

**“VICTOR BABES” UNIVERSITY OF MEDICINE AND PHARMACY
TIMISOARA**

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Emergencies**

Scientific Coordinator

PROF. UNIV. DR. HABIL. POPOIU CALIN MARIUS

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TABLE OF CONTENTS

PERSONAL CONTRIBUTIONS	VI
LIST OF ABBREVIATIONS	VII
LIST OF FIGURES	VIII
ACKNOWLEDGEMENTS	IX
INTRODUCTION	X
GENERAL PART	
CHAPTER 1: PEDIATRIC NEUROLOGY AND NEUROPSYCHIATRY	1
CHAPTER 2: PARENTAL STRESS AND CONCERNS ASSOCIATED WITH PEDIATRIC EMERGENCIES	
CHAPTER 3: MULTIDISCIPLINARY INTERVENTIONS IN PEDIATRIC NEUROPSYCHIATRY	18
CHAPTER 4: PEDIATRIC NEUROPSYCHIATRIC EMERGENCIES DURING THE COVID-19 PANDEMIC	25
SPECIAL PART	
I. STUDY 1: EVALUATING FAMILY COPING MECHANISMS IN PEDIATRIC SEIZURE DISORDERS: FROM EMERGENCY ROOM TO LONG-TERM FOLLOW-UP	32
I.1 INTRODUCTION	32
I.2 MATERIALS AND METHODS	33
I.3 RESULTS	35
I.4 DISCUSSIONS	43
I.5 CONCLUSIONS	46
II. STUDY 2: A CROSS-SECTIONAL ASSESSMENT OF PARENTAL CONCERNS IN THE PEDIATRIC SURGERY DEPARTMENT DURING THE COVID-19 PANDEMIC	48
II.1 INTRODUCTION	48
II.2 MATERIALS AND METHODS	51
II.3 RESULTS	57
II.4 DISCUSSIONS	68
II.5 CONCLUSIONS	72
III. STUDY 3: STRESS DYNAMICS IN FAMILIES WITH CHILDREN WITH NEUROPSYCHIATRIC DISORDERS DURING THE COVID-19 PANDEMIC: A THREE-YEAR LONGITUDINAL ASSESSMENT	
III.1 INTRODUCTION	75
III.2 MATERIALS AND METHODS	76
III.3 RESULTS	80
III.4 DISCUSSIONS	88
III.5 CONCLUSIONS	91
IV. FINAL CONCLUSIONS AND FUTURE PERSPECTIVES	94
BIBLIOGRAPHY:	98
ANNEX	I

STUDY 1: EVALUATING FAMILY COPING MECHANISMS IN PEDIATRIC SEIZURE DISORDERS: FROM EMERGENCY ROOM TO LONG-TERM FOLLOW-UP.

CONTEXT

Seizure disorders represent a significant clinical challenge within pediatric neurology, impacting not only the affected children but also their families in profound ways. The incidence of unprovoked seizures in children ranges between 4 and 10 per 1000, with a notable portion progressing to more frequent seizures that necessitate chronic management strategies. The sudden onset of a seizure often leads to an emergency room visit, which not only serves as a critical intervention point but also marks the beginning of a long-term adjustment process for the family. The uncertainty surrounding the possibility of future seizures adds considerable psychological strain, affecting family dynamics and the overall coping capacity. This sets the stage for a complex interplay of medical management and psychological support, underscoring the need for comprehensive care approaches that address both immediate and long-term concerns.

The emotional toll on families of children with seizure disorders is significant, with caregivers often experiencing heightened levels of stress, anxiety, and depression. These psychological impacts are exacerbated by the unpredictable nature of seizure disorders, the fear of recurrence, and the potential for severe outcomes. The initial emergency department visit often catalyzes a continuous process of adaptation, necessitating ongoing support from a range of healthcare professionals. Despite this recognized need, there is a notable lack of longitudinal studies that explore how families adjust over time to living with pediatric seizure disorders. Addressing this gap, the current study aims to provide insights into the dynamics of family stress and adaptation over a 12-month period, highlighting the critical role of integrated care that encompasses neurology, psychology, and social support services to facilitate better management and improved family outcomes.

