% adults without ADHD). The number of comorbidities did not differ between adults with ADHD diagnosed before or after 18 years of age ($p = 0.674$).

Table 1
Demographic Characteristics of Respondents With and Without ADHD.

Characteristic	Adults with ADHD ($n = 89$)	Adults without ADHD ($n = 94$)
Mean (SD) age, years***	32.1 (11.5)	45.6 (15.0)
Sex		
Male	46 (51.7)	41 (43.6)
Current relationship status [89/91]		
Single, without steady partner	36 (40.4)	31 (34.1)
Married	29 (32.6)	36 (39.6)
Living with steady partner, but not married	16 (18.0)	15 (16.5)
Have a steady partner but not living with him/her	8 (9.0)	9 (9.9)
Number of children*** [89/92]		
None	41 (46.1)	88 (95.7)
One	18 (20.2)	2 (2.2)
Two	17 (19.1)	1 (1.1)
Three	10 (11.2)	1 (1.1)
Four	3 (3.4)	N/A
Education level [88/93]		
Low	3 (3.4)	1 (1.1)
Medium	26 (29.5)	37 (39.8)
High	59 (67.0)	55 (59.1)
Employment status		
Employed full-time	52 (58.4)	44 (46.8)
Employed part-time	13 (14.6)	13 (13.8)
Student	5 (5.6)	3 (3.2)
Retired	0	10 (10.6)
Unemployed	12 (13.5)	14 (14.9)
Homemaker	3 (3.4)	4 (4.3)
Other	4 (4.5)	6 (6.4)
Household income (GB£)* [81/83]		
<20,000	22 (27.2)	32 (38.6)
20,000–49,999	35 (43.2)	42 (50.6)
50,000–79,999	15 (18.5)	8 (9.6)
80,000 or more	9 (11.1)	1 (1.2)
Community type** [87/90]		
Urban (within a city)	39 (44.8)	25 (27.8)
Suburban (in the suburbs of a city or in a town)	41 (47.1)	42 (46.7)
Rural (in the country)	7 (8.0)	23 (25.6)
Mean (SD) personal income, 1000 Euros[a] [66/64]	28.9 (25.6)	21.5 (16.8)

NOTE. Data are given as *n* (%) unless indicated otherwise. Numbers in square brackets show numbers of adults with ADHD/adults without ADHD when different to the numbers given in the columns per group.
ADHD, attention-deficit/hyperactivity disorder; N/A, not applicable; SD, standard deviation.
[a] Personal incomes were normalized and individuals with income >2.5 SD above the mean were set to missing ($p = 0.051$).
* $p < 0.05$, Student's *t*-test.
** $p < 0.01$, Student's *t*-test.
*** $p < 0.001$, Student's *t*-test.

Table 2
Comorbidities and Pathologies of Respondents With and Without ADHD.

Condition *n* (%)	Adults with ADHD ($n = 89$)	Adults without ADHD ($n = 94$)
Depression	54 (60.7)	18 (19.1)
Insomnia or other sleep disorders	41 (46.1)	7 (7.4)
Anxiety disorder(s)	36 (40.4)	5 (5.3)
Personality disorder	27 (30.3)	1 (1.1)
Bipolar disorder	20 (22.5)	1 (1.1)
Alcohol or drug abuse or dependence	19 (21.3)	6 (6.4)
Oppositional defiant disorder	15 (16.9)	0
Conduct disorder	15 (16.9)	0
Decline to answer	0	4 (4.3)
None of these	0	65 (69.1)

NOTE. ADHD, attention-deficit/hyperactivity disorder.

Experiences of ADHD Management

For adults with ADHD, the mean (SD) age at diagnosis was 18.2 (11.5) years; 44.9% of respondents were aged ≥18 years when ADHD diagnosis was received. Approximately one fifth (21.3%) of adults with ADHD were diagnosed between the ages of 6 and 10 years and approximately one quarter (23.6%) were diagnosed when aged between 11 and 17 years. Adults with ADHD diagnosed before 18 years of age did not differ significantly on any of the scales from those diagnosed as adults. The majority of respondents recalled having to wait for over a year (69.6%) and saw at least three doctors (51.7%) to receive a diagnosis. Patients visited a mean (SD) of 3.3 (3.4) physicians (median 3.0) and diagnosis of ADHD was obtained after a mean (SD) duration of 49.4 (88.2) months (median: 14.0 months, $n = 56$). Over one third (39.3%) reported frustration at the number of visits to the doctor before they received a diagnosis and one fifth (20.2%) reported experiencing no difficulties or frustrations. Also, approximately one third (30.3%) reported that their doctor was sceptical about ADHD as a diagnosis in adults, viewing it as a paediatric condition.

