

## Health & Research Journal

Vol 5, No 4 (2019)

Volume 5 Issue 4 October - December 2019



Volume 5 issue 4 October – December 2019

### EDITORIAL

The problem of lower extremity burns in diabetics

### REVIEW

Comparison of enteral and parenteral nutrition in critically ill patient of Intensive Care Unit: a systematic review

The emergence of depression in teenagers and the role of health professionals

Biomarkers of acute kidney injury in a mixed ICU population. a narrative review

### RESEARCH ARTICLES

Contemporary stroke care delivered in a specialised stroke bay, a neurology ward and a medical ward in Greece



Published in cooperation with the Postgraduate Program "Intensive Care Units", the Hellenic Society of Nursing Research and Education and the Helerga

### The emergence of depression in teenagers and the role of health professionals

*Alexandros Argyriadis, Andria Tryfonos, Maritsa Gourni, Evanthis Asimakopoulou, Despoina Sapountzi-Krepia, Agathi Agyriadi*

doi: [10.12681/healthresj.22122](https://doi.org/10.12681/healthresj.22122)

### To cite this article:

Argyriadis, A., Tryfonos, A., Gourni, M., Asimakopoulou, E., Sapountzi-Krepia, D., & Agyriadi, A. (2019). The emergence of depression in teenagers and the role of health professionals. *Health & Research Journal*, 5(4), 134–149. <https://doi.org/10.12681/healthresj.22122>

## SYSTEMATIC REVIEW

## THE EMERGENCE OF DEPRESSION IN TEENAGERS AND THE ROLE OF HEALTH PROFESSIONALS

Alexandros Argyriadis<sup>1</sup>, Andria Tryfonos<sup>2</sup>, Maritsa Gourni<sup>3</sup>, Evanthia Asimakopoulou<sup>4</sup>, Despoina Sapountzi-Krepia<sup>5</sup>, Agathi Agyriadi<sup>6</sup>

1. Assistant Professor, Frederick University, Cyprus
2. RN, Frederick University, Cyprus
3. Professor, Frederick University, Cyprus
4. Lecturer, Frederick University, Cyprus
5. Professor, Frederick University, Cyprus
6. Lecturer, Cyprus University of Technology

DOI:

**Abstract**

**Introduction:** Depression is one of the most common mental disorders and a serious disease that plagues many people today who end up in this through their various problems. The prevention and treatment of adolescent depression is a major issue for the society and for this reason it is important to further study this issue.

**Aim:** This study aims to explore research studies about teenagers' depression and its effects as well as ways to prevent and address it. Moreover, it aims to seek all cultural and historical aspects of the individual and his/her family to further understand the issue.

**Material and Method:** This is a systematic review of research studies in the electronic databases EBSCO, MedLine, Pubmed journals and books and articles referring to the issue of teenage depression.

**Results:** This systematic review showed that depression is a daily occurrence that affects many people and that adolescents with depression tend to multiply rather than diminish. Among the most important methods of treatment are psychotherapy and reading books.

**Conclusions:** Young people with depression problems find difficulties in their performance in school and society and often have changes in their eating habits as they stretch their weight very often. The consequence of all the above is often suicidal behavior and suicidal tendencies or even thoughts of suicide. So the necessary prevention is needed to avoid unpleasant situations.

**Key words:** : Depression, Adolescence, prevention, depression treatment.

**Corresponding Author:** Alexandros Argyriadis, Frederick University, 7 Y. Fredericou Nicosia, Cyprus, e-mail: alexargiriadis@gmail.com

Cite as: Argyriadis, A., Tryfonos, A., Gourni, M., Asimakopoulou, E., Sapountzi-Krepia, D. Argyriadi, A. (2019). The emergence of depression in teenagers and the role of health professionals. *Health and Research Journal*,5(4),143-158. <https://ejournals.epublishing.ekt.gr/index.php/HealthRes/>

## INTRODUCTION

Taking into account the European commission's report of 2008 on the depressive teenage Cypriots, we decided to conduct a systematic review of adolescent depression. The teenagers in Cyprus who were questioned felt "happy", "full of life" and had "much energy" in excess of the average. (Most of these feelings were rated as "continuous" or "sometimes" at 65%, 66% and 64%, respectively, as opposed to the EU average of 61%, 59% and 51% for each descriptor.) In addition, fewer people felt "downhill" and "disillusioned and sad" (77% and 70% of respondents had never or rarely had these feelings compared to 74% and 66% of the corresponding EU averages for each emotion). However, the Cypriots studied felt "particularly tense", "exhausted" and "tired" more often than Europeans. They felt "continuous" or "most of the time" at 29%, 16% and 27% as opposed to the EU average of 15%, 13% and 20%, respectively.<sup>1</sup>

A small percentage of Cypriot respondents sought professional assistance for a psychological or emotional problem encountered at a rate close to the EU average (14% compared to 15%). This percentage has increased significantly since 2006 (+4 percentage points). Throughout the survey, most participants said they took antidepressants to treat depression (67%) but not to address anxiety (38%), while in the rest of Europe, the proportion is the same for both depression and of anxiety. In addition, 19% of Cypriots who received antidepressants took them to boost efficiency, as opposed to 8% of Europeans who took it for the same reason.

Across Europe, depression is a condition affecting all ages. It is all the more so for young people who are in a sensitive age of life, including those in puberty who are facing many problems for the first time. However, the causes, factors and even the effects of depression differ from person to person.<sup>2</sup> Thus, it is necessary to investigate the condition of depression, as well as the issues that can lead to the loss of life, the most serious outcome.

Depression in adolescence is not uncommon, but in most cases, it goes unnoticed. Many blame adolescent immaturity and behavior.<sup>3</sup> A large percentage of students feel sad or melancholic at some point in time. Boys generally are more satisfied

with their lives than girls. In fact, depressive states can be as high as 20%, while a diagnosis with full DSM criteria may be estimated at 4-5%. Depression is manifested by symptoms of "chronic" fatigue, psychosomatic illness, a tendency to isolation, unjustified aggression, persistent insomnia, reduced school performance and an appetite disorder. When there is no supportive relationship, a teen can become suicidal.<sup>3,4</sup>

Depressed teenagers experience feelings of deprivation, intense loneliness and abandonment. They often punish themselves because they do not think logically or know how to express themselves in words.<sup>5</sup> Teenage depression is not limited and can afflict any young person.<sup>6</sup> As the incidence of depressive disorders is rather high, it is very important not only for medical specialists in the field but also for the whole population to be aware of prevention and treatment. According to a WHO survey in 2011,<sup>7</sup> 15% of the world's population suffers from a depressive disorder. This means that there is a patient in any circle of relatives, acquaintances or friends. Unfortunately, even today, the problem is ignored or not properly diagnosed. Yet every day, someone is talking about "depression" even if the person in question is simply moody. However, as the number of episodes increases, the risk of recurrence grows, making careful treatment is very important.<sup>7</sup> Overall, the research on teenage depression is relatively limited as shown below.

