



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

The Impact of Depression On Young Adults

¹KONDA SIVA KRISHNA, ¹GOGINENI LOHITHA, ¹JUTURU REVATHI DEVI, ¹SUNKARA SAI SRAVANTHI, ¹NADAKUDURU HEMANJALI. ²PUTTAGUNTA SRINIVASA BABU.

Author-1= Assistant Professor, Department of pharmacy practice, Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Author-1= Student, Department of pharmacy practice, Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Author-1= Student, Department of pharmacy practice, Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Author-1= Student, Department of pharmacy practice, Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Author-1= Student, Department of pharmacy practice, Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Author-2= Principal Vignan Pharmacy College, Vadlamudi, Guntur (district), Andhra Pradesh, India.

Abstract

Young adults are greatly impacted by depression in a variety of areas. In the classroom, it might interfere with focus, drive, and attendance, which can result in poorer marks and a higher dropout rate. Depression can cause social problems such as loneliness, strained relationships, and trouble making and keeping meaningful connections. On an emotional level, it can worsen anxiety, diminish self-worth, and raise the possibility of suicidal thoughts and self-harm. Furthermore, because young adults may try to self-medicate, depression can make them more susceptible to substance usage. Through an analysis of its effects on academic performance, social functioning, emotional well-being, and substance use, this project seeks to understand the complex effects of depression on young adults. The results will help create effective preventative and intervention techniques and advance knowledge of the difficulties young adults with depression confront.

Key words: Depression, Quality of life, Young adults, Physical and Mental health

Introduction

A persistent state of sadness, weariness, loss of interest, and diminished functional ability are the hallmarks of depression, according to health organizations (American Psychiatric Association [APA], 2013; Harvard Medical School [HMI], 2019; National Institute of Mental Health [NIMH], 2016; Pan American Health Organization [OPAS], 2018). Major depression, dysthymia, premenstrual dysphoric disorder, depressive disorder brought on by drugs or alcohol, and depressive disorder brought on by another medical condition are some of the several forms of depression (APA, 2013;). Psychomotor agitation or restlessness (Trivedi et al., 2020), indecisiveness (Rice et al., 2019), feeling of worthlessness, loss of energy (Park & Kim, 2020), insomnia or hypersomnia and suicidal ideation. Accordingly, depression may result in a reduction in quality of life, a loss of social interaction, and an inability to carry out daily chores. Age and location have no bearing on how depression manifests provide evidence that high school and college students are among the most impacted populations. Depression is a prevalent illness among college students that significantly

affects self-esteem, peer connections, academic performance, cognitive functioning, and death rates. Between 20% and 30% of college students who do not receive psychiatric services report having severe depression symptoms. Despite the fact that depression is linked to numerous issues, young adults frequently do not seek therapy and struggle in their day-to-day lives.¹ Consistent with previous research, our study confirmed in the cross-sectional analyses, that life events and life changes in adolescents and young adults are associated with increased risks not only for threshold major depressive episodes according to the DSM-IV criteria, but also with increased risks for the occurrence of depressive symptoms and subthreshold expressions of depression.²

Impact of Mild depressive symptoms in young adults

Among college students, depression is a common illness that has a considerable impact on self-esteem, social relationships, academic outcomes, cognitive functioning, and mortality rates. There is a wide spectrum of symptoms, from moderate depressive symptoms to intense and profound depressive symptoms. Suicidal thoughts may occur in young adults with depression, many of whom are first unaware of their symptoms. For a better prognosis and suitable early intervention, it is crucial to research the features of moderate depressive symptoms (MDS) in young adults. Research has shown that depression is significantly influenced by one's sense of self-worth. The definition of self-esteem is "a certain attitude and a perception of one's self," which influences how one interacts with and feels about oneself and other people. Social support is also linked to self-esteem. Given the connection between young people's interpersonal issues and depressive symptoms, it's critical to investigate how the onset of depression impacts self-esteem. According to Orth et al., self-esteem is a potential risk factor for depression in a study of early adolescents. Researchers used questionnaires and interviews to assess participants' degrees of self-esteem and discovered that those with secure high self-esteem were less inclined to verbally defend themselves and were abler to accept their flaws. Students with fragile high self-esteem, on the other hand, exhibited verbal defensiveness, which was indicative of mental health issues such anxiety and sadness. According to this study, there are several forms of high self-esteem, and occasionally, these can result in depressed symptoms. The connection between depression and self-esteem has not yet been investigated; specifically, the impact of self-esteem levels on MDS has not been shown.²

