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CHARACTERISTICS OF REFERRAL CASES TO CHILD AND ADOLESCENT MENTAL HEALTH SERVICES (CAMHS) IN BRUNEI DARUSSALAM.

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ABSTRACT

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Method: All new referrals assessed by CAMHS between 1st July 2016 and 30th June 2017 were included. Each new referral was designated as a "case". Data were collected from the department's outpatient register and the hospital's electronic patient information system, Brunei Health Information Management System (Bru-HIMS). Diagnostic Data was collected from the recorded ICD-10 diagnosis recorded on Bru-HIMS and cross checked with patient's written case notes. **Results:** 60 cases were seen over the year, with an average of 5 cases per month. The highest proportion of referrals came from developmental pediatricians (23.3%). The mean age of presentation was 12.5 (range 2-18) years. The most common diagnostic category was disorders of psychological development (ICD-10: F80-89). In terms of intervention, only 20 (33.3%) cases were prescribed medication while 40 (66.7%) cases were offered non pharmacological interventions. In terms of management outcome, 10 (17%) cases were discharged, 45 (75%) cases were followed up at the out-patient clinic and 5 (8%) cases were lost to follow up after the initial assessment. **Conclusions:** CAMHS is a developing service in Brunei which treats a spectrum of mental disorders, most commonly disorders of psychological development and emotional and behavioral disorders. Most cases are offered non-pharmacological interventions by medical staff, some with further multi-disciplinary input into their management. The development of comprehensive multi-disciplinary and multi-agency management should be a priority in this developing country with a substantial young population.

KEYWORDS: Brunei, Child psychiatry, Child mental disorders, Child health services, Referrals, Southeast Asia

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INTRODUCTION

Brunei Darussalam is a country located in South East Asia with a total population of 429,000 and an average annual population growth rate of 1.5%.¹ The country has a con-

siderable population of children and adolescents, the total population under the age of nineteen being 32.2 percent of the total population.² Although no current epidemiological data exists on the prevalence of child and adolescent mental health problems in Brunei, the general prevalence of such disorders in Asia has been estimated to be in the range of 10-20 %³ which is comparable to findings in the United Kingdom and Ireland.^{4, 5} Similar re-

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sults are reported in a community based prevalence study in Singapore where the prevalence of emotional and behavioral disorders was found to be 12.5 %.⁶

Mental Health Services in Brunei Darussalam have undergone a period of growth and improvement.^{7,8} Child and Adolescent Mental Health Services (CAMHS) have been an important part of that expansion. This service provides mental health assessment and management for those presenting below the age of eighteen years with emotional and behavioral problems. There is a lack of data regarding child and adolescent mental health problems or service use in Brunei. This study aims to describe the characteristics of new referral cases assessed by the Child and Adolescent Mental Health Service (CAMHS) at Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital.

METHODS

Patients

RIPAS hospital is the largest national tertiary-care hospital for Brunei situated in the capital city, Bandar Seri Begawan.⁹ It has the largest psychiatric admission ward with a catchment area covering 75% of the population.⁸ CAMHS at RIPAS for the duration of this study consisted of a psychiatric outpatient service run by three doctors; a consultant, a senior medical officer and a trainee medical officer. The service accepts referrals up to the age of 18 years for children and young people living in Brunei. Sources of referrals include general practitioners, other hospital specialties including Accident & Emergency, psychologists, social workers, school teachers, welfare agencies, family solicitors, the police and criminal justice system. Direct referrals made by parents and guardians are also accepted. A CAMHS nursing team manages outreach services such as domiciliary and school visits. There is limited access to clinical psychology and social work services. In-patient admission

is available in the general psychiatric ward for those aged above fourteen years.⁹

In addition to referrals for mental health assessment and subsequent management of children and adolescents, the CAMHS nursing team also accepts welfare referrals from the adult psychiatry service for high risk families with vulnerable children. These referrals are mainly for conducting home visits to assess the child's development and welfare. This additional service is provided due to the relative scarcity of comprehensive social work and child protection services in Brunei.

This is a retrospective cohort study carried out as part of a departmental audit. All newly referred patients who were assessed by CAMHS between 1st July 2016 and 30th June 2017 were included in this study. Each new patient assessed was regarded as a "case". Those who were referred during this time period but assessed after 30th June 2017 were excluded. Welfare referrals made to the nursing team for high risk families were also excluded. All the initial assessments were carried out by one of 3 medical practitioners working in CAMHS.

