

Chapter 269

Prognosis of children and adolescents submitted to early diagnosis of depression

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ABSTRACT

1 INTRODUCTION

Depression is a mental illness that can be explained by genetic, organic, or psychosocial factors and affects people of all ages (NAKAMURA, E. & JQ, 2007). This disease, evidenced in the 70s, progressed in its discussion also covering the development of its functionality in the infant-juvenile phase. Thus, it was possible to consolidate the specialty of child psychiatry as different from adult and pediatric psychiatry.

For LIMA & FLECK. (2009) "Mental disorders also seem to cause more impairment in daily tasks than heart disease, arthritis, hypertension, and diabetes." In addition, data from the National Comorbidity

INTRODUCTION: Depression is a mental illness that can be explained by both genetic and organic factors and affects not only adults but also children and adolescents. Due to the severity of this disease and its impact on the social and professional life of the individual, it is necessary to have more accurate diagnoses at the beginning. **METHODOLOGY:** The present study is an exploratory integrative literature review. A total of 76 articles were surveyed, of which 56 were excluded and 20 were included. The articles were identified using the Bireme, Ebsco, Google Scholar, Pubmed, and Scielo databases. **RESULTS:** The 20 articles included discuss the severity of depression and the association with other mental illnesses, such as ADHD, borderline, bipolar, and addictions. **DISCUSSION:** Through literary reviews and articles produced between 2012 and 2022, it was possible to analyze that depression is a psychiatric illness associated with other diseases and often confused with ADHD in childhood. In addition, the role of the family in the treatment of the disease was analyzed, as well as its relationship with addictions and phobias. **CONCLUSION:** It was demonstrated that childhood depressive disorder, anxiety, and phobias, when perceived early, are likely to predict the improvement of mental status in adulthood.

Keywords: Depressive disorder, Mental illness, Childhood, Anxiety, Phobia.

Survey showed that depressive individuals have less education, have more teenage pregnancies, and divorce more than healthy people.

Therefore, childhood depression is considered a serious illness and associated with social incapacity, which reveals the need and importance for its signs and symptoms to be recognized in the early stages of the disease. Unlike adults, children do not complain about their sadness, do not expose their feelings freely, and cannot be aware of their feelings. (LIMA & FLECK, 2009)

Given this fact, an effective diagnosis is necessary for a consequent better prognosis, and for this, adequate measurement instruments must be taken into account for the evaluation of the disease. Psychological instruments are characterized by scales, interviews, and evidence studies of validity and reliability. (BAPTISTA et al., 2001)

According to studies cited by DIAZ et al. (2001) who carried out a survey of the most used instruments in Brazil, the frequency of those intended for children was only 2.3%. In addition, these objects of analysis must have the favorable opinion of the Federal Council of Psychology. (BAPTISTA et al., 2001) It is also known that the period of adolescence denotes the highest rate of risk of incidence for the emergence of major depression.

Given this context, this article aimed to carry out an integrative review of the scientific literature about the prognosis of the early diagnosis of depression in childhood and adolescence.

2 METHODOLOGY

The present study consists of an integrative exploratory literature review. The integrative review was carried out in six stages: 1) identification of the theme and selection of the research's guiding question; 2) establishment of criteria for inclusion and exclusion of studies and search in the literature; 3) definition of the information to be extracted from the selected studies; 4) categorization of studies; 5) evaluation of studies included in the integrative review and interpretation and 6) presentation of the review.

In the initial stage, to define the research question, the PICO strategy (Acronym for Patient, Intervention, Comparison, and Outcome) was used. Thus, the following central question was defined that guided the study: “What is the prognosis of children and adolescents with depression, when diagnosed early?” In it, the P: children and adolescents; I: depression; C: control; O: prognosis.

To answer this question, a search was carried out for articles involving the intended outcome using the terminologies registered in the Health Sciences Descriptors (DeCs) created by the Virtual Health Library developed from the Medical Subject Headings of the U.S. National Library of Medicine, which allows the use of common terminology in Portuguese, English, and Spanish. The descriptors used were depression, childhood, treatment, early, and diagnosis. To cross the keywords, the Boolean operators “and”, “or” “not” were used.