When asked to specify how they were being treated or what help they were receiving for their ADHD, only 25.8% of participants confirmed they were taking prescription medication, either alone (11.2%) or in combination with behavioral interventions (14.6%); 37.1% were receiving behavioral interventions only. Some form of therapy was the most common non-pharmacological intervention received by adults with ADHD (21.3%).

The most commonly prescribed ADHD medications were immediate-release stimulants (27.0%) followed by long-acting preparations (16.9%) and atomoxetine (5.6%). The majority of respondents (66.7%) declared being satisfied with their medication, while 20.5% were dissatisfied with their current treatment; 12.8% were neither satisfied nor dissatisfied. When questioned on the improvements they would like to see in their medication, respondents reported that it was very or quite important for: the efficacy of their medication to be improved (82.5%), to have fewer adverse events or side effects (74.4%), to have a swift onset of action (75.0%), for the medication to work throughout the day and into the evening (82.5%), to have a lower frequency of dosing (70.0%) and to have a smooth delivery profile (64.1%).

ADHD Impairment and Symptoms Scale Scores

The mean scores obtained by adults with and without ADHD in the impairment and symptom scales are presented in Table 3. Adults with ADHD reported significantly greater impairments than adults without ADHD in all scales ($p < 0.001$) except the involvement scale (i.e. inclination to spend time with friends/family and participate in different types of activities), for which the two groups obtained similar mean scores (2.0 and 2.1, respectively). When examining the influence of age, a significant age effect was observed in three scales: self-organization ($p < 0.001$), involvement ($p = 0.003$) and mood/temper ($p = 0.013$). While a significant effect of age was observed on these scales, they remained significant when age was controlled. However, when controlling for age, there was no longer a significant difference between adults with and without ADHD in the involvement scale ($p = 0.822$).

The areas associated with significantly greater difficulties in the ADHD group included social functioning ($p < 0.001$), partnership relationships ($p < 0.001$), personal finances ($p < 0.001$), mood/temper control ($p < 0.001$), self-organization and planning ($p < 0.001$) and rule-breaking behavior ($p < 0.001$). Adults with ADHD reported greater work difficulties ($p < 0.001$) and a greater number of jobs in the past 10 years ($p < 0.001$) compared with those without ADHD (mean [SD] number 4.4 [2.8] vs. 2.3 [1.8], respectively). The responses of participants in relation to the individual items comprising the social, partnership, work and financial impairment scales are shown in Figs. 1–4, respectively.

Table 3
ADHD Impairment and Symptom Scale Scores.

Scale/score	Number of items per scale	Mean (SD) score	
		Adults with ADHD ($n = 89$)	Adults without ADHD ($n = 94$)
Mood/temper control scale*	5	3.2 (0.8)	2.4 (0.8)
Work impairment scale*	15	3.0 (0.5)[a]	2.4 (0.6)[b]
Self-organization and planning scale*	10	3.2 (1.1)	1.8 (0.8)
Involvement scale	5	2.0 (0.5)	2.1 (0.5)
Social impairment scale*	8	2.7 (0.8)	1.9 (0.7)
Partnership impairment scale*	5	2.8 (0.7)[c]	2.1 (0.8)[d]
Financial impairment scale*	9	3.1 (1.1)	2.3 (1.0)
Rule-breaking behavior score*	7	2.5 (2.0)	1.1 (1.5)
Perceived impact scale	8	3.2 (1.4)	–
Perceived impairment scale	13	3.6 (0.8)	–

NOTE. ADHD, attention-deficit/hyperactivity disorder; SD, standard deviation.
[a] $n = 65$.
[b] $n = 57$.
[c] $n = 53$.
[d] $n = 63$.
* $p < 0.001$ between groups; Student's t-test.