Data Collection and outcomes

A data collection form was designed to record the patient identifier number, source of referral, age, gender, diagnosis, intervention offered and outcome. Data for new referrals and demographic details are routinely collected for all new patients in the department's outpatient register and the national health electronic patient record system (Bru-HIMS). The International Classification of Diseases, version 10 (ICD-10) was used to record diagnosis.¹⁰ Diagnostic data were extracted from the Bru-HIMS electronic patient record system, which requires an ICD-10 diagnosis to be entered as a mandatory entry field at every clinical encounter. The main diagnosis entered by the assessing doctor was recorded and cross-checked with the patient's free-text case

notes. Due to the small sample size, diagnoses were collected according to ICD-10 group, for example disorders of psychological development (F80-89) to aid statistical analyses.

Data regarding the source of referral, intervention provided and outcome were recorded from each patient's written electronic notes. Intervention was recorded in two groups; those who were receiving medication or those who were receiving only non-pharmacological interventions such as monitoring of their mental state, supportive counseling, psychological input or parenting advice. Data was also recorded how many patients within each of these groups were being monitored only by the medical practitioner and how many were receiving input from multi-disciplinary team (MDT) such as a psychologist, occupational therapist, speech and language therapist, a domiciliary or school visit by the CAMHS nursing team.

Outcomes were recorded as whether the patient was being followed up in clinic, had been discharged or was lost to follow up. Data for this study were recorded on a database on a password protected work computer stored on the department of psychiatry site.

Statistics

All data from the data collection forms were transposed onto Microsoft Excel (Microsoft, USA) and analysed using SPSS Version 20. Continuous data were presented as mean and range. Nominal data were presented as frequency and percentage and in graphs and tabular form.

RESULTS

A total of 60 new referral cases were included in the study for a period of 1 year. The median age of presentation to CAMHS was 14 years (range: 2-18 years) (Figure 1). Of the 62 new cases seen, 33 (53.2%) were male and 29 (46.7%) were female. On average 5

new cases were seen per month with majority of cases referred usually during school holidays and early school terms (Figure 2: June-September and November-January).

With regards to sources of referrals, 14 new cases (23.3%) were referred from developmental pediatricians, 10 (16.6%) from Accident and Emergency department doctors, 10 (16.6%) from general practitioners, 7 (11.6%) from other specialty doctors in the hospital and 6 (10%) from a psychologist. Five cases (8.3%) were self-referrals from parents and 4 (6.6%) were referrals from other agencies including welfare services, family solicitors, the police and criminal justice system. For 4 (4.4%) patients the source of referral was not recorded in the electronic or free-text written files.

Detailed diagnostic data is reported in Table 1. Nineteen (31.6%) had a diagnosis recorded under disorders of psychological development (ICD-10: F80-89), 15 cases (25%) under behavioral and emotional disorders with onset usually occurring in a childhood and adolescence (ICD-10: F90-98), seven (11.6%) recorded under diagnosis of mood disorders (ICD-10: F30-39), six (10%) under neurotic, stress related and somatoform disorders (ICD-10: F40-48), three under mental retardation (ICD-10: F70-79), one (1.6%) under diagnosis of schizophrenia, schizotypal and delusional disorders (ICD-10: F20-29) and another (1.6%) recorded under behavioral syndromes associated with physiological disturbances and physical factors (ICD-10: F50-59). Eight cases (13.3%) had a diagnosis recorded under person with potential health hazards related to socio economic and psychosocial circumstances (ICD-10: Z55-65).

Twenty cases (33.3%) were prescribed medication while 40 (66.7%) were offered non-pharmacological interventions only. In the medication group, 14 (70%) were

