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The role and evaluation of parental medical activity in the prevention of chronic gastrointestinal diseases in children

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Abstract. *Chronic gastrointestinal diseases in children represent a significant medical and social issue characterized by long-lasting conditions, periodic flare-ups, and a substantial decline in the quality of life. These conditions not only impact physical health but also interfere with educational performance, physical activity, and emotional well-being, ultimately affecting the child's overall development. The management and outcome of these diseases heavily rely on the involvement of parents, including their ability to seek timely medical care, ensure adherence to prescribed diets and pharmacological treatments, maintain health records, and organize psychological support for their child. In this context, the role of parental medical activity is of crucial importance in preventing complications, managing symptoms, and improving the child's overall quality of life. The purpose of this study was to evaluate the level of medical involvement among parents of children with chronic gastrointestinal disorders, identify factors influencing this involvement, and assess its significance in the prevention, treatment, and enhancement of the child's quality of life. To achieve this, a cross-sectional survey was conducted involving 80 children aged 6 to 17 years, all registered with a dispensary for chronic gastrointestinal conditions, including gastritis, peptic ulcer disease, and irritable bowel syndrome. The survey included 47 questions divided into seven thematic areas: socio-demographic information, the course of the disease, awareness and interaction with healthcare services, prevention, psycho-emotional status, social support, and school or kindergarten adaptation. The responses were evaluated using a 1-3 point scale, with the total score used to categorize parental medical activity levels as low, moderate, good, above average, or high. The results indicated that 10% of parents had low activity levels, 22.5% demonstrated moderate involvement, 36.2% showed good activity, 21.3% had above-average activity, and 10% exhibited high engagement. In total, 67.5% of parents displayed a suficient level of medical activity, while 32.5% showed low or moderate involvement. The areas where parents excelled included adherence to medical prescriptions (72.5%) and informing educational institutions about the child's condition (65%). However, the most concerning aspects were the regular maintenance of medical records, which only 22.5% of parents managed effectively, and participation in psychological or social programs, which was less than 15%. These findings suggest that the psychosocial component of care remains undervalued by many families. Additionally, parental activity varied significantly depending on the educational and socio-economic status of the family. The study concluded that parental involvement in medical care plays a vital role in the prevention and treatment of chronic gastrointestinal diseases in children.*

This involvement directly affects the child's health outcomes, psychosocial development, and overall quality of life. Future initiatives should focus on enhancing parental awareness, improving family education on medical and psychosocial care, and increasing support for families with lower socio-economic status to ensure equitable and effective management of chronic gastrointestinal conditions in children.

Keywords: Child; Chronic Disease; Family Support; Gastrointestinal Tract; Quality of Life.

Introduction

Chronic gastrointestinal (GI) diseases in children are one of the important medical and social problems that have a significant impact on the physical, emotional, and social well-being of children [1,2,3]. They are often accompanied by a prolonged course and periodic exacerbations, which significantly reduce the quality of life and can lead to the development of secondary disorders, such as growth disorders, decreased physical activity, and psychological disorders. Chronic pain, abdominal discomfort, or other manifestations of the disease create increased anxiety and emotional tension, contributing to the development of psychological disorders such as depression or adjustment disorders [4,5,6,7,8,9].

One of the main factors determining the effectiveness of treatment and prevention of complications of such diseases is the level of parental involvement in the medical care of the child [10,11,12]. Parents play a key role in timely visits to medical institutions, adherence to diet, following medical recommendations, keeping health diaries, and organising psycho-emotional support [13,14]. Their activity affects not only the treatment process but also the psychological state of the child, which, in turn, can influence the course of the disease and its prognosis. Insufficient parental involvement in these aspects can lead to delays in diagnosis, inadequate treatment, increased frequency of disease exacerbations, and reduced adherence to therapy [15,16,17].

Aim

To assess the level of medical activity of parents of children with chronic gastrointestinal diseases, to study the factors influencing this level, and to determine its significance for the prevention, treatment, and improvement of the quality of life of children.

