

Psychological Problems Among School Going Children; A Systematic Review

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Author's Contribution

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ABSTRACT

Background: Childhood psychological problems are indicative of significant life impairments in individuals. Adolescence is the most critical stage for the development of diverse psychological adaptations.

Objective: This research study systematically analyzes the psychological problems affecting school-going children. The aim of this study is to assess the consensus and variations in the spectrum of psychological problems among school-going children, as well as their associated factors, based on previously published literature.

Methodology: The research methodology employed in this study follows the PRISMA diagram. We conducted a search in EndNote Version X9's PubMed collection using specific keywords, such as "psychological issues" and "school-age children." Papers published before 2019 were excluded from the electronic PubMed collection.

Results: Out of a total of 1564 papers, we included 10 articles for systematic analysis. These articles were international research studies conducted in various countries, including China, Europe, Turkey, the Netherlands, Denmark, the USA, and Canada. The research studies utilized cross-sectional correlational research design, longitudinal research studies, and quantitative cross-sectional studies.

Conclusion: Qualitative analysis revealed a spectrum of psychological and physical problems in school-going children, including behavioral changes, ignorance, arrogance, irritation, social withdrawal, social isolation, lack of confidence, low self-esteem, anxiety, depression, stress, and post-traumatic stress disorder. These psychological issues are strongly associated with factors such as mobile phone addiction, social media addiction, parental psychological disorders, child sexual abuse, school bullying, and criticism. It is recommended to consider moderate to vigorous physical activities as non-pharmacological treatments for these psychological problems.

Keywords: Children, adolescents, psychological problems, school-going children.

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Background

"The childhood phase of a human being is a rapidly growing period.¹ The age after puberty, or the adolescent age, is a rapid transition phase.² During this phase of life, various physiological and psychological changes occur in individuals. Interpersonal, individual, societal, and environmental factors affect a person's physiological and psychological health.³ Children undergo diverse positive and negative psychological changes. These variations set the pattern for the next stages of life, establish deep

constructs related to social affairs and society, and form the basis of an individual's social behavior.⁴ The psychological health of a child is as essential as a balanced diet for their complete health.⁵ Physiological health encompasses a person's overall well-being, responsible for maintaining self-esteem, self-respect, and personal dignity.⁶ A person's mental health makes them more confident and socially well-connected with fellow human beings and their environment. A psychologically healthy person is more resistant to negative emotions, burnout, distress, anxiety, depression, and stress.⁷ Psychologically

resilient and healthy individuals possess leadership and sportsmanship qualities that contribute significantly to society.⁸

However, school-age children are prone to various psychological problems. These issues not only negatively affect a child's personal life but also contribute to increased crime in society.⁹ School-age adolescents face numerous psychological challenges. The literature links life-impairing psychological challenges in school-going children to behavioral issues, arrogance, social withdrawal, isolation, distress, anxiety, and depression.¹⁰ Children also experience post-traumatic stress disorders and suicidal ideation.¹¹⁻¹³

Furthermore, it is estimated that depression is the fourth most common leading cause of death among children aged 14 to 19. The global burden of mental health issues in children ranges from 10 to 20% of the total population.¹⁴ The prevalence of mild to moderate levels of depression and anxiety among high school students in China is 43.7% and 37.4%, respectively.¹⁵⁻¹⁷ The comorbid disease burden of anxiety and depression in children is 31.3%, according to Janise epidemiological studies.¹⁸

Similarly, psychological disorders in children are associated with various deeply rooted interpersonal, parental, social, and environmental causes. Social media addiction and excessive screen time are reported as major causes of depression among children.¹⁹ Likewise, it is evident from existing literature that parental psychological disorders increase suicidal thoughts and psychological problems among individuals.²⁰ Social bullying and criticism are the primary reasons for depression, anxiety, and social rejection and isolation in children.^{21, 22} The current systematic review analysis examines the psychological disorders of school-going children. The outcomes of this analysis are significant for systematically summarizing psychological disorders and their major contributory factors, quantitatively analyzed in the literature. These outcomes are crucial for policy-making to protect the mental health of children and address juvenile crimes.