## Aim

The aim of this study was to explore Greek and international research literature on depression and its effects on teenagers.

## Material and Method

A systematic review was conducted for the period between 2015 and 2019. The search method which used for the review of relevant Greek and international literature was in the PMC, PubMed, Proquest, Medline, Google databases scholar and Proquest. A search of the bibliography in these databases was done both in a simple and combined way using keywords like "depression", "adolescence", "prevention" and "treatment", with the addition of "and/or."

## Entry criteria

- Studies should be written in the Greek and English language
- They should have full access to content.
- They should come from approved scientific journals
- The articles date should be from 2015-2019
- Clinical trials, epidemiological studies, prospective studies, systematic reviews and post-analyses are accepted

#### **Exclusion-limitation criteria**

- Restricted articles and abstracts
- Articles not available in English or Greek
- Literature reviews

#### **Results**

The results are presented in two thematic units; The first one is about addressing the problem of depression in teenagers and the second in preventing it.

The first search resulted in 169 articles. Since the first survey, 75 were blocked because of bibliographic reviews, leaving 94 for further evaluation. After careful reading of the titles, another 49 studies were rejected and 45 studies for further evaluation were obtained. After the study entry and exclusion criteria were taken into consideration, 23 articles remained, which were analysed at a later stage. Diagram 1 shows the systematic steps from the initial search of the literature to the final articles included in the overall review.

#### **Addressing the problem**

Jakobsen et al., in 2011 studied the effects of cognitive therapy in patients with a major depressive disorder. The survey was conducted at the Copenhagen Hospital in Denmark. According to the results, a major depressive disorder affects about 17% of people during their lifetime, causing them enormous discomfort and cost. The cognitive treatment approach was found to be an effective therapeutic option. The research used with a systematic assessment methodology, with meta-analyses and sequential randomized trials, comparing the results of "routine" cognitive therapy for major depressive disorders. Of the 719 participants aged 17 and over, a risk of bias was found. Cogni-

tive therapy may not be considered an effective treatment, but its effect is well known.<sup>8</sup>

Wilkinson et al., in 2013, investigated the treatment of depressive symptoms and disorders in adolescents. The degree of depression was reported in anxiety-related scales. The sample consisted of 658 healthy adolescents at increased risk for presentation. The study applied a regular non-linear coefficient to gather data from three self-reporting questionnaires to investigate whether separate cases were associated with depression and anxiety. It was then examined if rumination could be predicted independently of depressive disorder and symptoms during the subsequent 12 months, after adjusting for relevant factors. The results of the study showed a single factor associated with the cognitive symptoms of depression, and the physical symptoms of depression and anxiety. Increased predictions of the onset of depressive disorders throughout the year were made ( $p = 0.035$ ), along with the levels of the depressive symptoms after 12 months ( $p < 0.0005$ ), factoring in adjustments for previous levels. The conclusion of the study was that high rumination predicts the onset of a depressive disorder in healthy adolescents. Treatment to reduce rumination and increase the resolution of attention distraction can reduce the appearance and rates of recurrence.<sup>9</sup>

Kasteenpohja et al., in 2015, aimed to describe treatments for depression, showing the factors related to the adequacy of therapy and withdrawal for a sample of Finnish young adults. Representatives of a two-stage 1894 group of 19- to 34-year-olds answered a questionnaire about mental health. They also underwent a mental health assessment, including a SCID interview. A sample of mental health records was taken for treatment correlated with the final diagnostic assessment. Based on all available information, patients received antidepressant medication for at least two months and had at least four visits to a doctor with at least eight psychotherapy sessions within 12 months; but this was considered to be the least appropriate treatment. The treatment was abandoned if the strategy was deemed sufficient according to the case records, but the patients did not stop their visits. The results further showed that the participants with depressive disorders ( $n = 142$ ) at 40.9%, received inadequate treatment. In the multiple regression ac-

counting models, substance abuse and female gender were associated with at least one visit to a specialist, while for patients experiencing a major depressive disorder, it was associated with visits to a physician at least FOUR times a year. Women were more likely to receive psychotherapy, lasting for at least eight sessions in a year. A low education level and history of suicide attempts were associated with an increased chance of treatment abandonment. The proposed treatment in the present study is better than what has been shown in past research; but more work is needed to provide the most appropriate treatment for young adults, especially those with a low level of education that may lead them to suicide.<sup>10</sup>

Rohde et al., in 2012, conducted a study aimed to identify subgroups of adolescents with increased depressive symptoms who were more likely to develop into a future major / minor depressive disorder. On the basis of depression risk factors, they were asked to participate in depression programs to assess the impact of preventive interventions. The sample consisted of adolescents (N = 341) with increased depressive symptoms, who were randomized into one of four prerequisite intervention conditions (cognitive-behavioral group, supportive-expressive group, cognitive behavioral therapy and audit training leaflet). Within two years of follow-up, 14% of the participants experienced the onset of a major / minor depressive disorder. Negative interventions were the most important risk factor for young people with high scores who showed a four-fold increase in depression compared to those who did not receive this treatment. The results show that two main pathways to depression have adverse effects and cause increased depressive symptoms in this population, suggesting that libiotherapy can compensate for the most significant risk of depression in this sample.<sup>11</sup>

Niciu et al., in 2014, studied the treatment of major depressive disorders (MDDs) for more than 50 years, which is still prevalent today in the available treatment options. The brain neurons used as the primary monounsaturated neurotransmitter is <20%. In addition, most patients treated with antidepressant monoaminergic drugs had significant residual symptoms and showed psychosocial disability as well as several side effects, e.g., sexual dysfunction. Over the last few decades, there has

been a greater focus on the major stimulant neurotransmitter in the human brain, glutamate, pathophysiology and MDD therapy. Several preclinical human studies along with magnetic resonance spectroscopy have looked into brain abnormalities, and it is postulated that some are triggered by ketamine as a rapid and powerful antidepressant even in the most resistant MDD patients, including those who fail to respond to electroconvulsive therapy and have an active suicidal ideation. The study sample consisted of patients with depressive disorders in which glutamate malfunction was diagnosed. They discovered the progression of topical fast-acting antidepressants and other glutamate receptor modulators (including proprietary drugs) for treatment-resistant depression.<sup>12</sup>

