



## **MULTIDIMENSIONAL IMPACT OF OVERWEIGHT ON QUALITY OF LIFE OF CHILDREN AND ADOLESCENTS: A SCOPING REVIEW**

**Iin Utami Yasrianti Lamukara\*, Nur Setiawati Dewi, Rita Hadi Widyastuti**

Departemen Master of Nursing, Faculty of Medicine, Universitas Diponegoro, Jl. Prof. Soedarto, Tembalang, Kec. Tembalang, Kota Semarang, Jawa Tengah 50275

\*[iinutami23@gmail.com](mailto:iinutami23@gmail.com)

### **ABSTRACT**

Overweight in adolescents is a global health issue that has shown a significant increase in recent decades. This condition has a multidimensional impact, particularly on the physical, psychological, social aspects, and overall quality of life of adolescents. Children and adolescents who are overweight often experience body shaming, social stigma, decreased self-esteem, and social isolation, all of which can contribute to a lower quality of life. Although numerous studies have explored the relationship between being overweight and quality of life, most have focused only on physical or psychological dimensions. Many of the existing studies examine just one or two aspects of quality of life and lack a comprehensive consideration of cultural factors, developmental age, and social interactions. Objective to comprehensively review the scientific literature that examines the impact of overweight on the quality of life among adolescents. This study employed a scoping review approach based on the PRISMA-ScR guidelines. Literature searches were conducted through three databases: Scopus, PubMed, and ScienceDirect, using the keywords "Overweight," "Adolescents," and "Quality of Life." The selected articles were published within the last three years (2023–2025) and met the inclusion criteria, including being written in English, open access, and relevant to the topic. A total of 15 articles were selected from an initial search result of 18,441 records. The article selection involved a multi-stage screening process, including title and abstract screening, full-text review, and assessment using inclusion and exclusion criteria. Each article was then analyzed thematically to identify patterns related to the impact of overweight on adolescents' quality of life. These studies employed qualitative and quantitative approaches, including multivariate analysis, logistic models, as well as mediation and moderation analyses. Most of the articles reported that overweight has a negative impact on adolescents' quality of life, particularly in the physical, psychological, social, and academic functioning domains. Overweight in adolescents has a significant impact on various aspects of quality of life. These findings highlight the importance of developing multidimensional interventions that not only address physical aspects but also take into account psychosocial factors and the adolescent's environment.

**Keywords:** adolescents; overweight; quality of life; scoping review

### **How to cite (in APA style)**

Lamukara, I. U. Y., Dewi, N. S., & Widyastuti, R. H. (2025). Multidimensional Impact of Overweight on Quality of Life of Children and Adolescents: A Scoping Review. *Indonesian Journal of Global Health Research*, 7(5), 111-120. <https://doi.org/10.37287/ijghr.v7i5.6622>.

## **INTRODUCTION**

Overweight in adolescents is an increasingly concerning public health issue at the global level. According to data from the World Health Organization (WHO, 2024b), more than 340 million children and adolescents aged 5–19 years are overweight or obese worldwide. In Indonesia, this trend has also shown a consistent increase, as reported by Riskesdas and the annual reports of the Ministry of Health. Overweight among adolescents affects not only physical aspects, such as increased risk of type 2 diabetes, hypertension, and metabolic disorders, but also has significant consequences on psychosocial well-being. Adolescents with overweight often face social stigma, bullying (body shaming), low self-esteem, and even depression, all of which contribute to a decreased quality of life. (Mustafa et al., 2022)

Quality of life (QoL) is defined as an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns (WHO, 2024a). In adolescents, QoL encompasses physical, psychological, social, and environmental domains (Kissya et al., 2024) Overweight

can directly or indirectly affect these domains.

