

PSYCHIATRIC PATHOLOGY MODEL AT THE DEPARTMENT OF ADOLESCENT HEALTH AT VIETNAM NATIONAL CHILDREN'S HOSPITAL IN THE PERIOD 2020-2021

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This retrospective study is to determine the rate of psychiatric pathologies of adolescents who come for examination and treatment at the Department of Adolescent Health - National Children's Hospital from January 2020 to April 2021. We use the ICD-10 International Classification of Diseases for diagnosis. The mental illnesses accounted for 27.9% of the adolescents who came for examination and treatment. Among psychiatric pathologies, three groups with the highest rates are behavioural and emotional disorders with onset usually occurring in childhood and adolescence (chapter F9) with 45.9%, neurotic, stress-related and somatoform disorders (chapter F4) (29.4%) and mood [affective] disorders (chapter F3) (8.1%). Among the psychiatric pathologies, mood disorder; anxiety and behaviour disorder are the highest prevalent. We recommend to provide training to human resources in psychiatric specialties to effectively treat these conditions.

Keywords: Psychiatry, adolescent, Department of Adolescent Health.

I. INTRODUCTION

According to the World Health Organization (WHO), adolescents are children from 10 to 19 years old, divided into 3 stages: early adolescence (10-13 years old), middle adolescence (14-16 years old) and late adolescence (17-19 years old). There are 1.3 billion adolescents in the world, representing 16% of the world's population. One in six people are at 10-19 years old. Adolescence is a unique and formative time.^{1,2} This is the transition period from childhood to adulthood with strong physical development as well as psychophysiological changes. During this stage of development, about 16-20% of adolescents have physical, mental disorders that affect their health in adulthood.³ Globally, it is estimated that 1 in 7 (14%) 10-19 year-olds experience

mental health conditions, yet these remain largely unrecognized and untreated. Physical, emotional and social changes, including exposure to poverty, abuse, or violence, can make adolescents vulnerable to mental health problems.¹

Today, society's awareness of the urgency to take care of adolescents is increasing. WHO has called on countries to take action to improve adolescent health. Health, education, and legal systems have not kept pace with shifting adolescent needs and demographic changes.^{4,5}

Therefore, determining the rate of mental illness among adolescents will lead to priority treatment strategies and preventive measures for mental illnesses in this age group. However, currently, in Vietnam, there are no study showing the rate of mental illnesses among adolescents. The Vietnam National Children's Hospital is the first hospital in Vietnam to have established a Department of Adolescent Health with the aim of providing comprehensive care services

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for adolescents in the fields of mental health, reproductive health, gender and puberty.

Evaluating the characteristics of the pathologies of adolescents who come for examination and treatment, especially in the group of psychiatric pathologies, will assist the Department of Adolescent Health and medical staff to have the basis for the development of orientation, planning, training human resources and acquire appropriate equipment to best meet the needs of adolescent health care, counseling and education. From the actual needs, we carried out the research topic: *“To determine the rate of psychiatric pathologies of adolescents who come for examination and treatment at the Department of Adolescent Health - Vietnam National Children’s Hospital”*.

II. SUBJECT AND STUDY METHOD

1. Study subject

Selection criteria

All adolescent patients with psychiatric conditions come for examination and treatment at the Department of Adolescent Health.

Exclusion criteria

Under 10 years old.

2. Time and place

From January 2020 to April 2021 at the Department of Adolescent Health, *Vietnam National Children’s Hospital*.

3. Study method

Design

Retrospective description, convenience sampling. In this study, we selected 708 patients.

Steps to conduct research

Selection of patients who come to the Department of Adolescent Health for examination and treatment includes inpatients

and outpatients. Psychiatric pathologies are diagnosed by adolescent specialist in this field use the ICD-10 International Classification of Diseases. We make the final diagnosis with the agreement of the doctors in the Department of Adolescent Health and determine the prevalence and distribution of psychiatric and gynecological pathologies.

Research variable

- Age:

- +) 10-13 years old: Early adolescence
- +) 14-16 years old: Middle adolescence
- +) 17-19 years old: Late adolescence

- Sex: males, females

Psychiatric pathologies

+) Disease chapter

+) Disease code

4. Data processing

Data processing by using SPSS 20.0 software. The results in the study are expressed as frequencies and percentage.

5. Ethical considerations in the study

This is a retrospective descriptive study, so it does not affect the patient’s health. Personal information is encrypted to ensure patients’ confidentiality.

III. RESULTS

From January 2020 to April 2021, a total of 708 adolescents with psychiatric conditions came for examination and treatment among a total of 2534 adolescents at the Department of Adolescent Health - *Vietnam National Children’s Hospital*; they met the criteria to be included in the study. The rate of mental illnesses was 27.9% which shows that mental illness accounts for high proportion in the Adolescent Health Department.

