

# Analysis of Application-Based Parental Guidance for Children with Psychological Disorder

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**Abstract**— The motive of this research is to examine how application-based parental guidance works for children with mental health problems. Since citizen confusion is rising, there is a need for ways to protect children's mental health. Smartphone apps may help parents and guardians better manage their children's mental health. Techniques like quantitative as well as qualitative research (other techniques will also be used) will be used in this research. Stakeholders will be parents and guardians of children with different backgrounds who have been discovered to have psychological disorders. According to the numbers, we will be doing surveys and interviews with parents and NGO representatives to measure their thinking on application-based parental support in terms of things such as ease of usage, recognition effectiveness, and overall fulfillment through all features. In-depth interviews with a group of users will be conducted as part of the qualitative portion to obtain further information regarding their experiences and actions while using the app. Qualitative data will illuminate the benefits, drawbacks, and inflation of parentally directed applications. This research is likely to add to the present frame of understanding by examining how the use of mobile applications might assist parents in taking one step ahead in taking care of their children who have mental health disorders. This may help the creator create more functional and user-focused applications by paying attention to the advantages and disadvantages of existing ones. The purpose of this research is to guide parents, guardians, and healthcare professionals about the most effective way to use technology to treat their kids with mental health issues. Finally, studying how apps might help parents support their children with mental health difficulties may spur new technologies to improve kids' and families' mental and emotional health.

**Keywords**—parental help, good behavior, well-being, disorders in kids, mental health

## I. INTRODUCTION

Psychological disorders are often portrayed as the consequence of misinterpretations in modern culture, and contacting a psychologist or psychiatrist is bizarre and obnoxious for the majority of the audience. These kinds of circumstances prevail in our society as a result of an abundance of knowledge and cognition, and they are often the consequence of unawareness of the actual causes and the inauspicious impacts of the problems. A psychological disorder is a condition where the individual suffers from a strange pattern of thoughts, behavior, and emotions, as well as disturbances in that person's cognition. These disorders are associated with enduring behavioral patterns that may

significantly impair the daily functioning of the mind and body. These aforementioned conditions have been examined, determined, and classified, and they involve autism, dyslexia, ADHD, anxiety disorder, eating disorders like anorexia nervosa, personality disorders, for example, antisocial personality disorder, mood disorders such as depression, and many more that people are not aware of. Although no specific cause of these disorders has yet been determined, research studies previously carried out and the close examination of patients with psychological disorders have pointed out several contributing factors, which include childhood experiences, chemical imbalances in the brain, genetics, parental situations, and certain diseases. The center of every family is a child. Seeing your child happy, healthy, and developing normally brings you enormous delight as a parent.

A child's physical health supports healthy growth and development. However, it is also crucial to recognize that children's mental health is as important as their physical health. A healthy balance between the two enables kids to handle the various difficulties life presents them with at various junctures and even helps lay a solid foundation for their growth into healthy people. In children and young people nowadays, mental diseases are a fairly common occurrence all around the world. Typically, one in ten kids has some sort of emotional or mental disorder. Since once a pattern emerges, it becomes a regular component of the child's behavior and is then very challenging to cure, it is crucial to identify and address patterns as soon as achievable. Children and adolescents who suffer from mental health disorders frequently have a delay in the progression of suitable age thoughts, actions, social ability, or controlling sentiments, or they experience the impact of these aspects. Such issues create unease in children, which affects their ability to perform their tasks appropriately at home, at school, or in any other communal environment that they might encounter themselves in.

### A. Classification System

ICD-11 and DSM-5 are two widely used classification systems in the field of mental health, each with its own purpose, structure, and updates.

ICD-11: The International Classification[1] of Diseases, 11th Revision (ICD-11) is a global classification system developed by the World Health Organization (WHO) for various health conditions, including mental health disorders. It provides a standardized way of classifying and coding diseases and disorders for international use, including diagnosis, treatment, and research. ICD-11 was released in 2018 and represents a significant update from its predecessor, ICD-10. ICD-11 includes a broad range of mental health disorders organized into chapters based on different categories, and it has a person-centered approach that emphasizes functioning and disability rather than just symptomatology.