Adolescents with overweight are at risk of experiencing a decline in quality of life across multiple domains. Physically, excess weight can lead to limitations in daily activities, joint pain, fatigue, and decreased stamina, which directly reduce physical functioning (Kissya et al., 2024). In the psychological domain, adolescents with overweight often experience low self-esteem, anxiety, depression, and body image disturbances, which can contribute to long-term emotional and psychological difficulties (Sartika et al., 2021); (Azizah et al., 2024). Additionally, discrimination, social rejection, and bullying related to excess weight can worsen social relationships and increase isolation, negatively impacting the social domain of quality of life (Sari, 2020). The environment also plays a significant role in shaping the quality of life for adolescents with overweight. Access to recreational spaces, supportive school environments, and support from family and peers are protective factors that can enhance positive perceptions of quality of life. However, in many communities, social stigma toward adolescents with overweight exacerbates their condition by restricting opportunities for participation and social acceptance (Khoirunisa, 2023).

Overweight can affect adolescents' quality of life both directly through physical health problems and indirectly through the accompanying social and psychological pressures. Therefore, it is important to understand the impact of overweight in a holistic and multidimensional manner so that interventions can be designed to address the specific needs of adolescents across physical, psychological, social, and environmental contexts. Several studies have explored the relationship between overweight and quality of life in adolescents; however, the findings remain scattered and do not provide a comprehensive picture, especially across different times and locations. To date, there is no comprehensive literature review that maps the latest findings from the past three years (2023–2025) on the impact of overweight on adolescents' quality of life globally. To address this gap, this study conducts a scoping review of recent literature to identify, summarize, and map scientific evidence regarding the impact of overweight on the quality of life in children and adolescents. Thus, the results of this review are expected to serve as a foundation for the formulation of more effective and holistic health policies and interventions for this vulnerable adolescent population.

## **METHOD**

This review employed a scoping review methodology aimed at mapping and providing a comprehensive overview of the available literature on the studied topic. The scoping review was conducted through a series of stages, including: formulating the research question, identifying relevant studies based on the question, extracting data from the selected studies, organizing and presenting the data in tabular form, conducting content analysis and synthesis, and compiling the final review report. This review was guided by a primary research question: “What is the impact of overweight on the quality of life in adolescents?”.

The literature search was conducted through three scientific databases: Scopus, PubMed, and ScienceDirect. The search process used the main keywords: “Overweight,” “Adolescents,” and “Quality of Life.” These keywords were further expanded using equivalent terms from Medical Subject Headings (MeSH), such as “teenager,” “youth,” “obesity,” and “health-related quality of life (HRQoL).” Keyword combinations were performed using the Boolean operators AND and OR. The included articles were full-text publications written in English, published between 2023 and 2025, and available as open access. The restriction to the last three years was intended to ensure that this review reflects the most current literature. The studies included employed quantitative and qualitative approaches, as well as advanced statistical analyses such as multivariate logistic models, moderation analysis, and mediation analysis. The initial search across the three databases yielded 18,438 articles. After the

removal of duplicates and preliminary screening based on titles and abstracts, the number of articles was reduced to 1,817. These articles were then thoroughly reviewed and evaluated for topic relevance and clarity of findings, resulting in a final selection of 15 articles. The article selection process was guided by the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) framework, as illustrated in the PRISMA diagram (see Figure 1). The search strategy was developed with the assistance of a librarian to ensure the comprehensiveness and validity of the literature search.

