

Education of parents who have overweight children

Hu Olivia
Jiang Vivian

Bachelor's thesis
June 2021
Social services, Health and Sport
Degree Programme in Nursing

Author(s) Hu Olivia Jiang Vivian	Type of publication Bachelor's thesis Number of pages 35	Date June 2021 Language of publication: English Permission for web publication: x
Title of publication Education of parents who have overweight children		
Degree programme In Nursing		
Supervisor(s) Sinivuo Riikka		
Assigned by -		
<p>Abstract</p> <p>Over the past thirty years the prevalence of overweight and obesity has increased dramatically. Because of the rapid increases prevalence and the serious consequences, obesity became one of the most serious public health challenges of the early 21st century.</p> <p>This review aim to examine the parental influence on overweight children and adolescents, giving relevant nursing interventions. The purpose is to provide a reference point for nurses in educating parents of obese children .</p> <p>This study through the method of literature review, summarizing databases from Conchance , EBSCOhost, Wiley and Hownet, and publications from nursing education institutions, about studies related to educating parents of overweight children in nursing. in an attempt to improve the phenomenon of overweight children by enhancing the education of parents of overweight children, and thus improve the quality of life of children.</p> <p>The results of the study showed that there were varying degrees of influence of various factors on various dimensions of quality of life. To improve the quality of life of children and adolescents with obesity, parents need to focus on behaviour interventions, psychological interventions, health education and integrated interventions to create a positive environment.</p>		
Keywords Children, obesity, overweight, nursing intervention, educate parents		
Miscellaneous (Confidential information).		

Contents

1 Introduction.....	3
2 Background.....	4
2.1 Definition of overweight and obesity.....	4
2.2 Possible consequences of overweight children.....	5
2.3 Parental influence on children's weight.....	8
2.4 Other related factors.....	9
3 Aim, Purposes and Research Questions.....	10
4 Methodology.....	10
4.1 Literature review.....	10
4.2 Scientific articles selection.....	11
4.3 Data analyses.....	13
5 Results.....	15
6 Discussion.....	18
6.1 Ethical considerations.....	18
6.2 Validity, Reliability, and Limitation.....	19
6.3 Discussion of the results.....	19
7 Conclusion.....	20
References.....	22
Appendices.....	26
Appendix 1. Related literature summary.....	26
Figures	
Figure 1. Screening process chart.....	12
Figure 2. Data analysis process.....	14

Tables

Table 1. Inclusion Criteria..... 12

Table 2. Results of the data search.....13

Table 3. Results of main categories and subcategories..... 15

1 Introduction

Since 1975, the prevalence of overweight and obesity has increased dramatically. Once considered a problem in high-income countries, overweight and obesity are now rising in low- and middle-income countries, especially in urban environments. (WHO 2020)

Childhood overweight may increase the risk of many diseases, such as cardiovascular diseases (related to high blood pressure and high cholesterol), insulin resistance and type 2 diabetes induced by impaired glucose tolerance, respiratory problems, musculoskeletal and joint problems, digestive diseases (CDC 2016), also some cancers and disability (WHO 2014)

In addition, obesity is also related to psychological problems such as anxiety and depression of 8-10 year old children, causes low self-esteem, low self-reported quality of life, and even social problems such as bullying and stigmatization. (CDC 2016)

Obesity may continue in childhood, adolescence and adulthood, if obese infants and young children without intervention, Childhood obesity is associated with various serious health complications and an increased risk of premature attacks of diseases including diabetes and heart disease. (WHO 2020)

The good news is that overweight and obesity are largely preventable. Through policies, environments, schools and communities that positive influence the underlying choice of families, preventing obesity from making sensible meals and regular exercise as the most available and reasonably priced options. (WHO 2019)
The prevention and treatment of childhood obesity requires education and empowerment of the family on lifestyle. (Hilary Hoey. 2014)

Nurses are in a unique position when interacting with families in health care and community settings, so they can help prevent and manage overweight and obesity in

children and adolescents. This is the main health problem in the long-term morbidity. All members of the multidisciplinary team work together to solve the problem of childhood obesity. The primary prevention of obesity can prevent serious secondary complications in adults. The action of the nurse should always adopt the method of the whole family, because obese children without family support, it is difficult to change diet or physical habits. Nurses can help parents and children by providing nutrition advice and strategies to reduce calorie intake and increase physical activity through weight management programs. This study hopes that nurse intervention will provide support to parents of overweight children and adolescents, improve the quality of life of children and adolescents, and enhance personal and family well-being indicators. (Rabbitt 2012)

2 Background

2.1 Definition of overweight and obesity

WHO defines obesity as excessive or abnormal accumulation of fat, that have possibilities to damage our health. (WHO 2014) Body mass index (BMI), as a useful tool to assess body fat, can measure people body weight adjusted for height, is defined as person's weight (kg) divided by the square of height (m). BMI levels are associated with body fat and health risks, especially risk of cardiovascular disease. A high level of BMI can predict future obesity, morbidity and modalities. The author Sarah E. Barlow said that although not perfect, the BMI percentile is a clinically recommended method of body fat examination. (Sarah E. 2007) CDC believes that, as an indicator for judging children's overweight and obesity, BMI can be used as an alternative method to directly measure body fat. But the body composition of children varies according to their age, and different between genders. Therefore, it is necessary to express BMI levels compare with other children and adolescents of the same age and gender. Therefore, the condition of children and teenagers is assessed based on the age and gender of specific percentile BMI rather than the BMI category used by adults. (CDC 2018)

Indeed, body fat in high levels are connected with increased health risks. However, no matter measured by fat mass or weight percentage, there is no single standard can differentiate risk between health or disease. Even if it is easy to measure the body fat, other factors such as the location of fat, physical condition, genetic factor can also relates to health assessment. Because no objective assessment to distinguish high body fat from high lean body mass is clinically practical, clinicians must also consider the family history of obesity and medical problems, the child's past BMI pattern, and the child's current medical conditions and current health behaviors as they decide whether to recommend intervention. (Sarah E. 2007)