DSM-5: The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5), is a widely used classification system for mental health disorders developed by the American Psychiatric Association (APA). It is primarily used in the United States and other countries that adopt its criteria. DSM-5 was issued in 2013 and is the successor to DSM-IV-TR. It attires a methodizedstructureas long as detecting and listingpsychiatricissuespremiered on a categorical approach that focuses on symptomatology, duration, and impairment. DSM-5 includes a wide range of mental health disorders organized into chapters based on different categories.

## II. DEFINITION AND CLASSIFICATION

### A. Autism

As a neurological disorder, autism[2] spectrum disorder has far-reaching consequences for a person's mental, emotional, social, and physical well-being. Symptoms might range from mild to severe and everywhere in between. Communication issues[3], social isolation, fixated hobbies, and ritualistic behaviors are all common indicators of autism. In certain cases, symptoms may be mitigated, and learning and development can be supported by early diagnosis and intervention with behavioral, educational, and family therapy.

### B. Dyslexia

Children with average intellect and eyesight might nonetheless have trouble reading. Signs include a lag in the acquisition[4] of language skills such as talking and reading. Tutoring or a tailored education course may help most students with dyslexia[5] do well in school.

### C. ADHD

In many cases, ADHD[6] manifests itself in infancy and continues into adulthood. It may worsen issues at home, in social circles, and in the workplace. Inattention and hyperactivityare twosymptoms.Medication and psychotherapy are both used as treatments.

### D. Dementia

It is a collection of cognitive and interpersonal symptoms that cause significant impairment in everyday life. Dementia[7], which is not a single illness but a collection of symptoms, including memory loss and impaired judgment, is not a single disease but a collection of symptoms. The inability to remember things, to interact effectively with others, and to think clearly are all symptoms. Some symptoms can be controlled with medication and therapy. There are reversible reasons.

### E. OCD

Repetitive actions (compulsions) are triggered by excessive thinking (obsessions). Unreasonable worries (obsessions) and subsequent ritualistic [8] actions are hallmarks of obsessive-compulsive disorder. The obsession with cleanliness and order, as well as other related issues, are common triggers for OCD in many people. The onset of symptoms is often slow and inconsistent. Talk therapy, medicine, or both may be used in treatment.

### F. Anxiety

Public speaking and taking tests are two examples of stressful events that might cause anxiety [9]. When anxiety becomes extreme, all-consuming, and disruptive to everyday life, it is a sign of a more serious medical condition.

### G. Depression

Mood disorders include manic-depressive illness and schizoaffective [10] disease, among others. It causes a persistent feeling of isolation and a sudden loss of interest in most of the daily activities and hobbies.

### H. Bipolar Disorder

Several factors, including heredity, environmental factors, and changes in brain structure and chemistry, have been implicated as potential contributors to the development [11] of bipolar disorder. High levels of activity, decreased need for sleep, and dissociation from reality are all characteristics that have been associated with manic episodes. Depression may cause a person to feel lethargic, unmotivated, and disinterested in their normal routine. Mood episodes may last anywhere from a few days to many months and are sometimes accompanied by suicide ideation. Medication and psychotherapy are commonly used together in a long-term treatment plan.

### I. Schizophrenia

A mental illness impairs one's capacity for rational thought, emotion, and action. Schizophrenia [12] may have several reasons, including genetics, the environment along alterations in the makeup and development of the human mind. Schizophrenia may be identified by its essential features, such as disordered or unorganized verbal expression, an inadequate level of focus in usual tasks, and obviously unreasonable ideas or instances. It's also possible that you're having trouble focusing and remembering things. Medication, counseling, and integrated specialty care services are common components of a lifetime treatment plan. In the introduction, we have discussed the various psychological disorders that are being faced by children. Also, in the next sections, we will discuss the solutions to the above disorders, which can help parents diagnose the problems and, with the help of the results, get into contact with the concerned doctor.