Moreover, socioeconomic factors and disparities in access to healthcare play crucial roles in shaping the experiences and outcomes for families managing pediatric seizure disorders. Differences in healthcare access and utilization can lead to varied management successes and levels of stress among families, which are influenced by economic conditions and social support systems. This study, situated in Romania, seeks to explore these dynamics within the specific context of a transitioning economy and healthcare landscape. By examining the long-term effects of pediatric seizures on family stress and coping mechanisms and assessing the impact of multidisciplinary care approaches, this research aims to advance understanding and support the development of more effective strategies for managing the complex challenges posed by pediatric seizure disorders.

SUMMARY OF FINDINGS

The study investigated the dynamics of stress and coping mechanisms among families of pediatric patients with seizure disorders over a period of twelve months, revealing a young cohort predominantly in early childhood with a mean age of 4.46 years. The socio-demographic backdrop included relatively young parents, mostly married, with a high level of education. This diverse socioeconomic and educational setup allowed for a comprehensive understanding of the families' initial ability to manage and react to their child's seizure episodes. Notably, a slight male predominance was observed in the children, consistent with broader epidemiological data on seizure disorders.

Over the year, significant reductions in stress were recorded across various dimensions as measured by the Parental Stress Index (PSI). Starting with high initial stress levels in emotional stress, parent-child communication, and behavioral challenges, these metrics notably decreased by the one-year follow-up. The decrease in total family stress from 65.55 to 55.97 highlights an improvement in familial coping mechanisms, suggesting an

adaptive resilience and underscoring the need for ongoing support to enhance outcomes in managing pediatric seizure disorders. These findings are vital as they point to both natural and possibly intervention-driven adaptations within families.

The study also employed the Hospital Anxiety and Depression Scale (HADS) to assess the psychological well-being of the caregivers. Initial moderate levels of anxiety and depression decreased over the study period, with both parameters showing statistically significant improvements by the end of the year. This trend reflects an easing of the mental health burden among caregivers, possibly due to increased familiarity with the disorder, better coping strategies, or the effectiveness of any interventions provided during the study. The overall reduction in combined anxiety and depression scores further emphasizes the importance of psychological support in managing chronic pediatric conditions.

Parental concerns, as assessed by the Parental Concerns Questionnaire (PCQ), also showed a significant reduction across various domains, including practical and emotional impacts as well as co-parenting issues. The total score of parental concerns decreased progressively over the year, illustrating an ongoing adjustment and lessened anxiety about managing their child's condition. These results suggest that as families become more adept at dealing with the practicalities and emotional strain of seizure disorders, their overall stress and concerns diminish.

Finally, the Perceived Stress Scale-10 (PSS-10) outcomes indicated a general reduction in perceived stress among families, with specific improvements in positive aspects of stress management. Although the decrease in negative aspects of stress was not statistically significant, the overall trend points to a gradual adaptation and enhancement in coping mechanisms. This ongoing reduction in stress, coupled with the positive shifts in handling emotional and practical challenges, underscores the resilience and evolving dynamics within families dealing with pediatric seizure disorders.

Figure 1 – Follow-up of PSI survey results.

