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ORIGINAL RESEARCH

Study of quality of life of patients with childhood and adolescent depression

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ABSTRACT

Background: Depression is common psychological disorder affects about 121 million people worldwide World Health Organization(WHO) states that depression is the leading cause of disability as measured by years lived with disability (YLD) and fourth leading contributor to global burden disease, an estimated 3-4% of India's 100 crores plus population suffer from major mental disorder, in the southeast Asian region, 11% of DALY's and 27% of YLD's are attributed to neuropsychiatric disease. Depression imposes itself not only on adults but it takes its toll on children and adolescents as well. Normally, parents want their children to be happy. Yet despite doing their best to provide and protect them, children may still encounter disappointments, frustrations, or real heartbreak. At times, children may feel sad and needy. However, some children and adolescents seem to be constantly experiencing sorrow, hopelessness, and helplessness. Depression is an illness where the feeling sadness persists and intervene with the child or adolescents functional ability.

Aim & Objective: 1.To study the phenomenology of childhood and adolescent depression. 2.To study the family factors in patients of childhood and adolescent depression. 3.To study the quality of life of patients with childhood and adolescent depression. 4.To study the functional status of patients with childhood and adolescent depression

Methods: Study design: A Cross sectional Observational Study. Study setting: in the Department of Psychiatry of a tertiary care hospital. Study duration: October 2015 to June 2016

Study population: The study population included all children or adolescent diagnosed with depression admitted at a tertiary care center. Sample size: 30

Results: most of the study population belongs to the age group of 13 to 15 years (50%) followed by 10 to 12 years (33.35). there was higher number of female (60%) as compared to male amongst study population. there was higher number of nuclear family (80%) as compared to joint family amongst study population. most of the study population had family income of 25000 to 35000 rupees (43.3%) followed by 15000 to 25000 (33.3). Family psychiatry history was present in 16.7% of study population. mean CDI, PedsQL, CGAS and FAD score amongst study population was 27.57 ± 3.730, 52.63±9.701, 67.93±6.068 and 131.67 ±6.266. mean CDI, PedsQL, CGAS and FAD score was higher in female population as compared to male though statistically not significant.

Conclusions: Understanding and recognizing the early signs of depression, as well as the treatment and prevention, helps reduce the global burden that persists from depression among young groups. Families and guardians are in a unique position to provide interventions to promote healthy lifestyles and reduce the likelihood of depression on their children.

Keywords: Depression, PedsQL, FAD, CDI, CGAS

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INTRODUCTION

Depression is common psychological disorder affects about 121 million people worldwide World Health Organization(WHO) states that depression is the leading cause of disability as measured by years lived with disability (YLD) and fourth leading contributor to global burden disease, an estimated 3-4% of India's 100 crores plus population suffer from major mental disorder, in the southeast Asian region, 11% of DALY's and 27% of YLD's are attributed to neuropsychiatric disease [1].

Depression imposes itself not only on adults but it takes its toll on children and adolescents as well. Normally, parents want their children to be happy. Yet despite doing their best to provide and protect them, children may still encounter disappointments, frustrations, or real heartbreak. At times, children may feel sad and needy. However, some children and adolescents seem to be constantly experiencing sorrow, hopelessness, and helplessness. Depression is an illness where the feeling sadness persists and intervene with the child or adolescents functional ability.[2]

According to Birmaher [3], the characteristics of a child and adolescent depression is not always manifested by sadness but by irritability, boredom, or an inability to feel pleasure. Depression is a chronic, recurrent, and mostly an inherited illness. The first appearance of depression can occur during childhood or adolescence. Prolonged depressive episodes happen in an individual with dysthymic disorder (a milder depression that is constituted by an insidious onset and chronic course) that gradually progresses into major depression.

The clinical spectrum of the illness can range from simple sadness to a major depressive disorder or sometimes to bipolar disorder [4]. Depression in adolescents is a disabling condition that is associated with serious long term morbidities and even suicide5. About 5% of the general population of children and adolescents may experience depression at any given point in time2 and its prevalence continued to rise [5].

Although depression is common among children and adolescents, it is still frequently unrecognized or undetected [4]. In many societies, depression has been considered as a major health problem, but the treatment seeking is rare, which mostly includes the non-western societies. People from traditional cultural backgrounds either deny psychological distress; interpret such distress as somatic illness or either take it as physical illness[6]. Jacob et al.[7]

further suggests that while western societies may view depression as a medical problem that requires professional attention, more traditional societies assume depressive symptoms as social problems or as emotional reactions to situations. Depression is treatable but depressed children and adolescents may present with different behaviour than those of depressed adults.