A sign of childhood obesity is their weight well above the average as child's development. When they are off the normal weight trajectory, their weight gain is disproportionate to their growth in height, which means excessive accumulate fat that can negatively impact their health. Then, if it not be corrected, gaining fat too much, kids will be classified as overweight or obese. (Childhood Obesity Foundation 2019) WHO recommendation , apply The WHO Child Growth Standards to evaluate children under five and infants; and apply Growth reference data for 5-19 years to children and adolescents aged 5-19 years Evaluation. (WHO 2014)

2.2 Possible consequences of overweight children

As overweight obesity among children and adolescents increases year by year, some chronic diseases in adults, such as hypertension, hyperglycaemia and hyperglycaemia, have also emerged among overweight children and adolescents, and the trend towards the younger age group of these diseases is becoming more and more obvious. In recent years, with the changes in living standards and lifestyles of Chinese residents, the incidence of hyperglycaemia in children has gradually increased and has become the most common clinical manifestation of obesity in children. (Huang , 2008) The risk of hypertension among obese adolescents in the United States has also been documented to be three times that of non-obese individuals. (Ma 2009) The obesity of children and adolescents can also lead to metabolic disorders. The overweight and obesity of children and adolescents can also lead to metabolic disorder syndrome. A total of 134 cases of metabolic syndrome (MS) were detected,

with a detection rate of 31.0%. This indicates that the prevalence of MS is serious and close to the level of developed countries.(Sorof 2002).Obese adolescents with symptoms of hypertension, hyperglycaemia, hyperglycaemia and metabolic-disorders are more likely to develop chronic non-communicable diseases such as cardiovascular disease and type II diabetes early in adulthood, and this risk increases as the age of onset and duration of obesity increases (Sheng 2009). The long-term risks of obesity to adolescent health cannot be ignored.

Obesity can also have a negative impact on the normal psychological and behavioral development of young people. Children who are overweight and obese are generally dissatisfied with their weight and body shape. Xu Hongxia et al.(2008)studied 129 obese primary and secondary school students and 193 normal weight students in Yinchuan and Shizuishan, Ningxia, and showed that for both boys and girls, the obese group had lower scores on physical appearance than the normal weight group, and the difference in scores was statistically significant (Xu 2008). Obese children are prone to adopt abnormal weight control eating behaviors such as taking diet pills, inducing vomiting, not eating for long periods of time and taking laxatives. They hope to change their body shape in these ways (Wang 2006).

Obesity also has a serious impact on the mental health of young people. Overweight and obese students are vulnerable to ridicule from their peers and parents because of their bulky bodies and limited mobility, and are often denied opportunities to participate in group activities such as singing and dancing, which can undermine their self-esteem. External prejudice and self-sensitivity result in obese students being reluctant to participate in group activities and their social and adaptive skills deteriorate. Many studies have reported that obese adolescents are more likely to experience anxiety and depression than those of normal weight. Hong et al.(2008)assessed depressive symptoms in 7161 secondary school students from junior to senior high school in 168 classes in 56 schools in 13 districts and counties in Nanjing. After adjusting for multiple factors, overweight and obese adolescents had a 37.1% and 48.8% increased risk of depressive symptoms, respectively, compared to those with normal weight (Hong 2008).Xu Ling et al.(2005) used an epidemiological survey to assess the level of depression, anxiety and self-awareness in three groups

of female secondary school students: the obese group, the overweight group and the normal weight group, using the Depression Self-Rating Scale, the Anxiety Rating Scale and the Piers-Harris Self-Awareness Scale. The results showed that the detection rate of depressive symptoms was higher in the obese group than in the overweight group, and the detection rate of anxiety symptoms was higher than in the overweight and normal groups, with significant differences. Bazarqan et al.(2005)survey of 12-17 year olds in California, USA, showed no association between actual overweight and obesity and depressive symptoms, but there was an association between adolescents' subjective perceptions of their weight as overweight and obesity and depressive symptoms (Bazargan-Hejazi S 2010)

If unrestrained in their weight, studies show that overweight or obese children are more likely to become obese adults , and more likely to suffer health problems due to chronic diseases, which can increase the cost to individuals and healthcare.(childhood obesity foundation 2019)They are also more likely to suffer from stress, sadness and low self-esteem. Children with obesity face health conditions such as hyperparathyroidism, Hypertension, premature heart disease, Diabetes, skeletal issues, skin diseases including prickly heat, infections of fungus and acne. (2020 WebMD).

The persistence of obesity will also have a negative impact on the physical and psychological well-being of young people, which is detrimental to their physical and mental development. Numerous studies have shown that different BMI classifications have different effects on the quality of life of children and adolescents. Overall, the higher the BMI, the lower the quality of life score. In this study, no difference was found between the quality of life of thin and normal weight children and adolescents, and the quality of life scores of overweight and obese children and adolescents were lower than those of normal weight, which is in line with the majority of domestic and international studies.(Halasi S 2018). They found that obesity was negatively associated with quality of life in children, and that obese boys had less social support and poorer relationships with peers than their normal-weight peers(Halasi S 2018) .The results of a quality of life survey conducted by Chen Yuxia et al. on 1,119 primary and secondary school students in Guangzhou showed that

overweight and obese children scored lower on three dimensions of quality of life: overall satisfaction with life, motor ability and other dimensions compared to children of normal body mass (Chen 2010). It was also found that overweight and obese children and adolescents had lower scores on the psycho-social and school functioning dimensions compared to normal children .(Hovsepian S 2017).

The results of the survey also showed that overweight and obese children and adolescents' scores in many domains and dimensions of quality of life decreased with age. Petersen S et al. conducted a study on the relationship between obesity and quality of life in 8,947 children and adolescents in Fiji and found that obese children and adolescents had lower scores on social and school functioning and satisfaction with quality of life as they grew older(Petersen S 2014). Chinese scholars studying the relationship between overweight and obesity and quality of life in primary and junior high school students found that overweight and obese primary school students scored higher than junior high school students on total quality of life scores and multiple dimensions, and researchers concluded that junior high school students were gradually developing a sense of self and were more concerned about their image, and that the negative impact of overweight and obesity on quality of life was greater for junior high school students than for primary school students.(Chen 2010).