Auerbach et al., in 2014, conducted a study to examine cognitive and interpersonal prognostic stressors and subsequent depression in adolescents. Adolescents (n = 157, boys = 64, girls = 93) aged 12 to 18 years participated for 6 months in a multi-center diachronic study examining the effect of the negative dimensions of self-criticism and dependence on anxiety and depression. The results of the analyses showed that the occurrence of stress is mediated by a relationship between cognitive vulnerability and depressive symptoms over time. At the same time, self-criticism anticipates the interior style and other dimensions. Contrary to our assumptions, dependence does not contribute to the emergence of stress; and, moreover, no gender differences arise. Overall, the findings suggest that self-criticism may be particularly harmful at puberty, a time of vulnerability; and more attention may be needed in the context of psychotherapeutic interventions.<sup>13</sup>

Hilla et al., in 2014, investigated the presence of depressive symptoms (Subd) in puberty associated with the high prospective risk of developing a Major Depressive Disorder (MDD). Few known variables predict an escalation from Subd to MDD. Their study used a longitudinal future design for a sample of a community of adolescents to identify risk factors in combinations for scaling from Subd to MDD. Tree analysis and classifications were used to identify various combinations of risk factors that improved the sensitivity and specificity of the prediction of an MDD event among 424 adolescents with a history of Subds. Of the 424, 144 MDDs were developed during the mon-

itoring period. Evidence for multiple subgroups was also found. For adolescents with poor friend support, the greatest risk of escalation was found among participants with reports of anxiety or a substance abuse disorder. Among adolescents with a high level of support from a friend, those reporting multiple major life events in the past year or a history of anxiety disorder were at a higher risk for escalation. Limitations of the study revolve around prevention efforts for individuals who develop Subd in adulthood. This study did not look at the timing of the prognostics involved in the escalation from Subd to MDD. In short, adolescents with a history of Subd were at a higher risk of escalating to MDD in the presence of poor friend support and anxiety disorder or substance use, with their history of multiple major life events. The findings warn of hypothetical approaches to teenage depression in prevention programs.<sup>14</sup>

Grosso et al., in 2014, investigated improvements in depressive symptomatology. Their aim was an updated meta-analysis of randomized controlled trials (TMF) of omega-3 polyunsaturated fatty acids to treat depressive disorder, taking into account the differences between the clinical patients included in their study. The method used was to search in Medline, Embase, PsycInfo and the Cochrane database of RCT on the use of omega-3 polyunsaturated fatty acids in patients with depressive symptoms published up to August of 2013. The standardized mean difference in the clinical practice of depression severity was the primary outcome. The type of omega-3 used (in particular, eicosapentaenoic acid [EPA], docosahexaenoic acid [DHA] and omega-3 as mono- or adjuvant therapy were also examined.

Regression analysis evaluated the results based on size, the baseline severity of the depression, the duration test, the omega-3 dose and the age of the patients. Meta-analyses 11 and 8, respectively, were performed on patients with a DSM-defined major depressive disorder (MDD) and those with depressive symptomatology, but not an MDD diagnosis. An important clinical benefit of omega-3 polyunsaturated fatty acid therapy was demonstrated compared to the placebo (the standard difference in SD effect model: 0.56 [95% CI: 0, 20, 0.92] and 0.22 SD [95% CI: 0.01, 0.43], respectively. The assay analysis was 0.38 SD [95% CI: 0.18, 0.59]). EPA was mainly used in prepara-

tion, despite DHA, and it showed the ultimate clinical efficacy. Significant clinical efficacy came with the use of omega-3 PUFAs as an adjuvant rather than monotherapy. No relationship was seen between efficacy and size, the severity of the depression, the duration trial and the age of the patients.<sup>14</sup>

Depression and anxiety are very common in people with chronic obstructive pulmonary disease (COPD), and they are associated with excessive morbidity and mortality. Patients prefer non-drug therapies and the clinical, non-pharmacological interventions as the first-line treatment for these conditions as related to long-term illness. However, the efficacy of a psychological lifestyle with interventions in COPD patients is not known. This study looked at the lifestyles of adults with COPD interventions and measured the symptoms of depression and anxiety. Thirty independent comparisons of twenty-nine randomized controlled trials (n = 2063) were included in the meta-analysis. Overall, psychological interventions are associated with minor reductions in the symptoms of depression and anxiety after pharmacotherapy. What boosts treatment is strength training, found to reduce symptoms of anxiety and depression in patients with COPD, regardless of the severity. The study stresses the importance of promoting physical activity in this population.<sup>16</sup>

A similar systematic study investigated whether additional treatment is essential for help adults with depression. It is a fact that atypical antipsychotic drugs widely prescribed for the treatment of depression have several and yet unclear dangers. The study involved fourteen short-term trials of aripiprazole and a olanzapine / fluoxetine combination (OFC) risperidone. The duration of the study ranged from 4 to 12 weeks. The researchers found that atypical antipsychotic drugs are essential for the complementary treatment of depression, and they are effective in reducing depressive symptoms along with medical intervention.<sup>17</sup>

Strunk, Catherine M., et al. in their research in 2014, conducted a secondary analysis of the Surviving the Teens® program evaluation to determine its effect on help-seeking behaviors among troubled youth. Results showed significant increases in mean scores of the Behavioral Intent to Communicate with Important Others Regarding Emotional Health Issues subscale



( $p < .0005$ ) from pretest to 3-month follow-up. There was a significant increase ( $p = .006$ ) in mean scores of the Behavioral Intent Regarding Help-Seeking Behaviors when Suicidal subscale from pretest to posttest, but not at 3-month follow-up. Also, there was a significant increase ( $p = .016$ ) in mean scores in the item "I would tell an adult if I was suicidal" from pretest to 3-month follow-up. These findings suggest that the Surviving the Teens program has a positive effect on help-seeking behaviors in troubled youth.<sup>18</sup>

Hess, Sally G., et al. in 2004 conducted a research about adolescent depression and suicide that are major public health concerns. The Adolescent Depression Awareness Program (ADAP) was developed to address depression education as an effective means towards decreasing the morbidity and mortality associated with adolescent depression. Adolescents' baseline knowledge about depression was assessed to enhance curriculum development. The survey was administered to 5,645 high school students between 1999 and 2003. Results indicated that students had a cursory knowledge of depression facts but had gaps in knowledge about treatment and symptom identification.<sup>19</sup>