Table 1. General characteristics (n=708)

		n	%
Sex	Males	305	43.1
	Females	403	56.9
Age	Early adolescence	552	78
	Middle adolescence	144	20.3
	Late adolescence	12	1.7
	Mean ± SD (year)	11 ± 8.9	
Treatment	Inpatient	89	12.6
	Outpatient	619	87.4
Total		708	100

The mean age of the study subjects was 11 ± 8.9 years. Pre-adolescents had the highest rate (78%), male is 43.1%, female is 56.9%.

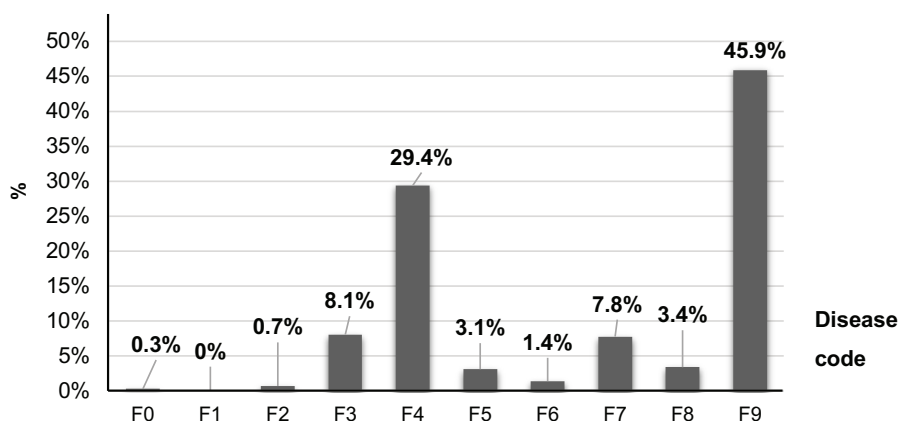


Chart 1. Distribution of psychiatric pathologies according to ICD-10

Note: The disease codes are based on the *International Statistical Classification of Diseases and Related Health Problems 10th edition: ICD-10*.

Among psychiatric pathologies, the rate of diseases in the group of behavioural and emotional disorders with onset usually occurring

in childhood and adolescence is highest (chapter F9) with 45.9%, followed by other medical conditions from the group of neurotic, stress-related and somatoform disorders (chapter F4) with 29.4% and diseases of the group of mood [affective] disorders (chapter F3) (8.1%).

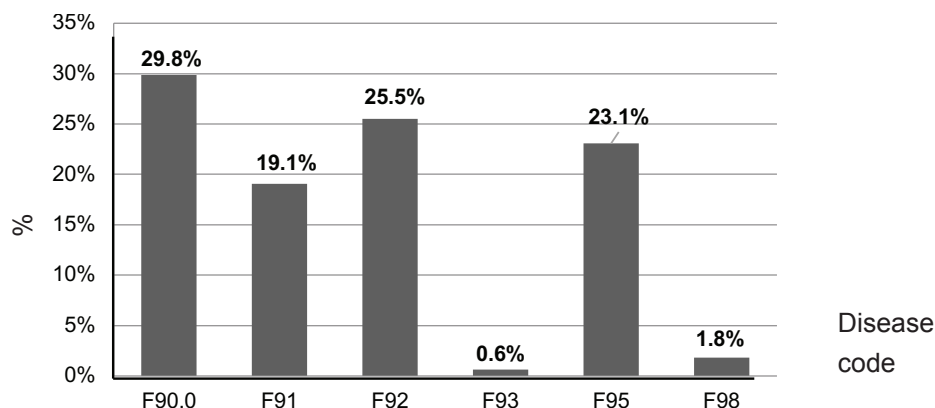


Chart 2. Distribution of pathologies of chapter F9

In chapter F9, disturbance of activity and attention (F90.0), mixed disorders of conduct and emotions (F92) and tic disorders (F95) accounted for 29.8%, 25.5% and 23.1%, respectively.