2.3 Parental influence on children's weight

In particular, it is important to note that obesity has long been considered a 'family issue' - high weight at birth, maternal diabetes and obesity in family members are all contributing factors in children. There may be multiple genes and strong interactions between genetics and the environment that influence the degree of obesity. The odds of a child being obese as an adult increase by 30% if one parent is obese, and by more than 10% if both parents are obese, and parental obesity is a better predictor of adult obesity than child weight status. These observations have important implications for the identification of risk and for regular anticipatory guidance on healthy eating and activity patterns for families.(Nutrition Committee 2003)

A systematic review of studies has shown that children of overweight or obese mothers are not only at increased risk of obesity, but also at increased risk of autism and emotional behaviour problems compared to children of normal weight mothers. (Padilla-Moledo C 2016) 。

A systematic review of studies has shown that children of overweight or obese mothers are not only at increased risk of obesity, but also at increased risk of autism and emotional behavioral problems compared to children of normal weight mothers. (Padilla-Moledo C 2016)

There are critical developmental periods of excessive weight gain. What has been found is that the extent and duration of breastfeeding is inversely associated with the risk of obesity in later childhood and is thought to be influenced by physiological factors in breast milk and the parenting pattern of breastfeeding.(Nutrition Committee 2003)

2.4 Other related factors

As a complex health problem, childhood obesity occurs when a child's weight is far above the healthy weight range for a child of the same age or height, and young people gain weight for similar reasons to adults. The causes of excess weight gain in young people are similar to those in adults.(CDC 2016)In summary,The root cause of excess weight is unequal calorie consumption and calorie intake.(WHO 2020)

From a number of aspects including biological, behavioral, social, psychological, technological, environmental, economic, cultural, complicated and interactive factors leads to the increasing prevalence of overweight and obesity, from the individual to the family even to the whole society,(childhood obesity foundation 2019) Globally, the causes of weight gain include the increasing intake of high-energy foods rich in fat and sugar, and a lack of physical activity due to long periods of absentmindedness, changes in transport patterns, and increased urbanization(WHO 2020), such as

watching television or other screen devices, medication use, and sleep routines.(CDC 2016)

Genetic disorders known to be associated with a predisposition to obesity include Prader-Willi syndrome, Bardet-Biedl syndrome and Cohen syndrome. In such cases, early diagnosis can work with specialists such as geneticists, endocrinologists, behaviorists and nutritionists to optimize growth and development while promoting a healthy diet and activity pattern at a young age. For example, data suggest that growth hormone can improve some of the physical signs of Prader-Willi syndrome.(Nutrition Committee 2003)

3 Aim, Purposes and Research Questions

This project start from the perspective of the parents, based on theories in the field of growing development and health management among children and adolescents ,research current studies on the related parental factors of childhood overweight .It aim to identify the behavioral and genetic links between overweight children and their parents, to provide references for nursing intervention of parental education in clinical and daily life. The purpose of review is to prevent and improve the health and quality of life of children and adolescents by strengthening parental education.

4 Methodology

4.1 Literature review

This method is based on extensive reading and understanding of the literature in the research field covered by the chosen topic, the thesis provides a comprehensive analysis, summarizes and comments on the current state of research (including the main academic views, previous research results and research level, focus of debate,

problems and possible reasons, etc.), new levels, new developments, new technologies and discoveries, development prospects, etc. in the research field, and presents its own opinions and research. It is a different style of writing from the thesis. It requires the author to not only synthesis and present the main ideas of the information reviewed, but also to provide a more specialism, comprehensive, in-depth and systematic discussion and corresponding evaluation of the synthesis literature according to his own understanding and knowledge, rather than just a "pile-up" of academic research in the relevant field(Wang 2010)

4.2 Scientific articles selection

The criteria as shown by Table 1 were established to retrieve articles meaningful to this article and provide strong evidence for the conclusion. Next, search keywords in the Conchance, EBSCOhost, Wiley and Hownet database listed in Table 2 , and then screen the large number of articles through the summary. At the second screening, we read the full text to ensure that the data needed for this article is included. Figure 1 is the flowchart of our entire screening process.

Inclusion Criteria	Nursing problems and intervention for obese children Science-based articles Study in English or Chinese Published years from 2000 to 2021 Free full-text access for JAMK students Peer-reviewed studies Answers of the research questions
-----------------------	---