### III. CAUSES

There could be multiple elements that lead to the risk of a psychological or mental disorder. Although people generally misunderstand psychological disorders as being lazy or weak, they tend to think that these are just character flaws [13] and not take them seriously either. They are way more than just lazy or weak. The major reasons or risk factors that could cause or lead to the risk of any psychological disorder are

#### A. Genetic

Any family history and genes that are passed on through generations.

#### B. Biological Factors

Some kind of chemical imbalance in the brain.

#### C. Physical Causes

Neurological conditions or head injuries can have a huge impact on mental health.

#### D. Correct Exposure

A mother's exposure to viruses and toxic chemicals when pregnant with the child.

#### E. Trauma

Any traumatic event, i.e., the death of a close one.

#### F. Abuse

Any kind of childhood abuse or negligence by others.

### IV. DIAGNOSIS AND ASSESSMENT

The identification of a psychological disorder requires a trained mental health professional's assessment, which generally involves an interview, the evaluation of several personality tests, and in some cases, neuropsychological tests, along with the examination of background (including medical) information about the patient.

Doctors might consider the following when determining a diagnosis while looking for complications that are associated with it –

#### A. A Physical Exam

The medical conditions that are triggering [14] the symptoms will be verified by the doctor.

#### B. Lab Tests

The doctors will be testing body substances to figure out the cause of a certain condition or the factors leading to it.

#### C. Psychological Assessments

The symptoms, thoughts, feelings, and behavioral patterns will be addressed by a clinical or psychological specialist. In order to help with responding to these concerns, one might be requested to complete a survey.

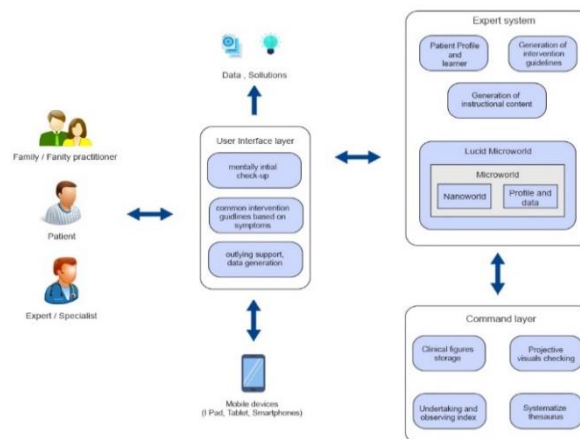


Figure 1: Information architecture of the proposed approach

## V. IMPACT AND CONSEQUENCES

There The Impact and consequences of mental health problems in kids may be devastating. Anxiety disorders, ADHD, autism spectrum disorders, depression, and wild behavior disorders are just some of the most repeated mental health problems that children at this age might face. Depending on this type of situation and the potency[15] of the symptoms, the sequelae of mental health problems in children may be extensive. However, some usual results may be:

- One more symptom of enlarging mental disorders in children is their inability to pay regard to whatever they do, learn, or bring out their best performance in academics.
- Isolation from peers: Children with mental health issues may find it hard to interact with their classmates.
- Addiction problems are more likely to surface in adulthood for kids who struggled mentally as children.
- Negative effects on family relations may compound the stress felt by those providing care for someone with a mental illness.
- Poor school performance and learning issues are common among children with mental health issues because of their inability to focus, retain knowledge, and remain on target.
- Delay in evolution: Language, communal, and analytic skills may not grown-up as rapidly in children with mental disabilities.
- Interpersonal difficulties Violence, impulse control, and restlessness[16] are all symptoms of mental illnesses that may make it difficult for children to get along with their peers and adults.
- If a parent or caregiver has reason to believe their child is suffering from a mental disorder, they should get help. When diagnosed and treated early, children with developmental disorders have better long-term results.

## VI. TREATMENT AND INTERVENTION

Children going through any mental disorders are believed to have significant variations in the way they generally acquire knowledge, behave, or deal with their emotions, which could be very stressful and distressing, making it difficult for them to get along with their day-to-day activities.