Fig. 5 illustrates the degree to which having ADHD impacted on daily life, particularly the negative impact on academic achievement (50.0% adults with ADHD), daily life and activities (42.7%) and professional/working life (40.2%). When recalling how ADHD affected life during childhood and adolescence (gathered in separate retrospective recall scales), data showed a significant association with poor school performance. Adults with versus those without ADHD recalled significant school impairment ($p < 0.001$), for example, whether they got along with their teachers and whether they were popular in school; and significant school failure ($p < 0.001$), for example, whether they were 'bottom' of the class or got expelled or suspended. Adults with ADHD did not report significant differences compared with adults without ADHD for impairments in relationships during childhood and adolescence, for example, whether they got along with friends outside of school and whether they were popular outside of school. When controlling for age, a significant age effect was observed in comorbid symptoms ($p = 0.004$) and school failure ($p = 0.007$). When controlling for age, there was no significant difference between adults with and without ADHD in the home impairment ($p = 0.306$) and relationship impairment scales ($p = 0.403$).

DISCUSSION

There were important limitations associated with this study and these data should be considered in the context of these limitations. LIS was not a validated questionnaire and, therefore, care should be taken when interpreting the results. Adults who responded to the study invitation represent a select, well-educated, IT-literate population willing to participate in the survey; an awareness of ADHD and its associated symptoms and impairments may have been greater in this group of participants compared with the general population. Adults without ADHD were significantly older than the adults with ADHD and included more retired respondents. This age difference significantly influenced five of the impairment scales; when controlling for age no significant differences between groups were seen for three scales (home and

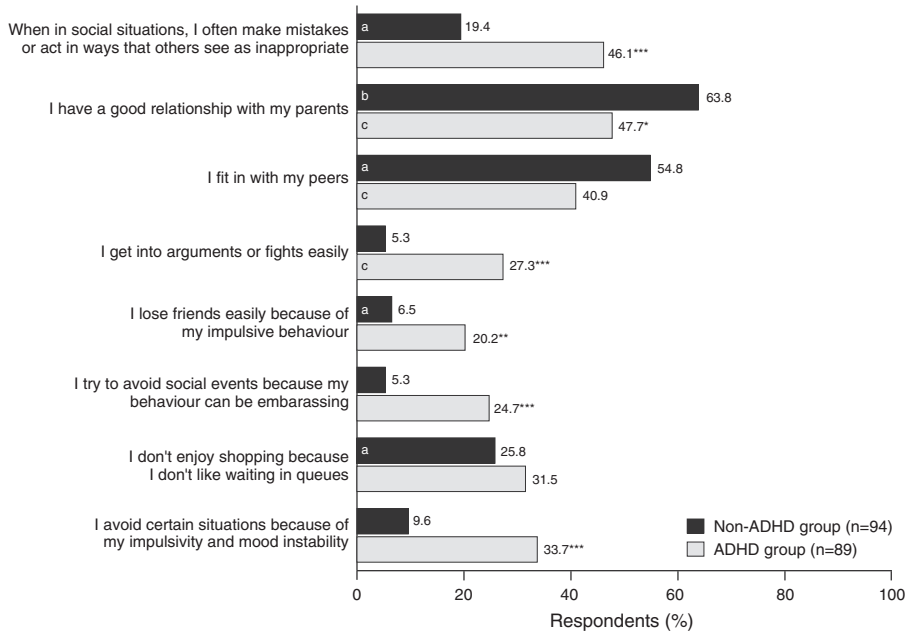

Fig. 1. Impairments in social functioning as indicated by the social impairment scale. [a]$n = 93$; [b]$n = 80$; [c]$n = 88$. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. ADHD, attention-deficit/hyperactivity disorder.

