Mandera-Grygierzec Amanda, Kostrzewska Paulina, Szuster Ewa, Pawlikowska-Gorzelańczyk Anna, Lebioda Aneta. Eating disorders in children and adolescents- the current state of knowledge. Journal of Education, Health and Sport. 2022;12(7):906-911. eISSN 2391-8306. DOI http://dx.doi.org/10.12775/JEHS.2022.12.07.091
https://apcz.umk.pl/JEHS/article/view/JEHS.2022.12.07.091
https://zenodo.org/record/6940379

The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 21, 2021. No. The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 21, 2021. No. 32343.
Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical Culture Sciences (Field of Medical sciences and health sciences); Health Sciences (Field of Medical Sciences and Health Sciences).

Punkty Ministerialne z 2019 - aktualny rok 40 punktów. Załącznik do komunikatu Ministra Edukacji i Nauki z dnia 21 grudnia 2021 r. Lp. 32343. Posiada Unikatowy Identyfikator Czasopisma: 201159.
Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu).

© The Authors 2022;
This article is published with open access at Licensee Open Journal Systems of Nicolaus Copernicus University in Torun, Poland
Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike. (http://creativecommons.org/licenses/by-nc-sa/4.0/) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.
The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 16.07.2022. Revised: 17.07.2022. Accepted: 29.07.2022.

Eating disorders in children and adolescents- the current state of knowledge

Amanda Mandera-Grygierzec[1], Paulina Kostrzewska[2], Ewa Szuster[2], Anna Pawlikowska-Gorzelańczyk[2], Aneta Lebioda[3]

[1]Beskid Oncology Centre — John Paul 2nd Municipal Hospital in Bielsko-Biała
[2]Cardiosexology Students Club, Wroclaw Medical University, 50-368 Wroclaw
[3]Central Clinical Hospital of the Ministry of Interior and Administration in Warsaw

Orcid numbers and e-mail contact:
Amanda Mandera-Grygierzec, https://orcid.org/0000-0001-7658-5429 amanda.mandera@vp.pl
Paulina Kostrzewska, https://orcid.org/0000-0002-7804-4535 pkostrzewska1@gmail.com
Ewa Szuster, https://orcid.org/0000-0003-1154-1606 ewa.szuster8@gmail.com
Anna Pawlikowska-Gorzelańczyk, https://orcid.org/0000-0001-7725-2220 anna.pawlikowska96@gmail.com
Aneta Lebioda, https://orcid.org/0000-0001-5530-9361 lebiodaaneta@gmail.com

Abstract

Introduction. Eating disorders (ED) are a group of severe mental health disorders with high prevalence, mortality and associated morbidity. The most common eating disorders are anorexia nervosa, bulimia nervosa and binge-eating disorder.
Objective. The aim of the study was to evaluate prevalence, risk factors, clinical manifestation as well as complications for proper diagnostic and treatment of eating disorders.
Materials and method. The literature review included articles from Google Scholar databases and PubMed. Articles published in 2013 or later were mainly considered.
Brief description of the state of knowledge. The prevalence of eating disorders vary according to gender. There are a variety of risk factors that can be divided into family history, individual and possible triggers.

The most common risk factors include family history of mental disorders. Studies have shown that premorbid overweight is more frequent in male. In the diagnosis of eating disorders, the ICD-10 and DSM-5 classification is used. Complications of this disease can manifest itself from various systems of the body. Proper cooperation between the pediatrician and the patient is very important. Treatment of eating disorders focuses on psychotherapy, especially family-based treatment. Worse results are obtained due to underdiagnosis and late initiation of treatment.
Summary. Pediatricians are the first healthcare professionals which have contact with young patients, so education about the first symptoms and consequences of not receiving appropriate treatment is essential.

Keywords: Eating disorders, Anorexia nervosa, Bulimia nervosa, Family-based treatment

Introduction

Eating disorders are a condition that affects all ages, genders and other such as pregnancy, and are influenced by many factors [1]. They are an increasingly visible problem in modern society, caused by the current canon of beauty in social media, including a slim body shape. This contributes to the increasing prevalence of eating disorders the most common of which are anorexia nervosa, bulimia nervosa and binge-eating disorder. Eating disorders are correlated with high mortality rate and morbidity, that is why proper diagnostics and early treatment implementation are so important. However, research shows that many young patients either do not have access or do not receiving treatment [2].

Epidemiology

The lifetime prevalence of eating disorders vary according to study populations and the criteria used to define an eating disorder [3]. Dasha E. Nicholls et al showed the correlation between eating disorder and a family history of mental disorders such as anxiety or depression, which was almost 40%. Moreover, early feeding problems was noted in over 20% of participants, across the diagnostic groups [4]. Anorexia nervosa and bulimia nervosa will occur in 0.5% and 2-3% of female, respectively, in their lifetime. The highest incidence of eating disorders is recorded among women in the 12-25 age group [5]. However, anorexia nervosa occurs in males as well as in females, few studies report incidence rates for males [6]. The rate ratio of lifetime prevalence of anorexia nervosa and bulimia nervosa in males compared to females is often reported to be equal or less than 1:10 [7]. Premorbid overweight is more common in male compared to female [8].