Methodology

The Preferred Reporting Items Analysis procedure (PRISMA) has undergone a systematic investigation. According to PRISMA methodology, research articles addressing psychological issues among school-going children are presented as a flow diagram.²³

Strategy: Using EndNote Version X9, we conducted a computerized search of articles from PubMed on November 8th, 2022. These articles were located using specific keywords such as "psychological problems" and "psychological issues in school-aged children." Additional papers were retrieved from Google Scholar and added to the PubMed library. The articles were filtered based on publication date, including only those from 2019 to 2022.

Inclusion and Exclusion Criteria: Publications were included in the systematic review after meeting specific criteria. We employed keywords like "psychological concerns among school-age children" to identify relevant papers. Studies published before 2019 were excluded from the review, as a review article on this subject was published in 2019. Consequently, the dataset for the current meta-analysis comprised quantitative research articles published in international journals between 2019 and 2022. The papers were further screened using the PSIO inclusion approach, which considers participants, study design, intervention, and outcomes. The participants in the included research projects were children under the age of 12 who were enrolled in school. The included studies used various research designs, including the Multi-Stage Stratified Cluster Random Sampling Method, Quantitative Cross-Sectional Study, Quantitative Research Design, Longitudinal Quantitative Analysis, and Correlational Research Design. No studies published prior to 2019 were considered, and case reports were excluded from the study.

Table I: Inclusion and Exclusion Criteria (PSIO Method).

Criteria	Inclusion	Exclusion
Participants	School going children below 18 years	Students above age 18, College going students and Other adults.
Research Design	Multi-Stage Stratified Cluster Random Sampling Method, Quantitative Cross-Sectional Study, Quantitative Research Design, Longitudinal Quantitative Analysis and Correlational Research Design	Case Report, Cohort Studies, Qualitative Research Design
Intervention	Physical Activities	Pharmaceutical Intervention
Outcomes	Positive Outcomes	Negative Outcomes

Reviewing Process: We conducted a search for publications using the specific keywords "psychological

issues" and "school-age children" in EndNote Version X9's PubMed collection. Initially, we filtered the papers by their year of publication, eliminating any content published before 2019 from the electronic PubMed collection. Subsequently, articles were reviewed based on their titles, and duplicate content was removed. Full-text articles, which were accessible in English and PDF format, were obtained and used in the qualitative analysis.

Data Extraction and Assessment of Risk of Bias: Data extraction included the author's name, publication year, article title, methodology, study population and sample size, data collection method, study conclusions, publication nation, and Jadad score. The quality of the included studies was evaluated using the Jadad score, which helped to reduce the risk of bias.²⁴

Table II: Jadad Score for Assessment of Quality of Included Studies.

Items	Description	Score
Randomization	If randomization is mentioned (including words random/ randomly/ randomization)	1
	If method of randomization is mentioned (computer-generated/ table of random number)	1
	If mentioned method of randomization is not appropriate (patients' allocation was done alternately/ based on DOB or hospital number)	-1
Blinding	If double blinded is mentioned	1
	If method of blinding is mentioned (active placebo/ identical placebo/ dummy)	1
	If mentioned method of blinding is not appropriate (comparison between tablet and injection having no double dummy)	-1
Withdrawal	If the number and reason of withdrawal or dropout in each group is mentioned	1
Maximum obtainable point		5

Results

Initially 1564 articles were identified by using online library of PubMed in EndNote X9 software and no articles was included directly from any other medium or website. By using the filter of custom trail year 2019 to 2022 and considering the duplication effect 1080 articles were removed. Out of the remaining 484 articles, 354 articles were removed by evaluating the articles on title based analysis. Furthermore, about 130 articles were assessed through full text eligibility. The full text articles removed with reasons based on inclusion and exclusion criteria were 117. The full text articles, available in English language and PDF form included qualitative analysis were

13. Among these revised studies three publication were from different cities of Pakistan.

Discussion

The systematic review analysis included ten international research studies to assess psychological problems among school-going children. There were four research articles from China, one from Canada, one from the USA, one from Denmark, one from the Netherlands, one from Europe, and one from Turkey. The research designs of the included research studies were randomized controlled trials, correlational qualitative analysis, and longitudinal quantitative analysis. The qualitative assessment of the studies has shown a spectrum of psychological disorders among school-going children associated with interpersonal, parental, social, and community-level factors.