Materials and methods

To assess the level of medical activity of parents of children with chronic gastrointestinal diseases, a sample of 80 children aged 6 to 17 years was formed, who were registered at a specialised outpatient clinic with diagnoses of chronic gastrointestinal diseases, such as gastritis, peptic ulcer disease, irritable bowel syndrome. All diagnoses were made on the basis of clinical data, laboratory test results, and instrumental examination methods, which confirmed the presence of chronic gastrointestinal diseases in accordance with international standards and recommendations. Diagnoses were verified by reviewing patient medical records, consulting with gastroenterologists, and additional confirmation of the diagnosis using modern diagnostic techniques (endoscopy, ultrasound, blood tests for inflammation markers, testing for Helicobacter pylori, etc.). All patients had officially confirmed diagnoses recorded in their medical records at the time of the study.

The main tool for data collection was a questionnaire consisting of 47 questions, which were divided into 7 main sections:

1. Socio-demographic data - questions concerning parents' education, their professional activities and socio-economic status.
2. Course of the disease - questions concerning the duration of the disease, frequency of exacerbations, and changes in treatment approach.
3. Parental awareness and interaction with medicine - assessment of parents' knowledge of the disease, their attitude to medical consultations and treatment.
4. Prevention - questions about adherence to diet, regularity of medical examinations, and physical activity of children.

5. Psycho-emotional state - assessment of the child's level of anxiety and stress, as well as the parents' reaction to these symptoms.
6. Social support and participation - parents' participation in charitable and social programmes, their interaction with other parents.
7. School/kindergarten adaptation - questions regarding teachers' awareness of the child's condition and the availability of individual learning conditions.

Each question in the questionnaire had three possible answers, which were rated on a scale of 1 to 3 points. According to this scale: 1 point - low activity/unsatisfactory condition; 2 points - average activity/conditional condition; 3 points - high activity/satisfactory condition. The overall result was calculated using the formula: Overall result = $(N1 \times 1) + (N2 \times 2) + (N3 \times 3)$, where N1, N2, and N3 are the number of answers that received 1, 2, and 3 points, respectively. The level of medical activity of parents was determined depending on the points received, where: 47-65 points - low level of activity; 66-84 points - moderate level; 85-103 points - good level; 104-122 points - above average level; 123-141 points - high level of activity.

Statistica and Microsoft Excel software were used to process the data obtained. Variational statistical analysis was used to assess the level of medical activity of parents, using percentage distributions and descriptive statistics (mean values ± standard deviation). The level of statistical significance was determined according to the standard criterion $p<0.05$.

Results

The study assessed the level of medical activity of parents of children with chronic gastrointestinal tract (GIT) diseases. Overall, among the 80 parents surveyed, the distribution by level of activity was as follows:

- A low level of activity (47-65 points) was recorded in 8 (10%) parents.
- Moderate activity (66-84 points) was demonstrated by 18 (22.5%) parents.
- Good activity (85-103 points) was demonstrated by 29 (36.2%) parents.
- Above-average activity levels (104-122 points) were observed in 17 (21.3%) parents.
- High activity levels (123-141 points) were found in 8 (10%) parents.

About 67.5% of parents showed a high or good level of involvement in the treatment and care of their children, which indicates their significant activity in medical support. However, 32.5% of parents demonstrated a low and moderate level of activity, indicating a need to improve the participation of these families in the treatment and prevention process.

According to the results, there are several key problem areas that require attention. Medical record keeping: only 22.5% of parents regularly monitored their child's well-being, nutrition, and other aspects of health. This may indicate insufficient attention to the importance of this tool in managing chronic diseases, although keeping medical records is critical for timely therapy adjustments. Participation in psychological or social programmes, as less than 15% of parents participated in such programmes or sought psycho-emotional support for their child. This highlights a lack of attention to the psychosocial aspects of treatment, which is an important component of comprehensive care for children with chronic gastrointestinal diseases.

The best results were observed in areas such as adherence to medical prescriptions, as 72.5% of parents reported that they followed all recommendations from medical professionals, indicating a high level of responsibility and awareness of the importance of medication control for their child's condition. 65% of parents regularly inform educational institutions about their child's chronic disease, which is an important aspect in ensuring appropriate conditions for children's education and social adaptation.

The results of the study show significant variability in the level of medical activity of parents, determined by both positive and negative aspects of their involvement. At the same time, the high level of compliance with medical recommendations and informing school staff indicates that most parents understand the importance of medical control and support at various levels. However, given the existing problems in other aspects of care, it is necessary to develop support programmes aimed at increasing parents' awareness and involvement in the medical process, in particular through involvement in medical record-keeping and psycho-emotional support programmes.