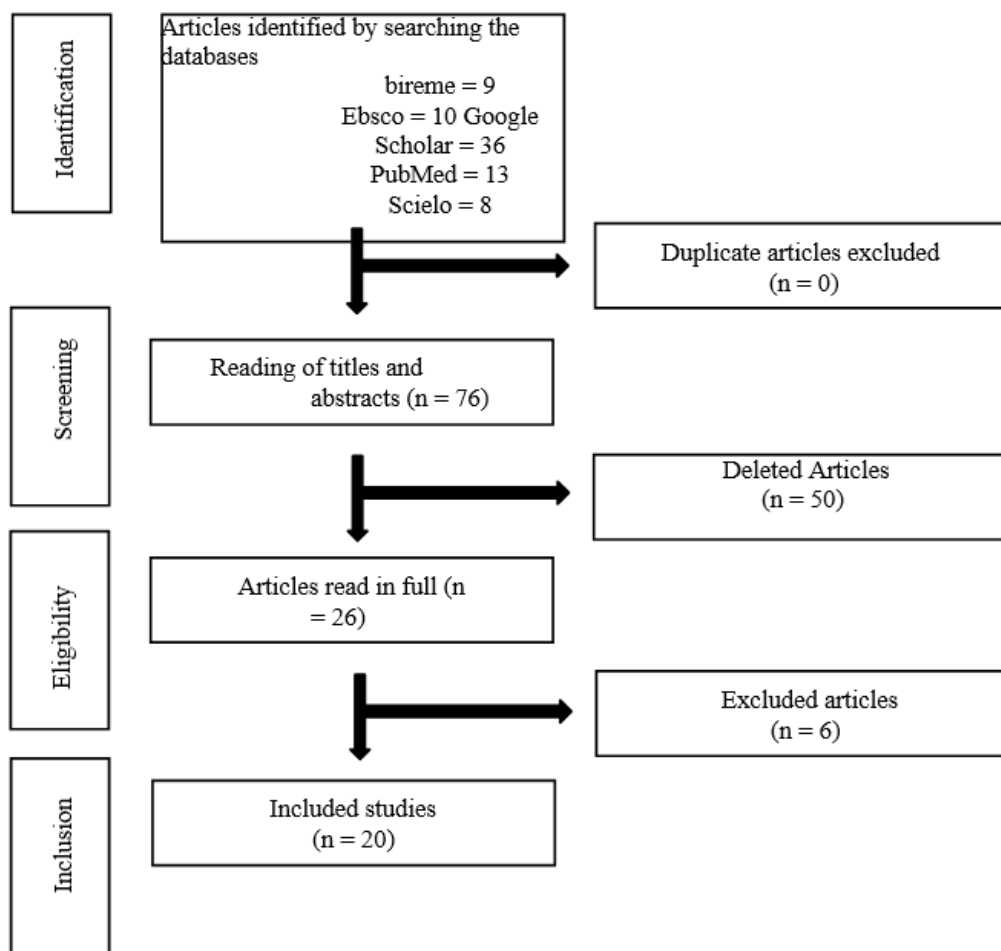
A bibliographic survey was carried out through electronic searches in the following databases: Virtual Health Library (BVS), Scientific Electronic Library Online (SciELO), National Library of Medicine (PubMed), EbscoHost)

The search was carried out in September 2022. As inclusion criteria, it was limited to articles written in English and Portuguese published in the last 10 years (2012 to 2022), which addressed the researched topic and which were available electronically in their format full, articles that did not meet the inclusion criteria were excluded.

After the survey of publications, 76 articles were found, of which the title and abstract of publications were read considering the defined inclusion and exclusion criteria. Then, the publications were read in full, paying attention again to the inclusion and exclusion criteria, and 56 articles were not used due to the exclusion criteria. 20 articles were selected for the final analysis and construction of the review.