Hence, child and adolescent psychiatrists caution parents to be acquainted with the signs of depression in their children [2]. Prevalence estimates of unipolar depression vary with the time period of reference and method of assessment. The reported point prevalence rates (30-day or 1-year) of major depressive disorder in non referred samples range between 0.4% and 2.5% in children, and between 0.7% and 9.8% in adolescents [8,9].

incidence of childhood depression is4-8%. however studies from India found it to be 0.1% (Bangalore) and 0.16% (North India) and more common in female with a male/female ratio1:2. Elevated risk for the disorder begins in the early teens, and continues to rise in a linear fashion throughout adolescence, with lifetime rates estimated to range from 15% to 25% by late adolescence [10-12]. These prevalence estimates of adolescent depression are comparable to the lifetime rates reported in adults, suggesting that the rates of depression begin to plateau by early adult life[11-12].

These data also indicate that, for a substantial proportion of adult cases, the onset occurred during adolescence[13,14].The prevalence of depression in youngsters is even greater when minor depression and subsyndromal depressive symptoms are considered. Juvenile depression may manifest in different forms. As stated above, children younger than seven years may not be able to describe their internal mood state and may express their distress through vague somatic symptoms or pain.

Irritable mood may be the cause of angry, hostile behaviour. Impaired attention, poor concentration, and anxiety may resemble attention-deficit/hyperactivity disorder, and substance abuse may be a means of self medication for depression.

Diagnosis of primary depressive mood disorders requires that physicians rule out depression from medical causes, such as endocrinopathies, malignancies, chronic diseases, infectious mononucleosis, anemia, and vitamin deficiency (especially folic acid), and from medications, such as isotretinoin (Accutane).[15]

If any of these causes are present, the condition is referred to as secondary depressive mood disorder or depressive mood disorder secondary to medical conditions. Lack of improvement following treatment or medication discontinuation warrants further evaluation and treatment. Major depressive disorder is the most severe of the depressive mood disorders.[16]

AIM AND OBJECTIVE

OBJECTIVE:

1. To study the phenomenology of childhood and adolescent depression.
2. To study the family factors in patients of childhood and adolescent depression.
3. To study the quality of life of patients with childhood and adolescent depression.
4. To study the functional status of patients with childhood and adolescent depression

MATERIAL AND METHODS

Study design: A Cross Sectional Observational Study.
Study setting: Department of Psychiatry in a tertiary care centre
Study duration: October 2015 to June 2016
Study population: The study population included all children or adolescent diagnosed with depression admitted at a tertiary care center. **Sample size:** 30

INCLUSION CRITERIA

1. Aged 8-18 years referred for academic difficulties.
2. Parents willing to give informed consent and children giving ascent.

3. Children diagnosed with major depressive disorder according to DSM 5 criteria and children diagnosed with major depressive disorder.

EXCLUSION CRITERIA:

1. Patient with mental retardation, psychosis and substance abuse.
2. Patient with Serious, unstable medical conditions.
3. On medication for chronic illness eg.RHD, JRA, etc.
4. ADHD, ASD and other neurodevelop-mental disorders

Approval for the study:

Written approval from Institutional Ethics committee was obtained beforehand. Written approval of Psychiatry and Related department was obtained. After obtaining informed verbal consent from all patients with depressive disorder the admitted psychiatry department of tertiary care centre such cases were included in the study.

Sample size: 30

METHODOLOGY

Children (age onset of disease before age of 18 years) diagnosed with childhood and adolescent depression by a psychiatrist, are to be recruited from outpatient child psychiatry clinic. The parent and child will be interviewed by the Psychiatry resident conducting this study.

The interview was consist of a semi-structured Pro forma which was include demographic factors and rating scales (children depression inventory scale, Family Assessment Device, The Peads core generic scale, Children's Global Assessment scale). Data obtained was entered in MS-excel sheet and analysed using SPSS-20 software.

Sampling technique: Consecutive type of non-probability sampling was used for the selection of study subjects during the study period. Patients presenting to us with symptoms of depression at the psychiatry department was recruited for this study. Based on the hospital data of past 3 years, the cases of childhood and adolescent depression is found to be 1-2 per month. Since this is periodic sample, minimum 30 diagnosed cases of childhood and adolescent depression were taken in the 18 months study duration.

TOOLS USED

All the patient's will be assessed at baseline.

Semi structured questionnaire will be used to note down patient's demographic and illness related variables.

The Children's Depression Inventory (CDI)[23]:

It is a psychological assessment that rates the severity of symptoms related to depression and/or dysthymic disorder in children and adolescents. The CDI is a 27-item scale that is self-rated and symptom-oriented. The assessment is now in its second edition. The 27 items on the assessment are grouped into five major factor areas. Clients rate themselves based on how they feel and think, with each statement being identified with a rating from 0-2. The CDI was developed by American clinical psychologist Maria Kovacs, PhD, and was first-published in 1979.