Lusk, Pamela, and Bernadette Mazurek Melnyk conducted research in 2011, with the aim to assess the feasibility and effects of a brief manualized seven-session cognitive—behavioral skills building intervention entitled COPE (Creating Opportunities for Personal Empowerment) delivered to 15 depressed adolescents in routine 30-minute mental health medication management outpatient visits. A preexperimental one group pre- and post-test design was used. Adolescents reported significant decreases in depression, anxiety, anger, and destructive behavior as well as increases in self-concept and personal beliefs about managing negative emotions. Evaluations indicated that COPE was a positive experience for teens and parents. COPE is a promising brief cognitive—behavior therapy—based intervention that can be delivered within 30-minute individual outpatient visits. With this intervention, advanced practice nurses can work with practice time limitations and still provide evidence-based treatment for depressed teens.<sup>20</sup>

King, Keith A., Catherine M. Strunk, and Michael T. Sorter conducted study in 2011, that examined the immediate and 3-

month effect of Surviving the Teens® Suicide Prevention and Depression Awareness Program on students' suicidality and perceived self-efficacy in performing help-seeking behaviors. High school students in Greater Cincinnati schools were administered a 3-page survey at pretest, immediate posttest, and 3-month follow-up. A total of 1030 students participated in the program, with 919 completing matched pretests and posttests (89.2%) and 416 completing matched pretests and 3-month follow-ups (40.4%). Students were significantly less likely at 3-month follow-up than at pretest to be currently considering suicide, to have made a suicidal plan or attempted suicide during the past 3 months, and to have stopped performing usual activities due to feeling sad and hopeless. Students' self-efficacy and behavioral intentions toward help-seeking behaviors increased from pretest to posttest and were maintained at 3-month follow-up. Students were also more likely at 3-month follow-up than at pretest to know an adult in school with whom they felt comfortable discussing their problems. Nine in 10 (87.3%) felt the program should be offered to all high school students.<sup>21</sup>

Fornos, Laura B., et al in 2005, conducted research about adolescent depression. Sixty-five high school and middle school students in a largely Mexican American, urban school district in San Antonio, Tex, participated in 9 semistructured, focus group interviews where participants were asked questions to elicit their understanding of depression, treatment for depression, and words used to describe it. Coding of salient words and themes from transcribed interviews were entered into Atlas.ti for qualitative analysis. Three themes emerged: (1) adolescents' definitions of depression, (2) beliefs about adolescent depression, and (3) treatment for adolescent depression. While depressive symptoms among Mexican American adolescents are common and recognized, resource and treatment knowledge is scarce. An understanding of the beliefs, attitudes, and knowledge of these adolescents can provide crucial information about the content and structure of a universal, school-based, peer-facilitated depression awareness program.<sup>22</sup>

Farmer, Terri J. in 2002 found out that approximately 70% of adolescents with major depression are not receiving adequate assessment and treatment due, in part, to an incomplete pic-

ture of the disorder. Current conceptualizations of depression in adolescence have not adequately addressed integration of developmental principles, salient contextual events, and the adolescent viewpoint of precipitators, symptoms, and treatments. The purpose of this study was to describe the experience of major depression from the adolescent's perspective to provide a more comprehensive description of the disorder. Using a phenomenologic approach, in-depth interviews were conducted with five depressed adolescents, ages 13-17. Data analysis, using an adaptation of Colaizzi's method, resulted in eight theme categories. The essential structure of the experience was formulated from all data. Adolescents focused on anger, fatigue, and interpersonal difficulties as characteristic of depression. The results call for increased awareness of the unique aspects of adolescents, an examination of adolescent-accessible services, and further clarification of the roles of friends and siblings in the disorder.<sup>23</sup>

### Preventing the problem

Lewinsohn et al., in 1999, conducted research on the risk factors of the differential for depression. They tested a teen community (N = 1709), some of whom had a history of major depressive disorder (MDD N = 286) and some of whom did not (n = 1,423). Regarding the etiology of the recurrent episodes, the authors hypothesized that a dysphoric disposition and dysfunctional thinking should be more closely related among those with a previous history than those with no history. Moods, symptoms of distress and dysfunctional thinking would be a stronger predictor of recurrent episodes (n = 43) than the first onset (n = 70); and great anxiety would be a stronger predictor of the first as opposed to recurrent episodes. In the present study, information was obtained from adults with a psychiatric condition, totalling 82% of the total sample. The depressive group was at increased risk for emotional disturbances in adulthood and, furthermore, had an increased risk for psychiatric hospitalization and psychiatric treatment. These findings suggest that there is a considerable difference in the aftermath of emotional disorders between childhood and adulthood.<sup>24</sup>

A study by Jeanne et al., in 2012, examined the relationship

between depressive symptoms in relation to sleep in older women. The survey was conducted in the United States among 30,305 community members, aged  $\geq 70$  years old. Measurement-depressive symptoms were evaluated on the geriatric depression scale, in which participants described them as "normal" (0-2, reported), "some of the symptoms of depression" (3-5), or "depression" ( $\geq 6$ ). Sleep and daily sleepiness were assessed. The study found women with some of the symptoms of depression (OR 1.82, CI 1.48 - 2.24) and full depression (OR 2.84, CI 2.08 - 3.86), while some reported poor sleep (PSQI > 5). Women with some of the symptoms of depression (OR 1.97, CI 1.47 - 2.64) and full depression (OR 1.70, CI 1.12 - 2.58) were more likely to experience excessive daytime sleepiness (ESS > 10).<sup>25</sup>

In a study on the association of sleep disorders with depression, it was investigated whether sleep-related disorders and anxiety in patients diagnosed with pancreatic adenocarcinoma fostered depression. The patients were evaluated during an initial consultation and later after visits to a university interdisciplinary cancer clinic. Cross-term and longitudinal problems for psychosocial anxiety were evaluated using the personal questionnaire Health (PHQ 9) to screen for depression. Twenty-two patients diagnosed with pancreatic cancer participated during the six-month pilot study. Eventually, they were followed by 13 more. On the whole, the study found mild to moderate symptoms of depression, anxiety, and possible sleep problems were common. The primary outcome of the study revealed that 23% of the patients who were part of the pilot project were deemed positive for moderately severe symptoms of major depression, possibly anxiety disorder or a possible sleep disorder.<sup>26</sup>

In another specific study, 180 patients were studied. Up to 70% of adolescents with moderate to severe unipolar major depression responded to psychological treatment with fluoxetine (20-50 mg) to reduce their symptoms and improve the social functioning. They reported after 24 weeks of starting treatment. Approximately 20% of the non-depressed responded, and 30% of the depressed indicated relapse within two years. The specific efficacy of the various psychological therapies with coordinators and mediators on the risk of relapse is unclear. Improving



mood with psychoanalytic and cognitive therapy will determine whether Cognitive Behavioral Therapy or psychoanalytic treatment is superior in reducing recurrence compared to clinical care.<sup>27</sup>