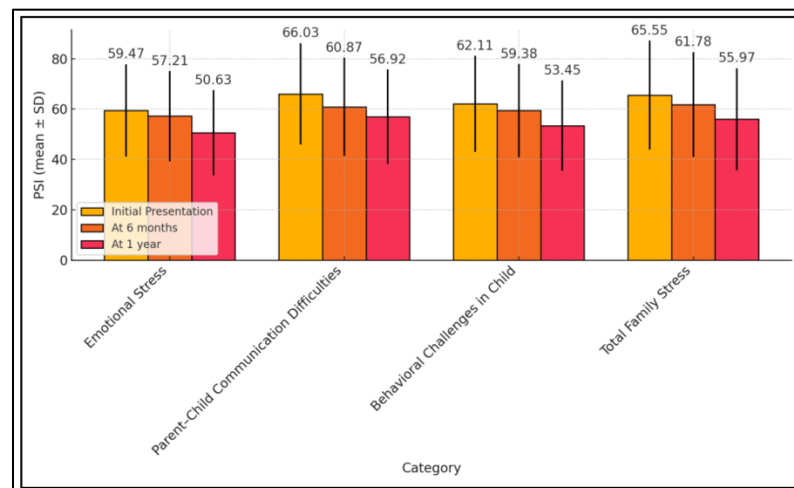
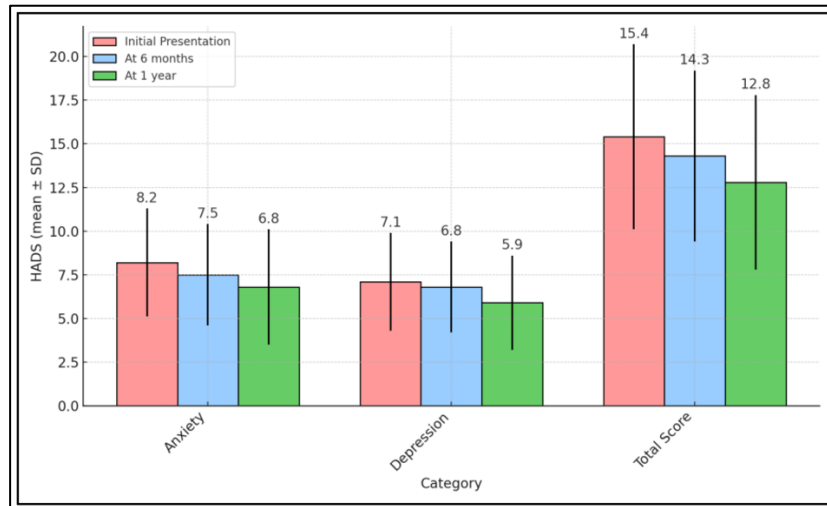


Figure 2 – Follow-up of HADS survey results.



CONCLUSIONS

In conclusion, the current study effectively demonstrates that a comprehensive, multidisciplinary follow-up care approach can significantly alleviate family stress and enhance coping mechanisms in the context of pediatric seizure management. These findings highlight the importance of integrated care models that go beyond medical treatment to address the psychological and emotional needs of families, advocating for broader implementation of such models in pediatric healthcare. The study's implications point toward a more holistic approach to chronic pediatric health conditions, emphasizing the critical role of psychological and social support in achieving favorable outcomes.

STUDY 2: A CROSS-SECTIONAL ASSESSMENT OF PARENTAL CONCERNS IN THE PEDIATRIC SURGERY DEPARTMENT DURING THE COVID-19 PANDEMIC.

CONTEXT

The COVID-19 pandemic, triggered by the SARS-CoV-2 virus, has significantly disrupted global health and healthcare systems, affecting not only adults but also the pediatric population. While children have been affected, their symptoms are often less severe than those in adults, leading to a lower percentage of severe cases among children. Research has shown that COVID-19 manifests differently in children, with many remaining asymptomatic or exhibiting atypical symptoms. This variation may be due to differences in the immune system's maturity and the expression of viral receptors between children and adults, alongside a lower exposure rate to the virus among the younger population.

Despite the overall milder symptoms in children, certain groups, especially those with preexisting conditions, are at a higher risk of severe complications from COVID-19, including the rare but serious multisystem inflammatory syndrome in children (MIS-C). The pandemic has necessitated significant healthcare reorganization, prioritizing urgent cases and managing COVID-19 patients, leading to postponed or canceled elective surgeries. This reorganization has impacted the prevalence of certain pediatric disorders and created a backlog of surgical cases, heightening parental anxiety over the safety and timing of their children's surgeries amid fears of hospital-acquired infections and the consequences of delayed procedures.