Impact of life events in young people

Changes in an individual's life, particularly those that are viewed as stressful, are referred to as frequently stressful life events because they have the potential to cause stress and have an impact on health. These events have been classified as either positive or bad, controllable or uncontrollable, or based on additional characteristics like chronicity (long-lasting life problems) or a connection to particular domains like family, society, or health. Stressful life events in any of these areas have the ability to alter lifestyle choices and are associated with physical health consequences, such as hip fractures, breast cancer, and the development of HIV into AIDS. Additionally, there is compelling evidence linking stressful life events to negative mental health effects, experiences that are viewed as hazardous (such as trauma, bodily harm, or completing a hard task) may be linked to anxiety rather than depression, while life experiences related to loss, education, family, and friendship may be linked to depression. Delineating pathogenic stressors has been the second problem. Researchers may find higher correlations between occurrences and outcomes if they can more precisely define the nature of particular life events than they can if they don't make such thorough distinctions. A person's assessment of a life event, or their assessment of its probable influence on their own well-being, may be significant for its role in depression. The difference in reactivity to exposure to life events between individuals with and without major depression may be influenced by genetic factors in addition to the evaluation of the life event. A third concern has been the timing of events with respect to the course of depressive illness. Early childhood trauma may be invested with greater meaning than events that happen later in life. An individual's early life experiences with stressful events increase risk in adulthood of mental disorders such as depression. The role of mediating factors, such as adaptive personal and social resources, perceived self-efficacy, social support, and effective coping strategies, is a fourth concern regarding the life event–depression relationship. However, not all studies have confirmed the buffering effect of social support. The ability to get social assistance and cope with stressful life situations can also be impacted by social competency.³

Quality of life in young adults

Teenage depression is a serious issue. About 10% of teenagers have a depressive disorder by the time they are 16 years old, and between 2 and 5% of them currently fit the diagnostic criteria for serious depression. Since depression in youth has been linked to a significant increase in the risk of major depression and anxiety disorders, social dysfunction, nicotine dependence and abuse, underachievement in school, unemployment, early parenthood, suicide attempts, and completed suicide, the effects of adolescent depression on both the individual and society are extensive. Depression is a major issue for society and mental health that transcends cultural boundaries. This is attributed to its high prevalence, high risk of suicide, detrimental effects on quality of life, and consequently, its role in medical, psychosocial, and familial issues. According to estimates, up to 15% of people who are extremely depressed will take their own lives, and between 5% and 25% of people will experience depression at some point in their lives. These unavoidable realities are particularly true for young individuals, as depression rates increase sharply during childhood and adolescence and then continue to be high for the majority of adulthood.⁴ Poor quality of life (QoL), which includes one's subjective assessment of relationships, physical health, day-to-day functioning, overall sense of well-being, and life satisfaction, has been associated with depression and anxiety. To make treatment easier, it's critical to clarify the aberrant white matter microstructure linked to mood, other symptoms, and quality of life.⁵ With a sharp increase in prevalence and incidence rates over the past ten years, depression is one of the top 25 causes of the world's health-related burden. Insomnia and depression frequently co-occur, with 41% of people with depression also having insomnia. Numerous studies have examined the bidirectional relationship between depression and insomnia, particularly in adult populations, and have found that insomnia is a risk factor that hinders the effectiveness of treatments for depression and predicts subsequent depression. Additionally, there is growing evidence that treating insomnia may reduce depressive symptoms in people with comorbid depression and insomnia, while depression is also thought to be a risk factor for future insomnia. A multidimensional notion that is frequently used to describe people's health status is health-related quality of life, or HRQoL. Physical and mental health are often the two primary components of HRQoL. New information about the burden of avoidable illnesses, injuries, and disabilities can be obtained by measuring HRQoL. A variety of questionnaires, including the Short Form (SF)-36 and the World Health Organization Quality-of-Life (WHO-QoL), can be used to measure HRQoL. Utility scores, also known as multi-attribute utility instruments, or MAUIs, are frequently obtained from HRQoL questionnaires with preference-based scoring algorithms and are typically used to express HRQoL.⁶ Clinical characteristics of excessively problematic usage and behavioural addiction that impact the user's everyday life (inoccupation, compulsive behaviour, lack of control, functional degeneration, deprivation, and tolerance) are characteristics of smart phone addiction. Nevertheless, there are no established and recognized diagnostic standards for smartphone addiction. Physical issues include sleep issues (drowsiness, waking up late, etc.) eye health issues, musculoskeletal issues, traffic, and other serious accidents brought on by excessive and problematic smartphone use. Additionally, excessive use of smartphones can lead to a number of behavioural, social, and mental health issues. Many ideas of well-being have a negative correlation with smartphone addiction. Addiction to smartphones affects academic achievement, hinders school and employment, causes attention deficit disorder and maladaptive behaviour, and diminishes in-person social contacts. To adopt preventative mental health measures, research should be done on the association between depression, sleep quality, and smartphone usage.⁷

