Association of the Wender Utah Rating Scale (WURS)-61 items with clinical psychiatric diagnosis in adulthood.

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INTRODUCTION

The Wender Utah Rating Scale (WURS) is a retrospective, self-reporting questionnaire comprising 61 questions that are used to evaluate the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in adults.
It was devised by Ward et al, 1993, and the 61 questions were all linked to symptoms of ADHD.
The DSM-5 criteria for ADHD requires symptoms to have been present before age 12. Hence, the need for retrospective assessment.
Our study aims to establish if any of these childhood symptoms are associated with the development of specific mental health disorders in adulthood.

AIM

To establish if certain childhood symptoms (including ADHD) are associated with specific mental health disorders in adulthood.

METHOD

- Patients attending outpatient clinics in Sligo/ Leitrim area, and people without mental disorders (assessed with General Health Questionnaire -12) had completed the WURS-61. ADHD was diagnosed using Conners' scale and psychiatric evaluation. Other psychiatric disorders have been classified according to ICD-10 using clinical criteria, and grouped into major categories.
- Inclusion criteria for both groups: age 18-65; ability to speak, read & write English. Exclusion criteria for study group: moderate to severe learning disabilities, cognitive impairment and severe brain injuries. Exclusion criteria for controls: score of 15 or more in the General Health Questionnaire (GHQ).
- In the WURS, each question has 5 possible responses, scored from 0-4 points. In the GHQ, each response was scored on a Likert scale from 0-3, total potential score = 36. Scores of 15 and above indicate symptoms of psychological distress.
- Statistical analysis was conducted using the IBM (SPSS) 24 package. It analysed 60 out of 61 items of the WURS, since one item was specific to the female gender. Categorical variables were reported as counts and percentages. Continuous variables were reported as means and standard deviations. Chi squared was used for categorical variables. The number of psychiatric disorders was reduced into major categories based off their ICD-10 classifications. One way ANOVA analysis of variants was used to compare scores of the WURS among the diagnostic groups, with Bonferroni correction for multiple tests. For the WURS, parallel analysis was used to determine factors of the WURS. The higher factor score of the dimensions was then given to each individual. Chi squared compared the WURS scores to the clinical diagnoses
- This research was approved by the Ethical Committee of Sligo University Hospital.

RESULTS

- Parallel analysis showed the best factor solution of the sample was the one with five factors.
- 5 factors were derived; 1. Impulsivity, distractibility, emotional distress; 2. Oppositional/ conduct symptoms; 3. Academic performance; 4. Psychosomatic symptoms; 5. Sociability, popularity
- Main diagnoses and associated symptoms, as seen from table 1:

1. Substance Misuse Disorder (SMD): Significantly likely: childhood symptoms of conduct and oppositional nature; Less likely: childhood symptoms of ADHD
2. Personality disorders (PD): Likely: childhood symptoms of ADHD and oppositional behaviour; Less likely: sociable and popular
3. ADHD: Likely: childhood symptoms of ADHD; Less likely: sociable and popular in childhood
4. No mental disorder: Likely: sociable and popular in childhood; Less likely: behavioural problems

Academic performance and psychosomatic problems in childhood had no significant association with mental disorders in adulthood

DISCUSSION

The results show adults with ADHD had symptoms and behaviours during childhood that overlap with those who were later diagnosed with personality disorders (PD). This is in line with previous research[6];

- In adults with ADHD, PDs often co-exist. ADHD and borderline personality disorder (BPD), are frequently shown to be co-morbid disorders .
- ADHD and BPD are not distinct disorders but represent two dimensions of one disorder.

Other studies[7] argued that those links are bad reflections of the scales used, that mediators or risk factors (gender, sexual abuse, attachment disturbances) influences the development of childhood ADHD symptomatology to a PD in adulthood.
Clearly, longitudinal studies need to be conducted to resolve this link if one exists.
Currently, there are only a few longitudinal studies, [16,19,28] but they seem to be underpowered, have too short a time follow-up, are too specific for gender.
From this present study, given that it is cross-sectional, we can only suggest there is an overlap of symptoms and behaviours during childhood which are common in both ADHD and PDs in adulthood.
Overlap of childhood symptomatology and the behaviour of adults with ADHD compared with those diagnosed with SMDs, shows an overlap in only one dimension; oppositional behaviour. The cohort of adults with SMDs were significantly less likely to have attentional problems or emotional distress in childhood which separates them from those with ADHD and PDs. High rates of ADHD (44%[33] and PDs (34.8-78%) have been reported in SMD populations[20]. This is also in line with previous research.
Results also show negative associations: Academic difficulties; only those with no mental disorder (controls) differed significantly. Previous studies have shown that the academic difficulties factor had the strongest correlation with ADHD symptomatology[4]; previous research did not include participants with mental illness.