It was developed by using the Beck Depression Inventory (BDI) of 1967 for adults as a model and "starting point." The CDI is a widely used and accepted assessment for the severity of depressive symptoms in children and youth, with high reliability . Crohnbachs alpha used to obtain high reliability measures, across one group of nine studies , alpha measures were 0.71-0.89,reflecting good internal consistency.

The test adequately measures for depressive symptoms. In another group of 16 studies of test-retest reliability, alpha measures were reported as 0.38-0.87. Regarding the short

factor subscales alpha reliability measures for internal consistency reliability were 0.59-0.68. Further studies in addition to those completed by Kovacs have obtained moderate to high reliability. One study used the Kunder- Richardson test of internal consistency and obtained results reflecting high reliability .

Family Assessment Device (FAD) [24]

The Family Assessment device based on the McMaster model of family functioning [MMFF]. The model evolved from previous work Epstein, Sigal and Rakoff 1962 Westely and Epstein 1969. It describes structural and organisational properties of the family group and patterns of transaction among family member which have found to distinguish between healthy and unhealthy family.

Family Assessment Device is a 53-item questionnaire which constitutes part of the larger Family Assessment Device .Each family member rates his or agreement or disagreement with how well an item describes their families by selecting among four alternatives responses. Each item is rated from 1 (Strongly Agree) to 4 (Strongly Disagree). The questionnaire takes approximately 15-20 minutes to complete.

A series of studies investigating the reliability and validity of the McMaster Family Assessment Device (FAD). The results indicated that the FAD has: (a) adequate test-retest reliability, (b) low correlations with social desirability, (c) moderate correlations with other self-report measures of family functioning, and (d) differentiates significantly between clinician-rated healthy and unhealthy families. Cut-off scores for identifying healthy and unhealthy families also were developed which have adequate sensitivity and specificity

The PedsQL core generic scales [25]

The PedsQL measurement model is a modular approach to measuring health related quality of life (HRQOL) in healthy children and adolescent and those with acute and chronic health conditions. The PedsQL measurement model integrates seamlessly both generic core scales and disease specific modules into one measurement system. It contain 23 items, it takes only 4 to 5 minutes to complete and designed for use with community, school clinically pediatrics populations, it can be used in ages 2-18, child self report ages 8-12, 13-18; parent proxy report ages 8-12, 13-18. it is also multi-dimensional containing physical, emotional social, school functioning.

Children's Global Assessment Scale (CGAS) [26]

The Children's Global Assessment Scale (CGAS) was is an adaptation for global assessment scale developed by Endicott et al(1976). The CGAS comprises one item that is rated on a 100 point scale for each decile, the instrument contains behaviourally oriented descriptive example, it has no sub scale raters assign one score ranging from 1-100. Test retest intra-class correlation across a 6 month interval ranged from 0.69 to 0.95 raters intra-class correlation across raters at two occasion were 0.84to0.85, the CGAS correlated significantly with other clinician rated measures of impairment and correlation ranged from 0.76 to 0.92 correlation between the CGAS and parent reported measures of psychiatric problem were significant and were -0.65 and -0.62, the correlation between the CGAS and a parent reported measures of hyperactivity was not significant. a cut-off value of 60 or lower on the CGAS is indicative of definite impairment .

Data entry and analysis:

The data were entered in Microsoft Excel and data analysis was done by using SPSS demo version no 21 for windows. The analysis was performed by using percentages in frequency

tables and correlation of COPD. $p<0.05$ was considered as level of significance using the Chi-square test

RESULTS AND OBSERVATIONS

Table 1: Distribution of cases according to Age (N=30)

Age in years	Frequency	Percentage
10-12	10	33.3%
13-15	15	50%
16-17	5	16.7%
Total	**30**	**30 (100%)**

As seen in the above table, most of the study population belongs to the age group of 13 to 15 years (50%) followed by 10 to 12 years (33.35).

Table 2: Distribution of cases according to Gender (N=30)

Gender	Frequency	Percentage
Male	12	60%
Female	18	40%
Total	**30**	**30 (100%)**

As seen in the above table, there was higher number of female (60%) as compared to male amongst study population.

Table 3: Family psychiatry history amongst study population (N=30)

Family psychiatry history	Frequency	Percentage
Yes	05	16.7%
No	25	83.3%
Total	**30**	**30 (100%)**

As seen in the above table, Family psychiatry history was present in 16.7% of study population.

Table 4: Various depression rating scale amongst study population (N=30)

Various depression rating scale	Mean	Std. Deviation
CDI	27.57	3.730
PedsQL	52.63	9.701
CGAS	67.93	6.068
FAD	131.67	6.266

6As seen in the above table, mean CDI, PedsQL, CGAS and FAD score amongst study population was 27.57 ± 3.730, 52.63±9.701, 67.93±6.068 and 131.67 ±6.266.

