

A pilot multidisciplinary clinic at an ASPECT autism school by a specialist mental health team

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Background

Around 50-70% of children with Autism Spectrum Disorder (ASD) and Intellectual Disability (ID) have at least one mental health diagnosis (AAASD, 2012, and Brereton *et al*, 2006). Many children with ASD and ID have mental health related difficult behaviours, which cannot be explained by ASD or ID. Appropriate psychiatric input is thus needed for diagnosis and management. While there has been a steady increase in the prevalence of autism worldwide (Brereton *et al*, 2006), there is a scarcity of child psychiatrists or paediatricians trained in neurodevelopmental and mental health disorders. This report describes the experience of two interns who were training in the only Neurodevelopmental Child Psychiatry Team in the public health system in NSW, at the Department of Psychological Medicine, at **the Children's Hospital at Westmead, Australia**. This report explores the experience and possible benefit of a multidisciplinary special school-based mental health clinic for children with ASD.

Autism Spectrum Australia (Aspect) is Australia's largest service provider for people on the autism spectrum in Australia and caters to students with co-morbid ID. Their curriculum includes mental wellbeing and most of the children have access to school /community-based services including a paediatrician, speech therapist, psychologist and behaviour management specialists. However, the specialist psychiatrist input is low, reportedly around 6% in children attending an Aspect school in Sydney.

This report follows a year-long monthly multidisciplinary Mental Health clinic pilot at an Aspect school. The clinic provided a comprehensive mental health assessment for the child/young person and the family by a team made up of a dual trained paediatric/child psychiatry fellow and clinical psychologist from the **Developmental Psychiatry Team at the Children's Hospital at Westmead**.

Aim

The clinic aimed to increase collaboration and mental

health awareness between families, educational staff and community-based professionals working with this population whilst providing care for children and young people.

In addition to establishing a collaborative relationship and a multidisciplinary service, this study assessed the following four questions:

1. Do these students have unidentified mental health diagnoses? We describe the new mental health diagnoses made and medications prescribed for these conditions.
2. Can available mental health screening instruments identify co-morbid psychiatric disorder in this population compared with clinical assessment (gold standard)? We trialled 3 screening questionnaires for identifying mental health disorders.
3. Do these cases have associated family problems as assessed by mental health status and parenting style of the parents by clinical assessment and using screening instruments?
4. Is a school-based multidisciplinary clinic felt to be a useful service by the parents and teachers? The usefulness of the clinic was evaluated with the Clinic Satisfaction Scale.

Method

This pilot clinic was set up and managed by a steering committee of senior representatives of Aspect and the Neurodevelopmental Psychiatry Team and ethics approval was obtained by **Aspect and the Children's Hospital at Westmead**.

Cases of concern were selected by the school; approval and involvement was sought from the parents, and a referral from the involved paediatrician (See Figure 1).



Figure 1. Organisational process of a school clinic.

Initially, some information was collected about the young person’s presenting symptoms. Pre-clinic perception of teachers and parents regarding the child or young person’s presenting symptoms table was used (see Appendix 1)

A single comprehensive diagnostic assessment generally took half a day and included: reviewing previous medical and educational health records, interviewing the parents, class teacher, child (if verbal), school counsellor, occupational therapist, speech therapist and observing the child in the classroom and playground. Other information was collected by questionnaires (as listed below). The MH (mental health) team provided verbal and written feedback to both the parents and school staff. The usefulness of the clinic was assessed by the Clinic Satisfaction Scale, informal telephone feedback and feedback from steering committee feedback.

Three MH screening tools were completed by parents and teachers:

- an online DAWBA (Development and Wellbeing Assessment) (Goodman *et al*, 2000),
- DBC (Developmental Behavioural Checklist) (Dekker *et al*, 2002) and
- MHID Screener with 9 Likert Scale questions (developed by The Neurodevelopmental team at the Children’s Hospital at Westmead).

DAWBA was chosen as it is easy to administer, accessible online, low cost and does not require expert input. The package is designed to generate ICD-10 and DSM-IV psychiatric diagnoses on 5-16 year olds. The DBC is widely used in Australia and assesses a broad range of behavioural and emotional disturbance in young people with intellectual or developmental disability between the ages of 4-18 years. The MHID was developed as a quick screener which can be completed in less than a minute. These screening tools were quick, easy to administer and did not require special training. Administering these tools was a way to ex-



“The clinic provided a comprehensive mental health assessment for the child/ young person and the family”

plore whether these questionnaires could provide a ready source of information for the school to identify the presence of co-morbid psychiatric disorder themselves and then decide whether there was a need to refer to specialist child psychiatry services.