Table 1. Inclusion Criteria

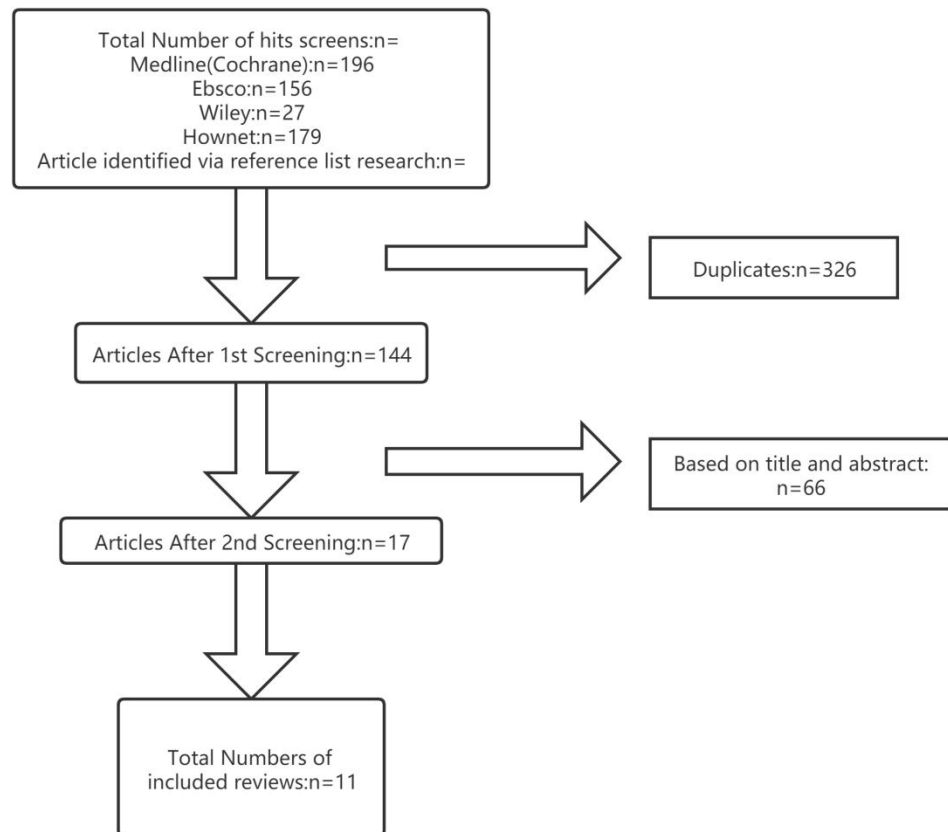


Figure 1. Screening process chart

Database	Search Words	Results	Relevance by Title and abstract	Related research
Cochrane	Childhood obesity and nursing experience	196	13	3

EBSCO	Childhood obesity and nursing experience or parents, family	156	11	2
Hownet	Childhood obesity and nursing experience	179	36	5
Wiley	Childhood obesity and nursing experience	27	6	1

Table 2. Results of the data search

4.3 Data analyses

Data analysis is to collect a large number of data related to project , understand and digest them, examining and summarizing data in detail for the purpose of extracting useful information and drawing conclusions. The purpose of data analysis is to concentrate and extract the information hidden in a large number of seemingly chaotic data, so as to find out the internal laws of the object of study. Data analysis is the process of collecting data in an organized and purposeful way, analyzing data and making it into information. It usually comes in the form of charts and graphs. (GU.2016)

Data analysis has an extremely wide range of applications and a typical data analysis involves the following four steps. When data is first obtained, it may be messy and

irregular, so this is the first step to explore possible forms of regularity by trying various combinations to find and reveal the regular features implicit in the data. The second step is model selection analysis, in which a type or types of probable models are proposed based on the exploration of regularity, from which models are then identified through further analysis. The third step is the inferential analysis, which usually uses mathematical and statistical methods to make inferences about the reliability and accuracy of the selected model. The fourth step in summarizing the view is to develop a systematic interpretation of the data analysis. (Yuan 2014)Figure 2 below illustrates the data analysis process

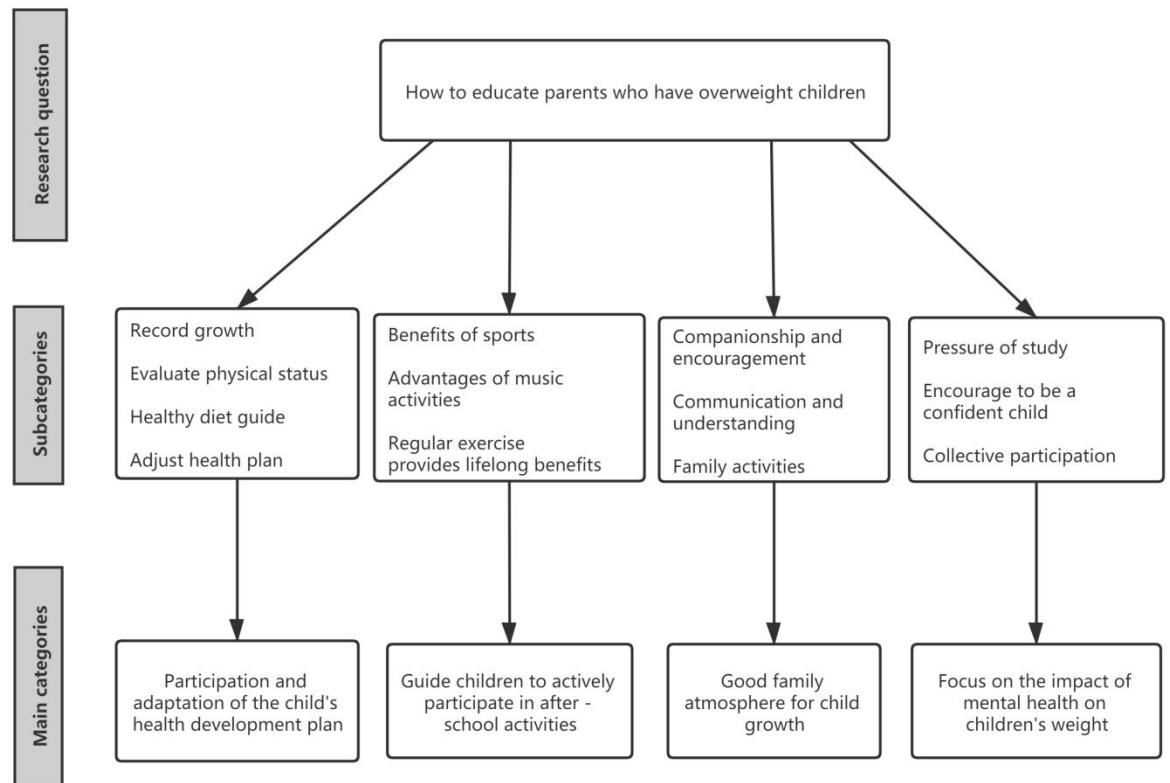


Figure 2. Data analysis process

5 Results

By summarizing, the current nurses and doctors should strengthen their parental education from multiple perspectives. Improve the literacy of the parents of overweight children from different perspectives, and optimize the whole education process. Table 3 below lists the aspects of this education.

