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PSYCHOLOGICAL FACTORS OF RE - INJURIES IN CHILDREN (MEDICAL AND PSYCHOLOGICAL SUPPORTOPTIONS FOR THE CHILDREN'S FAMILIES)

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Introduction

Relevance of the research. Medical practitioners draw attention to the fact that some children are quite often and seriously injured, starting from an early age. At the same time, there are many people who have never been seriously injured in their entire lives. The relevance of the recurrent unintentional childhood injuries problem is determined by statistical data on the increase in childhood injuries every year and the fact that children with injuries are considered a risk group for disability and other complications. Tens of millions of children annually require hospital care for unintentional injuries [35]. Despite the beginning of the new millennium, childhood injuries remain a serious medical and social issue. The injury rates are still dangerously high. Medical institutions in Russia register more than 3 million childhood injuries annually. Approximately every eighth child under the age of 18 seeks medical attention due to injuries, 50% of cases are due to domestic accidents (Russian Federal State Statistics Service) [12; 27; 88; 109; 112; 121].

Childhood injuries are preventable, but they continue to be a significant public health problem worldwide [75; 87; 112; 127]. Currently in the United States there are approximately 9.2 million emergency department visits annually and up to $17 billion in medical costs. In preschool children, injuries are considered the leading cause of disability [103; 110; 134]. In the UK, unintentional injuries are the leading cause of emergency department visits and preventable deaths in children over 1 year old. Convention on the Rights of the Child adopted in 1989 declared that every child has the right to the highest attainable standard of health and a safe environment. The report of the World Health Organization also confirms these principles, describing the protection of children's lives as “the most pressing moral dilemma of the new millennium” (World Health Organization report, 2008).

Most countries have ratified this Convention, which requires them to take appropriate legislative, administrative, social and educational measures to protect children from all sorts of injuries (Resolution of the USSR Supreme Council of June 13, 1990 N 1559-I). The Convention is a powerful expression of the collective view regarding the responsibilities towards children, but a declaration is not enough, action is required.

Injury prevention is an important social goal and special measures are required to protect children's rights to health and a safe environment, where the risk of injury would be minimal (Report… Copenhagen, 2009). Joint WHO/UNICEF report proposes keeping children safe by promoting scientific-based injury prevention interventions and providing sustainable funding for all relevant sectors (M. Peden, 2008). Unintentional injuries are considered highly preventable in younger age groups (M. Ruiz-Goikoetxea, 2018). Children having one injury are at increased risk of further injuries. Parenting programs can help reduce injuries in preschool children (J. Mytton, 2014). The preventive focus of the Russian healthcare system determines the implementation of preliminary complex actions to preserve and maintain human health. These actions must also include a global system of measures on psychological prevention of childhood injuries, including the recurrent ones. Researching the psychological risk factors and signs of childhood injuries should be one of the basics in developing effective and modern technologies for childhood injuries prevention [68].

The degree of the research topic development. Researchers working in various medical fields agree that symptomatology of both determining problems and the consequences of injuries is an interdisciplinary field in which the interests and efforts of doctors, psychologists and educators are combined, and it is a large and independent medical and social problem [66; 101; 171]. The constant increase in injury rates and the frequency of severe injuries is a serious worldwide concern [12; 27; 65].

Psychoanalytic studies view injuries, including recurrent physical unintentional injuries, as a result of nonconscious processes. Their analysis reveals the relative benefits of injury: its communicative function (as a metacommunication), participation in internal coping processes or as a result of auto-aggressive impulses, protest against the imposed restrictions, viewing injury as a redemption of one's indignation, impulsivity focused on immediate satisfaction, excessive risk taking, acting on the spur of the moment, fears of another injury [91; 95; 97]. The work that psychoanalysis covers is relevant. But it is individual, and when it comes to childhood injuries, we are talking about the 3 million cases being annually registered in medical institutions of Russia (Russian Federal State Statistics Service).

Analysis of factors that increase the risk of unintentional childhood injuries from the psychological perspective puts great emphasis on microsocial conditions [159]. In particular, the nature of interactions between parents and children, the parental social status and their views [96; 117; 136; 163; 165]. Parents often play a key role in the injury occurrence and prevention [167]. A comprehensive approach to preventing unintentional childhood injuries, based on W. Bronfenbrenner's ecological systems theory and the Haddon matrix, notes that behavioral risks arise from the child's family environment and broader cultural environment.

