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Review Article

Primary Care in Management of Depression in Children and Adolescents

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Abstract

Background: Many children with depressive disorders attend primary care services while only a few children present to specialist services. Primary care providers must be able to identify, evaluate and manage children suffering from depression. Primary care approaches have been shown to increase the reception of evidence-based depression therapy and boost results for patients in primary care setting through more than 70 randomized trials.

Aim: The objective of this article is to provide an up-to-date review on management of depression in children and adolescents in primary care settings.

Conclusion: Depression is more common than expected among children and adolescents. Primary care centers are the first contact facility between the patient and the health system. It is essential for primary health care physicians to be minded with the extent of occurrence, causes, risk factors, diagnosis and management of depressive disorders among children and adolescents according to his ability or referral of the resistant cases to the specialist.

Keywords: *Primary Care; Depression; Childhood Depression; Management of Depression in Primary Care; Primary Care Rule in Childhood Depression*

Introduction

Depression is the most common mental disorder diagnosed among children in the clinical setting. Major depressive disorder in children and adolescents is a condition that affects physical, emotional and social development [1].

Prevalence of childhood depression is surprising and the risk of depression increases with age into adolescence and young adulthood as it has been reported to affect approximately 3 - 4% of children [2]. The lifetime prevalence rate of major depressive disorder (MDD) among children in the United States was reported around 11% and 30% of children with MDD experiencing suicidality [3]. The frequency of suicides in children and adolescents is worrying as 4,482 children and adolescents aged between 10 and 24 committed suicides in 2005, rendering it the third leading cause of death in this age group [4].

Family history of depression, poor social relations, parental conflict, coping skills defects, negative thinking, sleep problems (as shorter rapid eye movement (REM) latency), higher REM density and higher frontal slow-wave activity were associated with the development of depression are all reported as risk factors for childhood depression [5].

Depression in children and adolescents is usually associated with functional impairment compared to their peers (i.e. interpersonally, socially, and academically, and performance on average) and are at greater risk of other comorbidities such as substance misuse, increased risk for other psychiatric disorders as well as attempted and completed suicide [6]. It causes disability among children and adolescents aged 10 to 19 years as well as suicide, which is the third cause of death in this age group. Depressed children experienced significantly higher levels of stressors during the year before onset when compared with a comparable 12-month period in normal children [7].

Many children with depressive disorders attend primary care services while only a few children present to specialist services. Primary care providers must be able to identify, evaluate and manage children suffering from depression [8]. Primary care approaches have been shown to increase the reception of evidence-based depression therapy and boost results for patients in primary care setting through more than 70 randomized trials [9]. While pediatric primary care providers undergo extensive instruction in a wide variety of health problems, advanced training in psychiatric illness treatment is necessarily limited in depth [10]. Failure to accurately diagnose and manage childhood depression and the inadequate supply of child mental health specialists led to increase the focus on improving the quality of depression management in pediatric primary care [11]. Research has confirmed that the initiation of depressive symptoms prior to age 18 can lead to the long-term adverse consequences of maturity, such as suicidal behavior, co-occurring mental, substance and physical health problems, decreased academic and social performance, and relationship difficulties [11].

Early identification and management of childhood depression result in better outcomes for patient lifetime, yet childhood depression is under-identified and under-evaluated. There is no specific blood test or imaging that can be done to diagnose depression [12]. However, evaluation of depression may include some investigations as complete blood count (CBC) and vitamin B-12 levels, electrolytes including magnesium, calcium, and phosphate, TSH, T3, free T4, liver function tests, renal function test (blood urea nitrogen, creatinine) to rule out some of the differential diagnosis [3]. Such tests can be requested if other medical problems are suspected, such as renal toxicity testing, blood alcohol levels, HIV tests, dexamethasone inhibition tests and ACTH stimulation tests [3].

The target of treatment is to minimize the effect of depression on the life of the child at home, at school and in interpersonal interaction, while at the same time striving for complete recovery. Many research in the United States, involving nationwide representative and observational studies of administrative claims files and medical history, suggest that nearly 40% of children and teenagers with depressive disorders are not managed [13,14]. Researches assessing the efficacy of depression treatments in children or teenagers generally provide at least one depression-related consequence, like reduction of symptoms of depression, recovery, reaction, lack of diagnosis, long-term testing, reduction in suicidality (thoughts, plans or attempts), mortality and functional impairment [15].

