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"To be or Not to be" ; the Choice will Always be ours, Percussions of Chronic Physical Illnesses on Pediatric Mental Health

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Abstract

Psychosocial adversities are not uncommon among children with chronic physical illnesses who survived because of the improved management of such disorders and health care's quality. Accordingly, mental health assessment and treatment of any concomitant mental disorder is a crucial part of the management plan of chronically physically ill children and adolescents. Addressing the psychosocial, psychiatric, educational, and vocational needs of those children and adolescents by a multidisciplinary professional team with appropriate family and social support are essential to help them to cope with their illnesses and achieve their ultimate goals in life. Finally, it is very worthy to let those young individuals learn by experience and modeling that "to be or not to be" will always be our choice and none else.

Keywords: Pediatric chronic physical illnesses; Pediatric mental disorders; Childhood anxiety; Depression in children; Resilience; Prolonged steroid therapy; Bronchial asthma; Type 1 diabetes mellitus; Autoimmune disorders; Congenital heart diseases

Introduction

With the significant improvement in the quality of health care and the great advances in the management of pediatric chronic illnesses, long standing psychosocial consequences have been reported in survived chronically ill children. Such children have been found to be more prone to develop different behavioral, emotional, and or psychiatric manifestations compared to their healthy counterparts [1,2]. The burden of the chronic illness, its treatment, and or the associated impairment of growth and development are the main proposed underlying mechanisms for the occurrence of comorbid psychosocial dysfunction [1]. Nevertheless, with the adequate family and social support and multidisciplinary professional care, resilience is common and poor psychosocial outcome is not inevitable [3].

What does the term "pediatric mental health" mean?

In general, mental health is defined as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, work productively and fruitfully, and is able to make a contribution to her or his community" [4,5]. Meanwhile, pediatric mental health means that a child reaches normal for age, developmental and emotional milestones, learns healthy social skills, and develops the ability of coping with daily stressors and or problems [6].

Pediatric mental disorders

Diagnosis of pediatric mental disorders is not an easy task for primary health care professionals as children, unlike adults, pass through many physical, mental, and emotional changes during different stages of growth and development in their journey to adulthood. Starting from birth, children are in a continuous process of learning how to cope, adapt, and get familiar with others and the whole world they live in [7]. In addition, speed of children's maturation differs from one child to another; hence, normality is not easy to define as it has a wide range of behaviors and abilities. Accordingly, a child is suspected to have a pediatric mental disorder when he fails to attain developmental and emotional milestones within the expected age range and has disturbed behavior, beliefs, thoughts, mood, emotions, and or impaired learning. Such disturbance is usually associated with poor scholastic achievement, disturbed relations with family members, peers, and teachers, and may be involvement with criminal justice system [7,8].

How common are the pediatric mental disorders?

Pediatric mental disorders are quite common as their incidence is estimated to range from 20% to 25% of children at any age group [7,8] of which anxiety, depression, and Attention Deficit Hyperactivity Disorder (ADHD) are the most common [8].

Etiology of pediatric mental disorders

The etiology of pediatric mental disorders has been suggested after thorough researches to be multifactorial; many bio-psychosocial and environmental factors interact together leading to the development of such disorders. Biologically, genetic make-up paves the way for a disorder vulnerability that is passed from parents to their children via polygenes and associated with dysfunction of different regions of the brain which are responsible for emotion, thinking, perception, and behavior control. On the other hand, prolonged and or severe psychosocial stress like parental loss or prolonged marital discord, rejection, abuse, neglect, etc…. plays a crucial role in triggering the occurrence of pediatric mental disorders. Lastly, but by no means least, environmental factors as head trauma, brain hypoxia, infection, heavy metal intoxication, and some dietary constituents can lead to the development of mental disorders in genetically susceptible children [7,9].

Pediatric chronic physical illnesses

Although it varies widely from one country to another, the overall prevalence of pediatric chronic physical illnesses approximately ranges from 10% to 20% [10]. On the other hand, it is estimated that 7 out of 10 office visits to a primary care practitioner are due to chronic physical diseases [11]. These diseases are associated with variable degrees of impaired functions of different body organs or systems as in cases of poorly controlled bronchial asthma, chronic rheumatic heart disease, congenital heart disease, autoimmune disorders, chronic hemolytic anemias, endocrinopathies, and chronic hepatic and or renal diseases.

Because of the advances in health care delivery all over the world, there is a growing concern about the mental consequences of pediatric chronic physical disorders. Chronic illnesses in childhood usually include pain, discomfort, scholastic absences, poor scholastic achievement, dependence on different medications, frequent health care visits and hospitalizations, social incompetence, and poor self-esteem; all of which increase the risk of developing internalizing and externalizing mental disorders [12,13].

