



Letter to the Editor

Using digital psychometric tests in an Irish Child and Adolescent Mental Health Service (CAMHS): an examination of the acceptability of Q-interactive for service users and clinicians

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Dear Editor,

Given the urgent need for development in technology to support the work of Irish Child and Adolescent Mental Health Service (CAMHS) teams highlighted by Dr. Maskey (2022) and Dr. Finnerty (2023) in their respective reports, it is pertinent to share some recent developments here at Lucena CAMHS.

In her recent report for the Mental Health Commission, Dr. Finnerty recommends urgent developments in technology and digitisation in Irish CAMHS settings, where paper records currently predominate (Finnerty, 2023). This lack of digital infrastructure is noted as creating ‘inefficiency to a large scale within the teams and this is preventing service development’ (Finnerty, 2023, p. 8). Concurrently, Dr. Maskey specifically highlights the digital Conner’s questionnaire for Attention Deficit Hyperactivity Disorder (ADHD) as an enhanced and more efficient version of its paper-and-pen counterpart (Maskey, 2022, p. 60). The digital Conner’s allows for computerised scoring to be delivered instantly to clinicians saving valuable time on scoring the questionnaire while delivering vital clinical data to inform diagnosis and treatment planning.

Here at Lucena CAMHS, our Mental Health Information System (MHIS) electronic patient record system is noted as unique in its comprehensive ability to create and store clinical files improving ‘efficiency, auditing, case management and research’ (Finnerty, 2023, p. 46). MHIS is provided through Saint John of God Community Services and provides a solid digital foundation upon which further innovations can be developed in areas like assessment, although it requires considerable investment to ensure long-term viability.

One such area is standardised testing, which is an essential part of delivering a high-quality CAMHS to young people and their families. The knowledge of a young person’s neurocognitive profile gained through such testing contributes to explaining their socio-emotional behaviour and learning and informs clinical decision-making regarding inclusion, mental capacity, and potential to engage in therapy (Shernoff *et al.*, 2014).

The iPad-based digitalised psychometric assessment tool called Q-interactive (Pearson, 2024) was introduced at Lucena CAMHS

during the COVID-19 pandemic to facilitate high-standard neurocognitive and speech and language assessment in compliance with COVID-19 safety guidelines around social distancing. The project was funded via a grant from ReThink Ireland through their *Innovate Together* programme, and it has remained in use given the benefits of digital assessment.

Tests available through Q-interactive support the identification of cognitive and/or speech and language deficits which have important implications for treatment. For example, the Wechsler Intelligence Scale for Children (WISC-V) can give deep insight into the unique verbal, language processing, and working memory skills of young people (Pearson, 2019). Research shows that when treatment plans combine remediation of such difficulties with psychological therapy alongside psycho-educational and intervention work with parents, outcomes are better than when such interventions are made separately (Hechtman *et al.*, 1996).

This is particularly important given that around 80% of children and adolescents attending mental health services have a speech, language (oral and/or reading), or communication disorder according to a meta-analysis of studies in the area, as found by Hollo *et al.* (2014). Likewise, young people with identifiable language or communication impairments can experience significant mental health difficulties, stemming from a struggle to communicate, learn, and socialise through language (Botting, *et al.* 2016; Sullivan *et al.*, 2016).

Until recently, such psychometric testing has remained over-reliant on heavily outdated and labour-intensive paper-based instruments, which are ‘slow, highly inefficient, and expensive’ (Miller and Barr 2017, p. 541). However, while technological advancements have created improvements in the speed and accuracy of assessment and testing in all healthcare-related fields, neuropsychology lags behind in the trend towards modernisation. The recent reports of Dr. Finnerty (2023) and Dr. Maskey (2022) show the Irish CAMHS sector is no different in allowing this lack of digitisation to hamper the standard and efficiency of care we deliver.

Given this topical concern, I share below the results of a recent internally conducted acceptability survey on introducing a digital psychometric testing tool here at Lucena CAMHS, the Saint John of God Community Services CAMHS provider in CHO 6 and partially CHO 7 on behalf of the Health Service Executive (HSE). The survey was built using LimeSurvey and distributed to clinicians and service users immediately after using Q-interactive

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Table 1. Clinician survey results

Clinician acceptability survey for Q-interactive	Definitely yes	Yes	Not sure	No	Definitely no
Using the iPad for administration was difficult for me	0 (0%)	1 (2.5%)	1 (2.5%)	13 (32.5%)	25 (62.5%)
I feel I had sufficient training in how to use the digital assessment	15 (37.5%)	22 (55%)	3 (7.5%)	0 (0%)	0 (0%)
I found it difficult to locate key administration information on Q-interactive	1 (2.5%)	4 (10%)	1 (2.5%)	21 (52.5%)	13 (52.5%)
I had difficulty scoring the assessments using Q-interactive	0 (0%)	2 (5%)	0 (0%)	13 (32.5%)	25 (62.5%)
I experienced technical problems (e.g., with iPad, internet, Bluetooth, synch)	1 (2.5%)	10 (25%)	0 (0%)	18 (45%)	11 (27.5%)
It was easy to maintain 2-metre social distance throughout the test	14 (35%)	18 (45%)	1 (2.5%)	7 (17.5%)	0 (0%)
I felt the quality of information that I gathered was of equal standard to the paper/pencil version of the test	20 (50%)	17 (42.5%)	2 (5%)	1 (2.5%)	0 (0%)
I completed testing more quickly using digital assessment	14 (35%)	17 (42.5%)	2 (5%)	6 (15%)	1 (2.5%)