The issue of undiagnosed and the management of depression in children could've been resolved if screening was part of regular clinical visits. Screening for depression includes a procedure in place that then guarantees a successful screen for depression accompanied with an appropriate diagnosis, successful intervention and proper follow-up [16]. Pediatric primary care physicians indicated loss of confidence in the understanding of depression screening, safety assessment, management of depression patients and monitoring of response to intervention [5].

Objective of the Study

The objective of this article is to provide an up-to-date review on management of depression in children and adolescents in primary care settings.

Participants and Methods

Study design: Review article.

Study duration: Data were collected between 1 June and 30 November 2020.

Data collection: Medline and PubMed public database searches have been carried out for papers written all over the world on primary care in management of depression among children and adolescents. The keyword search headings included "primary care, depression, childhood depression, management of depression in primary care, primary care rule in childhood depression", and a combination of these were used. For additional supporting data, the sources list of each research was searched.

Criteria of inclusion: the papers have been chosen on the basis of the project importance, including one of the following topics: primary care, depression, childhood depression, management of depression in primary care, primary care rule in childhood depression.

Criteria for exclusion: all other publications that did not have their main purpose in any of these areas or multiple studies and reviews were excluded.

Statistical analysis

No predictive analytics technology has been used. In order to evaluate the initial results and the methods of conducting the surgical procedure, the group members reviewed the data. The validity and minimization of error were double revised for each member's results.

Literature Review

Randomized trial with blinded outcome assessment conducted by Richardson, Laura P., *et al*. (2014) to determine whether a primary care intervention for adolescents with depression improves depressive outcomes compared with usual care reported that primary care intervention resulted in greater improvement in depressive symptoms in adolescents with depression seen in primary care at 12 months than usual care which suggest that mental health services for adolescents with depression can be integrated into primary care [17].

Rushton J., *et al*. (2000) undertaken a study to provide a self-described assessment and comparison of pediatricians' and family physicians' management of childhood depression found that (65%) primary care physicians used referral and (61%) counseling for management of childhood depression, (18%) of family physicians used medications more commonly than pediatrics (9%) and pediatricians referred patients more commonly (77%) than family physicians (48%). However, practice patterns vary by specialty and other factors [18].

Gledhill J., *et al*. (2015) conducted a review article to describe the features of depression in children and adolescents to give an account of the salient aspects of management concluded that appropriate interventions in primary care settings as watchful wait; brief problem solving or cognitive behavior therapies are useful. Family therapy may be used for mild, moderate or severe depression which addresses significant family relationship problems. Problems in the external environment such as learning difficulties or peer difficulties should also be addressed [19].

Retrospective chart reviews were conducted by Stafford A., *et al*. (2020) to gather information related to symptom reassessments, antidepressant prescriptions, psychotherapy referrals, and treatment discontinuation reported that many adolescents who are seeking depression management in the primary care settings may not be receiving depression follow-up under the AAP recommendations and unnecessarily discontinuing depression treatment. Because of the complexities of depression and the high risk for recurrence in the future, interventions should be implemented to increase rates of depression medication follow-up and adhere to best practice recommendations in the primary care environment [20].

Another study by Richardson L., *et al*. (2007) found that; primary care physician decision of when and how to treat adolescent depression is strongly influenced by their perceptions of their role in treatment, availability of other treatment resources, and family and patient preferences and resources [21].

Clark Molly S., *et al*. (2012) reported that depressive disorder in children and teens is a common illness involving physical, mental and social health. Risk factors include family history of depression, parental tension, weak peer relationship, deficiencies in communication

skills, and negative thinking. Psychotherapy and interpersonal therapy are prescribed and those with mild depression and adequate adjuvant therapy for those with moderate to major depression. Pharmacological management is recommended for patients with moderate or severe depression [22].

Clow Kelly., *et al*. (2016) undertaken a study to educate primary care providers on the current recommendations for the management of adolescent depression and provide an education sheet for both the medical and non-medical treatment of adolescent depression reported that; improving the degree of trust of the practitioner to understand how to treat teenage distress and to be familiar with evidence-based management choices. There has been no shift in the confidence of the provider in the capacity to handle teenage depression or to address a range of treatment strategies or in the provider's interpretation of the CBT model after an education intervention [23].