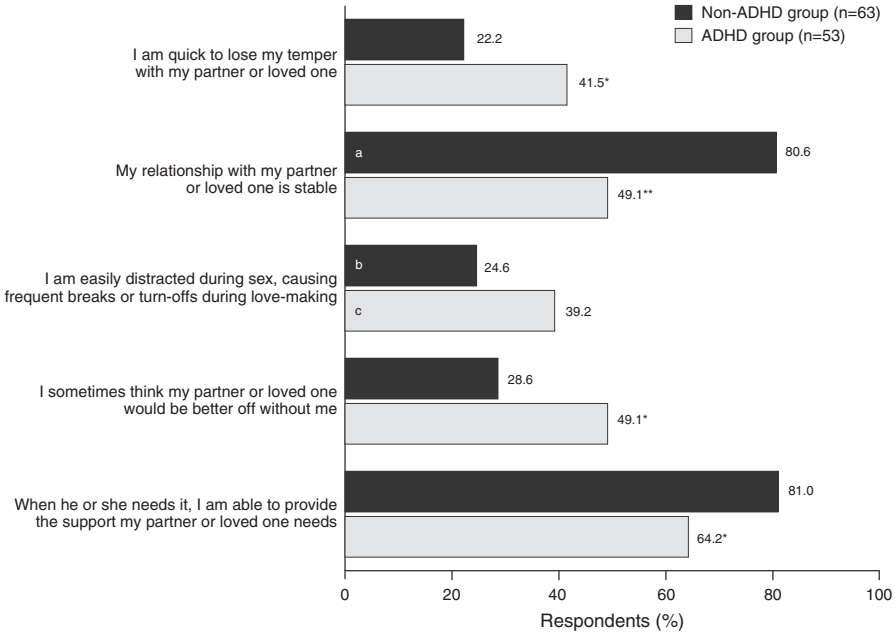

Fig. 2. Difficulties in partner relationships as shown by the partnership impairment scale (only includes participants with a current partner). [a]$n = 62$; [b]$n = 57$; [c]$n = 51$. *$p < 0.05$; **$p < 0.001$. ADHD, attention-deficit/hyperactivity disorder.

relationship impairment and involvement scale). Interestingly, almost half of respondents were diagnosed above the age of 17 years, which although it does not reflect current practice in the UK is similar to the findings reported for adults with ADHD in Europe (20 years; (Caci et al., 2014); however, age at diagnosis did not affect the level of impairment indicated on the 10 scales.

Adults without ADHD were more likely to live in rural than urban areas compared with adults with ADHD. It was unexpected that adults with ADHD were, on average, higher earners than those adults without ADHD, despite the presence of a greater level of self-reported social and occupational difficulties, suggesting an atypically productive and high functioning group of patients with ADHD, despite reported impairments (Halmoy, Fasmer, Gillberg, & Haavik, 2009; Kessler et al., 2005a). This could be related to greater access to healthcare facilities for higher functioning individuals with ADHD. Other factors might be the cheaper living costs in urban areas or reflect the older demographic of those adults without ADHD. There are, therefore, uncertainties inherent in the patient-reported data, including self-reported ADHD diagnosis. Although some adults were excluded based on obvious implausible answers, no control for other potential data entry errors could be applied.

- This study investigated the experiences of adults with ADHD in the UK using survey data from the European LIS study. Impairments reported by adults with ADHD were all significantly greater than

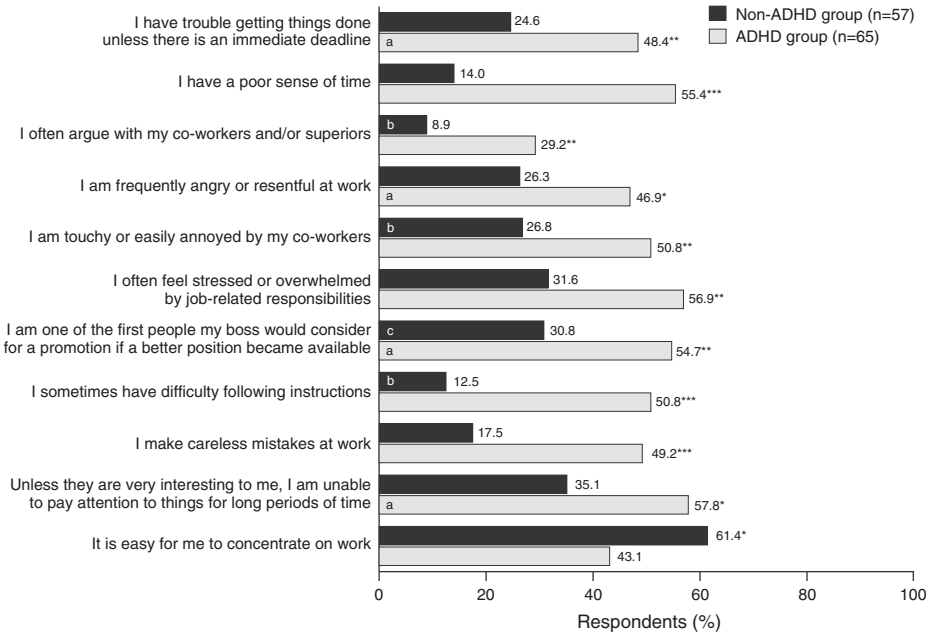

Fig. 3. Impairments in work functioning as indicated by the work impairment scale. [a]$n = 64$; [b]$n = 56$; [c]$n = 52$. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. ADHD, attention-deficit/hyperactivity disorder.