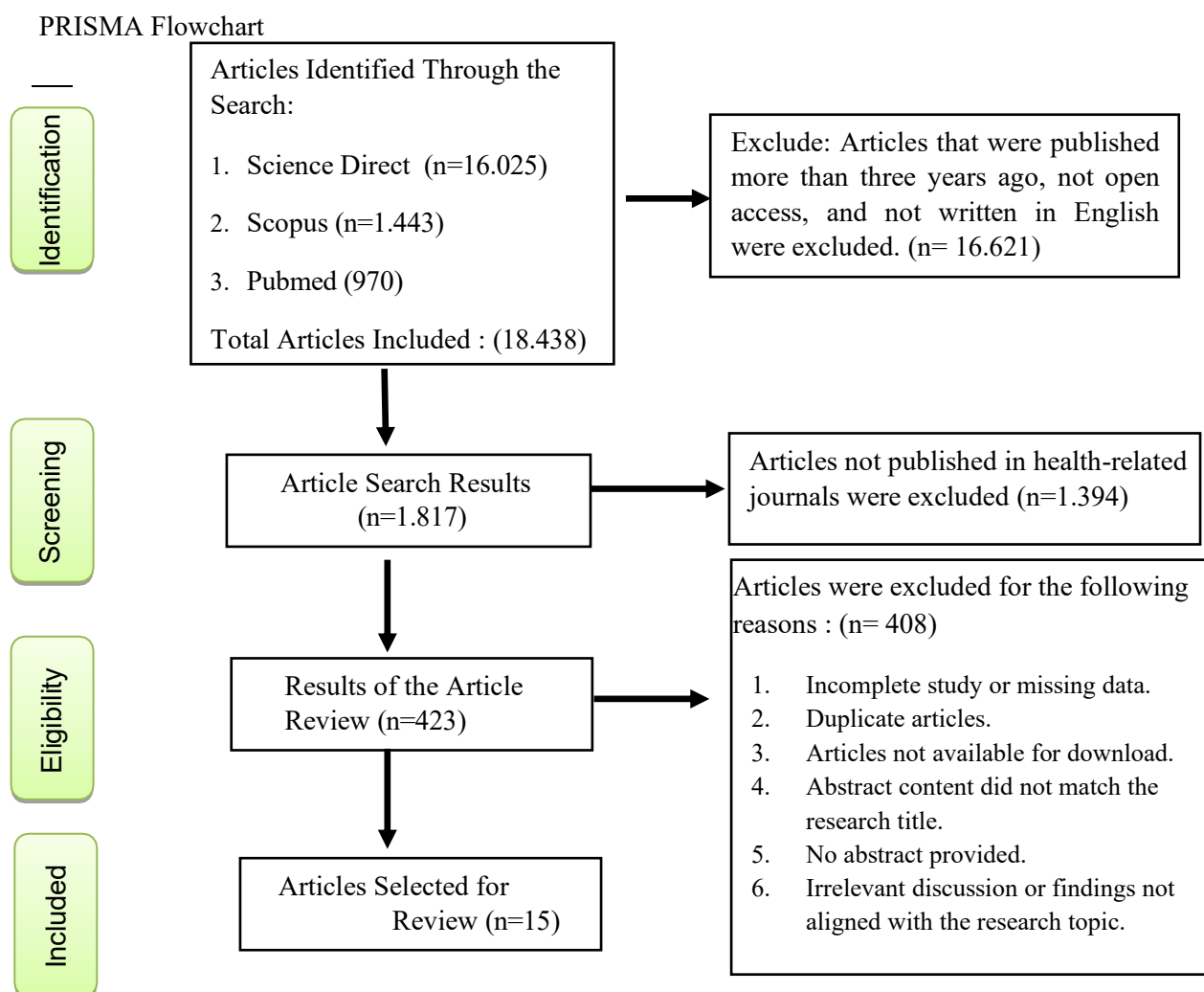


Figure 1. PRISMA Flowchart of Study Selection

## RESULT

This article search identifies as many as (18.438) articles that are subsequently extracted with inclusion criteria so that (15) articles are relevant and usable.

Table 1.  
Article Extraction

No	Article Title/Author	Year	Country	Objectives & Methods	Main Findings
1	A Close Association between Body Weight, Health-Related Quality of Life, and Risk Behaviors in a	2023	Italy	Objective: To determine whether weight status is associated with health-related quality of life (HRQoL) and risk behaviors. Methods: A cross-sectional study involving 1,826 adolescents using the	HRQoL was lower among adolescents with both underweight and overweight conditions.