Percussions of pediatric chronic physical illnesses on mental health

The disability and dysfunction that are commonly encountered with chronic illnesses were found to be attributed to the concomitant anxiety and or depression rather than the physical manifestations of such illnesses [14].

Reciprocal relationship between chronic illnesses and anxiety

It is believed that both chronic illnesses and anxiety interact with each other in ways which are likely to precipitate and or exacerbate their manifestations. On one hand, clinical anxiety increases the risk of development of medical complaints and or exaggeration of physical symptoms via either biological mediators (as hormonal or autonomic changes), psychological mechanisms (as biased symptom perception or defective coping), or a combination of both (as impaired immunity in cases of chronic worry and or excessive avoidance behaviors). On the other hand, the physical manifestations of chronic illnesses and or associated pain, dependence on medications, and or repeated hospital admissions may result in extreme fear about safety or separation from parents that eventually ends with school refusal or may lead to increased scanning and obsessions concerning physical symptoms ending with increased anxiety and panic responses to both physiological body changes and manifestations of physical diseases [15,16].

Interestingly, sometimes a mediator may pave the way between anxiety and physical problems as when anxiety disorder lead to substance abuse that results in physical consequences or when medications for physical illnesses exaggerate anxiety symptoms [15]. Lastly, a common risky bio-psychosocial and environmental background may account for the comorbidity of anxiety and physical disorders [14,17].

Depression and chronic physical illnesses

There are many points that could explain why chronic physical illnesses are considered as risk factors for the development of depression. First, the symptoms of such illnesses may be upsetting and or handicapping for the child because of their severity (e.g. repeated vomiting, nausea, shortness of breath, etc…) or their nature (e.g. epileptic fits, short stature, craniofacial dysmorphism, etc…) that makes them visible to the others who might treat the sick child in a way that makes him feel inadequate [11]. Second, depression may be an adverse effect of some drugs as corticosteroids that are used to treat many pediatric chronic conditions (e.g. bronchial asthma, rheumatic carditis, nephrotic syndrome, etc…..) or phenobarbital which is used in treatment of epilepsy. In addition, medications may require lifestyle changes and dependency on others that might lead to loss of pleasure, unhappiness, and poor self-esteem [17].

Third, the chronic illnesses may have remissions and exacerbations that cannot be predicted by the child who might feel helpless and unable to control his life. In addition, the sick child might not have the energy or time to share his peers in their play time and other social activities or his peers might prefer to keep a distance in order not to disturb him that ends with social isolation and lack of pleasure. On the other hand, the family members of the chronically ill child might be deprived from many enjoyable activities that they used to be engaged in just to help and support their child which is very distressing and conflict creator for any family, adding more to the child suffering. Furthermore, neurotransmitters' inadequacy that causes some manifestations of chronic physical illnesses (e.g. reduced amount of serotonin causing pain) might lead to depression. Lastly, depression is a multifactorial disorder meaning that the child will have an increased risk to develop it if he has a first degree relative suffering from it [11,17].

Psychological percussions of bronchial asthma

Bronchial asthma is known to be responsible for significant school absenteeism compared to any other chronic physical illness. Consequently, it is expected to be associated with poor quality of life and psychosocial dysfunction of the asthmatic child [18]. Zaky et al. [19] found that the total Health Related Quality of Life (HRQOL) score and all its sub-scores (both child and parental reports) significantly lower in asthmatic children compared to controls. Furthermore, they reported a negative correlation between HRQOL total score and anxiety and depression scores and a positive correlation with their pulmonary functions (FEV1 and FEF 25%-75%) i.e. the severer the asthma, the poorer the pulmonary functions, the higher the depression and anxiety scores and the worse the HRQOL.

Impact of congenital heart diseases on pediatric mental health

Congenital heart diseases especially if cyanotic are reported to be associated with increased risk of depression, fears, anxiety, and delinquent behavior that can be magnified by maternal anxiety [20,21]. Unfortunately, when children with congenital heart diseases do develop pediatric mental disorders, they rarely receive any treatment for them [22].

Type I Diabetes Mellitus and pediatric mental disorders

Type I Diabetes Mellitus is a disease that requires treatment with insulin injections for life and it is very distressing that affected children are obliged to learn how to give themselves the injections. Such obligation is not uncommonly associated with phobia of inserting the needle into the skin or fears of over dosage and hypoglycemia [23]. Adolescents with type I Diabetes Mellitus were reported to have more externalizing and internalizing psychological problems and lower

quality of life than the diabetic children [24] with significantly prevalent anxiety disorders [25].