Research Issues	Main categories
How to educate parents who have overweight Children	Participation and adaptation of the child's health development plan
	Guide children to actively participate in after - school activities
	Good family atmosphere for child growth
	Focus on the impact of mental health on children's weight

Table 3. Results of main categories and subcategories.

First, the first step in health management is health monitoring, in which parents should take the initiative to record information about their children's growth and developmental status to keep abreast of their children's health status. The second step is health assessment, in which health care professionals assess the degree of obesity and the risk of related diseases based on the height, weight, and waist circumference of the examinee, and promptly alert the parents and child if the child is found to be overweight. The third step is health intervention and health education. Before health intervention, health managers should correctly analyze the hazards of overweight/obesity and its risk factors to parents and children, help them establish a healthy concept and convey correct scientific knowledge of weight reduction. (Cheng 2020) Childhood obesity and adult obesity should be treated differently in terms of weight reduction methods, the core methods being diet therapy and exercise

therapy. In terms of diet, since children and adolescents are at a critical stage of growth and development, and obesity treatment is a long-term process, we recommend low-fat, low-sugar, high-protein, high-micro nutrient, and moderate-fiber recipes, avoid skipping breakfast, and slow down the speed of eating (Zhang 2021); in terms of exercise, the amount of activity is based on the principle of being relaxed and not feeling fatigue after exercise, and increase the mode of exercise and improve the fun of exercise. and improve the fun of exercise. (Wu 2018)

Second, parents are educated to guide their children to participate in more after-school activities. Research has shown that active participation in extracurricular activities and increased exercise time can effectively improve memory, fatigue, anxiety, and low self-esteem, which in turn can increase self-satisfaction (Gerson 2019). For example, it is possible to participate in some music classes or group activities. It has been found that individuals who want to have a better experience in social relationships and psychological aspects in close surroundings can be exposed to music, and this can also enhance their self-confidence and self-esteem and allow them to interact more harmoniously with others. Increased exercise time and regular exercise habits can improve the quality of life of obese children and adolescents. Therefore, it is important to encourage children to participate in more sports activities to enrich their after-school life. (Shen 2018)

Third, educate parents to create a good family atmosphere. The family is the basic unit of society, and parents are the first teachers of their children. A well-functioning family has a clear division of roles, clear and effective communication, and open and self-controlled emotions. In order to make the family function positively, firstly, parents are encouraged to accompany each other regularly, to truly recognize the importance of the issue, and to create a warm and happy family atmosphere together(Zhao 2012).Secondly, parents should learn to communicate with their children. Communication is an important process of transferring feelings and ideas between people. Parents with lower education should be more proactive in learning how to communicate with their children, get inside their children's hearts, understand their real thoughts, and consider problems from their children's point of view. For children with low academic achievement, parents should take the initiative

to understand their children's learning progress and work together to develop an appropriate learning plan based on effective communication with teachers (Kitzman-Ulrich H 2010).

In 1989, the WHO stated that health is not only the absence of disease, but also a state of physical, mental, social and moral well-being . There is no doubt that mental health is an important aspect that cannot be ignored. First of all, academic stress is one of the most important factors affecting the quality of life of obese children. When expressing their expectations for their children, parents should be closer to their hearts and offer realistic goals and feasible methods that they can achieve, rather than just imposing their high expectations on their children. Studies in China and abroad have shown that psychological interventions based on understanding the personality types of obese children and adolescents can effectively improve their quality of life (Vos RC, Huisman SD, 2012). Second, for children with low quality of life in terms of self-concept, parents can use encouragement to guide their children to appreciate themselves correctly and objectively, build self-confidence, and integrate into group life, thus improving their quality of life (Luo 2015). Finally, if obese children and adolescents have risk factors that reduce their quality of life, the outside world should give them more care and encouragement to help them solve their problems, because these children are more likely to have psychological problems, and the consequences of such problems may even exceed the impact of obesity itself on the individual (Lin 2018).

Compared with a single intervention, a comprehensive health management program that combines health education, exercise and psychological interventions and that brings together individuals, families, schools and communities is more effective. This form of intervention has been found to be the most effective when used with obese children and adolescents and their parents, significantly improving their quality of life (Poeta LS 2003). Therefore, parents can be educated to take exercise intervention as the core, and then supplement it with health education and psychological intervention to carry out a three-dimensional, whole-person, all-round health management.

6 Discussion

6.1 Ethical considerations

Ethics is the science of moral issues and an important part of academic research.

"Academic misconduct affects the authenticity of papers, damages the value of research, misleads the direction of academic development, and hinders the healthy development of journals and scientific research" (LU 2019)

Honesty is an important component of academic research and publication, which ensures the authenticity and feasibility of research. The data in this literature strictly follow this principle and the data are traceable. Academic plagiarism is a violation of academic honesty. It refers to the existence of theft of others' research results in academic research, activities and results involving academic issues. It is an unfair and disrespectful act to the author of the original literature. (Zhang 2014)

This literature ensures respect for the authors of the cited literature by accurately tagging the cited literature, citing the authors of the literature used and the year in which the article was published.

This is because the method used in this study is a literature review, which brings the basis for our study by summarizing many literatures. Therefore, this paper is based on the studies of other authors. The main ethical issue facing the literature we referenced was obtaining informed consent from obese children and parents of obese children. The principle of informed consent is that the experimenter must be informed and voluntarily participate in the research project before participating in the study, and the subject is allowed to withdraw unconditionally at any stage. (LU 2019).

6.2 Validity, Reliability, and Limitation

Validity is the extent to which the planned activities and planned results are achieved, which in this case means that the conclusions we draw can be applied to the problem we are studying. (Fitzner, K. 2007). Our article summarizes the different causes of childhood obesity and how to teach parents with obese children in their homes according to the situation, thus serving to promote the physical and mental health of children.

Reliability means that something can be measured consistently and that similar results are obtained each time it is tested. (Fitzner, K. 2007) We searched the Cochrane, EBSCO, Wiley and Hownet databases according to the keywords of our study and selected a large amount of scientific and practical literature related to our topic, which is infinitely close to our topic. This ensures the credibility and validity of the subject.