The standard methods of treatment for children with psychological disorders are –

### A. Medications

A health professional treating psychological disorders might suggest taking a course of medication[17], such as mood stabilizers, antipsychotics, antidepressants, or anti-anxiety.

### B. Psychotherapy

A conversation with a psychologist or other mental health professionals is a way to deal with or treat psychological disorders. While interacting with young children, psychotherapy may include engaging the children in different physical or brain games and observing their behavior closely, teaching them how to keep track of their thoughts and emotions, how they should respond to them, and coping mechanisms.

Healthcare professionals provide general counseling with the diagnosis procedure based on the visible symptoms in the children suffering from it. Although, the treatment process for each of the disorders differs drastically from each other, For instance –

- Autism: Treatments that are frequently used for treating autism are behavior therapy, speech therapy, interaction therapy, physical therapy, and diet-focused therapy, which generally comes under psychotherapy.
- Dyslexia: Occupational therapy, counseling psychology, and rehabilitation are the standard dyslexia therapies, while there are no medications to treat dyslexia within the current research system.

- ADHD: Treatments for ADHD under psychotherapy that are commonly used are psychoeducation, counseling psychology, family therapy, anger management, cognitive behavioral therapy, and applied behavior analysis. In relation to medications, stimulants, cognition pharmaceuticals, and antihypertensive drugs are often used.
- Anxiety and Depression: Frequently used medications for anxiety and depression are antidepressant drugs, sedatives, and anxiolytics. Psychotherapy includes cognitive behavioral therapy and meditation. There is one more category that has been included for anxiety and depression, and that is self-care, which mainly includes a healthy diet, stress management, relaxation techniques, and physical exercise.

## VII. PREVENTION AND EARLY INTERVENTION

Early intervention is the method that offers professional support and assistance to an individual who appears to be experiencing or showing any kind of early symptoms of psychological disorders. Not only is intervention vital for preventing or halting the development of a psychological disorder, but it is also crucial for strengthening an individual's interminable social effects, physical and mental health, and involvement in society. In the very beginning stages of mental health, immediate and early detection could have significant and life-altering impacts on a person's mental health.

The possible preventive measures could be:

- Parents and guardians should be taught due to the crucial tasks they perform for children's psychological health. Avoidance and quick intrusion in mental health disorders may rely on people being conscious of the symptoms, able to acknowledge them, and identifying where to look for them.
- Increase mental health care. Having access to mental health care and treatment by psychology experts is vital for the early detection and treatment of mental health problems. Children who are aware of mental health problems should have easy access to counseling.
- Children can only be raised in environments where their well-being is paramount. Building this type of space may support the early detection and treatment of mental health disorders. One way to do this is to make sure that kids are heard, admired, and loved throughout their lives.
- The initial spotting of mental disorders may be assisted by regular check-ups. Teachers, parents, and doctors may all play a crucial role in keeping an eye out for measuring mental disorders in children.

## VIII. OBJECTIVES OF THE RESEARCH

A. *To spread awareness among parents about different disorders in children*

B. *To do an assessment of the children for the respective disorders...*

## IX. METHODOLOGY

This study seeks to determine whether parents and guardians were indeed perplexed by their children's unusual behavior and whether they needed a resource that would provide them with the correct information regarding psychological disorders and connect them to the finest health professionals. Consequently, our research question was defined as:

“Are parents aware of the various psychological disorders, and do they have trouble identifying symptoms in their children?” and “Are they interested in a platform that gives minute-by-minute descriptions of particular psychological disorders and walks them through each stage of the treatment process for their children?”

The research questions led us to move forward with different research methodologies:

### A. *Primary Research*

In terms of primary research, we conducted one-on-one interviews with parents of children who had been diagnosed with certain psychiatric disorders, as well as parents of children who were in good health, and with guardians of NGOs to ensure that they were aware of specific problems and their implications.