No	Article Title/Author	Year	Country	Objectives & Methods	Main Findings
	Sample of Italian High School Students (Lazzeri et al., 2023)			KIDSCREEN-52, Physical Activity Questionnaire for Children (PAQ-C), and Bergen Social Media Addiction Scale (BSMAS).	
2	Alterations in Dietary Behavior, Appetite Regulation, and HRQoL in Youth with Obesity in Germany during the COVID-19 Pandemic (Struckmeyer et al., 2023)	2023	Germany	Objective: To evaluate the impact of the pandemic on eating patterns and health-related quality of life (HRQoL) among adolescents with obesity. Methods: A cross-sectional study involving 264 adolescents with obesity using the Korean Food Frequency Questionnaire for Lifestyle (K-FFL) and the Korean Form of the Eating Values Questionnaire (K-FEV).	Negative effects of the pandemic were observed on dietary intake, eating behavior, and health-related quality of life (HRQoL) in adolescents with obesity.
3	Association between QoL and Emotional Overeating in Danish Children (Aagaard et al., 2023)	2023	Denmark	Objective: To assess the relationship between quality of life (QoL) and emotional overeating habits. Methods: A cross-sectional study involving 184 children using the Pediatric Quality of Life Inventory (PedQoL) and the Children's Eating Behaviour Questionnaire (CEBQ).	Children who engaged in overeating tended to have lower HRQoL and higher levels of emotional eating.
4	Health-Related Quality of Life in Children with Overweight and Obesity (Buratta et al., 2023)	2023	Italy	Objective: To focus on the school domain and HRQoL among overweight and obese children. Methods: An exploratory study involving 102 adolescents using self-reports and the Kid-KINDL questionnaire.	There is an association between body weight and HRQoL in the domains of school functioning and psychological well-being.
5	Impact of Underweight, Overweight, and Obesity on HRQoL in Children with Tetralogy of Fallot (Hidestrand et al., 2024)	2023	Sweden	This study evaluated the Body Mass Index (BMI) and Health-Related Quality of Life (HRQoL) in patients with Tetralogy of Fallot (TOF). The method involved a survey of 85 adolescents using the PedsQL 4.0 and DISABKIDS questionnaires.	Adolescents with a high Body Mass Index (BMI) were found to experience more physical and social impairments compared to those with a normal BMI.
6	Perceived Quality of Life Is Related to a Healthy Lifestyle and Related Outcomes in Spanish Children and Adolescents (Marina Ródenas-Munar, Margalida Monserrat-Mesquida et al., 2023)	2023	Spain	This study aimed to assess the relationship between perceived quality of life, healthy lifestyle, and health outcomes. Method: A cross-sectional design was employed, involving 3,534 children and adolescents aged 8–16 years. Data were collected using the EQ-5D-5L, KIDMED, and IFIS questionnaires.	Healthy eating habits, normal body weight, adequate sleep duration, physical fitness, and limited screen time play a significant role in the perception of quality of life.
7	Clustering of Lifestyle and	2023	Australia	Identification of lifestyle and health behavior clusters and their	The study identified distinct adolescent