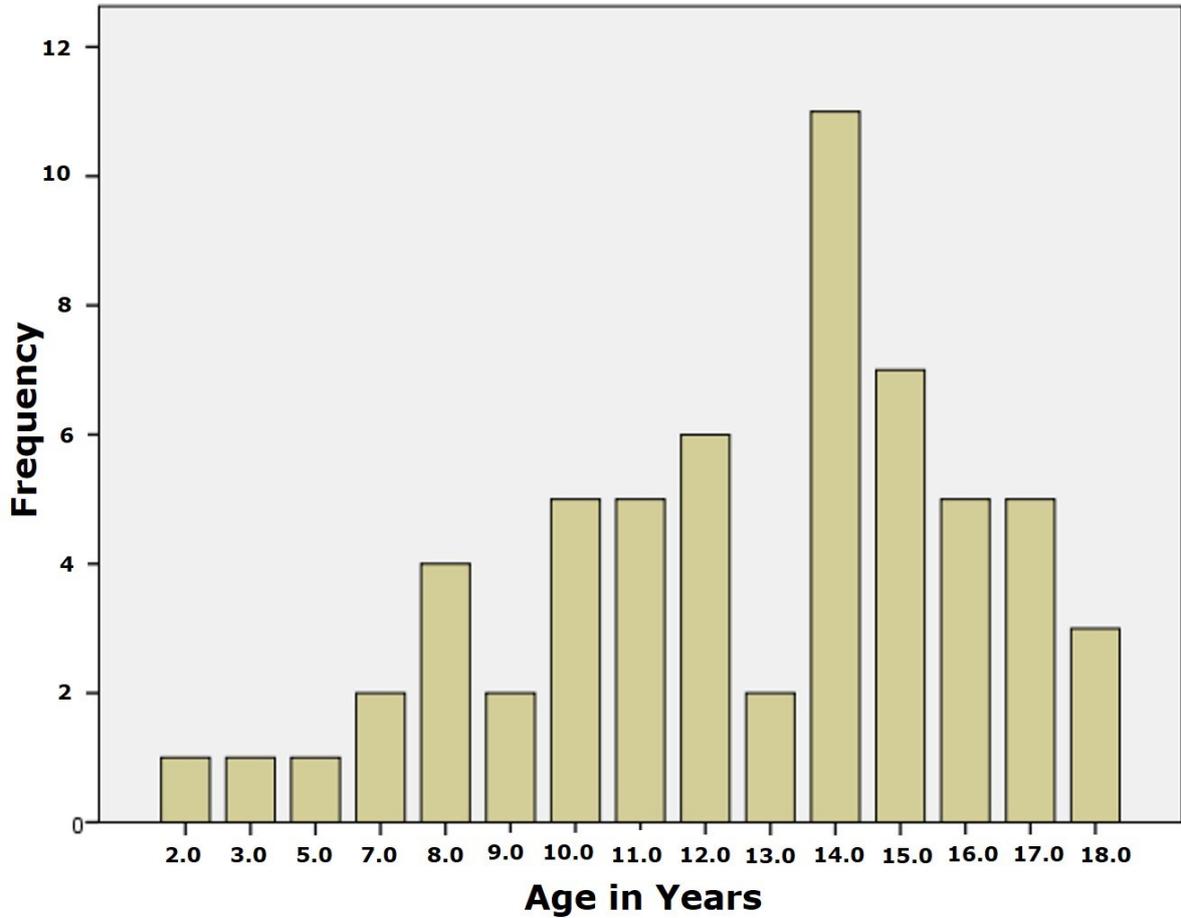


Figure 1. Age distribution of new referral cases to CAMHS.