Risk factors

Table 1. shows risk factors for eating disorders.

Family history	Individual	Possible triggering factors
Obesity	Female	Social pressures
Eating disorders	Genetic factors	Puberty
Anxiety	Low self esteem	Structure of the family system
Depression	Perfectionism/ Anankastic personality	Comments about body shape and weight
Alcoholism	Premature birth	Peers behavior
	Diabetes	Pressure to achieve
	Preceding depression/anxiety	Sexual history
	Premorbid overweight	Drug use
	Crohn's disease	

Diagnostic

We use the ICD-10 or The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria to classify and to make a diagnosis of eating disorders. DSM-5 for eating disorders includes Anorexia nervosa (AN), Bulimia nervosa (BN), Binge-eating disorder (BED), Avoidant/restrictive food intake disorder (ARFID), Other specified feeding or eating disorders, examples [9].

Pediatricians should consider a possible eating disorder in patients presenting with a change in weight combined with intense exercise or maintained with laxatives and vomiting; erratic eating and excessive focus on nutrition, including calorie counting; excessive concentration on maintaining low body weight and body shape dissatisfaction; denying the problems; withdraws from friends and activities; eating alone, lying about quantity of food consumed; physical complications such as periods stopping, or cold intolerance [10]. Serial weight and height measurements on percentile line are important to quickly capture weight loss or failure to achieve expected weight gain. Likewise, rapid weight gain or weight fluctuations may cue pediatrician to question binge eating [11]. The communication between a patient and health care providers is very important, as well as the documentation on the prevalence of eating disorders.

Dasha E. Nicholls et al detected that the mean time between appearance of symptoms and referral to secondary care was 8.3 months [12]. In the study conducted by Lask et al, concluded that one consultation about eating behavior or body shape and weight concerns is a strong predictor of the later emergence of anorexia nervosa [13]. Early intervention in children and adolescents with eating disorders is very important in order to obtain a better treatment result [14].

Medical complications

Mental and somatic features of an eating disorder are summarized in Table 2 [15,16,17,18,19].

Table 2.

Somatic complications	Mental complications
Cachexia, weakness	Depression
Dry skin, lanugo	Anxiety
Electrolyte disturbance	Cognitive dysfunction
Hormonal disorders	Suicide
Heart arrythmia	
Osteoporosis	
Bradycardia	
Low blood pressure	
Anemia, neutropenia, thrombocytopenia	
Constipation, abdominal pain	
Low blood glucose	

Treatment

Age, height, premorbid growth trajectory, pubertal stage, and menstrual history are essential for formulating individualized treatment goal weights [18,20]. Primary role in assessing for and managing acute and long-term medical complications is played by pediatricians[21]. Over the past 20 years, specialized family intervention focused on eating disorders, commonly referred to as family-based treatment (FBT), has become the leading approach to treating eating disorders in children [22]. Pharmacotherapy is ineffective in treating eating disorders in children [23].

Summary

Eating disorders can lead to serious complications and even death, so it is important to detect the disease early. Moreover, early detection gives a lower risk of illness recurrence. If an eating disorder is suspected, pediatricians, in collaboration with appropriate consultants, should initiate a holistic patient assessment, primarily medical, psychological and assess the risk of suicide.