No	Article Title/Author	Year	Country	Objectives & Methods	Main Findings
	Health Behaviours in Australian Adolescents and Associations with Obesity, Self-Rated Health and QoL (Ahmad et al., 2023)			association with adolescent health outcomes. Method: Cross-sectional design with 3,127 adolescents aged 14–15 years, using LSAC, PedsQL, and SRH data.	lifestyle patterns and highlighted the characteristics of vulnerable groups at risk for obesity, including their health status and quality of life.
8	Mental Health in Children and Adolescents with Overweight or Obesity (Förster et al., 2023)	2023	Germany	Investigation of the association between BMI, HRQoL, and mental health problems in children and adolescents. Method: Linear regression analysis involving 2,350 participants aged 4–18 years, using the KIDSCREEN-27 and Giessen Complaint Questionnaire.	High BMI is associated with psychological complaints, highlighting the importance of mental health interventions for children and adolescents with obesity.
9	Health-related quality of life in children under treatment for overweight, obesity or severe obesity: a cross-sectional study in the Netherlands (van der Voorn et al., 2023)	2023	Netherlands	Objective: To explore both generic and weight-specific health-related quality of life (HRQoL) in relation to weight status among children aged 5–19 years. Method: A cross-sectional study using multiple linear regression analysis was conducted with 803 children with obesity.	Children with overweight, obesity, or severe obesity reported lower health-related quality of life (HRQoL), particularly in relation to physical challenges.
10	Health-Related Quality of Life in Children and Adolescents with Overweight, Obesity, and Severe Obesity: A Cross-Sectional Study (Van De Pas et al., 2023)	2023	Netherlands	This study aimed to evaluate the health-related quality of life (HRQoL) of children and adolescents seeking treatment. A cross-sectional design was employed, involving 419 participants aged 8 to 17 years, with data analyzed using multivariate linear regression.	The lowest health-related quality of life (HRQoL) was observed in the severely obese group. Tailored lifestyle interventions are needed to address the specific needs of this vulnerable population.
11	Overweight and obesity and associated factors among public and private secondary school adolescent students in Harar city, Eastern Ethiopia (Mandefro et al., 2024)	2024	Ethiopia	Objective: To assess overweight and obesity and their associated factors. Method: A cross-sectional study involving 664 students.	The prevalence of overweight and obesity is higher among students in private schools, indicating a need to enhance nutrition education programs in public schools.
12	Associations of Body Mass Index with Self-Rated Health and Weight Perceptions among Rural Appalachian Adolescent Students	2024	United States of America	Objective: To describe weight status and health perception. Method: A cross-sectional study involving 814 adolescents from rural Appalachia.	Overweight and obesity were prevalent, with a rate of 54.1%. Adolescents with elevated BMI reported more frequent negative health perceptions compared to their peers.

No	Article Title/Author	Year	Country	Objectives & Methods	Main Findings
13	(Kirkpatrick et al., 2024) Changes in health-related quality of life and sleep habits after a 6-month non-randomized cluster-controlled trial among children with overweight or obesity (Kleppang et al., 2024)	2024	Norway	Objective: To evaluate the impact of a family-based intervention on health-related quality of life (HRQoL) and sleep habits. Method: A non-randomised cluster trial involving 166 children.	Family-based interventions have been shown to effectively enhance both health-related quality of life (HRQoL) and sleep quality in children.
14	Factors influencing health-related quality of life of children with overweight and obesity in Kuala Lumpur, Malaysia (Abdullah et al., 2024)	2024	Malaysia	Objective: To compare health-related quality of life (HRQoL) and identify its determinants. Method: A cross-sectional study involving 384 primary and secondary school children.	Obesity negatively impacts health-related quality of life (HRQoL). Significant factors include obesity severity, family structure, dieting history, and self-esteem.
15	Exploration of motivation to be physically active among overweight adolescents in Switzerland (Sejdija & Maggio, 2025)	2025	Switzerland	Objective: To investigate the role of motivation on physical activity and its impact on quality of life (QoL). Method: An observational study involving 72 adolescents aged 12–18 years.	Intrinsic motivation is important for enhancing physical activity and quality of life. Larger studies are needed to confirm these findings.

Hasil pemetaan literatur menunjukkan bahwa kelebihan berat badan (overweight) pada remaja memberikan dampak yang signifikan terhadap kualitas hidup remaja yang mengalami overweight, ditemukan enam domain utama, yaitu: fungsi fisik, fungsi sosial, fungsi emosional dan kesehatan mental, fungsi akademik, persepsi diri dan citra tubuh, serta kesejahteraan umum.

## DISCUSSION

The results of this scoping review confirm that overweight in adolescents has a multidimensional impact on their quality of life. This impact is distributed across six main domains: physical, social, emotional/mental, academic functioning, self-perception, and general well-being. These findings reinforce the evidence that overweight is not only a physiological issue but also a complex social and psychological problem that requires comprehensive and cross-sectoral approaches to address.

Studies included in this review indicate that an increase in BMI is negatively correlated with HRQoL scores, particularly in the physical and psychosocial domains. A longitudinal study by (Sawyer et al., 2020) also found that children and adolescents with obesity consistently experience lower quality of life compared to their normal-weight peers, with this effect persisting even after controlling for socioeconomic status and other health conditions. In terms of physical functioning, common findings include activity limitations and complaints such as fatigue, joint pain, and low physical fitness. These findings are further supported by external research from (Reinehr, 2019), which reports that childhood and adolescent obesity

leads to reduced aerobic and motor capacity, contributing to avoidance of physical activity and increased sedentary behavior.