The MH team assessment included an assessment of parental relationships and wellbeing and this was supplemented with the DASS-21 (The Depression Anxiety Stress Scale) (Lovibond and Lovibond, 1995) and the 30 questions Parenting Scale from Stepping Stones Triple P (SSTP, 2012).

A Clinic Satisfaction scale (See appendix 2) was used to provide data on what the parents and teachers thought of the clinic, which was modified from the Service Satisfaction Scale (Plapp and Rey, 1994). The process, outcomes and teacher and parent satisfaction were evaluated.

Results

Assessments

8 clinic assessments were completed in the course of a school year, (7 boys, 1 girl, aged 8-12 years). All had new or additional psychiatric diagnoses: 6/8 for sleep disorder, 4/8 with Anxiety Disorder and 2/8 with Atten-

tion Deficit Hyperactivity Disorder (ADHD). All had pharmacological intervention for these disorders (details in Table 1) and were given behaviour management advice.

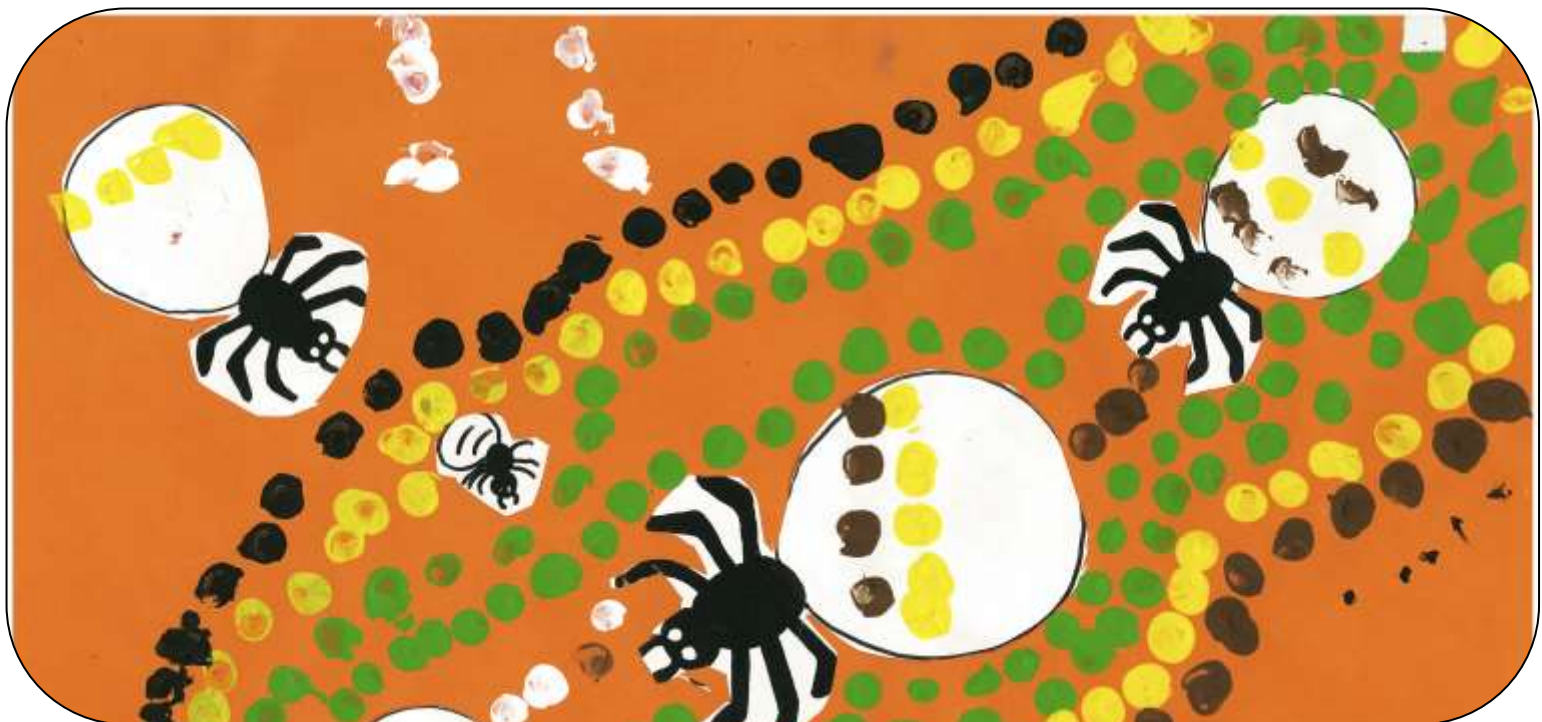
| Medication Recommendations | Number of Patients (out of 8) |
|---|-------------------------------|
| Antidepressant/ Anxiolytics (Recommended) | 6 (SSRI and 4 Amytriptylline) |
| Stimulant started | 2 (Ritalin) |
| Clonidine | 4 |
| Risperidone | 1 |
| Increase in medication | 2 (Fluoxetine, Risperidone) |
| Stopped resperidone | 1 |
| Melatonin | 2 |