First, Li, X., et al., 2020, performed a multi-stage stratified clustered random sampling analysis on 2,284 students from primary and middle schools in 29 counties of Jiangxi, a developing province of China. The analysis assessed the impact of psychological problems and school bullying on non-suicidal self-injury among students.²⁵ As the literature indicates, the prevalence rate of bullying among primary and middle school students in China is 33.36%.²⁵ Bullying causes serious psychological disorders among students, including self-injury, low self-esteem, self-criticism, self-depression, anxiety, and arrogance.²⁵ The scholarly work of Li, X., et al., 2020, documented a positive relationship between school bullying and non-suicidal self-injury. The commonly reported psychological problems among

students who face school bullying are social withdrawal, loneliness, reduced community adaptability, negative behavior, and sleep disorders.²⁵

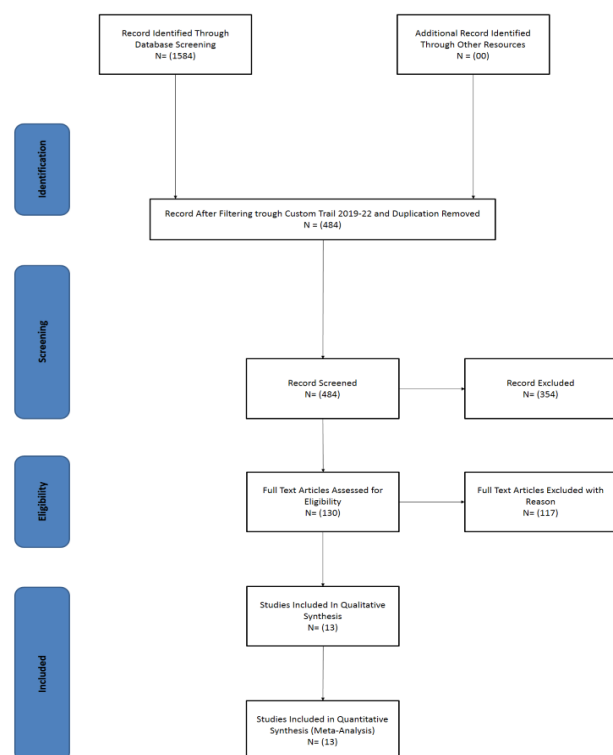


Figure 1: PRISMA Diagram.

Furthermore, a Chinese psychiatrist and scholar, Liu, M., et al., 2020, documented a quantitative cross-sectional analysis on 13,349 high school students to assess the impact of moderate to vigorous physical activities on psychological health and psychological health issues of students.²⁶ It was documented that Chinese middle and high school students had low levels of moderate to vigorous physical activities. A sedentary lifestyle was most prevalent among them. Therefore, psychological issues such as depression, anxiety, general emotional and social problems, behavior disorders, attention deficit hyperactivity disorder, conduct problems, and self-harm were estimated to be high in Chinese students.²⁶ Liu, M., et al., 2020, concluded that moderate to vigorous physical activity is negatively associated with psychological disorders.²⁶

The COVID-19 pandemic caused an increase in psychological distress among parents and children during quarantine. COVID-19 was associated with a diversified number of psychological issues among the population, including isolation, stigma, and loneliness.²⁷ It was also associated with the fear of a painful death and death in separation from loved ones. Scholarly research during

COVID-19 indicated serious post-infectious psychological and mental health disorders among infected and non-infected individuals.²⁷ Similarly, another research study conducted on Chinese adolescents during the COVID-19 outbreak assessed psychological health problems in relation to demographic characteristics. A cross-sectional quantitative analysis conducted on 8,140 Chinese students showed a high level of prevalence of psychological disorders among Chinese adolescents.²⁸ The stigmas of isolation, painful thoughts, emotional disturbance, economic and social hardships were responsible for a higher level of psychological disorders among the population. Similarly, adolescents under the age of 16 had moderate to severe symptoms of depression and anxiety during COVID-19. The prevalence rate of moderate to severe depression among adolescents was 4.5% to 2.7%, respectively.²⁸

Social media has become an integral part of the lives of the modern generation, with the use of social media rapidly rising. In Turkey, social media addiction has increased to 11% in recent years.²⁹ The global prevalence of social media addiction among social media users is 10%.²⁹ Similarly, it is estimated that among American social media users, 78% of individuals check their mobile phones repeatedly for notifications without any notification alarm. A recent research study published in Turkey has shown that mobile phone addiction is not the only psychological disorder among adolescents and children in Turkey; it also causes sleep disorders, emotional imbalances, and other psychological problems in people suffering from mobile phone addiction.