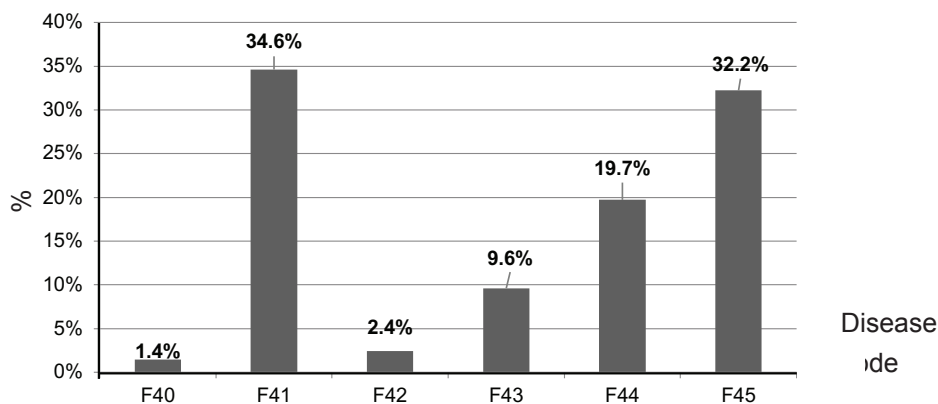


Chart 3. Distribution of pathologies of chapter F4

In the pathologies of chapter F4, anxiety disorders (F41), somatoform disorders (F45) and dissociative [conversion] disorders (F44) accounted for 34.6%, 32.2%, and 19.7% respectively.

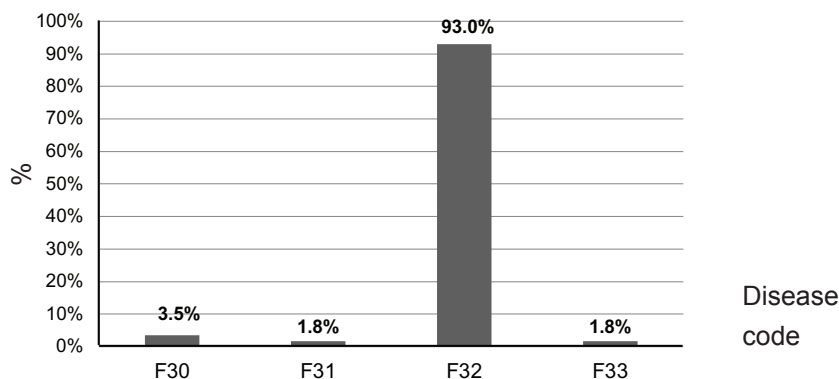


Chart 4. Distribution of pathologies of chapter F3

In the group of diseases in chapter F3, the disease code F32 (depressive episode) accounted for the majority with 93%.

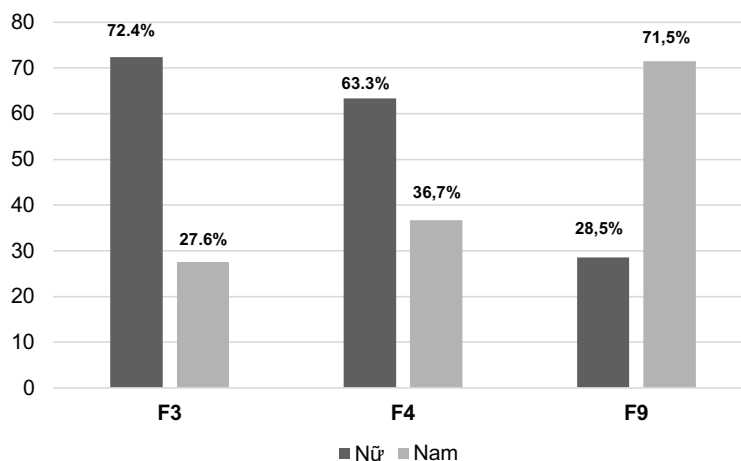


Chart 5. Distribution of pathologies of chapter by sex

In the group of diseases in chapter F3 and F4, the proportion of female is higher than male, the group of diseases in chapter F9, the proportion of male is higher than female.

IV. DISCUSSION

From January 2020 to April 2021, 708 adolescents with psychiatric conditions were included in our study. Among them, the group of pre-adolescents (10-13 years old) accounted for the highest proportion (78%) and the lowest group was late adolescents, only 1.7% (Table 1). The physical, psychological and puberty changes in pre-adolescence are one of the reasons for the highest proportion of children coming for examination and treatment among this age group. Psychologically, in this period, children begin to separate from their parents, express their independence, and expand their social relationships while their thinking is not yet mature.⁶

According to the results of our study, the rate of mental illnesses accounted for 27.9% of the adolescents who came for examination and treatment. This shows that mental illness accounts for high proportion in the Adolescent Health Department. Therefore, it is necessary to provide training to human resources (including doctors, psychologists) in psychiatric specialties to effectively treat these diseases.

In addition, the prevention of mental illness in minor is also a necessity.