After the selection of the articles, the selected works were filed to select the collection and analysis of the data. The collected data were made available in a table, allowing the reader to evaluate the applicability of the elaborated integrative review, to achieve the objective of this method.

Figura 1 - Fluxograma da busca e inclusão dos artigos



Source: Own authorship, 2022.

3 RESULTS

Table 1 – Main articles found on depression in adolescents between 2012 and 2022

Author and Year	Title	Main findings
RAMOS, V. A. B., 2018.	Depressão da Infância e Adolescência	The characteristic symptoms of childhood depression tend to be confused with hyperactivity.
SCOTT, K., et al, 2020.	Trajectories of Symptom Change in the Treatment of Adolescents with Depression Study	The study revealed three different trajectories of symptom change in depressive adolescents, each with different profiles. unique.
DIAZ, P. A., et al, 2019.	Adult Outcomes of childhood disruptive disorders in Offspring of Depressed and healthy parents	Children and adolescents with disruptive disorders had worsening symptoms in adulthood, even without a parental history of psychopathology.
GRAZIOLI, V. S., et al, 2019.	Attention deficit hyperactivity disorder and future alcohol outcomes: Examining the roles of coping and enhancement drinking motives among young men	Young adults with high levels of ADHD-I may be more at risk of becoming involved with alcohol problems because use alcohol for reasons of primacy and/or coping.
BIEDERMAN, J. M. D., 2012.	Adult Outcome of Attention–Deficit / Hyperactivity Disorder: A Controlled 16-Year Follow-Up Study	Men who were diagnosed with ADHD in childhood had significantly more impairment global and family conflicts, compared to the control group.
RUFINO, N. C., et al, 2020.	Treatment compliance and risk and protective factors for suicide ideation to completed suicide in adolescents: a systematic review	Parental perceptions of the need for mental treatment and participation in more activities were associated with better use of the mental health service and a protective factor for suicidal ideation.
TURAN, B., et al, 2021.	Online challenges that emerge as a public health issue for adolescents: Assessment of psychiatric comorbidity and the importance of parenting	Excessive gaming can provide an escape from real-life problems for individuals with ADHD, and some traits of this disease can be associated with problematic Internet use. Family problems increase the chance of having emotional problems.
MACPHERSON, H. A., et al, 2021.	Relationship between cognitive flexibility and subsequent course of mood symptoms and suicidal ideation in young adults with childhood-onset bipolar disorder	Young adults with borderline onset depression had a greater cognitive flexibility deficit than the control group. What can increase suicidal ideation.

Continuation: Table 1 – Main articles found on depression in adolescents between 2012 and 2022

Author and Year	Title	Main findings
ABEND, R., et al, 2017.	Association between attention bias to threat and anxiety symptoms in children and adolescents	Threat bias was correlated with anxiety symptoms, indicating threat hypervigilance. These symptoms began to appear as social anxiety and school phobias, which can culminate for psychiatric illnesses in adult life.
KEHINDE, F., et al, 2022.	Cross-sectional and longitudinal associations between psychotic and depressive symptoms in depressed Adolescents	The contrasting results are not clear how depressed adolescents with psychotic symptoms should be treated with "IMPACT". However, with "ADAPT", had a great reduction in depressive symptoms.
CHAHAL, R., GOTLIB, I. H., GUYER, A. E., 2020.	Research Review: Brain network connectivity and the Heterogeneity of depression in Adolescence – a precision mental health perspective	The depressive adolescent's brain proved to be heterogeneous, which implies that differential treatments based on this heterogeneity are necessary, intending to predict the prognosis of these adolescents.
KING, J. D., et al, 2017.	The Interpersonal–Psychological Theory of Suicide in Adolescents:A Preliminary Report of Changes Following Treatment	Patterns predicted changes in suicidal ideation during treatment as a function of changes in variables interpersonal relationships and depressive symptoms.
DAVIES, S. E., et al, 2020.	Trajectories of depression symptom change during and following treatment in adolescents with unipolar major depression	A rapid reduction in depressive symptoms in the first few weeks of treatment may not indicate a good prognosis. The improvement in
		symptoms are better after one year of treatment.
BREATHSAITE, R., et al, 2020	Predicting the risk of depression among adolescents in Nepal using a model developed in Brazil: the IDEA Project	This Brazilian model was able to stratify individualized risks of depression in adolescents from Nepal, thereby predicting depression in a diverse culture.
DOERING, S., et al, 2022.	Childhood-onset versus adolescent-onset anxiety and depression: Epidemiological and neurodevelopmental aspects	Neurodevelopmental disorders are extremely common in individuals with symptoms of anxiety and depression in childhood and adolescence.
HENNEFIELD, L., et al, 2018.	Changing conceptions of death as a function of depression status, suicidal ideation, and media exposure in early childhood	Children with depression and suicidal ideation scored a higher understanding of death than the control group. They also showed greater sadness and anxiety when listening to stories with death themes.