Physical activity in young adults during covid-19 pandemic

We are currently facing an infectious disease pandemic that has exacerbated the pre-existing physical inactivity pandemic due to the coronavirus disease 2019 (COVID-19) outbreak and the regulations put in place to limit its transmission (such as physical distancing, gym and recreation centre closures, and home quarantine^{11–14}).^{3, 15} Although these regulations have had an impact on all demographics, U.S. young adults in particular have had to make extraordinary behavioural and lifestyle changes,¹⁶ which has further exacerbated the problem of poor sleep quality in this population and created exceptional barriers to their participation in PA.^{16, 17} Furthermore, the lack of availability to commercial exercise equipment has reduced young adults' independent willingness to participate in PA, as the home environment has emerged as the sole practical indoor chance for PA.⁸

Adolescent and young adult health issues are linked to excessive smartphone use.

Because of the detrimental impacts on children and teenagers, health and educational authorities are becoming increasingly concerned about the consequences of excessive computer and smartphone use. According to recent evaluations, there is little evidence that excessive smartphone use is an addictive behaviour. More specifically, Billieux has maintained that there is not enough proof to support behavioural and physiological parallels between excessive smartphone use and other addictive tendencies. Additionally, Panova and Carbonell contended that the diagnosis of smartphone addiction is not well supported by the available data, and Montag et al. contended that excessive smartphone use is a type of Internet Use Disorder. There are several uses for cell phones, including gaming, social networking sites (SNS), and viewing YouTube videos. As a result, depending on the type of smartphone use, excessive smartphone use may present different features. The evidence currently available on excessive smartphone use will be reviewed in this study, along with the parallels and discrepancies with Internet addiction.⁹

Instagram

The rise in internet usage, especially on social networking sites, has been facilitated by mobile devices. According to Kim et al. (2017), p. 540, Instagram is "a mobile device application designed for the sharing of lifetime moments through photos in real time" and is currently the most popular social networking site among the younger generation. It has functions like the ability to create and share live stories, comment on or link to other people's posts, videos, and images, and photo and video sharing. Instagram's distinctive user interface makes it a social media platform that may lead to psychological effects from excessive use. However, because of their ongoing popularity, rival SNSs like Facebook and Twitter have been the subject of multiple studies in comparison to Instagram. Instagram content (Miles 2014), reasons for using it and its particular correlation with heavy use have been the primary focus of earlier research on Instagram use. The current study adds to the body of knowledge on Instagram by examining the possible causes and effects of Instagram addiction in a student population, given the platform's recent surge in popularity.¹⁰

The influence of symptoms of eating disorders on quality of life

Clinical samples of patients with EDs, as well as subclinical college samples, consistently report lower QOL than controls. For instance, in a longitudinal study involving women with eating disorders (EDs), there was a significant correlation between baseline psychological symptoms and lower BMI with poorer mental quality of life (QOL) in subsequent assessments. Additionally, these women continued to exhibit high symptomatology alongside low QOL over time. Moreover, the estimates of eating disorders (EDs) among college students vary from 8% to 17%, surpassing the lifetime prevalence rates; thus it seems that college students consistently experience a negative correlation between their QOL and ED symptoms. In addition to frequently engaging in harmful excessive or obsessive activity, these adolescents with disordered eating symptoms may also have a lower quality of life. However, a large number of these research employed ED-specific QOL measures or health-related QOL (HRQOL) measurements. Subjective measures of life satisfaction and quality of life (QOL) may be better indicators of well-being in university populations, where individuals are typically free of significant physical constraints.¹¹