In our study, the rate of mental illness are higher in female than male with the rate of 56.9% and 43.1% (Table 1). Other studies have also made similar conclusions when showing that females are more likely to have mental illnesses than males.^{5,7}

According to the study results, among psychiatric pathologies, the three most common groups of diseases in adolescents belong to the group of Behavioural and emotional disorders with onset usually occurring in childhood and adolescence (chapter F9), Neurotic, stress-related and somatoform disorders (chapter F4) and Mood [affective] disorders (chapter F3) (8.1%) (Chart 1). In 2010, Kathleen and colleagues studied on children from 8-15 years old in the US by using the diagnostic criteria of ICD-10 also gave similar results, in which pathology group of F9 and F3 was majority.⁸

The study results also show that there is a difference in the pattern of psychiatric pathologies in adolescents compared with

children and adults. In children, the most common pathologies are mental retardation (chapter F7) and disorders of psychological development (chapter F8) of which mostly are autism spectrum disorders.⁹ In adults, the common mental illnesses are schizophrenia, schizotypal disorder and paranoia, depression; in addition, the group of diseases related to substance addiction also accounts for a relatively high rate.¹⁰ It can be seen that, with each age group of children, adolescents and adults, the characteristics of psychiatric pathologies tend to be different, which is related to the development and maturation of the brain. In the longer term, more systematic studies are needed to assess this difference.

In the group of diseases in chapter F9, our study results show that the most common diseases are attention deficit hyperactivity disorder (F90.0), mixed disorders of conduct and emotions (F92) and tic disorder (F95) (Chart 2). In most of the children with hyperactivity disorder, the disease occurred at an early age and continued to progress into adolescence. According to Khyati Brahmhatt et al., about 80-85% of children with ADHD (attention deficit hyperactivity disorder) persist into adolescence and about 60% into adulthood.¹¹ Some other studies show that, the rate of onset in children and continuing to the adolescent stage accounts for about 40-70%.¹² According to Karen Baker, biological, psychological and social factors have an influence on the formation and progression of behavioral disorders in children. Behavioral problems are the most common reason for adolescents to visit mental health services, accounting for 30-40% of psychiatric pathologies.¹³

The pathologies of chapter F4, mainly anxiety disorders, Somatoform disorders and Dissociative [conversion] disorders (Chart

3). are all influenced by the effects of stress (which can be either a cause or a risk factor) and personality. During adolescence, children are very sensitive and vulnerable to external influences such as social relationships, family-friends, academic pressure, etc. The results of our study showed the incidence of pathologies in chapter F4 is higher in female than male. Therefore, in the adolescent period, it is necessary to detect psychological trauma early and intervene, provide timely psychotherapy to help children balance their life, enhance the ability to adapt to stress, thereby to limit the risks of psychosis. The correct and timely support of parents and teachers is very important and necessary in the transition from childhood to adulthood.

In the pathologies of chapter F3, the disease code F32 (depressive episode) accounts for the majority with 93% (Chart 4). According to the results of our study, depression was mainly seen in female children, of which 3 children had committed suicide. WHO data show that depression is the third leading cause of disability among adolescents and suicide is the third leading cause of death among adolescents aged 15-19 years.¹⁴

According to Anita Thapar et al., depression in children is less common before puberty but increases after puberty during adolescence, especially in girls. According to the author, one of the factors contributing to the increased prevalence of post-pubertal depression is that adolescents undergo significant biological and social changes. During this period, children begin to have a maturation of brain activity, improve self-awareness and social understanding. In addition, changes in certain regions of the brain involved in response to reward and danger increase stress levels, especially in girls. According to the same author, the prevalence of

post-pubertal depression differs between boys and girls, possibly due to increased sensitivity to endocrine-related stress in girls.¹⁵

In our study, in the pathology of chapter F3 (mainly is depressive episode), the proportion of girls is higher than that of boys. The proportion of girls affected is also higher than that of boys in the diseases of chapter F4. While the pathology chapter F9 with mainly are disturbance of activity and attention (F90.0), mixed disorders of conduct and emotions (F92) and tic disorders (F95), the proportion of boys is higher than girls (Chart 5). In the study conducted by Jae Hong Park et al, it was also found that boys had disturbance of activity and attention greater than girls, while girls were more likely to have depression.⁵ According to Filip Van Droogenbroeck et al, gender differences were found for psychological anxiety and depression with girls reporting significantly higher scores than boys.⁷

V. CONCLUSION

Mental illness is significant among the adolescents who came for examination and treatment at the Department of Adolescent Health. Mood disorder; anxiety and behaviour disorder are prevalent. It is necessary to provide training to human resources in psychiatric specialties to effectively treat these diseases. It is necessary to ensure mental health care for adolescents to support them to develop wholly as they enter adulthood to become significant members of society. .

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