Psychological problems are rarely inherent or inborn; they are often the result of long-term social and environmental challenges. Events during infancy and early childhood are the most common reasons for most psychological disorders in children.³⁰ A longitudinal research study involving 43 sexually abused children and 42 parents of such children assessed psychological disorders among children longitudinally over five consecutive years.³⁰ The outcome of the study revealed that the prevalence of post-traumatic stress disorder, behavioral issues, social withdrawal, and isolation among children ranged from 66.7% to 71.1%. These symptoms were also noticed in parents of sexually victimized children.³⁰

Maternal and paternal psychological disorders have been proven to have a negative association with the psychological well-being of offspring. Maternal psychological issues, high levels of stress, and depression can lead to the release of the stress hormone cortisol.³¹

Elevated levels of cortisol pass through the placenta and reach the hypothalamic-pituitary axis. This elevated level of maternal psychological disorders can cause biological stress and mental health problems in children. Similarly, paternal psychological disorders and stress can cause mental health issues in children due to genetic associations.³¹ Wesselhoeft, R., et al, 2021, recommended psychological screening of parents during the antenatal period for the psychological well-being of offspring.³¹

Table III: Characteristics of Included Research Studies

Author Name/Year	Topic	Research Design	Population	Age	Tool	Outcomes	Country	Jadad Score
(Li et al., 2020)	Research on the Relationships between Psychological Problems and School Bullying and Non-Suicidal Self-Injury among Rural Primary and Middle School Students in Developing Areas of China	Multi-Stage Stratified Cluster Random Sampling Method	2284 students	Less than 16 Years	Questionnaire	School bullying increases the non-suicidal self-injury and other psychological problems in school going children.	China	1
(Liu, Zhang, Kamper-DeMarco, Hu, & Yao, 2020)	Associations of moderate-to-vigorous physical activity with psychological problems and suicidality in Chinese high school students: a cross-sectional study	Quantitative Cross-Sectional Study	13349 High School Students	Average Age 15 Years	Self-Administered Questionnaire	Moderate to Vigorous Physical Activity reduces the psychological disorders and suicidal thoughts among students.	China	1
(Spinelli, Lionetti, Pastore, & Fasolo, 2020)	Parents' Stress and Children's Psychological Problems in Families Facing the COVID-19 Outbreak in Italy	Quantitative Research Design	Parents of 854 School going Children	2 to 14 Years	Online Survey	During Covid-19 children of working parents faced higher level of stress, anxiety and depression.	China	1
(Zhou et al., 2020)	Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19	Quantitative Cross-Sectional Study	8140 Junior and Senior Students	Mean Age 16 Years	Patient Health Questionnaire, Survey	High prevalence of psychological problems associated with low awareness of Covid-19 among adolescents.	Europe	1
(Sumen & Evgin, 2021)	Social Media Addiction in High School Students: A Cross-Sectional Study Examining Its Relationship with Sleep Quality and Psychological Problems	Cross-Sectional, Correlational Research Design	1,274 students	Less than 16 Years	Social Media Addiction Scale for Adolescents, Questionnaire	The social media addiction causes the psychological health problems and sleep disorders in students.	Turkey	1
(Tsang et al., 2021)	The Amsterdam Sexual Abuse Case: What Scars did it Leave? Long-Term Course of Psychological Problems for Children Who have been Sexually Abused at a Very Young Age, and their Parents	Longitudinal Quantitative Analysis	47 Sexually Abused Children	Average age 9 Years	Face to Face Focus Group Discussion	The Sexually abused children face high degree of psychological disorders	Netherlands	1
(Wesselhoeft et al., 2021)	Maternal prenatal stress and postnatal depressive symptoms: discrepancy between mother and teacher reports of toddler psychological problems	Longitudinal Quantitative Study	1302 Mothers and Their Child	Mean Age 10 Years	Questionnaire Survey	Stress of a depressed mother and father increases the psychological distressed in students.	Denmark	1
(Johnsen et al., 2022)	Sociodemographic and clinical characteristics of youths and parents seeking psychological treatment for school attendance problems	Cross-Sectional Design	152 Children	12 Years	Questionnaire Survey	The study highlights the need for early intervention, addressing a broad range of mental health problems.	The USA	1
(Pulkki-Raback et al., 2022)	Parental psychological problems were associated with higher screen time and the use of mature-rated media in children	Cross-Sectional Design	10,650 children	Mean Age 10 Years	Questionnaire Survey	Presence of parental psychological problems is associated with higher screen time of children.	Canada	1
(Sun & Ban, 2022)	Relationship between parental psychological control and suicide ideation in Chinese adolescents: Chained mediation through resilience and maladjustment problems	Correlational Research Design	2,042 students in junior high school	Mean Age 13 Years	26-Item Self-Report Scale	Parental psychological control reduces the suicide intention among Chinese adolescents.	China	1