Exercise's effects on life quality

Physical activity decreases depressed mood in addition to its health benefits, which include enhancing cardiovascular fitness, encouraging sleep, and lowering stress. Additionally, exercise may have a good impact on QOL. For instance, a major cross-sectional, global study of college students (n = 17,246) revealed that those who participated in physical activity during the preceding two weeks had higher probabilities of having moderate to high life satisfaction than those who hadn't. Likewise, university students who exercised more frequently and in greater quantities than those who exercised less frequently and in smaller quantities reported better overall and health-specific quality of life (QOL) (Lustyk, Widman, Paschane, & Olson, 2004).¹²

The Relationship of Physical and Mental Health

Furthermore, among other detrimental psychological effects, poor sleep quality is linked to attention-deficit/hyperactivity disorder, aggressiveness, anxiety and sadness, and decreased cognitive functioning. The literature mentioned above demonstrates how crucial good sleep is for mental and physical well-being. Adolescence is a crucial time for psychopathology as well as for sleep quality. According to the scientific literature, adolescence is a highly vulnerable stage of life. Sleep issues and mental health conditions are highly comorbid. This is particularly crucial if we take into account the reciprocal association between sleep disorders and mental health. Prior studies have demonstrated that sleep therapies may improve mental health and HRQoL (Health-Related Quality of Life) in addition to sleep outcomes. However, depending on the disorder, the impact of some disorders is more pronounced on the mental component or the physical component (e.g., apnoea has a higher impact on physical health whereas insomnia has a higher impact on mental health). It has been found that people with sleep disorders have lower levels of both physical and mental HRQoL, showing moderate R² for the physical and mental components. Furthermore, a study conducted on a sample of kids revealed that different sleep quality subtypes can affect HRQoL differently

¹³

Adolescents and young adults engaging in self-injury

Suicidal behaviour and self-harming among youth are significant public health issues. Although suicide rates have dropped worldwide over the past 30 years, it remains one of the top ten causes of age-standardized years of life lost in many regions and is the fourth leading cause of death among 15–29-year-olds globally (World Health Organization, 2021). The World Health Organization (2021) reports that for every suicide, numerous individuals either try to take their own life or partake in self-injurious behaviour. The WHO (World Health Organization) states that a previous suicide attempt is the most significant risk factor for suicide (World Health Organization, 2021). The risk of suicide for patients who present to hospital following an act of self-harm (both non-suicidal and suicidal) is approximately 50 times greater than in the general population. Adolescents represent a demographic that is especially vulnerable to self-harm, with around 30,000 adolescents in the UK receiving hospital treatment for self-harm annually. Moreover, the likelihood of suicide rises in correlation with the frequency of self-injurious behaviour, and individuals aged 10 to 24 are at greater risk than those in older age brackets. One can denote this age span as that of the adolescent and young adults ¹⁴

Family and Academic Stress: Effects on Students' Depression Levels and Academic Performance: Academic stress

It is believed that the most common cause of stress for college students is academic issues. For instance, as reported by Yang et al, students asserted that academic pressures like continuous studying, paper writing, exam preparation, and tedious professors were the primary daily issues they faced. Academic pressure is fuelled by exams and test prep, competitiveness among grade levels, and the need to amass a large amount of knowledge in a brief timeframe. Perceived stress denotes a state of physical or psychological arousal in response to stressors. When college students encounter excessive or negative stress, they experience physical and psychological repercussions. Health problems like fatigue, appetite loss, headaches, and gastrointestinal issues can arise from excessive stress. A range of adverse consequences, such as poor health, anxiety, depression, and subpar academic performance, has been associated with academic stress. In particular, Travis et al. found robust connections between academic stress and both psychological and physical health. This indicates that a significant portion of recent high school graduates is more likely to face depression or is more susceptible to experiencing depression as they enrol in university. As students advance to a higher level of education, various factors contribute to the calculation of stress, such as the difficulty of the syllabus, the challenges posed by assignments with unrealistic deadlines, and accommodation issues for those relocating from other cities, among others. While studying depression, experiences related to university can also be contributory. It is important to keep in mind that the symptoms of depression fluctuate over the course of the academic years. Subjective and objective experiences are directly linked to the depressive disorder, and stress inherent in the university situation likely contributes to the disparity in the depressive experiences of university students.