This literature was selected from the accessed database offered to students by the JAMK University of Applied Sciences (JAMK), excluding paid and restrictive literature, and our literature resulted in unavoidable limitations. A large amount of literature from China Knowledge Network was applied in the text because of the network. The selected articles are from English and Chinese only, as well as full-text and abstracted literature, which leads to some limitations.

6.3 Discussion of the results

Family intervention: through seminars, parents' meetings and other forms, parents give special lectures on obesity prevention and treatment knowledge to parents, distribute publicity materials on obesity prevention to parents to publicize the harm brought by obesity to the physical and mental health of teenagers. Through these activities, parents realize that the family environment is also one of the important factors in adolescent obesity, on the other hand to let parents understand how to reasonably arrange students' meals. In daily life, we should pay attention to protect

the mental health of obese teenagers and avoid making some derogatory remarks about the child's body size. In contrast to single interventions, comprehensive health management programmes that combine health education, exercise and psychological interventions and that bring together the individual, family, school and community are more effective. This has been found to be the most effective form of integrated intervention for obese children and adolescents and their parents, with significant improvements in their quality of life (Poeta LS 2003). Therefore, parents can be educated to use exercise interventions as a core component, complemented by health education and psychological interventions for a three-dimensional, whole-person, holistic approach to health management.

Studies at home and abroad, overweight and obesity have a significant impact on the quality of life of children and adolescents, which will not only affect their physical and mental health and self - satisfaction, but also affect their social and psychological functions, and even the quality of life in the living environment. (ZELLERMH 2006) Therefore, before talking about the impact of various factors on the quality of life of obese children and teenagers, we should first consider how to improve from the root, that is, strengthen the science education of scientific weight reduction knowledge for parents and improve the health management service process of overweight children and teenagers.(Chen 2010)

7 Conclusion

The prevalence of obesity in children and adolescents has increased worldwide in recent years and this may have many negative effects on the quality of life of children and adolescents. The causes of childhood obesity are complex and are linked to a variety of factors, including genetics, environment and parenting. In this study, the impact of parental factors on the quality of life of overweight children and adolescents, including physical and psychological factors, and the family environment, was analyzed, based on the clear understanding that being overweight has a significant negative impact on the quality of life of children and adolescents. The

results of the study showed that each factor had a different degree of influence on the various dimensions of quality of life. To improve the quality of life of obese children and adolescents, parents need to pay attention to the importance of behaviour interventions, psychological interventions, health education and comprehensive interventions to create a positive atmosphere.

References

Bazargan-Hejazi S, Alvarez G, Teklehaimanot S, et al. 2010. Prevalence of depression symptoms among adolescents aged 12-17 years in California and the role of overweight as a risk factor[J]. *Ethn Dis.* 20 (Suppl 1): 107-115.

Bonde, Ane Høstgaard, Peter Bentsen & Anette Lykke Hindhede. 2014. School Nurses' Experiences With Motivational Interviewing for Preventing Childhood Obesity. *The Journal of School Nursing* 30, 6: 448 – 55.
<https://doi.org/10.1177/1059840514521240>.

Catherine G.P. Berdanier, Joshua B. Lenart. 2020. Organizing Your Literature Review. *You Have to Write a Literature Review: A Guided Workbook for Engineers*, 53 – 63. <https://doi.org/10.1002/9781119555063.ch6>.

CDC. 2016. Childhood Obesity Causes & Consequences. access on 21.5.2021. Retrieved from: <https://www.cdc.gov/obesity/childhood/causes.html>.

CDC. 2018. Definition of childhood obesity: overweight and obese, access on 21.5.2021. Retrieved from: <https://www.cdc.gov/obesity/childhood/defining.html>.

Childhood Obesity Foundation. 2019. What is Childhood Obesity? Who is at Risk? access on 21.5.2021. Retrieved from:

Fitzner, K. 2007. A quick review of reliability and validity. *The Diabetes Educator*, 33(5), 775-780. doi:10.1177/ 0145721707308172

Gerson Luis de Moraes Ferrari et al. 2019. Factors associated with objectively measured total sedentary time and screen time in children aged 9 – 11 years[J]. *Jornal de Pediatria (Versão em Português)*, 95(1) : 94-105.

Halasi S, Lepes J, Dordic V, et al. 2018. Relationship between obesity and health-related quality of life in children aged 7-8 years[J]. *Health Qual Life Outcomes*. 16(1): 149.

Hilary Hoey. 2014. Management of Obesity in Children Differs from That of Adults. *The Proceedings of the Nutrition Society*. 73, 4: 519 – 25.
<https://doi.org/10.1017/S0029665114000652>.

Hovsepian S, Qorbani M, Motlagh ME, et al. 2017. Association of obesity and health related quality of life in Iranian children and adolescents: the Weight Disorders Survey of the CASPIAN-IV study[J]. *Pediatr Endocrinol Metab*. 30(9): 923-929.

Kitzman-Ulrich H, Wilson DK, St George SM, et al.2010.The integration of a family systems approach for understanding youth obesity, physical activity, and dietary programs [J]. *Clin Child Fam Psychol Rev.* 13:231-253.

LU Quan.WANG Jing&JIANG Yongmao.2019.Investigation on ethics principles that should be followed by editors of medical scientific journals in paper review.[J] *Chinese Journal of Science and Technology Research*, 30(1):19-23.

Ma G.2009. Focus on childhood diseases and stay away from chronic diseases [M]. Beijing, China People's Publishing House

Nutrition, Committee on.2003. Prevention of Pediatric Overweight and Obesity. *Pediatrics* 112, 2: 424 – 30. <https://doi.org/10.1542/peds.112.2.424>.

Padilla-Moledo C, Ruiz JR, Castro-Pinero J.2016. Parental educational level and psychological positive health and health complaints in Spanish children and adolescents[J]. *Child Care Health Dev.* 42(4): 534-543.

