

# Biopsychosocial Predictors of Mental Health among Adolescent: A Scoping Review

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## ABSTRACT

Mental illnesses are a substantial and frequently unrecognized source of suffering that affects children and young people's well-being, access to education, and capacity to realise their full potential. Because mental health must be comprehensive, the biopsychosocial model makes sense as a foundation for thought. It is commonly employed in medicine, particularly psychiatry.

The Scopus databases were searched for articles from journals published among January 1, 2018, and September 30, 2022 as part of this study's scoping review. The study's findings revealed that 10 pertinent full-text English articles had been examined. The conclusion is that biological characteristics such as age, gender, and hormones are associated to teenage mental health. The appearance of favorable psychotic psychosocial characteristics, such as the involvement of dads in parenting, social support, and peers, may be influenced by exposure to *Toxoplasma gondii*.

**Keywords:** Comorbidities; Smoking; Pre-ventive; Death.

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## Introduction

Mental illnesses are a substantial, but frequently disregarded, source of suffering that affects children's and adolescents' well-being, educational opportunities, and capacity to realize their full potential. It is projected that above 13% of teenagers among the ages of 10 and 19 have a documented mental character, according to the World Health Organization. There are 86 million adolescents among 15 and 19 years old and 80 million adolescents among 10 and 14 years old. There are 77 million adolescents and 89 million adolescents living with mental illness, respectively. In North America, Western Europe, and the Central East and North Africa, diagnosed disorders are more common. About 40% of these mental disorders are anxiety and depression, while the rest are internal, mental deficiencies, bipolar disorders, eating disorders, autism, schizophrenia and hyperactivity as a consequence of lack of devotion. In addition, children and adolescents are psychosocial. (I think the global situation of children in 2021, n.d.)

One of the objectives of the Worldwide Policy for Women's, Youngsters' and Young person Health of the World Health Organization (WHO) is to achieve a high level of adolescent health, according to worrying statistics that show that children and adolescents around the world have maternal or childhood diseases in one way or another. It reduces children's ability to learn, work, build deep connections and help society when we don't know their mental health. Parents and other caregivers need support to be able to raise and care for their children as much as possible, which is

why we shouldn't neglect the spiritual healthiness of parents and other caregivers. Furthermore, when we reject the significance of mental health complications in our culture, we encourage stigma, stop communication, and discourage children and caregivers from getting the support they need.

Many times we are silent and cannot join this truth to accept what man is. Otherwise, as the human rights activist and project contributor said, Labaki said that "we don't see that psychological gravity is not a deviant and hidden attitude, but a general aspect of the human experience." We cannot be quiet; On the contrary, we ought to not take into account the voices of adolescents calling for action around the world. Through this version of The Condition of the World's Children, UNICEF shows its willingness to listen and take action through its first edition based on mental health. We have recently fought to protect the mental health and psychological health of kids, teenagers, parents and caregivers in the world's most problem environment. (I think the global situation of children in 2021, n.d.) To promote physical and mental health, the World Health Organization has called on young people to lead healthy lifestyles. Throughout life, physical activity is a solid and fast way to increase fitness and health. However, the level of physical activity has decreased in adolescence [1].

One of the common mental health complications of adolescents is anxiety disorders. In the case of previous studies only some risk variables for the continuous onset of anxiety disorders have been analyzed [2]. Adolescents are more likely than ever to suffer from

depression, which increases the danger of disability, decreased learning achievement, cardiovascular disease, drug misuse, person-damage and self-destruction [3].

One can determine the aetiology of anxiety disorders. As a result, we examined the connection among preadolescent sociodemographic, familial, physical, and organic factors and the onset of anxiety illnesses in teenage years [2]. Teenagers are more likely than ever to experience depression, which increases the hazard of incapacity, reduced educational success, cardiovascular illness, drug abuse, self-harm, and suicide. Indication-founded therapies using drugs or therapy have minimal results [3]. One of the objectives of the Global Policy for Children is to improve adolescent health, and there are several types of mental health disorders that impact teenagers all over the world. By concentrating on the following factors, the current study contributes to identifying the dangers to mental health in early adolescence “state of emotional suffering characterized by symptoms of despair and apprehension”, also known as “psychological distress” [4].