Family stress

Parental involvement and learning influence how parents manage their children's habits and cognitive processes, as well as their overall parenting approach. As a result, this influences how their children act and perform in relation to them. The outcome of this is that the relationship between parent and child relies on how parents view things, their understanding of situations, and their attitudes. The relationship between parents and children is much better when parents have positive views compared to when they have negative attitudes. Parents react to unpleasant emotions in various ways, which can be categorized as supportive or non-supportive.¹⁵

Treatment

Impact of Fruit and Vegetable Intake on Depression

Four high-quality studies and one very high-quality study looked at the relationship between eating fruits and vegetables and depression; four of these studies analysed the use of depression medications or a doctor's diagnosis of depression, and one study utilized the CESD instrument. Fruit consumption has been shown to reduce the chance of getting depression in two high-quality studies. Additionally, increased consumption of legumes and "fruits and nuts" was found to have a significant protective impact. According to the Nurses' Health Study, citrus fruits and juices also lower the risk of depression in women. But according to the Seguimiento Universidad de Navarra (SUN) study, eating more vegetables had no discernible impact on the onset of depression in participants. After controlling for the major confounders, the excellent study revealed that eating fruits and vegetables was not linked to the onset of sadness or discomfort. In contrast, Mujcic and Oswald discovered a negative correlation between eating more fruits and vegetables and the likelihood of receiving a diagnosis of anxiety or depression in the ensuing 24 months. An intriguing discovery in the Add Health cohort was that, once adolescent depression was taken into account, there was no significant correlation between eating fruit as a teenager and a lower chance of developing depression as an adult. On the other hand, after controlling for adolescent depression, eating vegetables once daily was substantially linked to a lower risk of adult depression in females, but not at greater intakes (twice or more per day).¹⁶

Vegetarian Diet

Vegetarianism may effect or get impacted by various aspects of quality of life. Better physical health, positive emotions associated with embracing a morally upright mindset, a greater sense of community (as a vegetarian), and a smaller environmental effect are just a few advantages of choosing to follow a vegetarian diet. However, the quality of life (QoL) of people who choose not to eat meat or other animal products can be adversely affected by factors that are beyond their control, such as the environment and social/cultural group in which they are placed, gender-based differences, economic factors, and limited access to a wide variety of plant-based foods. Even though there aren't many studies on vegetarianism and life quality, what is known suggests that it has a greater beneficial effect. Beyond just the nutritional benefits of a vegetarian diet, it's critical to comprehend all of its ramifications. Studies in this field may help mitigate all variables that could deter people from adopting a vegetarian diet or negatively affect the quality of life for those who already do so, in addition to offering more consistent data. To find out how much these links between vegetarianism and QoL domains can affect those who follow this eating pattern, more research is required.¹⁷

Self-compassion as a Key Component in the Prevention and Management of Depression and Anxiety in Youth

There is convincing evidence that young people who have greater self-compassion also have lower levels of anxiety and despair. Young people acknowledge the significance of self-compassion in connection to anxiety and depression, and they specifically highlight the necessity for specialized therapies that take diversity and inclusivity into account. To support the growing body of research showing that fostering self-compassion in youth lowers anxiety and depression, further controlled trials of self-compassion intervention programs are needed.¹⁸

Exercise's impact on teenage depression

Adolescent depression symptoms are required. In recent years, the relationship between exercise and depression has drawn a lot of attention from researchers. Over the past 30 years, cross-sectional studies have indicated that a lack of physical exercise is a significant risk factor for the onset of depression. Regular exercise may lower the chance of developing depression, according to prospective cohort studies. Experiments on humans and animals have demonstrated that exercise can have an antidepressant effect by boosting monoamine neurotransmitter secretion, increasing neurotrophic factor concentration, inhibiting the overexpression of inflammatory factors, controlling microRNA expression, and increasing mitochondrial activity in brain neurons. By enhancing self-efficacy, lowering negative emotions, and encouraging positive activities in depressed individuals, it can help lessen depression symptoms. Additionally, RCTs have demonstrated a dose-response relationship and the effective alleviation of depressive symptoms with structured exercise regimens. According to studies, physical activity at both moderate and high intensities can help alleviate mild to moderate depression. Adult depression is typically thought to be the mental health issue that exercise has the greatest potential to improve.¹⁹

Cognitive Behavioural Therapy (CBT)

The trans diagnostic EMOTION intervention is a CBT-based program aimed at addressing anxious and depressive symptoms in both schoolchildren and their parents using the same manuals. For a duration of 10 weeks, children participated in child group sessions two times per week. Parents convened in groups for seven sessions, with their children attending four of these. Child groups consisted of up to seven participating children, whereas parent groups encouraged both parents to meet. To assist group leaders, manuals were created, whereas workbooks were given to parents and children. The first half of the program is focused on building skills, while the second half emphasizes behavioural experiments, cognitive restructuring, and self-esteem enhancement. The last ten sessions were specifically aimed at improving low self-esteem and focused on developing a differentiated self-perception. Parents and teachers contributed by offering insights into the child's strengths, both as a son/daughter and as a student. Shows key elements of the intervention targeting reduced anxiety and depression symptoms and enhanced self-esteem. Parents acquired many of the same skills as their children to assist them in their journey, as evidenced by the observation.