In another vein, Frances et al., (2012) studied a transcriptional randomized controlled trial phase. Depression is a common condition that usually has a recurrent course. Effective interventions for relapse have the potential to drastically reduce the prevalence of repeated episodes. The purpose of this particular test was to examine the clinical significance and health of the economy under real circumstances and explore where efforts have been made to evaluate and prevent episodes in the control group. This study was designed as a prospective, single-blind, randomized, controlled project to compare intervention and self-monitoring. The 204 participants had a history of three or more episodes of major depression, but they are now well. The results include clinical, functional and health outcomes, used to assess the role this treatment approach might have for the treatment of depression in Australia and elsewhere.<sup>28</sup>

In a randomized, controlled study of the family, behavioral prophylactic intervention for children of depressed parents was studied in a sample of 111 families. The results were evaluated two months after the completion of four monthly sessions and their follow-ups. The children were 9-15 years old. From the internalization and outreach reports, it was found that each child with a symptomatic parent had a major depressive disorder. The data revealed significant differences in the intervention family of two children with depressed parents. The most severe consequence was seen in a child after a 12-month assessment with an average magnitude of effect on most measures.<sup>29</sup>

Boris et al., (2004) studied the possibility of psychosocial factors that cause depression. They used a group of pre-adolescent boys (n = 46) and females in post-adolescence (n = 22). They were evaluated with structured interviews on psychopathology and parental psychiatric history and were followed once every two years for about five years. With the exception of most depressive symptoms in melancholic adolescents, the two groups had similar symptoms. Psychopathology was associated with a longer course. In general, a major depressive dis-

order is similarly manifested in children and adolescents, as both groups have a prolonged clinical course caused by surrounding psychosocial factors.<sup>30</sup>

## Discussion

It is a fact that the prevention and treatment of teenage depression is a major issue because of the particular situation of the economy and the deterioration of our society. Through this research, depression will be seen as a daily phenomenon, with depressed teens tending to increase rather than decrease.

One of the most important ways of dealing with depression is cognitive therapy, which may not be considered an effective treatment, but it is well known in the research.<sup>5,8</sup> At the same time, a high degree of rumination predicts the onset of depressive disorder in healthy teenagers. Treatment that reduces rumination and increase the resolution of attention distraction can reduce the occurrence and rates of relapse.<sup>9</sup>

For patients who have experienced major depressive disorder, their treatment has been associated with visits to a physician at least four times a year.<sup>11</sup> Then there are those patients who received antidepressant medication for at least two months, with at least four visits to any type of physician, at least eight psychotherapy sessions within twelve months, or a minimum of four days of hospitalization.<sup>10,27</sup>

Women were more likely to have received some degree of psychotherapy, at least eight sessions in a year. At the same time, a low education level and history of suicide attempts have been associated with the presence of depression.<sup>10, 11</sup> Depression programs for general symptoms in this population suggest that libiotherapy may compensate for the most important risk of depression in this sample.

The same data emerged when the researchers considered that people with depression have suicidal tendencies.<sup>17</sup> What gives a boost to treatment is the use of strength training, found to reduce symptoms of anxiety and depression in people with COPD regardless of the severity, highlighting the importance of promoting physical activity in this population.<sup>17</sup> Among adolescents with poor friend support, the greatest risk of escalation was found among participants with stress or a substance abuse disorder.<sup>14</sup>

By contrast, other research shows that antipsychotic drugs are essential for the complementary treatment of depression and are effective in reducing depressive symptoms using medical intervention. Drugs may be particularly harmful at the vulnerable time of puberty, and more attention may be needed to psychotherapeutic interventions.<sup>14</sup>

As a rule, patients are urged to become more closely related to psychological treatment and prevention parameters than to medication. Among adolescents with poor friend support, the greatest risk of escalation was among participants with reports of anxiety or a substance abuse disorder. Among adolescents with a high level of support from a friend, those who experienced multiple major life events within the past year or have a history of anxiety disorder were at a higher risk of escalation.<sup>14,17</sup>

### Conclusions

Adulthood is socially sanctioned in a different way and at a different time, according to the cultural values of each society. Young people with depression face problems in concentration, school performance and in society. They often exhibit changes in their eating habits and often gain weight.

Until recently, nurses and other specialists rarely thought that teenagers experienced some kind of depression. However, studies (VanDenKerkhof et al., 2013, Verbeek et al., 2012) show that this age group suffer from this disorder, with symptoms similar to those of adults. Extensive studies, such as Fenton et al., (2000), have identified the symptoms of "major depression." In children, classical symptoms can be disguised as behavioral problems or physical annoyances. For a correct diagnosis, at least five symptoms should be present and affect daily functioning for at least two weeks.

The culmination of untreated symptoms may be suicidal attempts, or even thoughts of suicide. At the same time, depression can cause enormous problems and the health of the affected may be irreparably affected by its aftermath. In sum, suicide, eating problems and sleep disturbance are some of the problems that arise.

That is why prevention is necessary to avoid unpleasant outcomes. Relatives and/or friends can contribute to the success

of patient therapy by encouraging their loved ones to focus on healing and practice coping techniques and problem-solving skills learned in psychotherapy (Argyriadou et al., 2001). Cognitive therapy may not be considered an effective treatment, but its role is well known as seen in many studies. The cognitive and physical symptoms of depression and stress indicate that the onset of stress mediates between cognitive vulnerability and depressive symptoms over time.