Table 1 Describes the changes in medication management recommended as a result of the clinic.

All medication changes received positive feedback from teaching staff or parents or both when contacted either by phone or verbal feedback. ASPECT staff said there was a decrease in behavioural concerns at school and improved school participation.

Parental Mental Health

Clinical assessments identified parental mental health issues in seven of the eight parents (87.5%). Maternal depression was identified in 5/8 (62.5%), and paternal depression in 1/8 (12.5%). Only one mother was already on antidepressants and was seeing a psychologist.



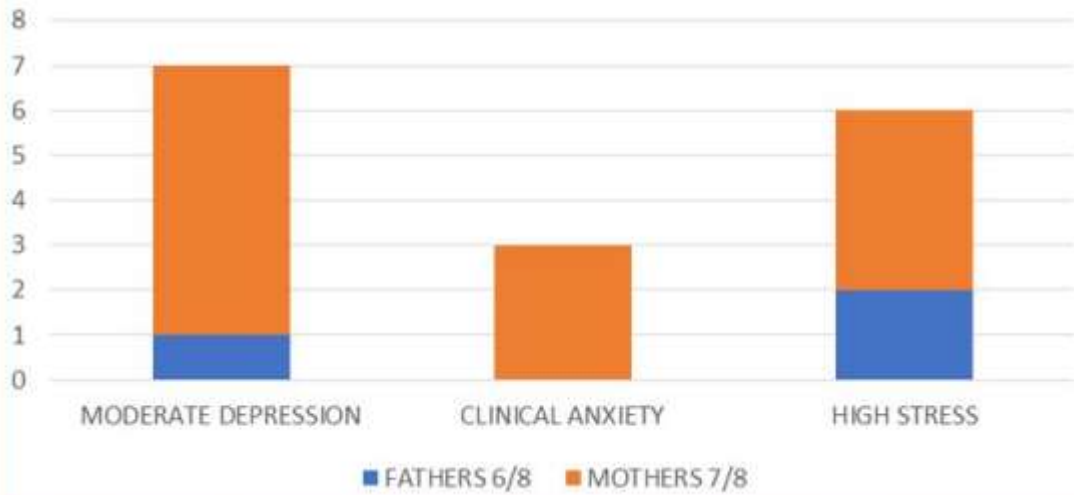
DASS results. The DASS was used to assess parent ill health. 7/8 (87.5 %) mothers and 6/8 (75%) fathers filled the DASS- 21 form. 6/7 (85.7%) mothers scored high for depression and 1/7 (16.6%) scored in the normal range. 1/7 (16.6%) had moderate depression and 5/6 (83.3%) fathers scored in a normal range for depression. 3/7 (42.8 %) mothers scored a clinical level of anxiety. 4/7 (57.1%) mothers and 6/6 (100%) fathers scored normally for anxiety. 4/7 (57.1%) mothers and 2/6 (33.3%) fathers had clinical level of stress. 3/7 (42.8%) mothers had a normal stress level and 4/6 (66.6%) of fathers. Figure 2 displays the results in the clinical range.

The results indicate that the DASS-21 performed well against clinical assessment and was therefore clinically useful.