Understanding and addressing parental concerns about pediatric surgical care during the COVID-19 pandemic is crucial. Healthcare providers must effectively communicate with parents to alleviate their worries and provide the necessary support for families navigating these challenging times. By assessing parental concerns and identifying factors contributing to their anxiety, healthcare professionals can offer targeted recommendations to improve the pediatric surgical care experience during the pandemic and any future health crises, ensuring both children and their families receive the care and reassurance they need.

RESULTS

At the conclusion of the study, 66 parents of children undergoing elective surgery and 108 parents of children undergoing emergency surgery were analyzed. The demographic analysis revealed no significant age difference between the two groups of parents, with those in the elective surgery group averaging 38.9 years and those in the emergency surgery group 37.1 years. The children in the elective surgery group were older on average compared to those in the emergency group, and a higher percentage of parents from urban areas were noted in the elective surgery group. Additionally, a significant difference was observed in COVID-19 vaccination rates between the groups, indicating potentially different levels of health engagement or access.

The types of surgeries performed on these children during the COVID-19 pandemic varied, encompassing areas such as digestive, neonate, urology, and orthopedics, with no significant differences in the distribution of surgery types between the elective and emergency groups. This suggests a broad spectrum of pediatric surgical needs during the pandemic, unaffected by the categorization into elective or emergent interventions. Parents in the elective surgery group expressed more concern about COVID-19 exposure during hospital visits, while a larger portion of parents in the emergency surgery group reported delaying surgery due to the pandemic, reflecting the heightened anxieties and decision-making challenges faced by parents during this period.

Analysis of unstandardized questionnaires showed significant differences in parental concerns about COVID-19 exposure, the impact of restricted visitation policies, and the decision-making process regarding their child's surgery. These findings underscore the psychological and emotional toll on parents navigating pediatric surgical care amidst the

pandemic, highlighting the need for targeted communication and support strategies by healthcare providers. The analysis of standardized questionnaires further revealed higher practical and emotional impact scores among parents in the emergency surgery group, indicating greater concern and anxiety levels.

Correlation analysis between standardized questionnaires demonstrated a positive association among parental concerns, anxiety, depression, and perceived stress, with digestive and neonate interventions significantly associated with increased parental anxiety. This emphasizes the interconnectedness of psychological distress factors among parents in pediatric surgical contexts during the COVID-19 pandemic. The data suggest that specific types of surgeries, combined with the pandemic's unique pressures, contribute to heightened parental anxiety.

Figure 3 – A comparison of the PCQ survey results.

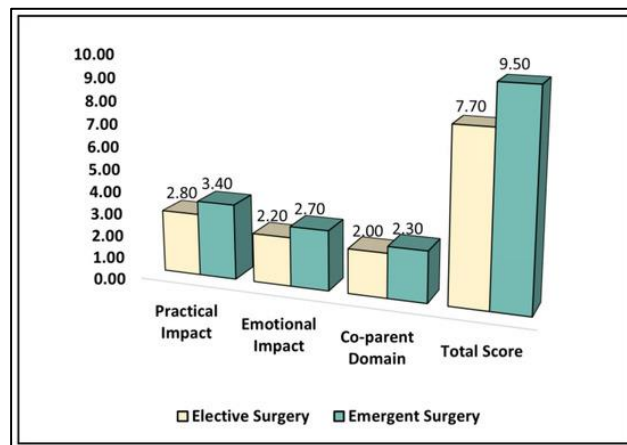
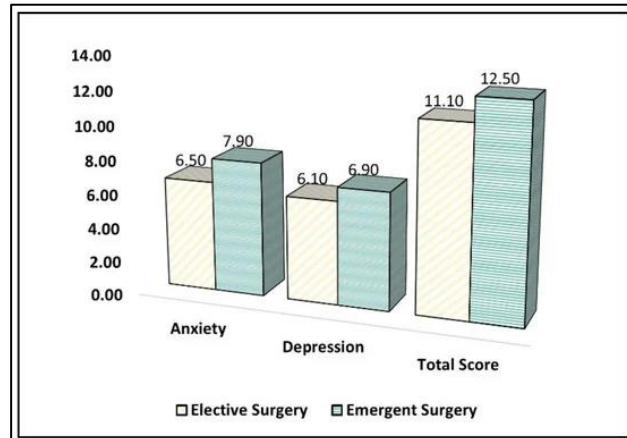