The level of parental medical activity is a key factor determining the effectiveness of treatment and prevention of chronic gastrointestinal tract (GIT) diseases in children. More than two-thirds of the parents surveyed demonstrate a sufficient or high level of activity, indicating an adequate understanding of the importance of medical care and monitoring of their child's condition. However, a significant proportion of parents (32.5%) have a low or moderate level of involvement, indicating a need for further measures to increase the activity of these families.

One of the most problematic aspects is the maintenance of medical records. Only 22.5% of parents reported that they regularly keep health diaries and other important records, which is a prerequisite for effective monitoring of their child's condition. Keeping medical records is an important tool for the timely detection of changes in health status and the adjustment of therapeutic measures. This indicator shows that parents aren't really motivated or aware of how important this is. So, we need to roll out extra educational programmes for parents to make them more aware of how important it is to keep medical records.

Psycho-emotional support for children is another important area where there is a significant gap between the high level of parental involvement in physical treatment and insufficient attention to the child's psychological state. Less than 15% of parents participated in psychological or social programmes, which may indicate an underestimation of the importance of psycho-emotional support in the context of chronic diseases. Given that such diseases can be accompanied by stress, anxiety, and social isolation, the role of psycho-emotional support cannot be underestimated. Children with chronic diseases often face emotional difficulties, which can worsen their overall well-being and even lead to the development of depression or other mental disorders. In this regard, it is important to raise parents' awareness of the need to provide psychological support to their children and to encourage families to participate in relevant programmes.

The highest results were recorded in areas such as compliance with medical recommendations (72.5% of parents comply with all medical prescriptions) and informing teachers about the child's condition (65% of parents). This indicates a high level of awareness among parents of the need for medication control and the importance of interacting with educational institutions to ensure favourable conditions for the child. A high level of awareness among teachers about the child's condition allows for an individual approach to learning, which in turn contributes to better socialisation and adaptation of children to the school environment. However, even these aspects require further attention, as not all parents are fully prepared to openly discuss medical issues with teachers, which may be due to various social, psychological, or cultural barriers.

Nevertheless, despite the significant number of highly active parents, the problem of social isolation of some families remains. About 32.5% of parents do not participate in charitable or social programmes, which may indicate a lack of support from the community or medical institutions. This points to the need to develop a support system that includes both medical and social components. Psychosocial support for families, in particular through the creation of support groups or online resources, could significantly improve the situation and reduce the level of social isolation.

Attention should also be paid to the problem of heterogeneity in the level of activity among parents. Factors that may influence this level include education, social status, access to medical resources, and information. Parents with higher levels of education and better access to medical information tend to be more medically active, confirming the importance of providing access to medical knowledge and support to all segments of the population. This factor is key to developing programmes aimed at increasing medical awareness in different social groups.

The study results highlight the importance of a comprehensive approach to the treatment and prevention of chronic gastrointestinal diseases in children, where parental involvement is a key component. To achieve the best results, it is necessary not only to improve medical support but also to focus on psychological and social support for children and their families. Given the results obtained, it is important to continue developing educational programmes for parents that will increase their involvement in the treatment of children, as well as to implement initiatives to improve access to information and medical resources for all segments of the population.

Conclusions

1. Parental medical activity is a key factor in the prevention and treatment of chronic gastrointestinal diseases in children, particularly in the context of COVID-19.
2. A high level of parental activity promotes compliance with medical prescriptions and better social functioning of children, while a lack of attention to medical record keeping and psycho-emotional support can worsen the course of the disease.
3. To improve the effectiveness of treatment, it is important to develop educational programmes for parents, particularly regarding medical record keeping and participation in psychological support programmes.
4. Increasing the level of parental involvement in medical care has a direct impact on the child's quality of life and the effectiveness of treatment, so it is necessary to strengthen information support for families with low socioeconomic status.

Ethical Approval

The study was conducted in accordance with the ethical standards set forth in the Declaration of Helsinki (2013) and relevant international requirements for biomedical research. All study participants signed an informed consent form for participation in the study and processing of personal data. The study was conducted within the framework of the research project ‘Improvement of methods for the diagnosis, treatment and prevention of socially significant childhood diseases’ (state registration number 0125U000113), with a completion date of 2025-2027.