Figure 1: The main diagnostic categories and their frequencies are as follows:

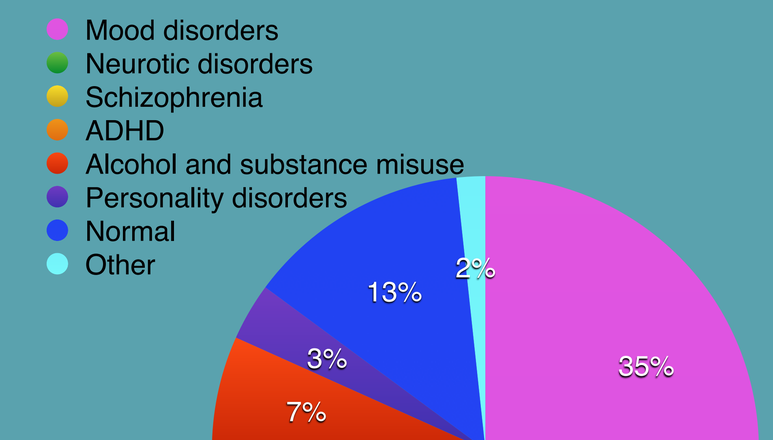
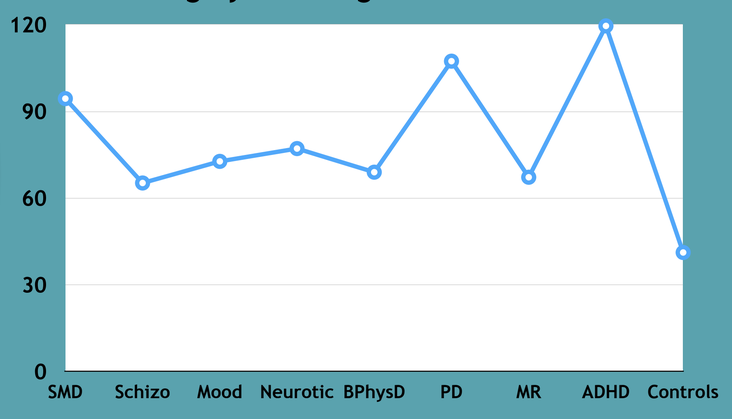


Table 1: Cross-tabulation of dingoses with main factor of the WURS

Diagnostic Categories		Factor 1 (Impulsivity)	Factor 2 (Oppositional)	Factor 3 (Academic)	Factor 4 (Physical)	Factor 5 (Sociability)
F10-19 (SMD)	Adjusted residual	**-2.3**	**3.5**	-.1	-.2	-.5
F20-29 (Schizo)	Adjusted residual	-1.1	1.0	.1	1.6	-1.3
F30-39 (Mood)	Adjusted residual	1.4	-1.6	.0	-.4	.5
F40-49 (Neurotic)	Adjusted residual	.1	-1.0	1.7	.2	-1.0
F50-59 (Behavioural; physiological factors)	Adjusted residual	1.9	-1.3	.6	-1.3	-.1
F60-69 (Personality disorder)	Adjusted residual	**2.2**	**2.0**	-1.2	.3	**-3.0**
F70-79 (Mental Retardation)	Adjusted residual	.2	-.9	1.7	.4	-1.2
ADHD	Adjusted residual	**2.5**	**2.3**	1.2	-1.9	**-3.7**
"Normal" controls	Adjusted residual	**-3.2**	**-2.4**	**-2.8**	.5	**7.0**

Figure 2: Mean WURS of each diagnostic category including "normal" controls



CONCLUSION

- Except ADHD, symptoms of substance misuse, and personality disorders in adulthood are possibly manifested earlier in life. Those symptoms overlap with ADHD symptomatology but are not purely ADHD.
- WURS-61 is a useful questionnaire to detect this symptomatology retrospectively but needs to be used with caution in populations of SMD and personality disorders.
- It needs to be; 1) used with other scales, or, 2) modified; because of the overlap of symptoms which can wrongly indicate ADHD when other diagnoses are more appropriate.

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