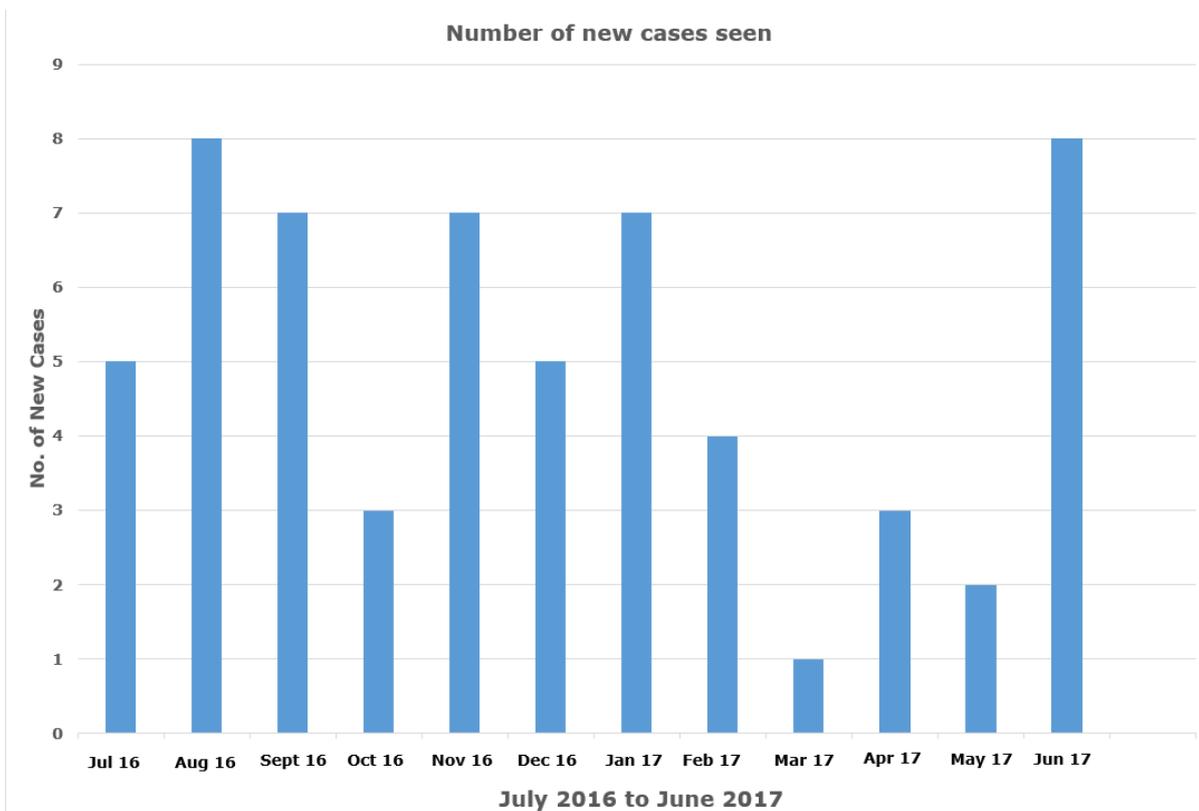


Figure 2: Number of new cases seen per month by CAMHS. Trend of referrals tended to be during school holidays and early school terms (June-September and November-January).

Table1. Recorded diagnosis for new cases.

| Diagnosis | ICD 10 Code | Number of cases | Percentage |
|---|--------------------|------------------------|-------------------|
| <i>Disorders of Psychological Development</i> | F80-89 | 19 | 31.6% |
| Childhood Autism | F 84.0 | 12 | 20% |
| Specific Developmental Disorder of Scholastic Skills | F81 | 2 | 3.3% |
| Mixed Specific Developmental Disorders | F83 | 2 | 3.3% |
| Pervasive Developmental Disorder Unspecified | F84.9 | 1 | 1.7% |
| Unspecified Disorders of Psychological Development | F89 | 1 | 1.7% |
| Asperger's Syndrome | F84.5 | 1 | 1.7% |
| <i>Behavioural and Emotional disorders with onset usually occurring in childhood & adolescence</i> | F90-98 | 15 | 25% |
| Emotional Disorders with onset specific to Childhood | F93 | 6 | 10% |
| Disturbance of Activity and Attention (ADHD) | F90.0 | 4 | 6.7% |
| Oppositional Defiant Disorder | F91.3 | 2 | 3.3% |
| Mixed Disorders of Conduct and Emotions | F92 | 1 | 1.7% |
| Elective Mutism | F94.0 | 1 | 1.7% |
| Nonorganic Enuresis | F98.0 | 1 | 1.7% |
| <i>Mood (Affective) Disorders</i> | F30-39 | 7 | 11.6% |
| Moderate Depressive Disorder | F32.1 | 6 | 10% |
| Depressive Episode | F32 | 1 | 1.7% |
| <i>Person with potential health hazards related to socioeconomic and psychosocial circumstance</i> | Z55-65 | 8 | 13.3% |
| Negative life event in childhood | Z61.9 | 4 | 6.7% |
| Problems related negative life event in childhood | Z61 | 2 | 3.3% |
| Problems related to other psychosocial circumstances | Z65 | 2 | 3.3% |
| <i>Neurotic, Stress related and somatoform Disorders</i> | F40-48 | 6 | 10% |
| Generalized Anxiety Disorder | F41.1 | 2 | 3.3% |
| Social Phobia | F40.1 | 1 | 1.7% |
| Mixed Obsessive Thoughts and Acts | F42.2 | 1 | 1.7% |
| Acute Stress Reaction | F43.0 | 1 | 1.7% |
| Post-Traumatic Stress Disorder | F43.1 | 1 | 1.7% |
| <i>Mental Retardation</i> | F70-79 | 3 | 5% |
| Mild Mental Retardation | F70.1 | 3 | 5% |
| <i>Other Diagnoses</i> | | 2 | 3.3% |
| Unspecified Non-Organic Psychosis | F29 | 1 | 1.7% |
| Anorexia Nervosa | F50.0 | 1 | 1.7% |

managed only with medication while 6 (30%) required both medication and MDT intervention. In the non-medication group, 35 (87%) were monitored only by the doctor while 5 (13%) patients were managed both by the doctor and MDT.

Forty-five cases (75%) were followed up at the out-patient clinic and five cases (8%) were lost to follow up. Ten cases (16.6%) were discharged; six of these were referred for medical report in context of negative life events and did not require follow-up

whilst four were discharged to psychology services.