Figure 4 – A comparison of the HADS survey results.



CONCLUSIONS

The study underscores the elevated levels of concern, anxiety, and perceived stress among parents of children requiring pediatric surgery during the COVID-19 pandemic, with these feelings being particularly pronounced in the emergent surgery group. Key factors contributing to increased parental anxiety include the age of the child, the parents' level of education, and whether the child is an only child. Notably, concerns and stress were significantly linked to the type of surgery, with digestive and neonatal surgeries causing more anxiety than others. These findings underline the necessity for healthcare providers to actively engage in alleviating parental concerns through effective communication and support, emphasizing the importance of further research to mitigate such anxieties in the face of ongoing or future health crises.

STUDY 3: STRESS DYNAMICS IN FAMILIES WITH CHILDREN WITH NEUROPSYCHIATRIC DISORDERS DURING THE COVID-19 PANDEMIC: A THREE-YEAR LONGITUDINAL ASSESSMENT.

CONTEXT

Neuropsychiatric disorders in children represent a complex array of conditions with varying presentations, causes, and treatment needs, notably including Attention Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD) among others. These disorders, encompassing issues from epilepsy and intellectual disabilities to mood and tic disorders, present significant challenges for the affected pediatric population and their families. The unique vulnerabilities of these children make their management a multifaceted task, further complicated by the need for individualized care and support.

The COVID-19 pandemic has had profound impacts on global health, affecting individuals across all demographics, with its psychological and social repercussions particularly felt by families of children with neuropsychiatric disorders. The disruption caused by lockdowns, the sudden shift in routine, and restricted access to necessary healthcare services have not only exacerbated the symptoms of these disorders but have also imposed additional stress and anxiety on these families. This situation has highlighted the unique difficulties faced by this group, as they navigate the heightened vulnerabilities of their children alongside the universal challenges posed by the pandemic.

Emerging studies suggest that while some families with neuropsychiatric disorders may develop resilience and adaptive coping mechanisms, others experience a significant exacerbation of symptoms and increased stress, illustrating the complex and varied effects of the pandemic on this demographic. The conflicting findings in existing literature underscore the need for further research to understand the specific impacts of the pandemic on these families, taking into account cultural and healthcare system differences that might affect their experiences.

RESULTS

During the COVID-19 pandemic, surveys collected from families of children with neuropsychiatric disorders showed a consistent age distribution and diagnosis prevalence, with ADHD being the most common condition across three years. Parental data indicated stable employment status and educational background, with a significant increase in COVID-19 vaccination rates from 2021 to 2022. Despite the consistent mean scores for parental confidence in understanding their child's condition and the perceived availability of online support resources, there was a significant decline in access to necessary therapies and interventions, highlighting the pandemic's impact on healthcare access for these children.

Parents reported feeling increasingly overwhelmed or anxious about their child's condition in 2021, with a notable decrease in 2022. However, the overall mental well-being of families improved significantly over the years, suggesting a potential adaptation or resilience to the pandemic's challenges. The study also found that while parental stress levels related to healthcare professional support remained unchanged, there was a significant positive trend in parents' perspectives and strategies influenced by the pandemic, indicating an evolving approach to managing their children's disorders amidst ongoing challenges.