100% of the completed DAWBA, MHID Screener and **DBC showed 'high probability' of mental health or behavioural disorder** showing high sensitivity, which indicates that the school were selecting cases appropriate for a mental health clinic. However, all the tools had their limitations in diagnostic accuracy. DAWBA did not identify ID vs 7/8 clinical assessment (CA), anxiety (vs 4/8 CA) and mood disorder (vs 1/8 CA) and underestimated ASD (37.5% vs 100% in CA).

MHID Screener was good at recognising ASD (100% as CA) and ID (83.3% vs 85% in CA). Both MHID Screener (100%) and DAWBA (37.5%) over-estimated the ODD (vs 25% CA). Both MHID Screener (100%) and DBC (100%) overestimated anxiety vs 50% CA.

Number of Parents in clinical range for Mental Illhealth on DASS-21



“Results indicate that the DASS-21 performed well against clinical assessment”

Figure 2, Number of parents in clinical range for mental ill health on the DASS-21

Parenting Questionnaire

7/8 (87.5%) mothers and 4/8 (50%) fathers answered the Parenting Questionnaire and results showed at least one of the parents who answered the questions had suboptimal style of parenting including laxness, over-reactivity and verbosity. This suggests that greater attention to parenting skills and style may be helpful to the identified clinic children.

Mental Health Screening tools

7/8 (87.5%) teachers and 6/8 (75%) parents completed the online DAWBA, 7/8 (87.5%) parents and 5/8 (62.5%) teachers filled the DBC. 8/8 (100%) parents and 6/8 (75%) teachers filled the MHID Screener.

DAWBA (37.5%), MHID Screener (66.7%) underestimated ADHD vs 75% CA. None of the above screening scales looked specifically for sleep difficulty which needed attention and management in six of the eight children (75%). Accordingly, these screening instruments had high level of under identification and over identification and therefore appear to lack clinical validity in this population. Some of these failings are because the instrument is not designed to identify some diagnoses, such as sleep disorders in all of them and ID in the DAWBA. It is not possible to comment more broadly on the clinical significance of these diagnostic differences due to low numbers, but in general they lacked clinical utility. However, the DAWBA may have value in a mainstream population, but may not be suitable for a population with Autism. The DBC is primarily a behavioural measure and does not serve well as a measure of psychiatric diagnosis. The MHID was of

Comparison of Different Assessment Tools used in a School Clinic at an ASPECT school for kids with Autism