With the help of the relevant interviews, we discovered that not many parents are familiar with all the different kinds of psychiatric problems, and most of them were open to using a platform that offers this comprehensive knowledge in order to avail themselves of the assistance.

We went through NGOs and parent interviews in our primary research. We focus on-

- Therapies for children with psychiatric issues that indicate success in the academic environment.
- Children's chance of developing psychiatric issues and their parent's state of mind.
- Autism, ADHD, and other mental health issues in kids.
- The success rate of family-based therapies for children with mental health issues.
- Reducing mental problems in children at risk via early intervention programs.

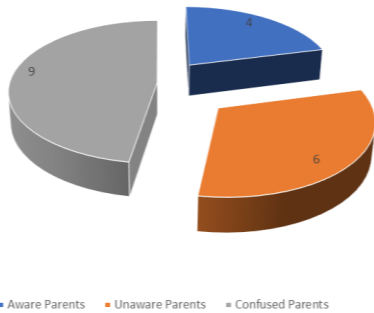


Figure 2: Graph illustrating the outcome of the primary research.

**B. Secondary Research**

This study uses a secondary research technique in order to determine whether the parents or guardians find it difficult to identify signs and whether they are aware of various psychiatric disorders. To satisfy the study's objectives, secondary research requires an analysis of already existing data and sources. In this case, we examined and understood different published data to analyze information from published articles, Internet databases, and industry reports.

Parental reports from nationally representative surveys were used to get the estimates shown here. This approach has a few drawbacks. The accuracy of this diagnosis in young patients is unknown. Figures determined by parent-reported diagnoses may coincide with estimates based on medical records; nevertheless, some children may have behavioral issues for which no diagnosis has been made, or for whom the diagnosis given may not adequately describe their symptoms. Measures of children's mental health on a nationwide scale are few[18]. Fig. 3 shows the various measures of children's mental health by age.

Anxiety, depression, bipolar, eating, autistic spectrum, behavior, drug use, idiopathic intellectual impairment, attention deficit/hyperactivity disorder (ADHD), and a cluster of behavioral disorders were included in the study's calculations, with all numbers rounded to the nearest 1,000. According to the State of the World's Children Report 2021, these findings originate from an analysis conducted by UNICEF using data from the Center for Medical Metrics and Evaluations (IHME) Global Cost of Disease Study, 2019[19]. Fig. 4 shows the number of mental disorders increasing in boys or girls by different age categories.

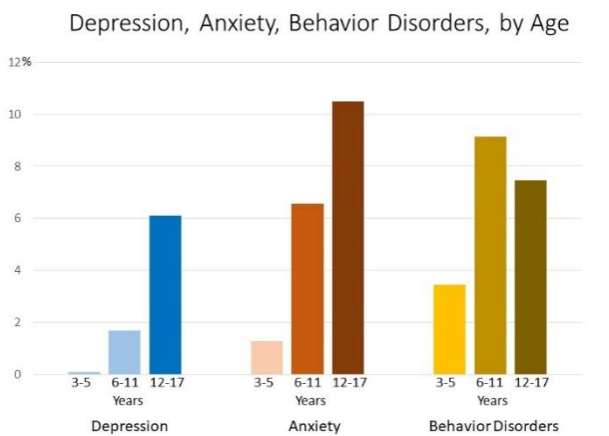


Figure 3: Depression, Anxiety and Behavior Disorders by age, 2016 - 2019

Estimates of number of mental disorders globally for girls and boys aged 10–14 and 15–19, 2019

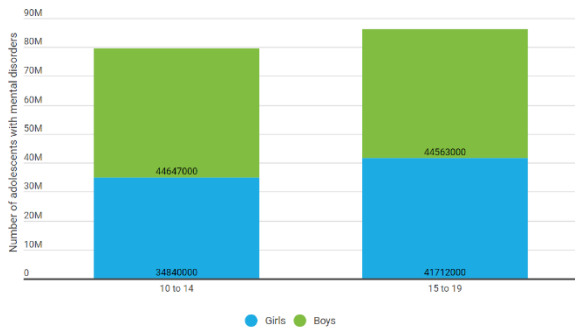


Figure 4: Estimates of number of mental disorders globally for girls and boys aged 10–14 and 15–19, 2019.