The Parental Stress Index (PSI) survey results highlighted a significant decrease in emotional stress, parent-child communication difficulties, and perceived behavioral challenges in children, suggesting a reduction in family stress dynamics over the course of the pandemic. This decrease in stress levels was further supported by the Child Behavior Checklist (CBCL) survey, which showed a significant reduction in emotional response problems, anxiety/depression, somatic complaints, and sleep problems among children, indicating a general improvement in children's behavioral and emotional status.

The Hospital Anxiety and Depression Scale (HADS) revealed a moderate reduction in parental anxiety levels over the years, although the decline in depression scores was not statistically significant. The combined total score of HADS, encompassing both anxiety and depression domains, suggested a marginal trend of improvement in the mental well-being of participants throughout the pandemic, albeit not reaching statistical significance. This finding points to the nuanced impact of the pandemic on parental mental health, with varying degrees of anxiety and depression experienced by different families.

The severity of a child's disorder played a significant role in parental stress and anxiety levels, with families of children having more severe or acute disorders reporting higher levels of stress and anxiety. This distinction highlights the increased burden faced by families managing more challenging neuropsychiatric conditions during the pandemic.

Figure 5 – Analysis of the PSI questionnaire results during the COVID-19 pandemic.

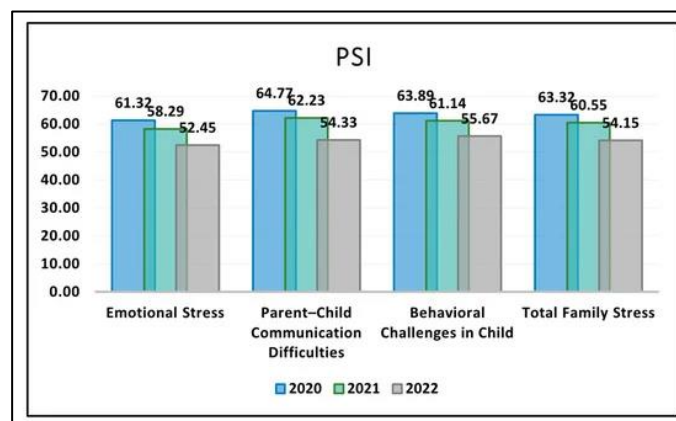
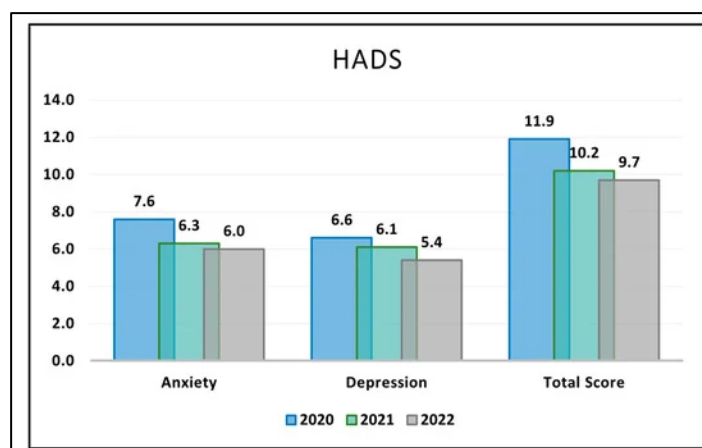


Figure 6 – Analysis of the HADS questionnaire results during the COVID-19 pandemic.



CONCLUSIONS

Our study reveals the multifaceted and evolving nature of stress dynamics in families with children diagnosed with neuropsychiatric disorders during the COVID-19 pandemic. A key takeaway is the remarkable adaptability and resilience demonstrated by these families despite facing decreased access to essential therapies and heightened initial stress levels. The study highlights a gradual improvement in overall mental well-being, effective parent-child communication, and a reduction in behavioral challenges, underscoring the critical need for continued and targeted support for these families, especially during global crises. These insights emphasize the importance of flexible and accessible healthcare resources and the resilience of families in adapting to unprecedented challenges.