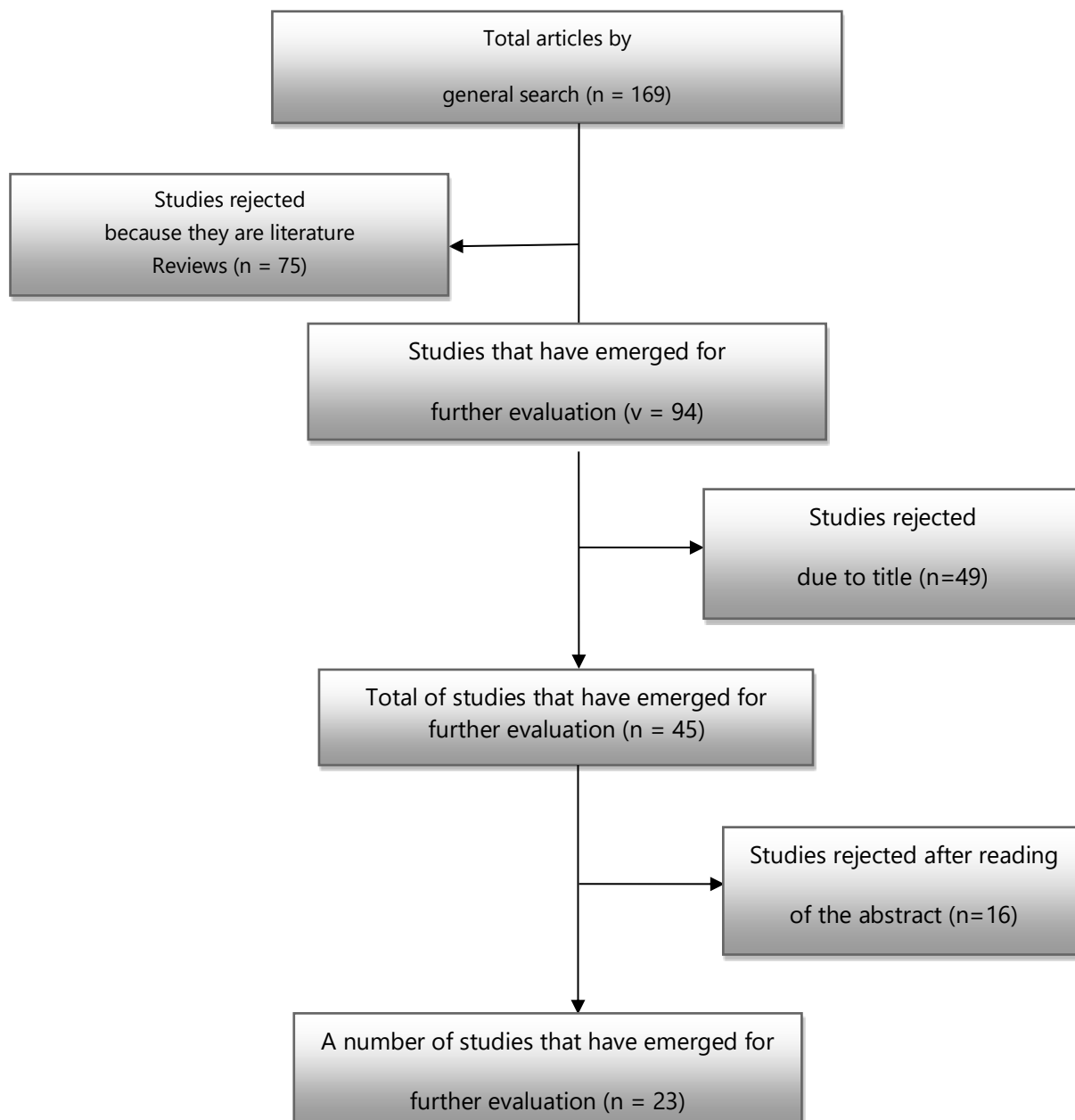
### REFERENCES

1. Stuckler D, et al. Effects of the 2008 recession on health: a first look at European data. *The Lancet* 2011; 3 (1): 124-125.
2. Kontaxakis V P, Havaki-Kontaxaki B J, Stamouli S S, Margariti M M, Collias C T, & Christodoulou G N. Comparison of four scales measuring depression in schizophrenic inpatients. *European Psychiatry* 2000; 15(4): 274-277.
3. Blum R. *Young people: not as healthy as they seem*, Lancet 2009; 374 (1) : 853-54.
4. Sotiropoulou-Zormpala M, and Argyriadi A. Utvrđivanje karakteristika estetskih aktivnosti zanesenosti u vrtiću i prvom razredu osnovne škole. *Croatian Journal of Education: Hrvatski časopis za odgoj i obrazovanje* 17.Sp. Ed. 3 (2015); 227-259.
5. [Galvan A](#), [Hare T A](#), [Parra CE](#), [Penn J](#), [Voss H](#), [Glover G](#), [Casey BJ](#). Earlier development of the accumbens relative to orbitofrontal cortex might underlie risk-taking behavior in adolescents. *J Neurosci*.2006; 26(25):6885-92.
6. Mystakidou K, et al. Self-efficacy beliefs and levels of anxiety in advanced cancer patients. *European journal of cancer care* 2010; 19 (2): 205-211.
7. WHO, UNAIDS, and Unicef. Global HIV/AIDS response: epidemic update and health sector progress towards universal access. *Progress report* 2011.
8. Jakobsen JC., Hansen JL, Storebø OJ, Simonsen E, Gluud C. *The Effects of Cognitive Therapy Versus 'Treatment as Usual' in Patients with Major Depressive*

- Disorder. *PLoS ONE* 2004; 6(8): 172-183.
9. Wilkinson P, Croudace T. and Goodyer I. *Rumination, anxiety, depressive symptoms and subsequent depression in adolescents at risk for psychopathology: a longitudinal cohort study* England 2013; 13(1): 250.
  10. Kasteenpohja T, Marttunen M, Aalto-Setälä T, Perälä J, Saarni S, and Suvisa J. *Treatment received and treatment adequacy of depressive disorders among young adults in Finland*. Filland 2015; 15 (1):47.
  11. Rohde P, Stice E, and Jeff M. *Effects of Three Depression Prevention Interventions on Risk for Depressive Disorder Onset in the Context of Depression Risk Factors*. 2012;13(6): 584–593
  12. Niciu M, Ionescu D, Richards E, and Zarate C. *Glutamate and its receptors in the pathophysiology and treatment of major depressive disorder*. USA 2014; 121(8): 907–924.
  13. Auerbach P, Ho-Ringo M, Kim J. *Identifying Cognitive and Interpersonal Predictors of Adolescent Depression*. Belmont *Abnorm Child Psychol*. 2014; 42(6): 913–924.
  14. Hilla R, Pettita J, Lewinsohnb P, Seeleyb J, Kleinc D. *Escalation to Major Depressive Disorder among Adolescents with Subthreshold Depressive Symptoms: Evidence of Distinct Subgroups at Risk*. *Affect Disord*. 2014; 158: 133–138.
  15. Grosso G, Pajak A, Marventano A, Castellano S, Galvano F, Bucolo C, Drago F, CaraciGrosso G, Pajak A, Marventano S. *Randomized Clinical Trials. Role of Omega-3 Fatty Acids in the Treatment of Depressive Disorders: A Comprehensive Meta-Analysis of Randomized Clinical Trials*. Peru 2014; 2(1): 29-32.
  16. Argyriadis A, Argyriadi A and Marvaki Ch. Beliefs and attitudes of caregivers of autistic children on special diets and their effectiveness. *The Rostrum of Asclepius* 2015; 1(2):203-220.
  17. Coventry A, Peter A, et al. The effect of complex interventions on depression and anxiety in chronic obstructive pulmonary disease: systematic review and meta-analysis. *Plos one* 2013; 8(4):e60532.
  18. Argyriadis A, and Argyriadi A. Mobile apps for students with autistic spectrum disorders. Nova Science Publishers, Inc., 2017.
  19. Strunk L, Catherine M, et al. Emotionally troubled teens' help-seeking behaviors: An evaluation of surviving the teens® suicide prevention and depression awareness program. *The Journal of School Nursing* 2014; 30(5): 366–375.
  20. Hess, Sally G, et al. A survey of adolescents' knowledge about depression. *Archives of psychiatric nursing* 2004; 18(6): 228–234.
  21. Lusk P, and Bernadette M. The brief cognitive-behavioral COPE intervention for depressed adolescents: Outcomes and feasibility of delivery in 30-minute outpatient visits. *Journal of the American Psychiatric Nurses Association* 2011; 17(3): 226–236.
  22. King K A., Catherine M. Strunk, and Michael T. Sorter. Preliminary effectiveness of surviving the Teens® Suicide Prevention and Depression Awareness Program on adolescents' suicidality and self-efficacy in performing help-seeking behaviors. *Journal of school health* 2011; 81(9): 581–590.
  23. Fornos L B, et al. A qualitative study of Mexican American adolescents and depression. *Journal of School Health* 2005; 75(5): 162–170.
  24. Farmer, Terri J. The experience of major depression: adolescents' perspectives. *Issues in Mental Health Nursing* 2002; 23(6): 567–585.
  25. Lewinsohn P.M. *A behavioral approach to depression*. In: Friedmann, R.J. & Katz, M.M. (Hg.) *The psychology of depression*. New York 1999; Wiley.
  26. Jeanne et al. *Depressive Symptoms and Subjective And Objective Sleep In Community-Dwelling Older Women*. *J Am Geriatr Soc*. April 2012; 60(4): 635–643
  27. Andrew et al. *Screening for Depression, Sleep-Related Disturbances, and Anxiety in Patients with Adenocarcinoma of the Pancreas: A Preliminary Study*. USA; 2012.