Petersen S, Moodie M, Mavoa H, et al.2014. Relationship between overweight and health-related quality of life in secondary school children in Fiji: results from a cross-sectional population-based study[J]. *Int J Obes (Lond).* 38(4): 539-546.

Poeta LS, Duarte MF, Giuliano IC, et al.2003.Interdisciplinary intervention in obese children and impact on health on health and quality of life[J]. *J Pediatric*, 89(5): 499-504.

Prevention of Childhood Obesity, Causes of Childhood Obesity, etc. Access on 14.5.2021.

Rabbitt, Aifric & Coyne, Imelda. 2012. Childhood obesity: Nurses' role in addressing the epidemic. *British journal of nursing* (Mark Allen Publishing). 21. 731-5. [10.12968/bjon.2012.21.12.731](https://doi.org/10.12968/bjon.2012.21.12.731).

Retrieved from:<https://www.webmd.com/children/guide/obesity-children>.

Sarah E. Barlow.Expert Committee.2007.Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report. 120 (Supplement 4) 164-192; <https://doi.org/10.1542/peds.2007-2329C>.

Se Williams, JI Greene.2018. Childhood Overweight and Obesity: Affecting Factors, Education and Intervention. *Journal of Childhood Obesity* 3,2<https://doi.org/10.21767/2572-5394.100049>.

Sorof JM, Poffenbarger T & Franco K. 2002. Isolated systolic hypertension, obesity and hyperkinetic hemodynamic states in children[J]. *Pediatrics*. 140(6):660-666.

Vos RC, Huisman SD, Houdijk EC, et al. 2012. The effect of family based multidisciplinary cognitive behavioral treatment on health-related quality of life in childhood obesity[J]. *Qual Life Res*, 21(21): 1587-1594.

Wang Q. 2010. Meaning, steps and common problems of writing a literature review [J]. *Degree and Graduate Education*. (11) DOI:10.16750/j.adge.2010.11.014

Wang Q. 2010. Meaning, steps and common problems of writing a literature review [J]. *Degree and Graduate Education*. (11) DOI:10.16750/j.adge.2010.11.014

WHO. 2014. Common problems with childhood obesity. access on 21.5.2021. Retrieved from: <https://www.who.int/end-childhood-obesity/faq/en/>

WHO. 2020. Obesity and Overweight access on 21.5.2021. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.

ZELLER MH, ROHRIG HR, MODI AC, et al. 2006. Health-related quality of life and depressive symptoms in adolescents with extreme obesity presenting for bariatric surgery. *Pediatrics*, 117(4):1155-1161.

Zhangbing. 2014. Problems and countermeasures of the methods and standards of academic plagiarism recognition in China. [J]-*Economic and Management Science. Technology and Economic Market. Social Science I Series - Civil and Commercial Law*. (07)

Chen, Y.X et al (陈玉霞) 2010. 超重肥胖对儿童青少年生活质量的影响 [J]. *中国学校卫生*. 31(05): 522-523+525.

Cheng, J.G (程家国) 2020. 肥胖儿童健康管理研究进展. *中国公共卫生管理*. 36(05). 655-658 DOI:10.19568/j.cnki.23-1318.2020.05.014

Guo, M.R. (郭沫若) 1996. 十大批评书 [M]. 北京. 东方出版社, 1996:2

Hang, H.T. (黄慧桃) 2008. 儿童肥胖与成人慢性疾病关系的研究进展 [J]. *齐齐哈尔医学院学报*. 29 (19) : 2359-2360.

Hong, X. et al. 2008. (洪忻), 等. 南京市中学生超重、肥胖与抑郁症状调查 [J]. *中国心理卫生杂志*, 22(10) : 744-748.

Lin,W.J et al(林文静).2018.基于学校的儿童肥胖干预研究进展[J].中国学校卫生,39(11):1748-1751.

Luo,L.H et al(罗丽辉).2015.基于气质类型的心理护理干预对单纯性肥胖症儿童体重的影响[J].现代医院,15(06):97-99.

Shen,H.Q(沈惠泉).2018.12周课外体育活动对肥胖学龄儿童身体成分的影响.当代体育科技.8(30),184-185+194.DOI:10.16655/j.cnki.2095-2813.2018.30.184

Sheng,Q.M. et al(盛秋明).2009.超重肥胖儿童青少年代谢综合征流行现状 调查口临床儿科杂志[J], 27(4): 359-362.

Wu,S.X(鄂盛鑫)2018.儿童青少年肥胖如何有效干预?人民教育,社会科学II辑;社会科学I辑(Z2)105-107

Zhang,Q(张倩).2021.中国学龄儿童营养健康状况及改善措施建议,中国学校卫生.42(03).DOI:10.16835/j.cnki.1000-9817.2021.03.001

Zhao,C.J(赵翠娟)2012.基于家庭干预研究对儿童肥胖效果分析.中国社区医师(医学专业). 14(12).406-407

Appendices

Appendix 1. Related literature summary

No.	Author(s), Year, Country	Title	Aim(s) and Purpose	Data collection and Analysis	Key results
1.	Zhang,Qian 2021 , China	Nutritional health status of school-age children in China and recommendation s for improvement measures	The government's health and nutrition policy and the recommendations of international organizations promote healthy child development in terms of improving the nutrition of poor rural children and preventing and controlling childhood obesity	Research into government and international institutional health policy, nutrition education and guidance on diet, government monitoring and evaluation, and research into parental responsibility for improving children's health.	Strengthen parental responsibility to improve children's health by strengthening regulations, promoting nutrition education and guiding diets, while conducting government monitoring and

					evaluation
2	Cheng Jaguo, 2020, China	Advances in research on health management of obese children	aim to explore feasible approaches to improving the physical and mental health management of obese children,purpose to provide a reference for promoting the application of health management in childhood obesity.	Literature search in Zhiwang, Wanfang, Wipu and Web of Science databases	A large number of clinical studies and epidemiological surveys have shown that proper diet, moderate exercise, psychological health and personality health management can help to reduce the incidence of childhood obesity and its

					complications with some success
3	Wu Shengxin, 2018, China	How can we effectively intervene in childhood and adolescent obesity?	Research into effective health interventions for overweight children	Conduct health interventions on samples and observe changes in children's health indicators	Interventions for overweight children mainly include dietary exercise, health education, and mental health, in the way of family and school cooperation
4	Gerson Luis de Moraes Ferraria, Carlos Piresd, Dirceu Soléc, Victor	Factors associated with objectively measured total sedentary time and screen time	Factors associated with sedentary behaviour in children aged 9-11 years	Monitor the total sedentary time of 328 children, collect self-reports of screen time use, and collect questionnaires from home	Healthy eating patterns, modes of transport, physical activity policies and impact on sedentary time