References

1. Balasundaram P, Santhanam P. Eating Disorders. 2021 Jun 29. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan–. PMID: 33620794.
2. Bould H, Newbegin C, Stewart A, Stein A, Fazel M. Eating disorders in children and young people. BMJ. 2017 Dec 7;359:j5245. doi: 10.1136/bmj.j5245. PMID: 29217505.
3. Smink FR, van Hoeken D, Hoek HW. Epidemiology of eating disorders: incidence, prevalence and mortality rates. Curr Psychiatry Rep. 2012 Aug;14(4):406-14. doi: 10.1007/s11920-012-0282-y. PMID: 22644309; PMCID: PMC3409365.
4. Nicholls DE, Lynn R, Viner RM. Childhood eating disorders: British national surveillance study. Br J Psychiatry. 2011 Apr;198(4):295-301. doi: 10.1192/bjp.bp.110.081356. Erratum in: Br J Psychiatry. 2011 May;198(5):410. PMID: 21972279.
5. John Hopkins Medicine. Psychiatry and Behavioral Sciences Eating Disorders Program: Frequently Asked Questions About Eating Disorders https://www.hopkinsmedicine.org/psychiatry/specialty_areas/eating_disorders/faq.html
6. Hoek HW. Incidence, prevalence and mortality of anorexia nervosa and other eating disorders. Curr Opin Psychiatry. 2006 Jul;19(4):389-94. doi: 10.1097/01.yco.0000228759.95237.78. PMID: 16721169.
7. Raevuori A, Keski-Rahkonen A, Hoek HW. A review of eating disorders in males. Curr Opin Psychiatry. 2014 Nov;27(6):426-30. doi: 10.1097/YCO.0000000000000113. PMID: 25226158.
8. Vo M, Lau J, Rubinstein M. Eating Disorders in Adolescent and Young Adult Males: Presenting Characteristics. J Adolesc Health. 2016 Oct;59(4):397-400. doi: 10.1016/j.jadohealth.2016.04.005. Epub 2016 Jun 7. PMID: 27287963.
9. Fisher M, Gonzalez M, Malizio J. Eating disorders in adolescents: how does the DSM-5 change the diagnosis? Int J Adolesc Med Health. 2015 Nov;27(4):437-41. doi: 10.1515/ijamh-2014-0059. PMID: 25720048.
10. ACOG Committee Opinion No. 651: Menstruation in Girls and Adolescents: Using the Menstrual Cycle as a Vital Sign. Obstet Gynecol. 2015 Dec;126(6):e143-e146. doi: 10.1097/AOG.0000000000001215. PMID: 26595586.
11. Hornberger LL, Lane MA; COMMITTEE ON ADOLESCENCE. Identification and Management of Eating Disorders in Children and Adolescents. Pediatrics. 2021 Jan;147(1):e2020040279. doi: 10.1542/peds.2020-040279. Epub 2020 Dec 21. PMID: 33386343.
12. Nicholls DE, Lynn R, Viner RM. Childhood eating disorders: British national surveillance study. Br J Psychiatry. 2011 Apr;198(4):295-301. doi: 10.1192/bjp.bp.110.081356. Erratum in: Br J Psychiatry. 2011 May;198(5):410. PMID: 21972279.
13. Lask B, Bryant-Waugh R, Wright F, Campbell M, Willoughby K, Waller G. Family physician consultation patterns indicate high risk for early-onset anorexia nervosa. Int J Eat Disord. 2005 Nov;38(3):269-72. doi: 10.1002/eat.20163. PMID: 16211625.
14. Lock J. An Update on Evidence-Based Psychosocial Treatments for Eating Disorders in Children and Adolescents. J Clin Child Adolesc Psychol. 2015;44(5):707-21. doi: 10.1080/15374416.2014.971458. Epub 2015 Jan 12. PMID: 25580937.

15. Society for Adolescent Health and Medicine, Golden NH, Katzman DK, Sawyer SM, Ornstein RM, Rome ES, Garber AK, Kohn M, Kreipe RE. Position Paper of the Society for Adolescent Health and Medicine: medical management of restrictive eating disorders in adolescents and young adults. J Adolesc Health. 2015 Jan;56(1):121-5. doi: 10.1016/j.jadohealth.2014.10.259. PMID: 25530605.
16. Herpertz-Dahlmann B. Adolescent eating disorders: update on definitions, symptomatology, epidemiology, and comorbidity. Child Adolesc Psychiatr Clin N Am. 2015 Jan;24(1):177-96. doi: 10.1016/j.chc.2014.08.003. Epub 2014 Oct 7. PMID: 25455581.
17. Campbell K, Peebles R. Eating disorders in children and adolescents: state of the art review. Pediatrics. 2014 Sep;134(3):582-92. doi: 10.1542/peds.2014-0194. PMID: 25157017.
18. Golden NH, Katzman DK, Sawyer SM, Ornstein RM, Rome ES, Garber AK, Kohn M, Kreipe RE. Update on the medical management of eating disorders in adolescents. J Adolesc Health. 2015 Apr;56(4):370-5. doi: 10.1016/j.jadohealth.2014.11.020. Epub 2015 Feb 7. PMID: 25659201.
19. Ellen S. Rome, Sarah E. Strandjord; Eating Disorders. Pediatr Rev August 2016; 37 (8): 323–336. https://doi.org/10.1542/pir.2015-0180
20. Norris ML, Hiebert JD, Katzman DK. Determining treatment goal weights for children and adolescents with anorexia nervosa. Paediatr Child Health. 2018 Dec;23(8):551-552. doi: 10.1093/pch/pxy133. Epub 2018 Nov 19. PMID: 31043839; PMCID: PMC6242059.
21. Katzman DK, Peebles R, Sawyer SM, Lock J, Le Grange D. The role of the pediatrician in family-based treatment for adolescent eating disorders: opportunities and challenges. J Adolesc Health. 2013 Oct;53(4):433-40. doi: 10.1016/j.jadohealth.2013.07.011. PMID: 24054079.
22. Rienecke RD. Family-based treatment of eating disorders in adolescents: current insights. Adolesc Health Med Ther. 2017 Jun 1;8:69-79. doi: 10.2147/AHMT.S115775. PMID: 28615982; PMCID: PMC5459462.
23. Van den Heuvel LL, Jordaan GP. The psychopharmacological management of eating disorders in children and adolescents. J Child Adolesc Ment Health. 2014;26(2):125-37. doi: 10.2989/17280583.2014.909816. PMID: 25391711.