Cheung Amy H., *et al*. (2013) conducted a review aimed to summarize recent evidence to provide practical guidance to PCPs on the management of pediatric depression in their practices found that PCPs are strongly encouraged to manage pediatric depression to address the unmet mental health needs of children and adolescents [24].

Prevalence

It has been reported that depression increasingly affects adolescents with lifetime prevalence rates estimated at 15 - 20% [25]. Almost 7.6% of children ages 12 and over have had depression with moderate to severe symptoms [1]. Pre-pubertal boys and girls are affected equally, but female adolescents are twice as likely to be depressed as adolescent boys. It was also estimated that, by age 18 years, 20% of adolescents experience a MDD [5]. 9.4% of children aged 2 - 17 years (approximately 6.1 million) have received an ADHD diagnosis. 7.4% of children aged 3 - 17 years (approximately 4.5 million) have a diagnosed behavior problem, 7.1% of children aged 3 - 17 years (approximately 4.4 million) have diagnosed anxiety and 3.2% of children aged 3 - 17 years (approximately 1.9 million) have diagnosed depression [26-28]. In other study, children younger than 13 years have prevalence of depression is estimated to be 2.8% and 5.6% in adolescents 13 to 18 years of age and almost 60% of adolescents with depression have recurrences throughout adulthood [29-31].

Diagnosis in primary care

Only few children and adolescents present to psychiatric when suffer from depressive disorders, in fact they attend primary care services. Many cases of depression in this age group are diagnosed in primary care settings although they did not necessarily attend for depression [32]. Almost one third of adolescents who present to primary care physician present with an emotional disturbance, and 14% screen positive for depression when suspected [33]. Before depressive disorder diagnosis; clinician should meet the patient and their families (parents, caregivers, siblings) to review the symptoms that have been reported and confirm their presence and ensure clarity of communication and avoid unhelpful "back tracking" by patients and families related to concerns about stigma when a depressive disorder does appear to be present [34].

Diagnostic criteria for depression include two weeks of continuous mood fluctuations (sad or irritable); loss of interest in pleasure; changes in appetite; weight changes; sleep disturbance; reduced movement, energy, or concentration; pessimistic self-esteems; intense guilt; and/or suicidal tendencies as was reported in Diagnostic and Statistical Manual of Mental Disorders [35].

Popular indications of childhood depressive conditions in primary care include: decreasing academic achievement, increasing aggression and argumentation, unexplained somatic symptoms, regular out-patient appointments and mild illnesses, alcohol and/or drug abuse, isolation from peers and family and self-injury [36]. Anger and restlessness function as warning signs which are correlated with elevated suicide impulses, aggressive actions (whether frustration is internalized or externalized by the child or the adolescent) and diminished impulse control. It is also crucial to understand the coping pattern of children and teenagers who have displayed frustration as a sign of depression [37].

Recognizing that relatively little empiric evidence is available on the diagnosis of depression in preschool children, an increasing number of science research confirms the prevalence of clinically relevant depression in children as young as 3 years of age [38]. Chronic depressive symptoms marked by anhedonia as lack of reactions or freshening in response to happy activities and psychomotor retardation have been identified in previous study [39].

Evaluation and diagnosis should include single and separate interview with patient at home at some point in the assessment process. Also, specific areas need to be assessed as patient functioning across domains (e.g. home, school, with peers), anxiety and other psychiatric symptoms and disorders, suicidal thinking, patient plans and behavior [40]. Child safety is also critical to be assessed. Psychosocial adversity, including some present or historical experience with ill-treatment or other traumatic trauma, physical wellbeing - particular attention should be provided to depression-related disorders and medications, family medical history particularly family history of depression, mental disorder and completed suicide [41].

Management in primary care settings

Forms of treatment most studied in primary care settings include cognitive behavioral therapy (CBT), behavioral activation therapy (BAT), interpersonal psychotherapy (IPT), problem-solving therapy and family therapy [42].

