The mental health of individuals referred for assessment of autism spectrum disorder in adulthood: A clinic report

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Abstract
Growing awareness of autism spectrum disorders has increased the demand for diagnostic services in adulthood. High rates of mental health problems have been reported in young people and adults with autism spectrum disorder. However, sampling and methodological issues mean prevalence estimates and conclusions about specificity in psychiatric co-morbidity in autism spectrum disorder remain unclear. A retrospective case review of 859 adults referred for assessment of autism spectrum disorder compares International Classification of Diseases, Tenth Revision diagnoses in those that met criteria for autism spectrum disorder (n = 474) with those that did not (n = 385). Rates of psychiatric diagnosis (> 57%) were equivalent across both groups and exceeded general population rates for a number of conditions. The prevalence of anxiety disorders, particularly obsessive compulsive disorder, was significantly higher in adults with autism spectrum disorder than adults without autism spectrum disorder. Limitations of this observational clinic study, which may impact generalisability of the findings, include the lack of standardised structured psychiatric diagnostic assessments by assessors blind to autism spectrum disorder diagnosis and inter-rater reliability. The implications of this study highlight the need for careful consideration of mental health needs in all adults referred for autism spectrum disorder diagnosis.

Keywords
autism spectrum disorders, psychiatric co-morbidity

Introduction
Autism spectrum disorder (ASD) is a life-long neurodevelopmental disorder characterised by deficits in social communication and social interaction across contexts and restricted, repetitive patterns of behaviours, interests and activities (Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-V); American Psychiatric Association (APA), 2013). ASD has been reported to affect approximately 14.67 cases per 1000 of children aged 8 years in the United States (Center for Disease Control and Prevention, 2014). The 3rd National Adult Psychiatric Morbidity Survey established ASD to be present in approximately 1% of the adult population in England (Brugha et al., 2011) with the authors highlighting the numbers of cases without intellectual disability living undetected in the community. ASD is associated with significant healthcare costs (Buescher et al., 2014). Increasing awareness of adults with ASD has led to evolving demand for services, but research guiding health service provision is limited. Changes in UK government legislation (i.e. the 2009 Autism Act (HM Government, 2009) and the 2010/2014 Autism Strategies (Department of Health, 2010; HM Government, 2014)) recommend need-led services for people with ASD. This is likely to include mental health needs as psychiatric

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humor and interests, particularly in those who enjoyed roles often associated with childhood. This study was designed to explore the relationships between humor and childhood experiences, as well as the role of age in determining the latter.

Methods

Participants

The participants consisted of 100 adults (50 with and 50 without childhood autism). The mean age of participants with childhood autism was 35.5 years, and 35 years for those without. All participants were recruited through a university autism research center.

Results

The results indicated a significant correlation between humor and interests, with those with childhood autism showing a stronger preference for humor than those without. Age was also found to play a role, with older participants showing a stronger preference for humor than younger ones. However, there was no significant difference between those with and without childhood autism in terms of humor or interests.

Discussion

This study provides insight into the relationship between humor and interests in adults with and without childhood autism. The findings suggest that humor and interests may be important factors in the development of childhood autism, and that age may play a role in determining these preferences. Further research is needed to better understand these relationships and their implications for individuals with and without childhood autism.

References


(20%) of adults also diagnosed with childhood autism, 44 (20.7%) of those with Asperger’s syndrome and in 18 (12%) adults with PDD-unspecified ($\chi^2 = 8.705$ (d.f. = 3), $p = 0.033$).

**Adults without ASD**: 221 (57.4%) received one or more diagnoses other than ASD (mean number of diagnoses 0.89 (s.d. = 0.95), min = 0, max = 5 (median = 1)), 127 (32.9%) received no diagnosis and additional assessments were recommended for 34 (8.8%). There was a significant gender difference in diagnosis of a psychotic disorder (N male = 9 (2.3%), 0 female, $\chi^2 = 3.781$ (d.f. = 1), Fisher’s exact $p = 0.044$). There were no other significant gender differences in diagnosis in this group.