Absenteeism from school is often considered an indicator of general, physical, or psychological problems among children. In Denmark, the benchmark for absenteeism is more than 10% of students missing from class, which

prompts consideration for physical and psychological assessment. A longitudinal cross-sectional research study analyzed the school attendance percentages of Danish youth seeking help for the treatment of psychological problems.³² The study's outcomes showed that the percentage of school-going children taking treatment for psychological problems had an absentee rate of 25% to 35%. Psychological disorders significantly impact an individual's daily life and can lead to serious general and physical health problems.³²

Similarly, children's psychological health is widely

associated with the parental standard of living and psychological well-being. Parental psychological issues are directly associated with negative outcomes in children's psychological health.³³ The scholarly work of Pulkki-Raback, L., et al., 2022, documented that children

of parents suffering from any psychological disorder spend more time on social media. Such children tend to watch mature content for more than two hours per day. Mobile phone or social media addiction further contributes to various social disorders in children.³³

Furthermore, suicidal ideation is a serious psychological disorder among people of all age groups. The World Suicide Report of 2019 reported that suicidal ideation is the leading cause of suicidal death worldwide among adolescents aged 14 to 19. Each year, 7 million people die worldwide due to suicide³⁴. Suicidal ideation is directly associated with the psychological health status of parents. Children of psychologically disturbed parents have a higher level of suicidal ideation³⁴. Critical analysis has shown that school-going children suffer from psychological issues such as behavioral problems, mood swings, and suicidal thoughts, and these psychological issues have diverse causes.

Conclusion

It was concluded through this systematic review analysis that school-going students globally suffer from a spectrum of psychological disorders. These disorders include behavioral changes, ignorance, arrogance, irritation, social withdrawal and isolation, lack of confidence, low self-esteem, low self-respect, anxiety, depression, stress, and post-traumatic stress disorders. Students also experience suicidal ideation, which is a leading cause of suicide among students. The causes of these psychological disorders are mobile phone addiction, social media addiction, parental psychological disorders, childhood sexual abuse, and school bullying and criticism. However, moderate to vigorous physical activities are a non-pharmacological curative approach for these psychological disorders, as physical activities help reduce psychological problems in students.