In the social domain, many overweight adolescents experience discrimination, bullying, and social exclusion. Social stigma related to body weight, referred to as weight stigma, has been shown to worsen both social and psychological well-being. A study by (Puhl & Suh, 2021) explains that weight-based teasing and discrimination in school and social settings are major risk factors for decreased self-esteem, increased depression, and social withdrawal among adolescents. Regarding academic functioning, reduced school performance may be attributed to two key factors: physical limitations and social pressure. In addition, obesity-related sleep disturbances, such as sleep apnea, contribute to decreased concentration and academic engagement. Research by (Neal, 2020) highlights that sleep disorders among children with obesity impair working memory, attention, and learning outcomes.

In the domain of self-perception and body image, many overweight adolescents experience distorted weight perception and body dissatisfaction. This finding is particularly significant, as body dissatisfaction can trigger unhealthy compensatory behaviors, such as extreme dieting or the development of eating disorders. According to (Neumark-Sztainer et al., 2022), body dissatisfaction is a strong predictor of reduced quality of life—stronger even than BMI itself. The overall impact on general well-being is further exacerbated by external factors, such as the COVID-19 pandemic. As highlighted by (Struckmeyer et al., 2023), sedentary lifestyles, social isolation, and increased stress during the pandemic have intensified the psychosocial burden experienced by overweight adolescents. This is also supported by a report from (UNICEF, 2021), which emphasizes that adolescents with weight-related issues represent one of the most mentally vulnerable groups during the pandemic period.

## CONCLUSION

Findings from various international studies consistently demonstrate that overweight in adolescents significantly affects nearly all domains of health-related quality of life (HRQoL), including physical, social, emotional, academic functioning, self-perception, and overall well-being. Physical functioning is compromised by activity limitations, fatigue, and low fitness levels, while social functioning is often disrupted by exclusion and bullying. Emotional and mental health aspects also reveal an increased risk of psychological issues such as depression and emotional eating disorders. In the academic context, overweight negatively impacts school engagement and well-being. Furthermore, poor self-perception and negative body image are associated with lower self-esteem and overall quality of life. These studies underscore the need for holistic interventions targeting overweight adolescents—interventions that go beyond physical health to also address psychosocial and emotional dimensions, incorporating intrinsic motivation and supportive environmental approaches.

## REFERENCES

- Aagaard, I., Jakobsen, D. D., & Bruun, J. M. (2023). Association between quality of life and emotional overeating — a cross-sectional study in Danish children attending a multicomponent lifestyle camp. *European Journal of Pediatrics*, 182(12), 5493–5499. <https://doi.org/10.1007/s00431-023-05206-7>
- Abdullah, S. R., Victor Chee Wai, H., Ishak, Z., Hamzah, S. S., Nur Zati Iwani, A. K., Wan Mohd Zin, R. M., & Yahya, A. (2024). Factors influencing health-related quality of life of children with overweight and obesity in Kuala Lumpur, Malaysia. *Health Psychology and Behavioral Medicine*, 12(1), 1–17. <https://doi.org/10.1080/21642850.2024.2413980>
- Ahmad, K., Keramat, S. A., Ormsby, G. M., Kabir, E., & Khanam, R. (2023). Clustering of lifestyle and health behaviours in Australian adolescents and associations with obesity,