Conclusion of Table 1 – Main articles found on depression in adolescents between 2012 and 2022

Author and Year	Title	Main findings
WORSLEY, J. D., et al, 2018.	Childhood maltreatment and problematic social media use: The role of attachment and depression	Symptoms of anxiety and depression are closely linked to childhood maltreatment and problematic use of social media.
TOMPSON, M. C., et al, 2020.	Development and Efficacy of a Family-Focused Treatment for Depression in Childhood	Family interventions may be appropriate for childhood depression. FFT-CD demonstrated efficacy compared to individual therapy.
POST, M. R., GRUNZE, H., 2021.	The Challenges of Children with Bipolar Disorder	It has been shown that there is a need for parents to help clinicians facilitate diagnosis and assessment of response to treatment by obtaining a weekly rating of your child's symptoms.
SHARP, et al, 2020.	Psychological Mediators of the Association Between Childhood Emotional Abuse and Depression:A Systematic Review	The study demonstrated that mechanisms that may be involved in the relationship between childhood emotional abuse and adult depression, such as early maladaptive schemas, cognition variables, emotional dysregulation, interpersonal styles and negative stressful events.

4 DISCUSSION

Depressive Disorder in Childhood and Adolescence has long-lasting symptoms that often resemble hyperactivity, which often leads to a misdiagnosis (RAMOS, V., 2018). Thus, it is of clinical interest to be able to differentiate the symptoms and correctly analyze the patient.

The main focus of this study was to determine whether there is any relationship between early diagnosis and long-term prognosis of depression in children and adolescents. The literature is limited to what concerns this subject and there have not been many studies that have discussed this topic. However, it has been shown that early treatment of depressive symptoms achieved satisfactory results, in addition to decreasing "suitability, self-reported depression and the remission rate on other analyses" (SCOTT et al., 2019). According to DIAZ et al. (2019), the consequences of childhood depression relate to cognitive and emotional development, such as mood disorder, bipolar disorder, school difficulties, and other factors. Furthermore, it increases the risk of developing depression and the use of chemical substances (alcohol and drugs) in adulthood. That is why it is necessary to start treatment as soon as the disease is diagnosed and parents and education professionals must pay close attention to children who demonstrate disturbing behavior at school.

There is evidence of an association between attention deficit hyperactivity disorder (ADHD) and alcoholism. According to GRAZIOLI et al. (2019), symptoms of ADHD may increase the risk of

alcoholism in young people, and bring greater global damage and family conflicts, when compared to individuals who do not have the diagnosis.

Furthermore, for BIEDERMAN et al. (2012), men diagnosed with ADHD in childhood may have a significantly higher risk of being diagnosed with psychiatric illnesses, which appear early in childhood development and remit later. However, it is not known whether this diagnosis can be considered reliable, as many depressive children were mistakenly considered hyperactive at the beginning. In this way, one can see the notability that depression and ADHD are well understood and differentiated by health professionals to make the proper diagnosis.