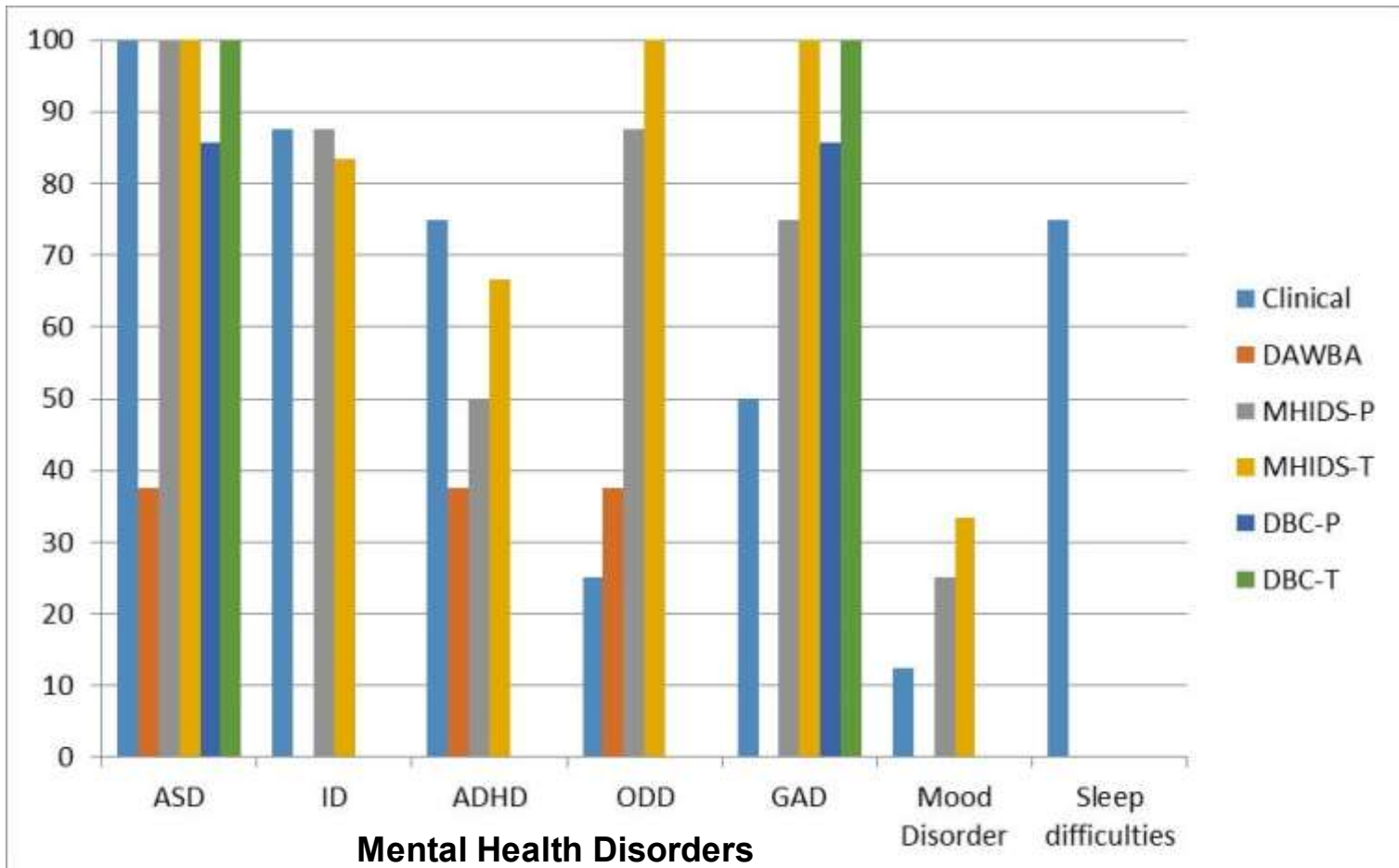


Figure 3: Overview of all assessment tools and the disorders they measured in an ASPECT school

greater convenience in terms of time taken, but needs further development. See figure 3 for an overview of all assessment tools and the disorders they measured.

Clinic Evaluations

5/8 (62.5%) clinic evaluations forms were returned from the parents and the teachers. Of these, 4/5 (80%) of teachers and parents strongly or very strongly agreed that the clinic was useful. 100% of both parents and teachers strongly/very strongly agreed that participation of school in the clinic was useful. 4/5 (80%) parents and 5/5 (100%) teachers agreed that multidisciplinary approach is essential. The Clinic Service Evaluation Questionnaire confirms that parents and teachers valued the Multidisciplinary MH School-based Clinic.

Conclusion

This school-based specialised psychiatry clinic had high levels of satisfaction from parents and teachers, and brought new understanding about troubled children with ASD. These mental disorders were not considered particularly severe but illustrated the importance of co-morbid sleep problems, anxiety and

ADHD not identified by 'treatment as usual' and intervention led to improved outcomes for the child, based on feedback from parents and teaching staff. It highlights the importance of specialised mental health assessment in addition to an educational and behavioural perspective in this population. Hence a multidisciplinary mental health approach is essential for children with ASD/ID and mental health comorbidity.

How can we enable a school-based multidisciplinary mental health approach, when the future of services based on the National Disability Insurance Scheme and Health Activity-Based Funding targets individual disability and mental health practitioners and does not fund collaborative multidisciplinary team work? Currently, mental health services expect clients with Autism or ID to be managed by mainstream mental health services. With the increasing incidence of Autism and the high level of documented mental health co-morbidity, the specialised mental health knowledge of this population is essential for professionals working with them. There is a need for upskilling and education of the professionals including the paediatricians who are the primary medical professionals looking af-

“simple and quick instruments can enable parents and teachers to identify mental health issues in this population ”

ter these children.

There is also a high level of mental health issues (mainly Depression) in parents and suboptimal parenting style was identified in at least one of the parents, most probably due to a lack of adequate community-based support for these children and families. However, the interactions between autism, intellectual disability, parental depression, child's and parents temperament, social support, cultural background, circumstances and parenting style is complex. Currently the 'My Say' project is rolling out universal availability of Stepping Stones Parent Training which is shown to improve parenting skills, parental wellbeing and childhood behaviour (Gray *et al*, 2017). The School-Link study of Stepping Stones Parent Training in Schools for Special Purposes catering for ID also demonstrated powerful effects. The need to maintain the funding of such parent training is clear and would no doubt greatly benefit special schools. Parental (Carer) mental health, support and wellbeing in this population needs a broad-based public health approach to address identified need of carer burn out.