Impact of rheumatic disorders and arthritis on pediatric mental health

Pediatric rheumatologic disorders are usually severer than the same disorders of adult onset and might lead to significant psychiatric morbidity with increased risk for internalizing problems especially anxiety and depression. Such high risk for psychiatric morbidity can be attributed to an autoimmune process, underlying vasculitis, and or treatment with steroids, immune suppressive medications, and or immune modulators which are potential causes of psychiatric adversities [26,27].

On the other hand, arthritis is usually associated with restriction of physical activities and might even end with physical disability that is considered as a high risk factor for the development of anxiety and or depression [20,28].

Corticosteroid therapy

Corticosteroids are indicated in a wide variety of pediatric physical diseases. They have been demonstrated to have significant neuropsychiatric side effects as cognitive disorders, behavioral changes, depression, and even psychosis. Practitioners should warn caregivers about these adversities before subscribing steroids and other similar drugs to children with different chronic illnesses [29].

What is resilience?

Resilience is defined as "the power or ability to return to the original form, position, etc…. after being bent, compressed, or stretched" or "the ability to recover readily from illness, depression, adversity, or the like" [30]. On the other hand, psychological resilience is the individual ability to successfully adapt to life tasks despite any social disadvantages and or other adversities like parental discord, parental death, physical health problems, poverty, etc…and come back from a negative experience with adequate functioning [31,32]. Resilience is a long process rather than a trait and it is not rare as it can be observed in average individuals. Furthermore, it can be learnt and developed by anyone via a structured system in a journey of an individual to discover his personal potentials and special abilities [33].

Management of pediatric mental disorders associated with chronic physical illnesses

Pediatricians' awareness of the possibility of development of pediatric mental disorders in chronically ill children is pivotal in their early diagnosis and proper treatment. Mental health assessment and treatment of any recorded mental disorder should be a crucial part of the management plan of chronically physically ill children and adolescents that must be individually tailored by a multidisciplinary team. Addressing the psychosocial, psychiatric, educational, and vocational needs of those children and adolescents by such professional team with appropriate family and social support are essential to help them to cope with their illnesses and achieve their ultimate goals in life [34].

Overview of a personal experience

It might be of value for the readers of this editorial to know that its author is not only a clinician and a researcher who is concerned with the physical and mental consequences of chronic pediatric physical disorders but also a sufferer of one of them as I was a child who developed acute poliomyelitis before completing my first year in life and it left me with a chronic physical disability. It is worthy to mention that I owe my mother, the rest of my family, and my primary school teachers a lot; they taught me how to accept my physical condition, address my needs, deal with things that I cannot do, and recognize my potentials, abilities, and skills that other healthy counterparts might not have, to finally cope with my physical disability and be one of those who are devoted to be the voice of people with special needs and try to make a difference for them.

Conclusion

To conclude, life is a journey that is full of challenges and it is entirely up to us to be either strong enough to face these challenges and cross all the obstacles in our way to reach our goals or to yield down under the pressure of such challenges, obstacles, and other life stressors. Chronic pediatric physical illnesses are one of those challenges that families have to face and help their children to understand, withstand, and cope with their physical and mental consequences in order to be able to attain self-actualization and significant achievements in their lives. Lastly but by no means least, it is very worthy to let those young individuals learn by experience and modeling that "to be or not to be" will always be our choice and none else.

Dedication

This editorial is especially dedicated to my late mother to whom I owe a lot and without her I would not have accomplished anything in my life. Also, it is dedicated to all children with chronic illnesses or special needs and their families who continuously inspire me with their resilience and fighting for a better tomorrow.

References

1. American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health (2001) The new morbidity revisited: a renewed commitment to the psychosocial aspects of pediatric care. Pediatrics 108 (5): 1227-1230.
2. Knapp PK, Harris ES (1998) Consultation liaison in child psychiatry: a review of the past 10 years. Part 1: clinical findings. J Am Acad Child Adolesc Psyciatry 37 (1): 17-25.
3. Rutter M(2006) Implications of resilience concepts for scientific understanding. Ann N Y Acad Sci 1094: 1-12.
4. http://www.who.int/features/factfiles/mental_health/en/
5. http://medical-dictionary.thefreedictionary.com/Children's+Health
6. www.cdc.gov/childrensmental health/index.html
7. http://www.webmd.com/mental-health/mental-illness-children?
8. http://www.medicinenet.com/mental_illness_in_children/article.htm
9. Zaky EA (2015) Nature, Nurture, and Human Behavior; an Endless Debate. Journal of Child & Adolescent Behavior 3: e107.
10. Janse AJ, Uiterwaal CS, Genke RJ, Kimpen JL, Sinnema G (2005) A difference in perception of quality of life in chronically ill children was found between parents and pediatricians. J Clin Epidemiol 58: 495-502.
11. Veale BM (2003) Meeting the challenge of chronic illness in general practice. Med J Aust 179: 247-249.