It was noted that disruptive behavior disorder, alcohol and drug abuse and anxiety were all related to poor adherence to psychotherapy treatment, while family dysfunction and poor parental relationships were related to poor adherence to family therapy. However, according to RUFINO et al. (2021), there was no evidence that treatment adherence was a defense factor against suicide attempts, but that good parental relationships and adherence to family therapy were shown to be protective factors. Given this, in addition to conventional therapy and psychotropic drugs, family participation in the treatment of mental disorders is crucial for the proper prognosis of the child and/or adolescent.

For RUFINO et al. (2021), children and adolescents, due to their lack of mature neuronal circuits and lack of life experience, are more susceptible to addiction, especially to online games. Moreover, according to the literature, individuals who in this age group have already gone through negative life experiences such as depression, borderline, abuse, (etc.) are psychologically more susceptible to being victims of this psychopathology, as they can watch the game online as a solution to their psychological problems and unhappiness. Additionally, young people with ADHD may be more addicted to games to escape real life. Symptoms of this disorder, such as introversion, disinhibition, withdrawal.

The prognosis of children and adolescents subject to early diagnosis of depression and low self-esteem may be associated with problematic Internet use. Other addictions, such as alcohol and drugs, can probably also work as a means of protection and overcoming negative stimuli. (BIEDERMAN et al., 2012; GRAZIOLI et al., 2019; RUFINO et al., 2021)

Problematic family relationships, according to TURAN et al. (2021), may also increase the likelihood of being a victim of addiction to online games. This reiterates the importance of a good family relationship and the need to support the child and/or adolescent from an early age.

Cognitive flexibility is capable of being an important brain mechanism, prognostic indicator, and target of intervention for the onset of bipolarity in childhood (MACPHERSON et al., 2022). Furthermore, for the authors, this deficit seems to last into adulthood and is associated with a worse prognosis for depressive symptoms and suicidal ideation. Still, according to this study, individuals who are unable to manage and deal with stress are likely to feel hopeless and increase suicidal ideation. Given this, the differential diagnosis at this stage may reduce the chances of self-extermination later.

It is mentioned that it is at the juvenile age when most individuals have the first contact with stressors, such as bullying at school, with the possibility of even causing school phobia and other anxiety symptoms. These symptoms, according to ABEND et al. (2018), are capable of developing into psychiatric illnesses such as depression. Thus, as discussed by CHAHAL et al. (2020), the brain of depressed adolescents is heterogeneous, and the treatment must be based on this characteristic, with the interest of predicting a favorable prognosis.

Changes in adolescent suicidal behavior, according to KING et al. (2018), showed that they are not necessarily linked to a specific treatment, but are capable of being associated with interpersonal variables and patient symptoms. This leads to the understanding that more future studies are needed about treatment and behavioral changes as a result of therapy. It was also seen by DAVIES et al. (2020) that a rapid reduction in depressive symptoms in the first weeks of treatment may not indicate a good prognosis, and is cited in most cases as favorable only after one year of treatment.

Although there is already a Brazilian model that can stratify the individualized risks of depression in adolescents, as mentioned in BRATHWAITE et al. (2021), this is not yet widely used in the country itself. Neurodevelopmental disorders proved to be extremely common in individuals with symptoms of anxiety and depression in childhood, according to DOERING et al. (2022). Although much has been said about this aspect in recent years, society still tends to neglect the health of young patients.

The studies by HENNEFIELD et al. (2019) showed that children with depression and suicidal ideation tend to have a greater understanding of death and are more sensitive to this subject, probably have a chance of experiencing abuse, as mentioned in WORSLEY et al. (2018) and problematically use social media, according to TURAN, B. et al (2021) and WORSLEY et al. (2018).

As these characteristics are relatively easy to be perceived by parents/caregivers and need to be investigated.