We found simple and quick (like MHID) instruments can enable parents and teachers to identify mental health issues in this population and facilitate the referral to the neurodevelopmental specialist. From this experience, we have made some modifications: we have omitted psychosis as one of the possible diagnoses due to its rarity. We are interested in adding a question on sleep issues. Further understanding of the relationship between level of disturbance and developmental age, may be important diagnostically, but was difficult for parents and teachers to understand.

We conclude that although screening questionnaires can sensitise parents and staff to mental health problems, there are problems of over and under-identification of problems. There are also diagnostic overshadowing issues. DAWBA showed poor sensitivity to ID, Anxiety, mood disorder, ADHD and ASD and over-identified ODD. DBC tended to over-identify anxiety. Both take significant time to complete and score and neither consider sleep problems. Due to small numbers the results are inconclusive. However, there is a need for an easily available, and simple screening tool



to enable parents and teachers to identify the mental health disorder. This will help people with autism (with or without ID) to get appropriate and quicker specialist services. We have not been able to demonstrate that MH screening instruments for students with ASD have reached acceptable standards, although those for parents' wellbeing appear to.

This pilot clinic demonstrates the importance of identifying co-morbid psychiatric disorder in students with ASD. Does this require such multidisciplinary clinics to be established as a means of helping the educational progress of the students and the wellbeing of the families? This is a large funding challenge. Are there other models of multidisciplinary mental health practice that can be supported to give these students and families to flourish? However, currently neither screening instruments, nor community treatment-as-usual are a substitute for a multidisciplinary school-based clinic.

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“This pilot clinic demonstrates the importance of identifying co-morbid psychiatric disorder in students with ASD. ”



Appendix 1

Pre-clinic perception of teachers and parents regarding the child's/young person's presenting symptoms

(0 =not at all, 1=may be, 2 =likely, 3=agree, 4=strongly agree, 5=definitely)

What do you think is contributing to the child's current presentation?

| | | | | | | | |
|---|--|---|---|---|---|---|---|
| 1 | Behavioural problem | 0 | 1 | 2 | 3 | 4 | 5 |
| 2 | ADHD | 0 | 1 | 2 | 3 | 4 | 5 |
| 3 | Autistic Obsession/ stereotypy | 0 | 1 | 2 | 3 | 4 | 5 |
| 4 | Learning difficulty | 0 | 1 | 2 | 3 | 4 | 5 |
| 5 | Psychosis | 0 | 1 | 2 | 3 | 4 | 5 |
| 6 | Anxiety including social anxiety | 0 | 1 | 2 | 3 | 4 | 5 |
| 7 | Mood Difficulty including depression | 0 | 1 | 2 | 3 | 4 | 5 |
| 8 | Is his/her behaviour appropriate for the developmental age | 0 | 1 | 2 | 3 | 4 | 5 |
| 9 | Is his/her behaviour inappropriate for developmental age | 0 | 1 | 2 | 3 | 4 | 5 |

Appendix 2

Clinic Satisfaction scale

Questionnaire asked to the parents and the teachers

We used a 1-5 Likert scale (strongly disagree, disagree, not sure, agree and strongly agree).

| | | | | | |
|--|--|--|--|--|--|
| The School clinic was useful in helping to meet the needs of my child | | | | | |
| The School Clinic was useful in helping address my family's needs | | | | | |
| The participation of the school staff is useful in the School Clinic | | | | | |
| The school is the best place to hold this clinic | | | | | |
| It is helpful to have school staff, health staff, disability support staff in the same room and working together. | | | | | |
| It is stressful to have a large number of people in the same room during the clinic | | | | | |
| Please indicate whether you feel the following people are essential to attend the clinic, useful but not essential, or you are unsure. | | | | | |
| This clinic provided a service that I couldn't have got elsewhere | | | | | |
| Did you feel that there was sufficient time allocated to discuss all your concerns? | | | | | |
| How can we improve on this service? | | | | | |