	Matsudoa, Peter T. Katzmarzyke, Mauro Fisbergb , 2019,France	in children aged 9 – 11 years		and school environments.	
5	Shen Huizhuan, 2018, China	Effect of 12 weeks of extracurricular physical activity on body composition in obese school-age children.	To investigate the effects of 12 weeks of extracurricular physical activity on body composition in obese school-aged children.	Thirty-two obese children (body fat percentage >30%) were subjected to 12 weeks of moderate-intensity (60% to 80% HRmax) extracurricular physical activity for one hour every four weeks to compare changes in body composition in obese children before and after the experiment.	Twelve weeks of extracurricular physical activity in schools can significantly improve the body composition of obese children and have a positive impact on the control and prevention of obesity in school-aged children.

6	Heather Kitzman-Ulrich; Dawn K. Wilson; Sara M. George; Hannah Lawman; Michelle Segal; Amanda Fairchild, 2010, USA	The integration of a family systems approach for understanding youth obesity, physical activity, and dietary programs	The aim was to examine the impact of family variables used to assess weight loss, physical activity and dietary approaches in adolescents, based on a family systems theory framework.	A review of studies manipulating family systems was conducted and the impact effects of interventions were calculated.	Twenty-one weight loss interventions were identified in which family-based treatment programmers, including authoritative parenting, parenting skills or child management and training in family functioning, had a positive impact on adolescent weight loss. Family system-targeted programmers to improve physical activity and eating behaviors also showed improvements in
---	--	---	--	--	---

					adolescent health behaviors
7	RC Vos, JM Wit, H Pijl, CC Kruyff, EC Houdijk, 2011, Netherlands	The effect of family based multidisciplinary cognitive behavioral treatment on health-related quality of life in childhood obesity	The aim of this study is to evaluate the effectiveness of a family-based cognitive-behavioral multidisciplinary lifestyle treatment. The purpose of the intervention was to establish long-term weight loss and stability, reduce obesity-related health consequences and improve self-image through lifestyle changes and learning cognitive-behavioral	A randomized clinical trial, 40 obese children aged 8-17 years (8-17 years) were divided by randomization into an intervention and control group, the intervention being 7 and 5 individual group sessions for the children and their parents, and one joint 2-hour group session. The main topics were nutrition	Parental involvement and support is necessary for long-term successful treatment of obese children and families whose mindset must be modified in terms of physical activity levels and diet structure. For children with low self-esteem and low self-

			techniques.	education, self-control skills, social skills, physical activity and improving self-esteem. The control group was given advice on physical activity and nutrition.	control, psycho-education and social skills transfer are also important
8	Luo Lihui, Pan Jihong, Yan Feifei, Wang Xin, Wu Chunyan2015 , China	The impact of a temperament-based psychological care intervention on the weight of children with simple obesity	To explore the effects of a temperament type-based psychological care intervention on the weight of children with simple obesity.	Fifty children diagnosed with simple obesity were randomly divided into two groups: the control group and the experimental group. 25 children in each group were randomly divided into the control group and the experimental group. In addition to the conventional care, psychological care	Different nursing interventions can improve the obesity status of children to varying degrees, and complemented by effective psychological care can improve the psychological status of obese children and have a more significant effect

				interventions based on the children's temperament and psycho-behavioral characteristics were used in the experimental group.	on weight and obesity reduction.
9	Lin Wenjing, 2018, China	Advances in school-based childhood obesity intervention research	To provide a reference for schools to carry out interventions for overweight and obesity in children.	Review of national and international studies, analysis and evaluation of the characteristics and effects of different interventions	There are many advantages to school-based interventions for overweight and obesity in children, and studies have been carried out both nationally and internationally, including exercise-focused, diet-focused, lifestyle-focused and multifaceted

					interventions
10	Lisiane S. Poeta and Maria de Fátima da S. Duarte and Isabela de C.B. Giuliano and Jorge Mota ,Portugal,2003	Interdisciplinary intervention in obese children and impact on health on health and quality of life	Verification of the effectiveness of intervention programmed including physical activity and recreational activities, nutrition and health-related quality of life of nutrition-labeled obese children.	Clinical controlled trial of 44 children aged 8-11 years, over 97% of age and gender matched BIM as WHO recommended, randomized to 22 each in the intervention control group. BMI was measured before and after the three weekly interventions and self-reported via the Paediatrics Quality of Life Questionnaire.	Intervention programmed of exercise, recreational activities and nutritional guidance are effective in guiding the health of obese children
11	Zhao Cuijuan,Yu Qiufeng,Lin	Analysis of the effects of a family-based	Exploring a comprehensive intervention approach based on family health management to	Children aged 3 to 5 years were divided into intervention and control	A comprehensive intervention based on family health

	Bing, Yaoyao, 2012,China	intervention study on childhood obesity	reduce the prevalence of simple obesity in preschool children	groups from two randomized kindergartens in Qingpu District, Shanghai. All children and parents in the intervention group were provided with individualised health education and exercise and diet guidance at home. The prevalence of obesity in the two groups was compared after one year.	management helped to help to control the prevalence of obesity in preschool children
--	-----------------------------	---	--	---	---