Table 2. Young person survey results

Young person acceptability survey for Q-interactive	Definitely yes	Yes	Not sure	No	Definitely no
The therapist explained to me what I had to do	14 (70%)	6 (30%)	0 (0%)	0 (0%)	0 (0%)
He/she told me what to do with the Ipad	12(60%)	8 (40%)	0 (0%)	0 (0%)	0 (0%)
I could ask a question if I did not understand what to do	9 (45%)	9 (45%)	0 (0%)	1 (5%)	1 (5%)
I liked using the iPad	11 (55%)	6 (30%)	2 (10%)	1 (5%)	0 (0%)
I could see the pictures and words clearly	9 (45%)	11 (55%)	0 (0%)	0 (0%)	0 (0%)
I could hear the instructions OK	9 (45%)	11 (55%)	0 (0%)	0 (0%)	0 (0%)
I did as well as I could (<i>n</i> = 1 blank response)	9 (45%)	10 (50%)	0 (0%)	0 (0%)	0 (0%)
I don't mind doing something like this again using an iPad	5 (25%)	12 (60%)	3 (15%)	0 (0%)	0 (0%)

for psychometric assessment, providing appropriate consent forms were returned. The survey was provided and responded to on the same iPad used for the assessment. A total of 60 responses were gathered, with 40 from clinicians (Table 1) and 20 from service users (Table 2). Of the clinicians, 20 (50%) were speech and language therapists, and 20 (50%) were clinical psychologists. The majority of service users surveyed were teenagers aged 13–16 (75%) and were mostly female (65%).

These results indicate clinicians at Lucena CAMHS find digital assessments easy to conduct, easy to score, quicker to conduct, and equivalent in quality compared to traditional paper assessments. Given this, the appeal of utilising digital psychometric assessment

is obvious for clinicians and CAMHS providers. These digital instruments are made accessible to clinicians through easy access to adequate training, convenient access to key test administration information, and more.

Similarly, service user responses indicate they found the digital assessment methods acceptable. A total of 100% of the young people surveyed found the auditory and visual stimuli used were of high-quality, 95% reported trying their best during assessment, 85% liked using the iPad for assessment, and 85% were open to future digital assessment. These figures suggest service users remain highly motivated and engaged in testing during digital assessment.

These results add to the evidence that digital psychometric assessment methods, like those provided through Q-interactive, are acceptable to clinicians and service users alike. Beyond acceptability concerns, digitalised neurocognitive and speech and language assessments have several benefits. They are more accessible and cost-effective due to elements of self-administration and instant scoring and provide rapid data to healthcare providers (Sahoo and Grover, 2022). The data presented here indicate that digital psychometric systems can maintain these benefits in Irish CAMHS settings.

Digital psychometric testing systems improve efficiency, saving clinical time and allowing clinicians to focus on the vital skill of interpretation and integration of assessment results into treatment planning and delivery. This serves the interest of both service providers and service users, given its potential to reduce waiting lists by freeing up clinicians' time through reducing the workload associated with psychometric testing. This may support reductions in time spent on waiting lists highlighted as necessary in the CAMHS review (Finnerty, 2023).

Further research investigating the viability and acceptability of introducing digitalised psychometric testing systems in other Irish CAMHS settings, disability services, and hospitals is needed. Such research can help to ensure the psychometric testing systems provided are both fit for purpose and suited to the needs of the services utilising them. Practical hurdles must also be considered. These include introducing the resources and digital infrastructure needed to operate a digital psychometric testing system. For example, Q-interactive requires functional Wi-Fi, iPads, and desktop/laptop computers with appropriate software. There are also vital data protection impact assessments to be conducted to

ensure proper procedures are in place when handling service user health data.

It is noteworthy that since the integration of Q-interactive, the use of digitalised psychometric assessment techniques has grown at Lucena CAMHS. For example, we have introduced the use of digitalised measures of ADHD (the Conner's questionnaire) (WPS, 2023). Additional tests are in use through Q-Global, the Q-interactive computer-based counterpart. For example, Q-Global offers access to a digitalised Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A), which can be used to support problem identification, diagnosis, and treatment planning through analysis of psychopathology (Pearson, 2023). Additionally, work is underway in-house at Lucena CAMHS to digitise clinical outcome measures for our eating disorder team using funding secured through the *Better Life Grant* fund operated by the Saint John of God Foundation.

It is clear from the work at Lucena CAMHS that digital psychometric assessment techniques are highly acceptable to both clinicians and service users in Ireland. It is vital that Irish healthcare services modernise the way in which we engage with psychometric testing and catch up with this international trend of modernising assessment processes through digitalisation. Given the demonstrated acceptability of digital psychometric assessment and the recent findings of Dr. Finnerty (2023) and Dr. Maskey (2022), the Irish CAMHS sector must treat the introduction and development of modern digital psychometric assessment systems with the sense of urgency our service users deserve.

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Ethical standards. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation and with the Helsinki Declaration of

1975, as revised in 2008. Ethics committee approval was obtained through Saint John of God Hospitalier Ministries Ethics Committee – ID774 & UCD Human Research Ethics Committee – Humanities (HREC-HS) – HE-E-21-119-Pinto-Grau-Nearchou. Consent was Obtained from Clinicians and Parents, where relevant. Assent forms were also completed by the young person participating.

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