Cognitive behavior therapy (CBT): Based on social learning theory, is a cooperative, goal-focused, time-limited management reinforced by the mutual relationship between judgments (cognitions), emotional state and performance. The psychoanalyst emphases on the influence a patient's current dysfunctional beliefs have on existing behavior and upcoming working [43]. Popular features of this therapy include help in improving the understanding of incidents, instruction in cognitive skills and problem-solving. It relies on the detection of emotional distortions associated with depressive moods that are challenged in clinical practice [44]. CBT was tested as a management for depression whether alone or in combination with pharmacotherapy. Patients are allowed to adapt to daily habits, behaviors and working, particularly activities they have already considered rewarding. This intervention is especially important in primary care, where physicians will and can motivate patients to rehabilitate their brains and return to doing activities they used to love and find rewarding, even though they no longer do [45].

Interpersonal psychotherapy (IPT): The mutual association between interpersonal issues and depressive symptoms is known to be significant at onset and to be a maintenance factor for depressive disorders. The emphasis is on the interpersonal context of depression, with the goal of reducing interpersonal tension. The goals include the elimination of interpersonal tension and the strengthening of interpersonal relations [46]. Patients can be encouraged to break down the associations between depressive symptoms and their personal emotional problems. The problems frequently discussed in the IPT include failure, position conflicts and transfers, and skill deficits. IPT has no clear theoretical roots, but its conceptual underpinning can be seen as a consequence of the work of Sullivan, Meyer and Bowlby [47] who reported effectiveness of the IPT method has been verified over the last three decades as response rates have been compared with other psychotherapies, placebo, and medication and follow-up relapse rates have been examined.

Behavioral activation therapy (BAT): It is a particular CBT approach where the focus is on arranging safe lifestyle activities on a patient's day. It aims to create balanced weekly or monthly schedules that emphasize constructive and assertive behaviors, such as social interaction, fitness, grocery shopping, etc. As such, BA has made a big promise for the treatment of young people [48]. BA study for children and teenagers is an emerging field. Parental participation was the most common application of BA to teenagers. These involved parents attending sessions, parents' workbooks, and parents' participation in assisting the child in the fulfilment of their preferred activities [49]. Family participation is to provide the support, overcome obstacles and build meaningful experiences. Behavioral activation successfully treats depression in adolescents and is promising to treat anxiety [50].

Problem-solving therapy (PST): Problem-solving method includes studying or reactivating problem-solving skills for patients. These abilities will then be extended to real life-related challenges associated with neurological and somatic symptoms. Problem-solving ther-

apy is appropriate to be used in general practice in people with common mental disorders and has been found to be as efficient as drug medication [51]. Problem-solving treatment requires a sequence of linear stages. The clinician aids the patient in learning new empowering abilities, and also helps them to work through the recovery processes to find and incorporate a patient-selected approach. Many seasoned GPs can recognize their own established problem-solving expertise. Learning about PST can entail refining and concentrating on these skills [52].

Family therapy: It is a type of psychotherapy that specifically includes all members of the family and clearly attends to relationships with all members of the family. If the emphasis is on the set of relationships in which the individual is intertwined, family work may be undertaken independently of who is originally involved [53]. Family therapy relies on the intimacy and coping dynamics of families in order to cope with health issues, even though the infant may be the sole member of the family with overt psychological symptoms. It may be used on its own or in conjunction with other treatment approaches. Family counselling techniques include psychodynamic, systemic, strategic and cognitive behavioral schools [54].

Secondary care referral and other management options: children and adolescents with persistent mild, moderate or severe depression should be referred to specialist of Child and Adolescent Mental Health Services. The decision to use pharmacotherapy for children and adolescents with depressive disorder should be taken by a specialist. Approximately 20% of patients with moderate to severe depressive disorder respond to pharmacological drugs [55]. Psychodynamic therapies are focused in a psychoanalytical paradigm that aim to support people manage stress through improving patient comprehension, knowledge and insight through recurrent confrontation [56].

Conclusion

Depression is more common than expected among children and adolescents. Primary care centers are the first contact facility between the patient and the health system. It is essential for primary health care physicians to be minded with the extent of occurrence, causes, risk factors, diagnosis and management of depressive disorders among children and adolescents according to his ability or referral of the resistant cases to the specialist. It is also important to understand factors that lead to adherence and nonadherence to recommendations for patients and their family to be managed.

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