- self-rated health and quality of life. *BMC Public Health*, 23(1), 1–19. <https://doi.org/10.1186/s12889-023-15724-6>
- Azizah, D. D., Azzahra, F., Deliani, N., & Batubara, J. (2024). *Risalah : Jurnal Pendidikan dan Studi Islam Dampak Perilaku Body Shaming Terhadap Psikologis Peserta Didik Tingkat Madrasah Aliyah*. 10(2), 598–610.
- Buratta, L., Delvecchio, E., Capurso, M., & Mazzeschi, C. (2023). Health-Related Quality of Life in Children with Overweight and Obesity: An Explorative Study Focused on School Functioning and Well-being. *Continuity in Education*, 4(1), 96–104. <https://doi.org/10.5334/cie.58>
- Förster, L. J., Vogel, M., Stein, R., Hilbert, A., Breinker, J. L., Böttcher, M., Kiess, W., & Poulain, T. (2023). Mental health in children and adolescents with overweight or obesity. *BMC Public Health*, 23(1), 1–11. <https://doi.org/10.1186/s12889-023-15032-z>
- Hidestrand, P., Svensson, B., Simpson, P., Liuba, P., & Weismann, C. G. (2024). Impact of Underweight, Overweight, and Obesity on Health-Related Quality of Life in Children with Tetralogy of Fallot Variants. *Pediatric Cardiology*, 46(2), 355–361. <https://doi.org/10.1007/s00246-024-03416-w>
- Khoirunisa, N. (2023). *Pengaruh Body Shaming Dan Intensitas Interaksi*. 0–110.
- Kirkpatrick, B. M., Porter, K. J., Reid, A. L., Brock, D., Markwalter, T. H., & Zoellner, J. M. (2024). Associations of Body Mass Index with Self-Rated Health and Weight Perceptions Among Rural Appalachian Adolescent Students. *Journal of School Health*, 94(4), 346–356. <https://doi.org/10.1111/josh.13383>
- Kissy, T. A., Dewi, N. S., & Andriany, M. (2024). Faktor penyebab body shaming pada remaja perempuan: scoping review. *Jurnal Keperawatan*, 16(2), 511–518.
- Kleppang, A. L., Abildsnes, E., Haraldstad, K., & Stea, T. H. (2024). Changes in health-related quality of life and sleep habits after a 6-month non-randomised cluster-controlled trial among children with overweight or obesity. *European Child and Adolescent Psychiatry*, 33(9), 3179–3187. <https://doi.org/10.1007/s00787-024-02375-0>
- Lazzeri, M. F. L., Mastorci, F., Piaggi, P., Doveri, C., Marinaro, I., Trivellini, G., Casu, A., Devine, C., Ait-Ali, L., Vassalle, C., & Pingitore, A. (2023). A Close Association between Body Weight, Health-Related Quality of Life, and Risk Behaviors in a Sample of Italian High School Students. *Nutrients*, 15(24). <https://doi.org/10.3390/nu15245107>
- Mandefro, M., Shore, H., Hailu, S., Ayele, F., Tekola, A., Shawel, S., Kassa, O., Tamire, A., Masrie, A., Gezahegn, A., Gebru, T., Roba, K. T., & Gebremichael, B. (2024). Overweight and obesity and associated factors among public and private secondary school adolescent students in Harar city, Eastern Ethiopia: A comparative cross-sectional study. *Medicine (United States)*, 103(21), E38271. <https://doi.org/10.1097/MD.00000000000038271>
- Marina Ródenas-Munar, Margalida Monserrat-Mesquida, S. F. G., Julia Wärnberg, María Medrano, Marcela González-Gross, Narcís Gusi, S. A., Elena Marín-Cascales, Miguel A. González-Valeiro, Lluís Serra-Majem, S. P., Marta Segu, 19, Montse Fitó, Silvia Torres, Juan Carlos Benavente-Marín, I. L., Augusto G. Zapico, Jesús Sánchez-Gómez, Fabio Jiménez-Zazo, P. E. A., Marta Sevilla-Sánchez, Estefanía Herrera-Ramos, Helmut Schröder, Cristina Bouzas, & Tur, and J. A. (2023). Perceived Quality of Life Is Related to a Healthy Lifestyle and Related Outcomes in Spanish Children and Adolescents: The



Physical Activity, Sedentarism, and Obesity in Spanish Study. *Nutrients*.