### C. Design Research

Originating in the field of design methods, the term "design research" has since been broadened to encompass not only research into the design process but also research that is embedded within that process, such as work that is concerned with the context of designing and research-based design practice.

We use #1E6076 hex color. Its red value is 30, the green value is 96 and the blue value of its RGB is 118. Many people link the qualities of authenticity, trustworthiness, expertise, power, professionalism, cleanliness, calmness, and concentration with blue. Given that the medical community places a premium on these characteristics, blue is the color of choice for medical logos and applications. Furthermore, customers already identify blue with the medical area since it is widely utilized by doctors and other relevant organizations.

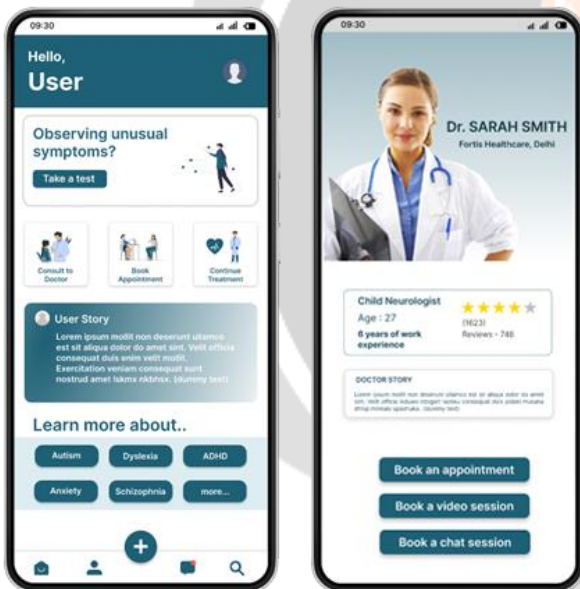


Figure 5: Shows the homepage and doctor detail screens of the prototype.

## X. FUTURE DIRECTIONS AND IMPLICATIONS

The future of the field of psychological disorders in children is slightly difficult to predict; therefore, healthcare professionals must continue to be remote to date with new emerging research and advancements in technology. The research and discoveries made by specialists on the human brain will have an impact on several alterations. It is highly probable that when it comes to the future of the field of mental health, revolutionary innovations, and techniques, including simulation of the brain, will consist of implanting electrically generated nodes inside the brain. A few previously attempted treatments or practices have already shown promising and favorable outcomes in their respective fields. Nevertheless, the deep simulation of the brain has not yet been sufficiently comprehended for it to be beneficial for psychological disorders.

In today's modern world, psychological specialists encourage a combination of psychotherapy and medication. Future mental health professionals will be using several strategies, which include collaborating psychologists' therapy alongside medications, to successfully treat each patient. In the future, in this field, treatment could potentially be accessible to patients without them having to leave their homes. Virtual therapy organizations already schedule patients for sessions over the Internet, providing

them access to psychological assistance that they might not ordinarily have. This, in turn, makes treatment easily accessible to people living in remote locations and to those who might not feel secure or comfortable approaching the therapist's clinic[20]. Researchers are additionally investigating the brain's neuroplasticity, or the capability for adaptation and evolution through the development of new neural connections. In terms of therapy, psychologists or psychiatrists ought to anticipate additional online video sessions along with some virtual reality experiments. Furthermore, it's possible that AI (Artificial Intelligence) could be developed to the point where it will be capable of providing primary care.