28. Goodyer et al. *Improving mood with psychoanalytic and cognitive therapies* (IMPACT): a pragmatic effectiveness superiority trial to investigate whether specialised psychological treatment reduces the risk for relapse in adolescents with moderate to severe unipolar depression: study protocol for a randomised controlled trial 2011; 11(1):12-175.
29. Dugas M J, Andrea S, and Kylie F. Brief report: Intolerance of uncertainty, worry, and depression. *Cognitive Therapy and Research* 2004; 28(6): 835-842.
30. Alexopoulos G S, et al. Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study. *American Journal of Psychiatry* 2009;166(8): 882-890.
31. Campo J V, et al. Recurrent abdominal pain, anxiety, and depression in primary care. *Pediatrics* 2004; 113(4): 817-824.

## ANNEX

**Diagram 1.** Flow chart of the research process

**TABLE 1:** Results of the research process

<b>Name of re-searchers</b>	<b>Release date</b>	<b>Sample &amp; Purpose</b>	<b>Main Findings</b>
Jakobsen et al.	2011	Studied the effects of cognitive therapy in patients with major depressive disorder. The survey was conducted at the Copenhagen hospital in Denmark.	Of the 719 participants aged 17 and over, it was found that in all investigations there was a risk of bias. Cognitive therapy may not be considered an effective treatment, but its role is well known as seen in many studies.
Wilkinson et al.	2013	Investigated the treatment of depressive symptoms and depressive disorders in adolescents. Depression was reported in anxiety-related scales. The sample consisted of 658 healthy adolescents with an increased risk of psychopathology.	The results of the study showed there was a single factor associated with those that represent the cognitive symptoms of depression, the physical symptoms of depression and anxiety. Increased predictions for the onset of depressive disorders throughout the following year ( $p = 0.035$ ) and depressive symptoms levels from 12 months ( $p < 0.0005$ ), after adjustment for previous levels of anxiety and depression. The conclusion of the study was that a high degree of rumination predicts the onset of depressive disorders in healthy adolescents.
Kasteenpohja et al.	2015	They aimed to describe therapies received for depressive disorders, presenting the factors related to the adequacy of treatment, and using the treatment in the Finnish sample from the general population of young adults. The method used was a representative sample of a two-stage 1894 Finnish group of 19- to 34- year olds.	The results showed that 40,9% of participants with depressive disorders ( $n = 142$ ) received inadequate treatment. In the multiple regression accounting models, substance abuse and the female gender were associated with at least one specialist visit while for patients with a major depressive disorder, they were associated with visits to a physician at least 4 times a year
Rohde et al.	2012	They aim to assess the impact of preventive interventions reported in the context of known risk factors. The sample consisted of adolescents ( $N = 341$ ) with increased depressive symptoms who were randomized according to one of the four preconception conditions.	The results show two main pathways to depression that have adverse effects and increase depressive symptoms in this population, suggesting that libirotherapy can compensate for the most significant risk of depression.
Neither et al.	2014	Studied the treatment of major depressive disorder (MDD) for more than 50 years which continues to dominated the available treatment options.	Although several preclinical human studies and magnetic resonance spectroscopy have already implicated human brain abnormalities, they are triggered by ketamine that has a rapid and powerful antidepressant effect. It is true for even the most resistant MDD patients in treatment, including those who fail to respond to electroconvulsive therapy and have an active suicidal ideation.
Auerbach et al.	2014	Conducted a study to examine cognitive and interpersonal stressor factors and subsequent depression in adolescents. In the present study, adoles-	The results of the analyses show that the occurrence of stress is mediated by the relationship between cognitive vulnerability and depressive symptoms over time.