12. Fitzgerald M, Beggs S (2001) The neurobiology of pain: developmental aspects. Neuroscientist 7: 246-257.
13. Jackson PL, Vessey JA, Schapiro N (2004) Primary care of the child with a chronic condition. St Lois, Mosby pp: 184-191.
14. Kessler RC, Ormel J, Demler O, Stang PE (2003) Comorbid mental disorders account for the role impairment of commonly occurring chronic physical disorders: Results from the national comorbidity survey. Journal of Occupational and Environmental Medicine 45: 1257-1266.
15. Sareen J, Campbell DW, Leslie WD, Malisza KL, Stein MB, et al. (2007) Striatal function in generalized social phobia: a functional magnetic resonance imaging study. Biol Psychiatry 61: 396-404.
16. Chavira DA, Garland AF, Daley S, Hough R (2008) The impact of medical comorbidity on mental health and functional health outcomes among children with anxiety disorders . J Dev Behav Pediatr 29: 394-402.
17. Katon WJ, Richardson L, Lozano P, McCauley E (2004) The relationship of asthma and anxiety disorders. Psychosom Med 66: 349-355.
18. Bloom B, Cohen RA (2007) Summary health statistics for U.S. children: National Health Interview Survey, 2006. Vital Health Stat 10: 1-79.
19. Zaky EA, Shaheen MA, Amr NH, Said SM (2015) Psychosocial Profile and Quality of Life in Children with Bronchial Asthma; A Comparative Study of Self Reports and Parent Proxy Reports of Peds QL™ Inventory. Indian Journal of Applied Research 5: 33-39.
20. Stuber ML, Shemesh E, Saxe GN (2003) Posttraumatic stress responses in children with life-threatening illnesses. Child Adolesc Psychiatr Clin N Am 12: 195-209.
21. Lane DA, Millane TA, Lip GY (2013) Psychological interventions for depression in adolescent and adult congenital heart disease. Cochrane Database Syst Rev: CD004372.
22. Cox D, Lewis G, Stuart G, Murphy K (2002) A cross-sectional study of the prevalence of psychopathology in adults with congenital heart disease. J Psychosom Res 52: 65-68.
23. Amillategui B, Mora E, Calle JR, Giralt P (2009) Special needs of children with type 1 diabetes at primary school: perceptions from parents, children, and teachers. Pediatr Diabetes 10: 67-73.
24. Nardi L, Zucchini S, D'Alberton F, Salardi S, Maltoni G, et al. (2008) Quality of life, psychological adjustment and metabolic control in youths with type 1 diabetes: A study with self and parent report questionnaires. Pediatric Diabetes 9: 496-503.
25. Northam EA, Matthews LK, Anderson PJ, Cameron FJ, Werther GA (2005) Psyciatric morbidity and health outcome in type 1 diabetes-perspectives from a prospective longitudinal study. Diabetic Medicine 22: 152-157.
26. Kawakatsu S, Wada T (2001) Rheumatic disease and depression. Nihon Rinsho 59: 1578-1582.
27. Turkel SB, Miller JH, Reiff A (2001) Case series: neuropsychiatric symptoms with pediatric systemic lupus erythematosus. J Am Acad Child Adolesc Psychiatry 40: 482-485.
28. Lin EH, Katon W, Von Korff M, Tang L, Williams JW, et al. (2003) Effect of improving depression care on pain and functional outcomes among older adults with arthritis: a randomized controlled trial. JAMA 290 (18): 2428-2429.
29. Drozdowicz LB, Bostwick JM (2014) Psychiatric adverse effects of pediatric corticosteroid use. Mayo Clin Proc 89: 817-834.
30. http://www.merriam-webster.com/dictionary/resilience
31. http://www.tandfonline.com/doi/full/10.1080/108033548.2015.1126142
32. American Psychological Association (2014) The Road to Resilience.
33. Rutter M (2008) "Developing concepts in developmental psychopathology", In: Hudziak JJ (eds.) Developmental psychopathology and wellness: Genetic and environmental influences. Washington DC, American Psychiatric Publishing pp: 3-22.
34. Turkel S, Pao M (2007) Late consequences of chronic pediatric illness. Psychiatr Clin North Am 30: 819-835.