Depression during adolescence affects pregnancy, employment, and educational attainment, among other psychosocial effects that are detrimental [5]. (In adding, sadness is powerfully linked with self-destruction, [6] the precise causes of the worldwide widespread of physical illness remain unknown as of this writing.) Mental illness is influenced by social and genetic predispositions, but these explanations are unable to explain the increasing prevalence. It is to be noted that the production and use of new chemicals is increasing every year worldwide in line with the increasing frequency of mental illness (plastic Europe). Environmental pollutants can alter endogenous metabolism, which is linked to several diseases [7]. At the heart of the biopsychosocial model, which Engel officially declared in 1977, is the recognition that organic, physical, and social issues distress healthiness and virus. According to Engel, a model is “nothing more than a belief system used to explain natural phenomena, which is used to understand what is surprising or confusing.” Here’s the word “paradigm” could be more applicable [8].

Social media use and chatting to family and friends had the biggest effects. In addition, one in three people reported having “poor” or “fair” mental health. Other reported symptoms were changes in sleeping habits, melancholy, worry, and impatience [9]. One of the elements that helped the adolescents’ depression was the psychosocial element. The demographic group that may suffer from depression are teenagers. The psychosocial effects of depression can affect mental health [10]. Differences among young people in Botswana showed key factors such as misunderstanding among youth and the public, personal complications, deprived communication, low confidence, rapid technological advancement and biological and genetic predisposition. Stigma associated with mental illness, absence of psychosocial funds, insufficient sequel of medical care, previous cultural ideas near mental sickness, and divided mental health facilities were among the structural barriers [11].

## Methods

In determining the multiple sorts of facts and determinants connected to adolescent biopsychosocial mental health, the scope of the literature has been reviewed. The research followed five stages, [12]: (1) define the research question; (2) locate important prior research; (3) choose to use a repeater group view; (4) the data are mapping, furnace data reduction, and qualitative thematic analysis; and (5) collect, summarize, and report findings. Although, as an optional element of the browser review, no recommended

consultations have been made to interested parties [12].

## Result and Discussion

In the first phase of the search, 1133 articles were obtained from across all databases, and 201 titles were found to be suitable after screening. All five of the titles that were found to be duplicates were deleted from Mendeley Desktop, which was utilized to aggregate qualifying titles from folders. The screening of the abstracts resulted in the selection of 160 articles, of which 102 articles satisfied the presence requirements and were thus advanced to the full-text eligibility phase. Record chosen by abstract Screening of the full texts of all the articles led to the elimination of 92 of them, leaving 10 to be used for data collection. This is seen in Figure 1. The features of the recognized studies are outlined in tabular form in table 1.

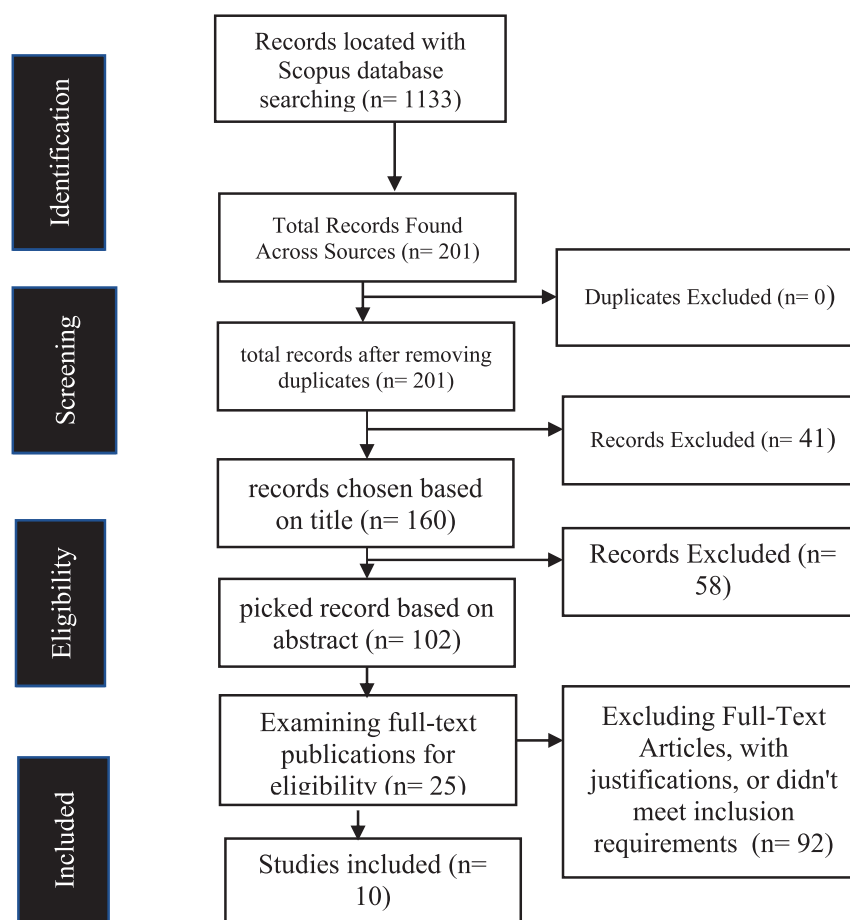
It appears that there is a geographical and economic context-dependent difference in the connection among juvenile suicide behaviors and parental education. This suggests that cultural, psychosocial, or biological variables may play a role in understanding this association [13].