During school hours, the intervention was delivered by trained group leaders. They were recruited from primary health services and mental health care, including primarily school health nurses and psychologists from the pedagogical/psychological services.²⁰

Discussion

Young adults who struggle with depression may experience significant negative effects on their emotional, social, and physical health, frequently resulting in feelings of worthlessness and hopelessness. It can impair academic performance by making it difficult to focus, finish assignments, and attend classes, which may have an effect on future employment prospects. Because depression causes loneliness, broken relationships, and a lack of interest in once-enjoyed activities, social withdrawal is typical. Additionally, the illness may affect physical health by impairing immunity, altering appetite, and disrupting sleep. In order to cope, young adults may use drugs or alcohol, which can make their symptoms worse. Timely management is essential because the emotional toll of depression can result in suicide ideation or self-harm. Depression can impede personal development and achievement by causing a cycle of poor self-esteem and ongoing emotional difficulties if it is not adequately treated. The stigma associated with mental health frequently keeps young adults from getting treatment, which exacerbates the problem. Untreated depression raises the chance of developing other illnesses and can eventually lead to long-term mental health problems. Addressing these issues through counselling, education, and the development of robust support systems for young adults is essential.

Conclusion

In summary, young adults who suffer from depression experience significant impacts on their mental, emotional, and social health. It can cause problems in educational institutions, impede professional goals, and cause interpersonal tension. Feelings of loneliness, hopelessness, and lack of motivation are common among young adults who are depressed. Fatigue and sleep problems are examples of physical complaints that might further impair quality of life. Depression can worsen into more serious mental health conditions including substance misuse or anxiety if treatment is not received. To lessen the long-term effects of depression, early detection and intervention are essential. Recovery depends heavily on having access to support networks and mental health resources. Better coping mechanisms and a decrease in stigma can be achieved by promoting candid conversations about mental health. For young adults who struggle with depression, they require a supportive environment. All things considered, young individuals can enjoy better, more satisfying lives if depression is treated early.

References

1. The relationship between depression and quality of life in students and the academic consequences: Protocol for a systematic review with meta-analysis Michele da Silva Valadão Fernandes a Carolina Rodrigues Mendonça bThays Martins Vital da Silva a Matias Noll <https://doi.org/10.1016/j.ijer.2021.101812>
2. Choi, Yoobin BAa; Choi, Soo-Hee MD PhDa; Yun, Je-Yeon MD PhDb,c; Lim, Jae-A MAa; Kwon, Yoonhee BSd; Lee, Hwa Young BSd; Jang, Joon Hwan MD PhDd,e,* . The relationship between levels of self-esteem and the development of depression in young adults with mild depressive symptoms. *Medicine* 98(42):p e17518, October 2019. | DOI: 10.1097/MD.00000000000017518
3. Friis RH, Wittchen H-U, Pfister H, Lieb R. Life events and changes in the course of depression in young adults. *European Psychiatry*. 2002;17(5):241-253. doi:10.1016/S0924-9338(02)00682-X
4. Quality of life as a predictor of depression Nilüfer Özabac <https://doi.org/10.1016/j.sbspro.2010.03.353>
5. Depression and anxiety mediate the relationship between frontotemporal white matter integrity and quality of life in distressed young adults Tsafirir Greenberg, Michele A. Bertocci, Amelia Versace, João Paulo Lima Santos, Henry W. Chase, Ricki Siffler, Haris A. Aslam, Simona Graur, Genna Bebko, Jeanette C. Lockovich, Mary L. Phillips <https://doi.org/10.1016/j.jpsychemes.2020.10.001>
6. Le PH, Khanh-Dao Le L, Rajaratnam SMW, Mihalopoulos C. Quality of life impacts associated with comorbid insomnia and depression in adult population. *Qual Life Res*. 2024 Dec;33(12):3283-3298. doi: 10.1007/s11136-024-03793-y. Epub 2024 Sep 26. PMID: 39325126; PMCID: PMC11599622.
7. Kaya F, Bostanci Daştan N, Durar E. Smart phone usage, sleep quality and depression in university students. *International Journal of Social Psychiatry*. 2021;67(5):407-414. doi:10.1177/0020764020960207.
8. McDonough, D.J., Helgeson, M.A., Liu, W. and Gao, Z., 2022. Effects of a remote, YouTube-delivered exercise intervention on young adults' physical activity, sedentary behavior, and sleep during the COVID-19 pandemic: Randomized controlled trial. *Journal of Sport and Health Science*, 11(2), pp.145-156. <https://doi.org/10.1016/j.jshs.2021.07.009>
9. Wacks, Y. and Weinstein, A.M., 2021. Excessive smartphone use is associated with health problems in adolescents and young adults. *Frontiers in psychiatry*, 12, p.669042. <https://doi.org/10.3389/fpsy.2021.669042> ????
10. Foroughi, B., Griffiths, M.D., Iranmanesh, M. et al. Associations Between Instagram Addiction, Academic Performance, Social Anxiety, Depression, and Life Satisfaction Among University Students. *Int J Ment Health Addiction* 20, 2221–2242 (2022). <https://doi.org/10.1007/s11469-021-00510-5>
11. The role of depression, eating disorder symptoms, and exercise in young adults' quality of life ☆Paige J. Trojanowski Sarah Fischer <https://doi.org/10.1016/j.eatbeh.2018.08.005>