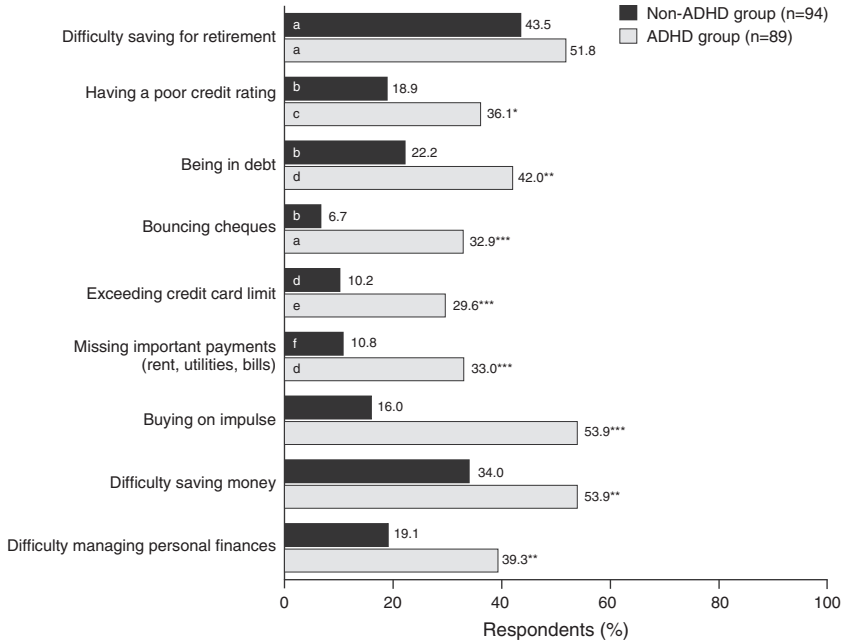

Fig. 4. Financial difficulties as indicated by the financial impairment scale. [a]$n = 85$; [b]$n = 90$; [c]$n = 83$; [d]$n = 88$; [e]$n = 81$; [f]$n = 93$. $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$. ADHD, attention-deficit/hyperactivity disorder.

those without ADHD, with the exception of the home, relationship impairment and involvement scale, suggesting the widespread impact that ADHD has on QoL and many aspects of daily life. These data are in agreement with previous literature reporting the negative impact of ADHD in adulthood on relationships and QoL (Agarwal, Goldenberg, Perry, & William, 2012; Asherson et al., 2012; Bernardi et al., 2012; Brod et al., 2012) and is consistent with the overall European adult sample across all six countries, in which all scales showed significant impairment except the involvement scale (Caci et al., 2013). Adults also recalled their poor performances at school and, even though this may be subject to memory bias, add compelling evidence that ADHD is a life-long disorder.

The data show a broad range of co-occurring conditions associated with ADHD in adults, with a distribution that is similar to that reported in the literature (Biederman et al., 2012, 2012; Kessler et al., 2006, 2006; Kooij et al., 2010). There was a particularly high prevalence for depression, sleep problems and anxiety in the adults with ADHD.

Almost half (45%) of the adults with ADHD were 18 years or older when diagnosed with ADHD. Adult services should be mindful, therefore, of the possibility of undiagnosed ADHD when assessing