**Differences between adults with and without ASD**

There was no significant between-group difference in the number of psychiatric diagnoses (excluding diagnosis of ASD). However, there was a significant between-group difference in type of diagnosis (see Table 1); significantly more adults with ASD were also diagnosed with OCD when compared with the non-ASD group. There was a trend towards a significant difference between the two groups in this study in terms of frequency of diagnosis of any anxiety disorder ($p = 0.058$), bi-polar affective disorder ($p = 0.056$) and alcohol dependence ($p = 0.058$), with the latter two conditions more prevalent in adults without ASD.

Where there was congruence in the labelling and categorisation of mental health conditions, rates of comorbidity were compared with general population data reported as part of the UK National Psychiatric Morbidity Survey (McManus et al., 2009). It was not possible to make certain comparisons, for example, collapsing the anxiety disorders into a single large group as data were not collated in this way for the purposes of the national survey. ‘All phobias’ were taken to include specific phobias, agoraphobia and social phobia grouped together.

In terms of the ASD group, there were significant differences between adults with ASD and general population data across a number of diagnostic categories (see Table 1) with ‘all phobias’, generalised anxiety disorder (GAD), OCD,
current depressive episode and psychotic disorders reported more frequently in adults with ASD. Post-traumatic stress disorder (PTSD), alcohol and drug dependence and eating disorders were more commonly reported in the general population sample. A similar pattern was observed in the adults without ASD when compared with the UK general population survey data (see Table 1).

Discussion

Our findings indicate high rates of clearly diagnosed mental health problems in a relatively large sample of individuals diagnosed with ASD in adulthood, primarily anxiety disorders, OCD, depression and ADHD. This is consistent with the findings of other studies (e.g. Hofvander et al., 2009) where a similar range of conditions was noted to be generally more prevalent in ASD than in general population clinical samples. When compared to a relevant psychiatric control group, that is, adults without ASD attending the same clinic, OCD was the single condition identified significantly more frequently in adults with ASD.

OCD and anxiety disorders, including agoraphobia, social phobia and GAD, and psychosis occurred in a greater proportion of adults with ASD when compared with rates from the UK national psychiatric morbidity survey (McManus et al., 2009). This was also observed in the adults without ASD suggesting that such difficulties, although common in ASD, may not be autism-specific. Comparison with the UK general population survey suggested that several conditions, for example, PTSD, alcohol and drug dependence and eating disorders, were under-represented in the referrals to the ASD clinic. It is possible that such conditions are more easily identifiable with clear care pathways in mainstream services. Of note, rates of ADHD were not significantly greater in the clinic sample when compared to general population data. It is possible that an associated specialist ADHD clinic within the same set of services meant many referrals were diverted away from the ASD clinic.

Our findings suggest that a significant proportion of adults referred for assessment of possible ASD do not meet ICD-10R diagnostic criteria for ASD, and also do not meet diagnostic criteria for other mental health problems. Thus, ASD diagnostic clinics need to consider a broad spectrum of mental health co-morbidity and onward care pathways for the majority of adults referred for assessment. This is consistent with the conclusions of Hofvander et al. (2009).

Our findings highlight the need for evidence-based, cost-effective community mental health services for adults with ASD. There is preliminary evidence that unmet needs arising from psychiatric co-morbidity in young adults with ASD increase the burden on both individual and carer(s) (Cadman et al., 2012). There is a need for accessible, evidence-based mental health care for adults with ASD including comprehensive assessments of possible ASD and co-morbid mental health difficulties. There is evidence that psychological interventions adapted for adults with ASD can be effective (see Spain et al., 2014 for review) and this is promising in light of the high rates of OCD, mood and anxiety disorders in this group.

Limitations

Limitations include the absence of structured diagnostic instruments of co-morbidity and absence of inter-rater diagnostic reliability data. Findings may not be generalisable to all adults with ASD, including those with intellectual disability, those not referred to tertiary clinics or where ASD was diagnosed in childhood. However, neuropsychiatric/multi-disciplinary assessments were robust and included ICD-10R criteria and gold-standard ASD assessment.

Implications

Assessment of possible ASD in adults should include thorough diagnostic assessments including gold-standard assessments (ADI-R and ADOS), valid screening instruments and careful consideration of psychiatric co-morbidity both in the presence and absence of ASD.

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References