12. Wang, X., Cai, Zd., Jiang, Wt. et al. Systematic review and meta-analysis of the effects of exercise on depression in adolescents. *Child Adolesc Psychiatry Ment Health* 16, 16 (2022). <https://doi.org/10.1186/s13034-022-00453-2>
13. Clement-Carbonell V, Portilla-Tamarit I, Rubio-Aparicio M, Madrid-Valero JJ. Sleep Quality, Mental and Physical Health: A Differential Relationship. *International Journal of Environmental Research and Public Health*. 2021; 18(2):460. <https://doi.org/10.3390/ijerph18020460>
14. McEvoy D, Brannigan R, Cooke L, Butler E, Walsh C, Arensman E, Clarke M. Risk and protective factors for self-harm in adolescents and young adults: An umbrella review of systematic reviews. *J Psychiatr Res*. 2023 Dec;168:353-380. doi: 10.1016/j.jpsychires.2023.10.017. Epub 2023 Oct 20. PMID: 37972513.
15. Deng, Y., Cherian, J., Khan, N.U.N., Kumari, K., Sial, M.S., Comite, U., Gavurova, B. and Popp, J., 2022. Family and academic stress and their impact on students' depression level and academic performance. *Frontiers in psychiatry*, 13, p.869337. <https://doi.org/10.3389/fpsy.2022.869337>
16. Dharmayani, P.N.A.; Juergens, M.; Allman-Farinelli, M.; Mihrshahi, S. Association between Fruit and Vegetable Consumption and Depression Symptoms in Young People and Adults Aged 15–45: A Systematic Review of Cohort Studies. *Int. J. Environ. Res. Public Health* 2021, 18, 780. <https://doi.org/10.3390/ijerph18020780>
17. Hargreaves SM, Raposo A, Saraiva A, Zandonadi RP. Vegetarian Diet: An Overview through the Perspective of Quality of Life Domains. *International Journal of Environmental Research and Public Health*. 2021; 18(8):4067. <https://doi.org/10.3390/ijerph18084067>
18. Marx, W., Penninx, B.W.J.H., Solmi, M. *et al.* Major depressive disorder. *Nat Rev Dis Primers* 9, 44 (2023). <https://doi.org/10.1038/s41572-023-00454-1>
19. Wang, X., Cai, Zd., Jiang, Wt. et al. Systematic review and meta-analysis of the effects of exercise on depression in adolescents. *Child Adolesc Psychiatry Ment Health* 16, 16 (2022). <https://doi.org/10.1186/s13034-022-00453-2>
20. Martinsen, K.D., Rasmussen, LM.P., Wentzel-Larsen, T. et al. Change in quality of life and self-esteem in a randomized controlled CBT study for anxious and sad children: can targeting anxious and depressive symptoms improve functional domains in schoolchildren?. *BMC Psychol* 9, 8 (2021). <https://doi.org/10.1186/s40359-021-00511-y>