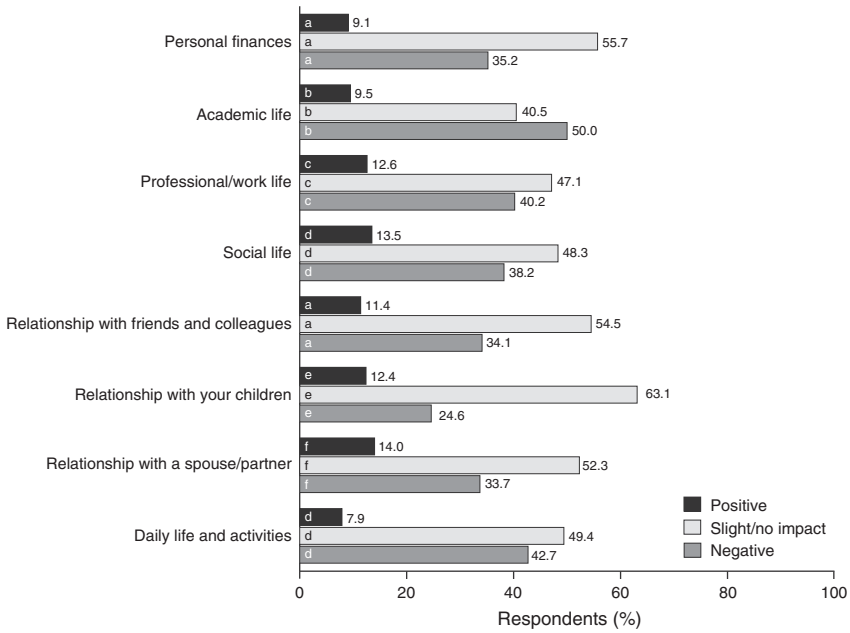

Fig. 5. Perceived negative impact of ADHD on daily life as indicated by the perceived impact scale. [a]$n = 88$; [b]$n = 84$; [c]$n = 87$; [d]$n = 89$; [e]$n = 65$; [f]$n = 86$. ADHD, attention-deficit/hyperactivity disorder.

adult patients, particularly those with long-standing (chronic) mental health problems. This is also complicated by the high frequency of other diagnoses and comorbidities prevalent among adults with ADHD (Kessler et al., 2006; Kooij et al., 2010; Skirrow et al., 2012) and the high level of mental health symptoms that are seen to accompany ADHD even in non-comorbid cases (Skirrow et al., 2012).

The majority of adults recalled having to wait for over a year and see at least three doctors to receive a diagnosis of ADHD. This difficulty, particularly the length of time to diagnosis, may arise for a number of different reasons. ADHD was formerly considered purely a childhood disorder by national guidelines, and in the UK it has only recently been formally recognized as a lifespan neurodevelopmental disorder with a high persistence rate into adulthood (National Institute of Health & Care Excellence, 2009). Difficulty in diagnosis may therefore be related, at least in part, to a lack of awareness that the condition persists in adults and consequently a reluctance of general practitioners and other healthcare professionals to refer. Furthermore, training in the diagnosis and treatment of ADHD in adults has been lacking from most adult mental health and primary care training programs. For example, to date, there has been no systematic training of nurses, although nurses are often the main point of contact for adults with mental health problems. Indeed, in this study, participants reported their frustration in the diagnostic process, with some doctors being sceptical about the clinical value of the adult diagnosis and its treatment. Hence there is a continued need for the training/education of all healthcare professionals and an increase in the public awareness of ADHD in adulthood. Other important contributing factors include lack of ADHD services for adults in many regions of the UK, or treatment of other mental health conditions prior to a diagnosis of ADHD being established.

- In adults with ADHD, prescription medication and behavioral interventions were the two most common forms of treatment; a third of adults received no treatment for ADHD. Reasons why this might be the case were not collected in this survey and are therefore open to speculation: for example, a reluctance to prescribe medication, lack of services including access to psychological treatments, patients not wishing to engage with treatment programs, patients functioning at a level where they believe they do not require treatment, or related to the way the survey was conducted. In terms of medical treatments for ADHD, the majority of patients receiving ADHD medications (67%) were satisfied, although they did identify areas for improvement, including shorter onset of action, longer duration of action and a lower frequency of dose.
- Compared with adults without ADHD, the impairments reported by adults with ADHD in the UK in the LIS suggest a continued impact of the condition on both personal and professional life. These results are in agreement with the data obtained for the overall European sample and suggest that diagnostic practice across the European countries included in the survey is comparable (Caci et al., 2013), supporting the same point that was noted in the European consensus statement on ADHD in adults (Kooij et al., 2010).

CONCLUSION

The greater impairments reported by adults with versus those without ADHD in this UK survey suggest an impact of the condition on both their personal and professional lives. It is important to emphasize that, in the UK, adults with ADHD often have to wait for over a year and consult several doctors before a diagnosis is made, due in part perhaps to a lack of awareness of the disorder in adults. However, the similarity between the UK and European results suggest that ADHD can have a significant and lifelong impact on daily life, affecting adult patients irrespective of the cultural differences between countries. There is a continued need for training/educating healthcare professionals on ADHD in adulthood, and improvements in service provision for adults.

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