References

1. Woodhead, M., *Changing perspectives on early childhood: theory, research and policy*. Vol. 4. 2006.
2. Blakemore SJ, Burnett S, Dahl RE. The role of puberty in the developing adolescent brain. *Human brain mapping*. 2010 Jun;31(6):926-33.
3. Salami B, Alaazi DA, Ibrahim S, Yohani S, Scott SD, Vallianatos H, Urchuk L, Islam B. African immigrant parents' perspectives on the factors influencing their children's mental health. *Journal of Child and Family Studies*. 2022 Jan 1:1-3.
4. Ko MSM, Poh P-F, Heng KYC, Sultana R, Murphy B, Ng RWL, et al. *Assessment of long-term psychological outcomes after pediatric intensive care unit admission: A systematic review and meta-analysis: A systematic review and meta-analysis*. *JAMA Pediatr* 2022;176(3):e215767. <http://dx.doi.org/10.1001/jamapediatrics.2021.5767>
5. Jamali S, Ghanbari H, Sharif JJOFOMH. *A comparative evaluation of mental health. depression and post-operative role adaptation in Iranian transgender people living in Iran and Germany*. 2022;24:47-53.
6. Tan YQ, Wang Z, Yap QV, Chan YH, Ho RC, Hamid ARAH, et al. *Psychological health of surgeons in a time of COVID-19: A global survey: A global survey*. *Ann Surg* 2023;277(1):50-6. <http://dx.doi.org/10.1097/SLA.0000000000004775>
7. Manchia M, Gathier AW, Yapici-Eser H, Schmidt MV, de Quervain D, van Amelsvoort T, Bisson JI, et al. *The impact of the prolonged COVID-19 pandemic on stress resilience and mental health: A critical review across waves*. *European Neuropsychopharmacology*. 2022 Feb 1;55:22-83.
8. Shattla SI. *Impact of Clinical Simulation on Student's Levels of Motivation. Satisfaction and Self-Confidence in Learning Psychiatric Mental Health Nursing*. 2022;37.
9. Copeland WE, Miller-Johnson S, Keeler G, Angold A, Costello EJ. *Childhood psychiatric disorders and young adult crime: A prospective, population-based study*. *American Journal of psychiatry*. 2007 Nov;164(11):1668-75.
10. Polese D, Belli A, Esposito D, Evangelisti M, Luchetti A, Di Nardo G, et al. *Psychological disorders, adverse childhood experiences and parental psychiatric disorders in children affected by headache: A systematic review*. *Neurosci Biobehav Rev* 2022;140(104798):104798. <http://dx.doi.org/10.1016/j.neubiorev.2022.104798>
11. Cohen JA, Scheeringa MS. *Post-traumatic stress disorder diagnosis in children: challenges and promises*. *Dialogues in clinical neuroscience*. 2022.
12. Kratzer L, Heinz P, Schennach R, Knefel M, Schiepek G, Biedermann SV, et al. *Sexual symptoms in post-traumatic stress disorder following childhood sexual abuse: a network analysis*. *Psychol Med* 2022;52(1):90-101. <http://dx.doi.org/10.1017/S0033291720001750>
13. Fung HW, Chien WT, Ling HW-H, Ross CA, Lam SKK. *The mediating role of post-traumatic stress disorder symptoms in the relationship between childhood adversities and depressive symptoms in two samples*. *Child Abuse Negl* 2022;131(105707):105707. <http://dx.doi.org/10.1016/j.chiabu.2022.105707>
14. Mesman J, Bongers IL, Koot HM. *Preschool developmental pathways to preadolescent internalizing and externalizing problems*. *J Child Psychol Psychiatry*. 2001;42(5):679-89. <http://dx.doi.org/10.1111/1469-7610.00763>
15. Shorey S, Ng ED, Wong CHJ. *Global prevalence of depression and elevated depressive symptoms among adolescents: A systematic review and meta-analysis*. *Br*