#### XI. CONCLUSION

Sometimes parents observe some strange actions in their children but are unable to determine what is genuinely wrong with them. Therefore, in certain circumstances, they eventually develop the tendency to give up on their kids, or even if the parents try to seek any kind of medical assistance, they get confused about which doctors to contact and which clinic to visit. This occurs as a result of a lack of knowledge and awareness about psychological disorders. So based on research and interviews, parents are unable to determine what happened to their children, even though they spot some strange symptoms in their daily behavior. They prefer a platform for better understanding the symptoms that children with diseases indicate because, occasionally, it might be challenging for them to identify their symptoms and decide which specialist to contact. We want to provide a platform that aids in symptom and condition identification for parents and guides them through the process of finding the appropriate medical professional to address that disorder for future care. This platform will provide extensive information on each psychological disorder, starting with detecting the signs, diagnosing the disorder, and getting in contact with the top psychiatric professionals.

#### REFERENCES

- [1] Kupfer, D. J., Regier, D. A., & Kuhl, E. A. (2008). On the road to DSM-V and ICD-11. *European Archives of Psychiatry and Clinical Neuroscience*, 258, 2-6.
- [2] Chess, S. (1971). Autism in children with congenital rubella. *Journal of autism and childhood schizophrenia*, 1, 33-47.
- [3] Rutter, M. (1968). Concepts of autism: a review of research. *Child Psychology & Psychiatry & Allied Disciplines*.
- [4] Myklebust, H. R., & Johnson, D. (1962). Dyslexia in children. *Exceptional children*, 29(1), 14-26.
- [5] Mattis, S., French, J. H., & Rapin, I. (1975). Dyslexia in children and young adults: Three independent neuropsychological syndromes. *Developmental Medicine & Child Neurology*, 17(2), 150-163.
- [6] Sayal, K., Prasad, V., Daley, D., Ford, T., & Coghill, D. (2018). ADHD in children and young people: prevalence, care pathways, and service provision. *The Lancet Psychiatry*, 5(2), 175-186.
- [7] Luscombe, G., Brodaty, H., & Freeth, S. (1998). Younger people with dementia: diagnostic issues, effects on carers and use of services. *International journal of geriatric psychiatry*, 13(5), 323-330.
- [8] Geller, D. A. (2006). Obsessive-compulsive and spectrum disorders in children and adolescents. *Psychiatric Clinics*, 29(2), 353-370.
- [9] Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology*, 25(2), 225-237.
- [10] Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American psychologist*, 53(2), 221.
- [11] Soutullo, C. A., Chang, K. D., Díez - Suárez, A., Figueroa - Quintana, A., Escamilla - Canales, I., Rapado - Castro, M., & Ortuño, F. (2005). Bipolar disorder in children and adolescents: an international perspective on epidemiology and phenomenology. *Bipolar disorders*, 7(6), 497-506.
- [12] Masi, G., & Liboni, F. (2011). Management of schizophrenia in children and adolescents: focus on pharmacotherapy. *Drugs*, 71, 179-208.
- [13] Barkley, R. A. (2003). Issues in the diagnosis of attention-deficit/hyperactivity disorder in children. *Brain and development*, 25(2), 77-83.
- [14] Dadds, M. R., Holland, D. E., Laurens, K. R., Mullins, M., Barrett, P. M., & Spence, S. H. (1999). Early intervention and prevention of anxiety disorders in children: results at 2-year follow-up. *Journal of consulting and clinical psychology*, 67(1), 145
- [15] Leavy, R. L. (1983). Social support and psychological disorder: A review. *Journal of community psychology*, 11(1), 3-21.
- [16] McIntyre, A., & Keesler, T. Y. (1986). Psychological disorders among foster children. *Journal of Clinical Child Psychology*, 15(4), 297-303
- [17] Burns, B. J., Hoagwood, K., & Mrazek, P. J. (1999). Effective treatment for mental disorders in children and adolescents. *Clinical child and family psychology review*, 2, 199-254.
- [18] <https://www.cdc.gov/childrensmentalhealth/data.html>
- [19] <https://data.unicef.org/topic/child-health/mental-health/>
- [20] Thulin, U., Svirsky, L., Serlachius, E., Andersson, G., & Öst, L. G. (2014). The effect of parent involvement in the treatment of anxiety disorders in children: A meta-analysis. *Cognitive behaviour therapy*, 43(3), 185-200