The connection among appearance judgments and depressed symptoms was shown to be mediated by stress, which is a result of appearance judgments’ contribution to psychological and bodily stress processes [14]. Anxiety was shown to be a major covariate of together genetic and deeds warnings of bounciness, whereas penis was created to be an important factor connected with social symptoms of weakness [15].

Clinical psychologists need to rely on the following concepts while offering support to adolescents: the systemic approach; subject-subjectivity, also known as communication; adaptability and resolution; safety and dependability. The following approaches to individual and group psychoanalysis are suggested to optimize the use of these concepts to achieve the desired results: establishment of a new reasoning model for activities of daily living; conducting an emotional analysis of traumatic events; regain a healthy sense of self-worth and the ability to function normally in society; Kinesiotherapy and psychodrama are two forms of conversational psychotherapy. Recreational medicine, artistic medicine, musical medicine (through musical knowledge) and psychotherapy (through singing) are other forms of conversational psychotherapy [16].

Researchers conducted a scoping review study in which they found biological elements that impact teenage mental health. These factors included age and gender, as well as hormones. In comparison to boys, there was a significantly greater incidence of psychological discomfort among females. In a sample of healthy 15–17-year-old teenagers, there was no association among pro-inflammatory markers and psychological discomfort [17]. Serum BPAF levels and the likelihood of rising gloomy signs. Men’s were additional susceptible to bisphenol AF (BPAF) exposure than women’s, and connection was substantially affected by gender [18]. It is imperative that hormones be included into the matrix that describes the neurobiological factors that contribute to depressive disorders [19]. On the other hand, facts indicates that there is no connection among biological variables and anxiety disorders (heart rate, blood pressure, cortisol, and BMI) [2].

Extremely high-risk, also known as UHR, criteria were developed with the purpose of identifying patients who were at an extremely high risk of developing psychosis. One piece of facts is that exposure to toxoplasma gondii can help generate definite psychotic signs and rise the chance of modulation to hangup for people with UHR [20].



**Figure 1:** Systematic Review Step

In addition to peers, family situations, and school, one of the elements that impact adolescents' mental health is their social environment. The concern was a key covariance of biological and behavioral notes of stability, but the gender was related with strong behavior markers of vulnerability [15]. Peer victimization is regarded as an urgent public health concern, impacting one in five adolescents. Current study has accumulated facts that peer victimized children and adolescents are at risk for a variety of physical health issues, despite the fact that significant research has shown the harmful consequences of peer victimization on juvenile mental health. Certain symptoms, such as headaches and stomachaches, may be immediately sensed and reported on by children and adolescents, whereas others can only be diagnosed via the use of biological samples (eg, inflammation) [21].

Regardless of biological sex, direct exposure to violent behavior amongst siblings at home as well as bullying at school are major indicators of psychological distress [4], a worse perception of one's social ties was connected with increased levels of pressure and sadness, including lower levels of academic accomplishment [22]. Individual and parental issues contribute to an increase in the likelihood that a young person will experiment with substances, which highlights the import of taking a holistic approach that takes into account both social and biological hazard issues in the context of risk prevention and reduction, risk assessment and management, and recovery [23].

Family connections and traumatic experiences are two of the

psychosocial factors that can have an impact on a young person's mental health. In this scoping review, it was discovered that the nature of the connection differs depending on the gender of the child and the age at which the father leaves the home, with the absence of a father in early childhood developing as the most important hazard reason for opposing progeny mental well-being routes [24], it's possible that parental surveillance is essential for the mental health of older adolescents [25]. There is a substantial correlation among various forms of social assistance and one's mental health [26].