DISCUSSION

The median age of new referral cases in this study was 14 years, in keeping with previous research in which the prevalence of any mental disorder in children is highest between ages 11-16.⁴ This could be because of increasing social and education demands to excel in youth around this age. The most common diagnoses recorded in this study were childhood

developmental disorders. The proportion of cases seen for "internalizing disorders" were higher compared to "externalizing disorders". This differentiation was made popular by Achenbach (1978) and Edelbrock (1983) who described the externalizing factor as extroverted behaviors such as aggressive outbursts, acting out, conduct issues and internalizing factor as introverted behaviors such as fears, worries, anxiety, depression.¹¹ Externalizing disorders include Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder, Mixed Disorders of Conduct and Emotions and internalizing disorders include Generalized Anxiety Disorder, Social Phobia, Mixed Obsessive Thoughts and Acts, Post-Traumatic Stress Disorder (Table 1). This is consistent with previous studies that have suggested that internalizing disorders are twice as common in some Asian countries compared to the situation in western developed countries where externalizing disorders are equally common or more common than internalizing disorders.^{6,12-15} The emphasis on emotional restraint within Asian families has been suggested for this difference from Caucasian American children.^{6,12,16}

The proportion of mental illness diagnoses such as mood disorders and neurotic disorders were comparatively low in this study. This may reflect lower prevalence of mental illness compared to developmental disorders amongst children and adolescents in the community. A study based in Singapore found that among those below the age of fourteen years, autism spectrum disorder was the top cause of disease burden whereas anxiety and depression were less common.^{12,17} There may also be a lack of recognition of mental illness compounded by the stigma associated with seeking psychiatric help for children.¹⁸ Stigma associated with mental disorders is widespread in Brunei. There are strong beliefs regarding spirit possession and people prefer to turn to spiritual treatment rather than seeking psychiatric help.¹⁹ In order to

address this, public mental health awareness programs have been implemented throughout the country. Further awareness campaigns targeting parents and schools could help to reduce stigma and improve mental health awareness. This study found that only 32% patients seen were offered medication compared to 68% who were offered non-pharmacological interventions. This information could be useful to help allay parental fears that taking children for psychiatric assessment will inevitably result in prescription of unnecessary medication. Stigmatizing attitudes towards child mental health assessments have previously been reported, including fears regarding the "over-medication" of children.²⁰

In this study, all initial assessments were made by the medical practitioner alone and multi-disciplinary team intervention was provided in a minority of cases. Unfortunately, CAMHS in Brunei does not have dedicated trained allied health professionals in the team and referrals for multidisciplinary intervention are made to pooled allied health services such as social work, occupational therapy and psychology, which provide services for the whole general hospital. This reduces access to these specific services and makes fully integrated collaborative care difficult to achieve. The country faces challenges in terms of employing and training specialist staff and developing services.¹⁹ However, an initial solution would be to establish regular multi-disciplinary meetings and a case management system. This requires commitment and human resource provision from all agencies.

Future targets

The importance of ensuring good mental health in childhood is well demonstrated. The World Health Organization has stated that; "The lack of attention to the mental health of children and adolescents may lead to mental disorders with lifelong consequences, undermines compliance with health regimens, and

reduces the capacity of societies to be safe and productive".²¹ The UK national service framework 2004 for children, young people and maternity services recommends that people with the necessary skills and competencies should deliver a comprehensive CAMHS. These should include child psychiatrists, clinical child psychologists, community pediatricians, trained nurses, occupational therapists, social workers, child and adolescent mental health workers, child psychotherapists, family therapists, specialist teachers, a range of creative therapists and other allied health professionals. Many services have not been able to recruit this range of members of a multi-disciplinary team, which arguably limits their capacity to provide a comprehensive service.²² CAMHS in Brunei will require a period of consistent service development and human resource investment to meet this ideal service model.

Strengths and limitations

This is the first study to describe referrals to a child and adolescent mental health service in Brunei. The information found in this study would help inform further service planning. The limitations to the study are that data were collected retrospectively from existing clinical data sources and depended on the accuracy of record keeping by administrative and clinical staff. The use of a larger prospective cohort of patients would allow more detailed statistical analyses in future studies.

CONCLUSIONS

CAMHS is a developing service in Brunei which treats a spectrum of mental disorders, most commonly disorders of psychological development and emotional and behavioral disorders. Most cases are offered non-pharmacological interventions by medical staff, some with further multi-disciplinary input into their management. The development of comprehensive multi-disciplinary and multi-agency management should be a priority in this developing country with a substantial

young population. Further human resource investment, training and research are required to inform the development of child and adolescent services nationally.

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DISCLOSURE

All authors have contributed to the manuscript equally. None of the authors have direct or financial conflicts of interest with this paper and material contained herein.

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