That said, TOMPSON et al. (2020) it was possible to find evidence that family intervention can be appropriate in the treatment and diagnosis, as well as in POST & GRUNZE, (2021). DIAS et al. (2022) also commented on the importance of the family in the diagnosis and treatment of ASD (autistic spectrum disorder). Since, most of the time, it is the family that has the opportunity to closely monitor the children's routine.

However, in line with SHARP et al. (2020), early maladaptive schemas, emotional dysregulation, interpersonal styles, and negative stressful events arising from violent upbringing are factors that may be associated with the development of depression in childhood. TEIXEIRA et al. (2022) mention how family practice is important for children's nutrition education and how it impacts their health, which can also be paralleled about how family habits impact mental health.

Therefore, there needs to be more specific future work that compares children who were diagnosed early with those who were not, in addition to monitoring the estimation of how depression evolves in these individuals with early treatment..

5 CONCLUSION

The present study demonstrated that depression is a disease that does not only affect adults, but that it can also occur in children and adolescents. This illness is linked to other mental disorders and most commonly with ADHD. The differential diagnosis of depression is important for resorting to the correct treatment, and this should be done based on the heterogeneity of the young brain. This article demonstrated that childhood depressive disorder, anxiety and phobias, when perceived at the beginning, can probably predict the improvement of mental status and activities involving social and psychomotor skills in adulthood. In addition, the role of the family proved to be crucial as a protective factor against suicide attempts and correct adherence to treatment. However, the same family, when there is no good relationship in it, was accused of triggering depressive symptoms and negative stressful events, in which they could act as a trigger for suicidal ideation. More studies need to be carried out in the future to be able to fully understand how early diagnosis influences the future of children with depressive disorders and other mental disorders when compared to individuals who were diagnosed only in adulthood.

REFERENCES

- Abend, r. Et al. Association between attention bias to threat and anxiety symptoms in children and adolescents. *Depression and anxiety*, v. 35, n. 3, 2018. <https://doi.org/10.1002/da.22706>
- Aros, m. S., & yoshida, e. (2009). Estudos da depressão: instrumentos de avaliação e gênero.
- Baptista, m. N., baptista, a. S. D., & dias, r. R. Estrutura e suporte familiar como fatores de risco na depressão de adolescentes. *Psicologia: ciência e profissão*, v. 21, n. 2, p. 52–61, 2001. <https://doi.org/10.1590/s1414-98932001000200007>
- Biederman, j., et al. Adult outcome of attention-deficit/hyperactivity disorder: a controlled 16-year follow-up study. *Journal of clinical psychiatry*, v. 73, n. 7, 2012. <https://doi.org/10.4088/jcp.11m07529>
- Brathwaite, r., et al. Predicting the risk of depression among adolescents in nepal using a model developed in brazil: the idea project. *European child and adolescent psychiatry*, v. 30, n. 2, 2021. <https://doi.org/10.1007/s00787-020-01505-8>
- Chahal, r., gotlib, i. H., & guyer, a. E. Research review: brain network connectivity and the heterogeneity of depression in adolescence – a precision mental health perspective. In *journal of child psychology and psychiatry and allied disciplines*, v. 61, n. 12, 2020. <https://doi.org/10.1111/jcpp.13250>
- Davies, s. E., et al. Trajectories of depression symptom change during and following treatment in adolescents with unipolar major depression. *Journal of child psychology and psychiatry and allied disciplines*, v. 61, n. 5, 2020. <https://doi.org/10.1111/jcpp.13145>
- Diaz, a. P., et al. Adult outcomes of childhood disruptive disorders in offspring of depressed and healthy parents. *Journal of affective disorders*, p. 244, 2019. <https://doi.org/10.1016/j.jad.2018.10.086>
- Doering, s., et al. Childhood-onset versus adolescent-onset anxiety and depression: epidemiological and neurodevelopmental aspects. *Psychiatry research*, p. 312, 2022. <https://doi.org/10.1016/j.psychres.2022.114556>
- Grazioli, v. S., et al. Attention deficit hyperactivity disorder and future alcohol outcomes: examining the roles of coping and enhancement drinking motives among young men. *Plos one*, v. 14, p. 6, 2019. <https://doi.org/10.1371/journal.pone.0218469>
- Hennefield, l., et al. Changing conceptions of death as a function of depression status, suicidal ideation, and media exposure in early childhood. *Journal of the american academy of child and adolescent psychiatry*, v. 58, p. 3, 2019. <https://doi.org/10.1016/j.jaac.2018.07.909>
- Kehinde, f., et al. Cross-sectional and longitudinal associations between psychotic and depressive symptoms in depressed adolescents. *European child and adolescent psychiatry*, v. 31, n. 5, 2022. <https://doi.org/10.1007/s00787-020-01704-3>
- King, j. D., et al. The interpersonal–psychological theory of suicide in adolescents: a preliminary report of changes following treatment. *Suicide and life-threatening behavior*, v. 48, p. 3, 2018. <https://doi.org/10.1111/sltb.12352>
- Lima, a. F. B. P., & fleck, a. Qualidade de vida e depressão: uma revisão da literatura. *Revista de psiquiatria do rio grande do sul*, v. 31, p. 3, 2009. <https://doi.org/10.1590/s0101-81082009000400002>