- Mustafa, M. S. A., Mahat, I. R., Md Shah, M. A. M., Mohd. Ali, N. A., Mohideen, R. S., & Mahzan, S. (2022). The Awareness of the Impact of Body Shaming among Youth. *International Journal of Academic Research in Business and Social Sciences*, 12(4). <https://doi.org/10.6007/ijarbss/v12-i4/13197>
- Neal, J. E. (2020). Childhood Obesity and Sleep Disturbances. *NASN School Nurse (Print)*, 30(6), 322–324. <https://doi.org/10.1177/1942602X15608922>
- Neumark-Sztainer, D., Wall, M., Story, M., & Standish, A. R. (2022). Dieting and unhealthy weight control behaviors during adolescence: Associations with 10-year changes in body mass index. *Journal of Adolescent Health*, 50(1), 80–86. <https://doi.org/10.1016/j.jadohealth.2011.05.010>
- Puhl, R., & Suh, Y. (2021). Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. *Current Obesity Reports*, 4(2), 182–190. <https://doi.org/10.1007/s13679-015-0153-z>
- Reinehr, T. (2019). Long-term effects of adolescent obesity: Time to act. *Nature Reviews Endocrinology*, 14(3), 183–188. <https://doi.org/10.1038/nrendo.2017.147>
- Sari, R. P. (2020). Hubungan body shaming dengan interaksi sosial teman sebaya. In *Universitas Islam Negeri Syarif Hidayatullah* (Vol. 15, Issue 2).
- Sartika, N. A., Yustiana, Y. R., & Saripah, I. (2021). Kesejahteraan Psikologis Remaja Korban Body Shaming. *Psychocentrum Review*, 3(2), 206–217. <https://doi.org/10.26539/pcr.32721>
- Sawyer, M. G., Harchak, T., Wake, M., & Lynch, J. (2020). Four-year prospective study of BMI and mental health problems in young children. *Pediatrics*, 128(4), 677–684. <https://doi.org/10.1542/peds.2010-3132>
- Sejdija, S., & Maggio, A. B. R. (2025). Exploration of motivation to be physically active among overweight adolescents in Switzerland. *Clinical Child Psychology and Psychiatry*, 30(2), 491–501. <https://doi.org/10.1177/13591045251315507>
- Struckmeyer, N., Biester, T., Kordonouri, O., Weiner, C., Sadeghian, E., Guntermann, C., Kapitzke, K., Weiskorn, J., Galuschka, L., von Stuelpnagel, K., Meister, D., Lange, K., Danne, T., & Reschke, F. (2023). Alterations in Dietary Behavior, Appetite Regulation, and Health-Related Quality of Life in Youth with Obesity in Germany during the COVID-19 Pandemic. *Nutrients*, 15(13). <https://doi.org/10.3390/nu15132936>
- UNICEF. (2021). *The State of the World's Children 2021: On My Mind – Promoting, protecting and caring for children's mental health*. <https://www.unicef.org/reports/state-worlds-children-2021>
- Van De Pas, K. G. H., De Krom, M. A. P., Winkens, B., Van Dielen, F. M. H., & Vreugdenhil, A. C. E. (2023). Health-Related Quality of Life in Children and Adolescents with Overweight, Obesity, and Severe Obesity: A Cross-Sectional Study. *Obesity Facts*, 16(3), 282–292. <https://doi.org/10.1159/000529560>
- van der Voorn, B., Camfferman, R., Seidell, J. C., & Halberstadt, J. (2023). Health-related quality of life in children under treatment for overweight, obesity or severe obesity: a cross-sectional study in the Netherlands. *BMC Pediatrics*, 23(1), 1–10. <https://doi.org/10.1186/s12887-023-03973-8>

- WHO. (2024a). World Health Organization Quality of Life Assessment (WHOQOL): Development and general psychometric properties. *Social Science and Medicine*, 46(12), 1569–1585. [https://doi.org/10.1016/S0277-9536\(98\)00009-4](https://doi.org/10.1016/S0277-9536(98)00009-4)
- WHO. (2024b). *Obesity and overweight*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>