Table 5: Comparison of various depression rating scale with different gender

Age in years	Male		Female		
	Mean	SD	Mean	SD	P value
CDI	27.00	3.742	27.94	3.780	0.506
PedsQL	50.92	12.631	53.78	7.337	0.438
CGAS	66.92	6.273	68.61	6.011	0.463
FAD	129.17	4.914	133.33	6.633	0.074

As seen in the above table, mean CDI, PedsQL, CGAS and FAD score was higher in female population as compared to male though statistically not significant.

Table 6: Comparison of various depression rating scale with Family psychiatry history

Family psychiatry history	No		Yes		
	Mean	SD	Mean	SD	P value
CDI	27.48	3.874	28.00	3.240	0.781
PedsQL	51.60	10.247	57.80	3.493	0.197
CGAS	68.12	6.399	67.00	4.472	0.713
FAD	130.76	5.703	136.20	7.662	0.076

As seen in the above table, mean CDI, PedsQL and FAD was higher in subjects with positive family psychiatry history though statistically not significant while CGAS score was lower in subjects with positive family psychiatry history though statistically not significant.

DISCUSSION

All 30 children in our study fulfilled, at any given time, up to 15 % of children and adolescents have some symptoms of depression. Five percent of those nine to 17 years of age meet the criteria for major depressive disorder,1,2 and 3 percent of adolescents have dysthymic disorder.[3] In the present study, most of the study population belongs to the age group of 13 to 15 years (50%) followed by 10 to 12 years (33.35).

In the present study, there was higher number of female (60%) as compared to male amongst study population. Also 10 children i.e. 33% had been diagnosed with some form of learning disability. The incidence of depressive disorders markedly increases after puberty. By 14 years of age, depressive disorders are more than twice as common in girls as in boys, possibly because of differences in coping styles or hormonal changes during puberty.[4]

Adolescent depressive disorders often have a chronic, waxing and-waning course, and there is a two- to fourfold risk of depression persisting into adulthood.[5,6] Depression impacts growth and development, school performance, and peer or family relationships, and it can be fatal. Major depressive disorder is a leading cause of youth suicidal behavior and suicide.[7,8]

More than 70 percent of children and adolescents with depressive disorders or other serious mood disorders do not receive appropriate diagnosis and treatment.[9]

Possible reasons for this may be the stigma attached to these disorders, an atypical presentation, a lack of adequate child mental health training for health care professionals, an inadequate number of child psychiatrists, and inequalities in mental health care insurance.

Underdiagnosis and undertreatment are greater problems in children younger than seven years, in part because of this age group’s limited ability to communicate negative emotions and thoughts with language and consequent tendency toward somatization.

Thus, young children with depression may present with general aches and pains, headaches, or stomachaches. Additionally, if a parent has major depressive disorder, he or she may minimize the child’s depressive symptoms through a lack of awareness or an unwillingness to recognize symptoms that may be similar to his or her own.

In the present study , mean Childrens depression inventory(CDI),Peds Quality of Life (PedsQL), Childrens global assessment scale(CGAS) and Family assessment device (FAD) score was higher in female population as compared to male though statistically not significant. Similarly in the study conducted by Nolen-Hoeksema S. et al.,demonstrated that females are two to three times more likely than males to develop depression.[18]

In the present study, mean CDI, PedsQL and FAD was higher in subjects with positive family psychiatry history though statistically not significant while CGAS score was lower in subjects with positive family psychiatry history though statistically not significant.

Bettge et. al.[11] showed that those with high number of psychosocial risks present in the family, depression scores were found higher but it decreased as the number of protective factors.

Conclusions

Majority of the study population belongs to the age group of 13 to 15 years (50%) followed by 10 to 12 years (33.35).There was higher number of female (60%) as compared to male amongst study population. Family psychiatry history was present in 16.7% of study population.

Mean Childrens Depression Inventory(CDI), Pediatrics Quality of Life(PedsQL), Childrens Global Assessment Scale(CGAS) and Family Assessment Device(FAD) score amongst study population was 27.57 ± 3.730, 52.63±9.701, 67.93±6.068 and 131.67 ±6.266.

Mean Childrens Depression Inventory(CDI), Pediatrics Quality of Life(PedsQL), Childrens Global Assessment Scale(CGAS) and Family Assessment Device(FAD) score was higher in female population as compared to male though statistically not significant. Mean CDI, PedsQL and FAD was higher in subjects with positive family psychiatry history though statistically not significant while CGAS score was lower in subjects with positive family psychiatry history though statistically not significant.

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