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Conflict of interest

There is no conflict of interest in this article. No rewards received.

Consent to publication

All authors of the article are acquainted with the final version of the manuscript and have no objections to its publication. The article does not use personal data and information about patients.

AI Disclosure

AI tools were not used in preparing this manuscript.

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REFERENCES

1. Nedelska SM, Samokhin IV, Kriazhev OV, Yartseva DO, Bessikalo TH, Kliatska LI. Functional disorders of the gastrointestinal tract in children of different age groups (a literature review). Zaporozhye Med J. 2024;26(1):66-71. doi:10.14739/2310-1210.2024.1.290950
2. Hommel KA, McGraw KL, Ammerman RT, Heubi JE, Hansen M, Dunlap E, Beidel DC. Psychosocial functioning in children and adolescents with gastrointestinal complaints and disorders. J Clin Psychol Med Settings. 2010;17(2):159-66. doi: 10.1007/s10880-010-9193-4.
3. Al-Beltagi M, Saeed NK, Bediwy AS, Elbeltagi R. Breaking the cycle: Psychological and social dimensions of pediatric functional gastrointestinal disorders. World J Clin Pediatr. 2025;14(2):103323. doi: 10.5409/wjcp.v14.i2.103323.
4. Krycky IO, Hoshchynskyi PV, Shulhai OM, Dzhyvak VG, Protsailo MD. Improving an integrated approach to the treatment of functional constipation in children. Paediatr Surg (Ukraine). 2023;4(81):87-91. doi:10.15574/PS.2023.81.87
5. Pop D, Man SC, Farcău D. Anxiety and depression in children with irritable bowel syndrome narrative review. Diagnostics. 2025;15(4):433. doi:10.3390/diagnostics15040433
6. Vinall J, Pavlova M, Asmundson GJ, Rasic N, Noel M. Mental Health Comorbidities in Pediatric Chronic Pain: A Narrative Review of Epidemiology, Models, Neurobiological Mechanisms and Treatment. Children (Basel). 2016;3(4):40. doi: 10.3390/children3040040.
7. Kumar A, Vallabhaneni P. Anxiety disorders presenting as gastrointestinal symptoms in children - a scoping review. Clin Exp Pediatr. 2025;68(5):344-351. doi: 10.3345/cep.2024.01732.
8. Johnston KJA, Huckins LM. Chronic Pain and Psychiatric Conditions. Complex Psychiatry. 2022;9(1-4):24-43. doi: 10.1159/000527041.
9. Krytskyi I, Popovych D, Dzhyvak V, Boiko V, Hevko U, Bai A. Substantiation of the importance of rehabilitation for children with intestinal obstruction in the postoperative period. Health Man. 2025;(2):86-96. doi:10.30841/2786-7323.2.2025.337357
10. Cunningham-Erves J, Deakings J, Mayo-Gamble T, Kelly-Taylor K, Miller ST. Factors influencing parental trust in medical researchers for child and adolescent patients' clinical trial participation. Psychol Health Med. 2019;24(6):691-702. doi: 10.1080/13548506.2019.1566623.
11. Aarthun A, Øymar KA, Akerjordet K. Parental involvement in decision-making about their child's health care at the hospital. Nurs Open. 2018;6(1):50-58. doi: 10.1002/nop2.180.
12. Aleid AM, Sabi NM, Alharbi GS, Alharthi AA, Alshuqayfi SM, Alnefiae NS, Ismail GM, Allhybi AK, Alrasheeday AM, Alshammari B, Alabbasi Y, Al Mutair A. The impact of parental involvement in the prevention and management of obesity in children: a systematic review and meta-analysis of randomized controlled trials. Children. 2024;11(6):739. doi:10.3390/children11060739
13. McLorie EV, Hackett J, Fraser LK. Understanding parents' experiences of care for children with medical complexity in England: a qualitative study. BMJ Paediatr Open. 2023;7(1):e002057. doi: 10.1136/bmjpo-2023-002057.
14. Michaelson V, Pilato KA, Davison CM. Family as a health promotion setting: A scoping review of conceptual models of the health-promoting family. PLoS One. 2021;16(4):e0249707. doi: 10.1371/journal.pone.0249707.
15. Religioni U, Barrios-Rodríguez R, Requena P, Borowska M, Ostrowski J. Enhancing Therapy Adherence: Impact on Clinical Outcomes, Healthcare Costs, and Patient Quality of Life. Medicina (Kaunas). 2025;61(1):153. doi: 10.3390/medicina61010153.
16. Mabunda NF. Factors associated with family involvement or lack thereof in caring for mental health care users: a qualitative study. Psychiatry Int. 2025;6(1):30. doi:10.3390/psychiatryint6010030
17. Reed-Knight B, Lewis JD, Blount RL. Association of disease, adolescent, and family factors with medication adherence in pediatric inflammatory bowel disease. J Pediatr Psychol. 2011;36(3):308-17. doi: 10.1093/jpepsy/jsq076.