- J Clin Psychol. 2022;61(2):287–305.
<http://dx.doi.org/10.1111/bjc.12333>
16. Kaggwa MM, Najjuka SM, Bongomin F, Mamun MA, Griffiths MD. Prevalence of depression in Uganda: A systematic review and meta-analysis. Plos one. 2022 Oct 20;17(10):e0276552.
17. Steinsbekk S, Ranum B, Wichstrøm L. Prevalence and course of anxiety disorders and symptoms from preschool to adolescence: a 6-wave community study. J Child Psychol Psychiatry 2022;63(5):527–34.
<http://dx.doi.org/10.1111/jcpp.13487>
18. Yokota R, Okuhara T, Okada H, Goto E, Sakakibara K, Kiuchi T. Association between stigma and anxiety, depression, and psychological distress among Japanese women undergoing infertility treatment. Healthcare (Basel). 2022;10(7).
<http://dx.doi.org/10.3390/healthcare10071300>
19. Arikan G, Acar IH, Ustundag-Budak AM. A two-generation study: The transmission of attachment and young adults' depression, anxiety, and social media addiction. Addict Behav 2022;124(107109):107109.
<http://dx.doi.org/10.1016/j.addbeh.2021.107109>
20. Husky MM, Bitfoi A, Carta MG, Goelitz D, Koç C, Lesinskiene S, et al. Bullying involvement and suicidal ideation in elementary school children across Europe. J Affect Disord 2022;299:281–6.
<http://dx.doi.org/10.1016/j.jad.2021.12.023>
21. Xie S, Xu J, Gao Y. Bullying victimization, coping strategies, and depression of children of China. Journal of interpersonal violence. 2022 Jan;37(1-2):195-220.
22. Zhao R, Yao X. The relationship between bullying victimization and suicidal ideation among Chinese adolescents: The role of depressive symptoms and gender differences. Journal of school violence. 2022 Jan 2;21(1):60-80.
23. Rico-González M, Pino-Ortega J, Clemente F, Los Arcos A. Guidelines for performing systematic reviews in sports science. Biology of sport. 2022 Mar;39(2):463-71.
24. Mohsina S, Gurushankari B, Niranjana R, Sureshkumar S, Sreenath GS, Kate V. Assessment of the quality of randomized controlled trials in surgery using Jadad score: Where do we stand? J Postgrad Med. 2022;68(4):207–12.
http://dx.doi.org/10.4103/jpgm.JPGM_104_21
25. Li X, Chen F, Lin Y, Jia Z, Tucker W, He J, et al. Research on the relationships between psychological problems and school bullying and non-suicidal self-injury among rural primary and middle school students in developing areas of China. Int J Environ Res Public Health. 2020;17(10):3371.
<http://dx.doi.org/10.3390/ijerph17103371>
26. Liu M, Zhang J, Kamper-DeMarco KE, Hu E, Yao S. Associations of moderate-to-vigorous physical activity with psychological problems and suicidality in Chinese high school students: a cross-sectional study. PeerJ. 2020;8(e8775):e8775.
<http://dx.doi.org/10.7717/peerj.8775>
27. Spinelli M, Lionetti F, Pastore M, Fasolo M. Parents' stress and children's psychological problems in families facing the COVID-19 outbreak in Italy. Front Psychol. 2020;11:1713.
<http://dx.doi.org/10.3389/fpsyg.2020.01713>
28. Zhou S-J, Zhang L-G, Wang L-L, Guo Z-C, Wang J-Q, Chen J-C, et al. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. Eur Child Adolesc Psychiatry. 2020;29(6):749–58.
<http://dx.doi.org/10.1007/s00787-020-01541-4>
29. Zhou SJ, Zhang LG, Wang LL, Guo ZC, Wang JQ, Chen JC, Liu M, Chen X, Chen JX. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European child & adolescent psychiatry. 2020 Jun;29:749-58.
30. Tsang VMW, Verlinden E, van Duin EM, Twisk JWR, Brilleslijper-Kater SN, Gigengack MR, et al. The Amsterdam Sexual Abuse Case: What Scars did it Leave? Long-Term Course of Psychological Problems for Children Who have been Sexually Abused at a Very Young Age, and their Parents. Child Psychiatry Hum Dev. 2021;52(5):891–902.
<http://dx.doi.org/10.1007/s10578-020-01067-5>
31. Wesselhoeft R, Davidsen K, Sibbersen C, Kyhl H, Talati A, Andersen MS, et al. Maternal prenatal stress and postnatal depressive symptoms: discrepancy between mother and teacher reports of toddler psychological problems. Soc Psychiatry Psychiatr Epidemiol. 2021;56(4):559–70. <http://dx.doi.org/10.1007/s00127-020-01964-z>
32. Johnsen DB, Lomholt JJ, Heyne D, Jeppesen P, Jensen MB, Silverman WK, et al. Sociodemographic and clinical characteristics of youths and parents seeking psychological treatment for school attendance problems. PLoS One. 2022;17(1):e0261449.
<http://dx.doi.org/10.1371/journal.pone.0261449>
33. Pulkki-Råback L, Barnes JD, Elovainio M, Hakulinen C, Sourander A, Tremblay MS, et al. Parental psychological problems were associated with higher screen time and the use of mature-rated media in children. Acta Paediatr. 2022;111(4):825–33.
<http://dx.doi.org/10.1111/apa.16253>
34. Sun J, Ban Y. Relationship between parental psychological control and suicide ideation in Chinese adolescents: Chained mediation through resilience and maladjustment problems. Front Psychol. 2022;13:946491.
<http://dx.doi.org/10.3389/fpsyg.2022.946491>