

A Turning Point for Paediatric Developmental Services in Oman

Establishment of a national autism screening programme

نقطة تحول في خدمات رعاية الطفولة النمائية في عمان

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Sir,

Autism spectrum disorders (ASDs) are neurodevelopmental disorders characterised by impaired social communication and interaction and restricted repetitive behavioural interests.¹ In 2011, the prevalence of autism in Oman was estimated to be 1.4 per 10,000 children; however, this was believed to be an underestimation, due to the underdiagnosis and under-reporting of ASD cases.² By the end of 2015, unpublished data from the Sultan Qaboos University Hospital (SQUH), Muscat, Oman, estimated the national prevalence to be approximately 8.5 cases per 10,000 children, which is much lower than global estimates (60–70 cases per 10,000 children).³ Limited community awareness with regards to autism has been found to constrain its detection rate among the Omani population.²

Local autism screening is necessary to detect undiagnosed cases in the community and refer them for early intervention services. It is well-established that children who undergo specific screening for developmental disorders are more rapidly diagnosed and subsequently referred for interventions than children who go through routine developmental surveillance by paediatricians.⁴ Moreover, early interventions can lead to enhanced patient outcomes and reduced costs; Jacobson *et al.* reported savings of \$187,000–203,000 per child with early intensive behavioural interventions.⁵ The use of standardised methods to screen for developmental disorders during paediatric appointments has been recommended.⁶

In Oman, increasing interest in autism and developmental disabilities in general have allowed a platform for academic, governmental and non-governmental organisations to work on increasing community awareness as well as diagnostic and rehabilitation services. As a result, the first Paediatric Developmental Clinic was established in 2012 at SQUH. In 2014, the legal Royal Decree #22/2014 known as the Children's Act was issued, emphasising early detection and interventions for paediatric disabilities.⁷ A national screening programme focusing on developmental disabilities among toddlers is currently being implemented by the Omani Ministry of Health.⁸ This programme will use an Arabic version of the revised Modified Checklist for Autism in Toddlers™ with follow-up (M-CHAT-R/F™).^{9,10} This tool is a two-stage screening questionnaire designed to detect early symptoms of autism during regular paediatric appointments; it has been proven to help detect ASD patients up to two years earlier.⁹ In addition, the M-CHAT-R/F™ tool has demonstrated high sensitivity and specificity (0.87 and 0.99, respectively).¹¹ Children with positive M-CHAT-R/F™ scores have a 47.5% risk of being diagnosed with ASD and a 94.6% collective risk of being diagnosed with a developmental disability.⁹

The national Omani screening programme will be integrated into existing extended programme of immunisation (EPI) services provided at all primary healthcare centres in Oman. In September 2016, primary healthcare providers underwent training to administer the screening tool, interpret findings, assess risks and communicate with parents; this training was modelled on the Training of Trainers method in order to ensure the sustainability of the service.¹² During regular visits, EPI staff nurses will administer the Arabic M-CHAT-R/F™ questionnaires to the parents or caregivers of 18-month-old children. Primary care physicians will then review at-risk children and refer them for further evaluation accordingly. Diagnostic evaluations will be carried out at a designated specialised clinic and expanded services are expected to be available from January 2017 onwards.

To the best of the authors' knowledge, this programme will be the first routine developmental screening programme utilising an Arabic tool in the Middle Eastern region. It is expected to increase national ASD detection rates with a concomitant increase in measured prevalence rates of autism and developmental disorders. Hence, national awareness and early intervention services will improve accordingly. Research can then be undertaken to

evaluate the programme and document available services before and after its implementation. In the future, this program could serve as a model for similar interventions for other countries in the Gulf and Middle Eastern region.

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