Роль і оцінка медичної діяльності батьків у профілактиці хронічних захворювань шлунково-кишкового тракту у дітей

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Анотація. *Хронічні захворювання шлунково-кишкового тракту у дітей є значною медичною та соціальною проблемою, що характеризується тривалим перебігом, періодичними загостреннями та істотним погіршенням якості життя. Ці захворювання не тільки впливають на фізичне здоров'я, але й заважають навчанню, фізичній активності та емоційному благополуччю, що в кінцевому підсумку позначається на загальному розвитку дитини. Лікування та результати цих захворювань значною мірою залежать від залучення батьків, зокрема від їхньої здатності своєчасно звертатися за медичною допомогою, забезпечувати дотримання призначених дієт і фармакологічних методів лікування, вести медичні записи та організовувати психологічну підтримку для своєї дитини. У цьому контексті роль батьківської медичної активності має вирішальне значення для запобігання ускладнень, лікування симптомів та поліпшення загальної якості життя дитини. Метою цього дослідження було оцінити рівень медичної активності батьків дітей із хронічними шлунково-кишковими розладами, визначити фактори, що впливають на цю активність, та оцінити її значення для профілактики, лікування та поліпшення якості життя дитини. Для цього було проведено перехресне опитування 80 дітей віком від 6 до 17 років, які були зареєстровані в амбулаторії з приводу хронічних шлунково-кишкових захворювань, включаючи гастрит, виразкову хворобу та синдром подразненого кишечника. Опитування включало 47 питань, розділених на сім тематичних областей: соціально-демографічна інформація, перебіг захворювання, обізнаність та взаємодія з медичними службами, профілактика, психоемоційний стан, соціальна підтримка та адаптація в школі або дитячому садку. Відповіді оцінювалися за 1-3-бальною шкалою, а загальний бал використовувався для класифікації рівня медичної активності батьків як низький, помірний, хороший, вище середнього або високий. Результати показали, що 10% батьків продемонстрували низький рівень активності, 22,5% — помірну залученість, 36,2% — добру активність, 21,3% — активність вище середнього, а 10% — високий рівень залученості. Загалом 67,5% батьків продемонстрували достатній рівень медичної активності, а 32,5% — низьку або помірну залученість. Серед областей, в яких батьки продемонстрували високі результати, були дотримання медичних призначень (72,5%) та інформування навчальних закладів про стан дитини (65%). Однак найбільш турбуючими аспектами були регулярне ведення медичних записів, з яким ефективно справлялися лише 22,5% батьків, та участь у психологічних або соціальних програмах, яка становила менше 15%. Ці результати свідчать про те, що психосоціальний компонент догляду залишається недооціненим багатьма сім'ями. Крім того, активність батьків значно варіювалася залежно від освітнього та соціально-економічного статусу сім'ї. У дослідженні зроблено висновок, що участь батьків у медичному догляді відіграє важливу роль у профілактиці та лікуванні хронічних захворювань шлунково-кишкового тракту у дітей. Ця участь безпосередньо впливає на стан здоров'я дитини, її психосоціальний розвиток та загальну якість життя. Майбутні ініціативи повинні бути спрямовані на підвищення обізнаності батьків, поліпшення освіти сім'ї з питань медичної та психосоціальної допомоги, а також збільшення підтримки сімей з нижчим соціально-економічним статусом для забезпечення справедливого та ефективного лікування хронічних захворювань шлунково-кишкового тракту у дітей.*

Ключові слова: Дитина; Хронічне захворювання; Підтримка сім'ї; Шлунково-кишковий тракт; Якість життя