## Conclusion

Although mental health must be comprehensive, the biopsychosocial type is the proper basis for thinking. Especially in psychiatry, it is frequently employed in the medical profession. Prior study has demonstrated that a set of changing biopsychosocial characteristics may be used to predict the mental health of the elderly. The results of this scoping study linked the risk of mental health from biological characteristics including age, sex, physical function, and health disorders. Affect, personality characteristics, and subjective well-being include psychological variables. Social variables, such as smoking, physical activity, sleep quality, daily activities, social support, marital status, loneliness, religion and spirituality, and early-life circumstances, pose a threat to the mental health of the elderly [29].

Yet, the psychological state of the population is significantly

Table 1: Students' results on smoking and comorbidities

Author	Site	Residents	Analysis	Result
Linkas al., 2020 [17]	Northern, Norway	458 girls and 437 boys	Logistic regression	The frequency of psychological discomfort was greater among females than among boys. In data from 15- to 17-year-old healthy teenagers, there was no association among pro-inflammatory markers and psychological discomfort.
Franklyn et al., 2022 [27]	Otawa, Canada	539 young adult	Principal component analysis	Inflammation was not highly connected with overall depression scores or severity, but rather with particular symptoms of depression characterized by hunger, eating, and fatigue.
Culpin et al., 2020 [24]	United Kingdom	8409 children	Longitudinal Study	This association differs by gender and the period of the daddy's departure, with main youthful father absence showing as the main hazard influence for harmful offspring mental health trajectories.
Zhang et al., 2020 [18]	Huaibei China	175 participants who had new onset depressive symptoms (cases) and 175 participants without depressive symptoms (controls) were included	The retrospective	Serum BPAF levels and the likelihood of developing depressive symptoms. The connection was substantially affected by gender, with men being more susceptible to BPAF exposure than females.
Pereira et al., 2020 [22]	Brazil	1,336 adolescents (605 boys and 731 girls) aged among 10 to 17 years from public schools.	Cross sectional	worse perceived social ties were connected with increased stress and depression, as well as worse academic performance.
Aderibigbe et al., 2022 [23]	Ontario, Canada	young people rated in the community (12-18 years old) (n = 47 418).	Cross sectional	Individual and parental variables enhance adolescent drug abuse risk, emphasizing the need for a comprehensive strategy that takes social and biological risk factors into account in prevention/risk reduction, risk assessment, treatment, and rehabilitation
Agampodi et al., 2022 [28]	Srilanka	3,367 pregnant females. Of these, 254 (7.5%) were teenage pregnancies.	Cohort	Nulli-parous adolescents exert poor social stability and consequences compromised physical and mental health effects.
Algahtany et al., 2021 [19]	Canada	66 unique patients who undergo surgery during the study period	Prospective Cohort	Hormones should be part of the puzzle that shows how neurobiology and neurochemistry affect depressive disorders.
Valente et al., 2022 [4]	Barcelona, Spain	2876 adolescent	A multi-group structural equation model	That being directly exposed to violence among siblings at home and bullying at school are important predictors of mental distress, no matter what biological sex the person is.
Narmandakh et al., 2020 [2]	Dutch	1584 adolescents	Longitudinal study	There are no correlations among biological markers (heart rate, blood pressure, cortisol, and body mass index) and anxiety disorder.

impacted by the news coverage related to the virus, and the government should dedicate an important amount of effort to improving this situation. During the outbreak in Indonesia, a number of practitioners, including counselors, psychiatrists, psychologists, therapists, and social workers, they established their own creativities to help with the first spiritual aids and progress the overall spiritual situation of the community. These initiatives addressed issues such as high stress levels, anxiety, depression, obsessive disorder (OCD), and other psychological conditions. The modes of intervention include online counseling, the distribution of literature on the prevention of the disease, websites, YouTube video lessons, films, short movies, online conversations through WhatsApp groups, and other forms of intervention. This sort of treatment is still carried out in a standalone fashion by practitioners [30]. The conclusion is that biopsychosocial factors are related to adolescent mental health, biological factors include age, gender, hormones, Exposure to *Toxoplasma gondii* may contribute to the manifestation of positive psychotic psychosocial factors including the presence of fathers in parenting, social support, peers.

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