		cents (n = 157; boys = 64, girls = 93), aged 12 to 18 years participated for 6 months, presenting a polycysmal diachronic study examining the effect of negative dimensions of self-criticism and dependence on anxiety depression.	
Hilla et al.	2014	Investigated the presence of depressive symptoms (Subd) in adolescence associated with the high risk of developing a major depression disorder (MDD). Few known variables predict escalation from Subd to MDD. This study used a longitudinal future design in a sample of a community of adolescents to identify risk factors in combinations provided for scaling from Subd to MDD.	Of the 424, 144 MDDs were developed during the follow-up period. Evidence for multiple subgroups was found. Among adolescents with poor friend support, the greatest risk of escalation was among participants with stories of anxiety or substance abuse disorder. Among adolescents with high friend support, those who reported multiple major life events in the past year or with a history of anxiety disorder were at a higher risk of escalation.
Grosso et al.,	2014	Their aim was to carry out an updated meta-analysis of the randomized controlled trials (TMF) of omega-3 polyunsaturated fatty acids to treat depressive disorder, considering the differences between the clinical patients included in the studies. The method used was a search in Medline, Embase, PsycInfo, and Cochrane's RCT database, using omega-3 polyunsaturated fatty acids in patients with depressive symptoms published until August of 2013.	The meta-analysis of 11 and 8 tests performed on patients with a DSM-defined diagnosis of a major depressive disorder (MDD) and patients with depressive symptomatology (but not a MDD diagnosis) demonstrated a significant clinical benefit of treatment with omega-3 polyunsaturated fatty acids compared with a placebo.
Coventry et al.	2013	Thirty independent comparisons of 29 randomized controlled trials (n = 2063) were performed and included in the meta-analysis. Overall, psychological interventions associated with minor reductions in the symptoms of depression are associated with anxiety pharmacotherapy.	It was found to reduce symptoms of anxiety and depression in those with COPD, regardless of the severity of the depression or anxiety, thereby stressing the importance of promoting physical activity in this population.
Glen et al.	2013	Investigated whether complementary therapy is essential to help adults with depression. It is a fact that atypical antipsychotic drugs widely prescribed for the treatment of depression have several dangers that are not clear. The survey concerned 14 short-term trials.	The study found that atypical antipsychotic drugs are essential for the complementary treatment of depression and are effective in reducing depressive symptoms as a form of medical intervention.
Lewinsohn et al.	1999	Conducted research on differential risk factors for the onset of depres-	The depressive group was at increased risk of emotional disturbances in adulthood and psychiatric hospitalization for

		sion. They tested a teen-based community (N = 1709), some of whom had a history of major depressive disorder (MDD N = 286) and some of whom had none (n = 1,423).	treatment. The findings suggest a considerable difference in the emotional disorders between childhood and adulthood.
Jeanne et al.	2012	The relationship between depressive symptoms in relation to sleep in older women was examined. The survey was conducted in the United States among 30,305 community members aged $\geq 70$ years old.	The study found that women with some of the symptoms of depression (OR 1.82, CI 1.48 - 2.24) and full-blown depression (OR 2.84, CI 2.08 - 3.86), were more likely to report poor sleep (PSQI > 5). Women with some of the symptoms of depression (OR 1.97, CI 1.47 - 2.64) and full-blown depression (OR 1.70, CI 1.12 - 2.58) were more likely to experience excessive daytime sleepiness (ESS > 10).
Andrew et al.	2012	Investigated whether sleep disorders and anxiety are related in patients with a diagnosis of adenocarcinoma of the pancreas exhibiting depression elements. The patients were evaluated during the original consultation followed by visits to an interdisciplinary university cancer clinic.	The first conclusion of the study showed that 23% of the patients in this pilot project had moderate seriously symptoms of major depression, probably anxiety disorder and one possible sleep disturbance.
Goodyer et al.	2011	180 patients were studied.	Improving mood with psychoanalytic and cognitive behavioral therapy will determine which approach is superior in reducing recurrence compared to clinical care.
Frances et al.	2012	The purpose of this test was to examine the clinical significance and health of the economy under real circumstances and assess where prevention efforts have been made for the control group. This study was designed as a prospective, simple-blind, randomized, controlled study with a comparison made between intervention and self-monitoring of the 204 participants.	The results of this test, include clinical, functional and health outcomes that assess the role this treatment approach might have in recommendations for depression in Australia and elsewhere.
Bruce et al.	2009	In another randomized, controlled study, the behavioral and prophylactic intervention of children of depressed parents was studied in a sample of 111 families.	The data revealed significant differences in a family of two children with depressed parents, showing the most severe consequences for a child after a 12-month assessment with an average magnitude of effect on most measures.
Boris et al.	2004	Studied the possibility of psychosocial factors causing depression. The study involved a group of pre-adolescent boys (n = 46) and females in post-adolescence (n = 22).	Psychopathology was associated with a longer course length. In general, a major depressive disorder was similarly manifested in children and adolescents, as both groups had a prolonged clinical course as a result of psychosocial factors.

Strunk, Catherine M., et al.	2014	Conducted a secondary analysis of the Surviving the Teens® program evaluation to determine its effect on help-seeking behaviors among troubled youth.	significant increases in mean scores of the Behavioral Intent to Communicate with Important Others Regarding Emotional Health Issues subscale ( $p < .0005$ ) from pretest to 3-month follow-up. There was a significant increase ( $p = .006$ ) in mean scores of the Behavioral Intent Regarding Help-Seeking Behaviors when Suicidal subscale from pretest to posttest, but not at 3-month follow-up.
Hess, Sally G., et al.	2004	Conducted a study about adolescents' knowledge about depression in 5,645 high school students between 1999 and 2003.	Results indicated that students had a cursory knowledge of depression facts but had gaps in knowledge about treatment and symptom identification.
Lusk, Pamela, and Bernadette Mazurek Melnyk	2011	assess the feasibility and effects of a brief manualized seven-session cognitive—behavioral skills building intervention entitled COPE (Creating Opportunities for Personal Empowerment) delivered to 15 depressed adolescents in routine 30-minute mental health medication management outpatient visits	COPE is a promising brief cognitive—behavior therapy—based intervention that can be delivered within 30-minute individual outpatient visits. With this intervention, advanced practice nurses can work with practice time limitations and still provide evidence-based treatment for depressed teens
King, Keith A., Catherine M. Strunk, and Michael T. Sorter.	2011	examined the immediate and 3-month effect of Surviving the Teens® Suicide Prevention and Depression Awareness Program on students' suicidality and perceived self-efficacy in performing help-seeking behaviors	Students were significantly less likely at 3-month follow-up than at pretest to be currently considering suicide, to have made a suicidal plan or attempted suicide during the past 3 months, and to have stopped performing usual activities due to feeling sad and hopeless.
Fornos, Laura B., et al.	2005	conducted a qualitative study of Mexican American adolescents and depression	Three themes emerged: (1) adolescents' definitions of depression, (2) beliefs about adolescent depression, and (3) treatment for adolescent depression. While depressive symptoms among Mexican American adolescents are common and recognized, resource and treatment knowledge is scarce.
Farmer, Terri J.	2002	The purpose of this study was to describe the experience of major depression from the adolescent's perspective to provide a more comprehensive description of the disorder. Using a phenomenologic approach, in-depth interviews were conducted with five depressed adolescents, ages 13-17.	approximately 70% of adolescents with major depression are not receiving adequate assessment and treatment due, in part, to an incomplete picture of the disorder. Adolescents focused on anger, fatigue, and interpersonal difficulties as characteristic of depression. The results call for increased awareness of the unique aspects of adolescents, an examination of adolescent-accessible services, and further clarification of the roles of friends and siblings in the disorder.