Macpherson, h. A., et al. Relationship between cognitive flexibility and subsequent course of mood symptoms and suicidal ideation in young adults with childhood-onset bipolar disorder. *European child and adolescent psychiatry*, v. 31, p. 2, 2022. <https://doi.org/10.1007/s00787-020-01688-0>

Nakamura e, & jq, s. Depressão na infância. *Rev saúde pública*, v. 41, n. 1, p. 53–60, 2007.

Post, r. M., & grunze, h. The challenges of children with bipolar disorder. In *medicina (lithuania)*, v. 57, n. 6, 2021. <https://doi.org/10.3390/medicina57060601>

Ramos, v. A. B. Depressão na infância e adolescência. *Psicologia.pt*. 2018.

Rufino, n. C., et al. Treatment compliance and risk and protective factors for suicide ideation to completed suicide in adolescents: a systematic review. In *brazilian journal of psychiatry*, v. 43, n. 5, 2021. <https://doi.org/10.1590/1516-4446-2020-1026>

Dias, s. M. C., et al. Importância da identificação precoce do transtorno do espectro autista (tea) em crianças: uma revisão de literatura. *Brazilian journal of health review*, v. 5, n.6, p.24572-24583, 2022. <https://doi.org/10.34119/bjhrv5n6-212>

Scott, k., lewis, c. C., & marti, c. N. Trajectories of symptom change in the treatment for adolescents with depression study. *Journal of the american academy of child and adolescent psychiatry*, v. 58, n. 3, 2019. <https://doi.org/10.1016/j.jaac.2018.07.908>

Sharp, c., et al. Psychological mediators of the association between childhood emotional abuse and depression: a systematic review. *Frontiers in psychiatry*, v. 11, 559213, 2020. <https://doi.org/10.3389/fpsy.2020.559213>

Teixeira, l. N., et al. O impacto parental na formação dos hábitos e comportamentos alimentares: da infância a vida adulta. *Brazilian journal of health review*, v. 5, n.6, p. P.23022-23039, 2022. <https://doi.org/10.34119/bjhrv5n6-097>

Tompson, m. C., langer, d. A., & asarnow, j. R. Development and efficacy of a family-focused treatment for depression in childhood. *Journal of affective disorders*, 276, 2020. <https://doi.org/10.1016/j.jad.2020.06.057>

Turan, b., et al. Online challenges that emerge as a public health issue for adolescents: assessment of psychiatric comorbidity and the importance of parenting. *Arch clin psychiatry*. V. 48, n. 6, p. 245-249, 2021. <https://doi.org/10.15761/0101-60830000000315>.

Worsley, j. D., et al. Childhood maltreatment and problematic social media use: the role of attachment and depression. *Psychiatry research*, 267, 2018. <https://doi.org/10.1016/j.psychres.2018.05.023>