At the same time, the work of a psychologist plays an important role in preventing childhood injuries [160].

Among the medical and biological factors associated with injuries, gender and parental injuries are considered the significant ones; this is how children are raised with the "injury-risk behavior" stereotype [12; 27; 63; 66; 113]. An important role in injury prevention is assigned to the medical professionals who, based on sufficient information on age and sexual characteristics of children, should promptly inform parents, kindergarten teachers and educational institutions teaching staff about "injury-risk situations" and "injury-risk behavior" in children. In studies on the problem of correction and prevention of unintentional childhood

injuries, there is no common understanding of what exactly is considered “medical and psychological support" aimed at reducing injury risk (D.V. Kulesh et al., 2016).

Most studies cover the epidemiology of injuries, mention the need for injury prevention and describe the preventive measures mostly for sport, school, and road traffic injuries, focusing on the consequences and rehabilitation of unintentional physical injuries in both adults and children (A. A. Gorlov, 1991, A. V. Spiridonov, 2003). But they don't study the causes of injuries, including recurrent ones, in detail, don't describe the cause-effect relations of the domestic injuries and the pathogenesis of the injuries occurrence. In particular, the characteristics of the microsocial situation of a child with injury-risk behavior are not studied enough. Based on these problems, it can be concluded that it is necessary to develop a modern recurrent injuries prevention model with early recognition of injury risks in children and a system of medical and psychological interaction when treating children with recurrent unintentional injuries. The above-mentioned reflects the need to study the problem of medical and psychological support for families, based on the psychological factors of recurrent unintentional childhood injuries.

Thus, the problem definition is determined by the contradictions between the following:

- the increasing trend of childhood injuries worldwide, the social significance of the problem and the insufficient development of methodological, theoretical and practical aspects of medical and psychological support for families with children with recurrent unintentional injuries, the lack of complex programs for reducing the injury risks, that take into account psychological factors;

- the capabilities of medical professionals and the parents pinning their hopes and expectations for solving the problem of recurrent unintentional childhood injuries solely on the doctors. Doctors find it difficult to give recommendations to parents when it comes to corrective work for recurrent injuries, since analyzing the microsocial situation of the child’s development is

beyond their competence. Some doctors try to draw the parents' attention to the family environment, but mostly they encounter resistance from the family members who are not ready to admit that injuries are a family problem. Thus, the main workload of providing psychological support is distributed among the consulting doctors, despite the fact that modern doctors do not have any specific methods for reducing the risks of recurrent unintentional childhood injuries. They require recommendations and instructions.

- data on how some factors affect recurrent childhood injuries, most of which are within the family environment of the child's development, insufficient understanding of the internal mechanisms of how the injury-risk behavior in children is formed by psychologists who lack the doctors' view of the problem. The society does not consider recurrent childhood injuries a phenomenon that is primarily occur within the family.

Consulting psychologists (pediatric or family) could supervise families of children with injury-risk behavior, but parents of injured children rarely seek psychological help.

The scientific and practical arguments mentioned above allow us to objectify the problem of studying specific psychological factors of recurrent unintentional childhood injuries and the medical and psychological supportoptions for the children’s families in order to reduce the injury risks. The interest in the study is focused on those cases where the same injured child seeks medical help more than once.

Object of the research is injury-risk behavior of children aged 5 to 10 years old (according to the statistics, this is a dangerous age injury-wise).

Subject of the study are psychological factors contributing to recurrent unintentional injuries in injury-prone children aged 5 to 10 years.

Aim of the study is to identify psychological factors contributing to recurrent unintentional childhood injuries with injury-risk behavior in the context of the child’s individual characteristics and the social situation of their development,

ways of medical and psychological interdisciplinary interaction within the effective correction and prevention of childhood injuries.

Research hypotheses:

Hypothesis 1. Psychological risk factors for recurrent childhood injuries may include certain individual characteristics (manifestation of the general temperament activity and temperamental attributes, personal and physiological characteristics), family environment characteristics of the child's development (parenting style, lack of the social situation structure of the child's development).

Hypothesis 2. The increased physical activity of a child with injury-risk behavior is usually based on the following mechanisms:

A (stereotyped representation). Neurophysiological preconditions of hyperactivity as a nosological entity (true syndrome).

B (alternative hypothesis). The manifestation of the individual characteristics of a healthy child and the pragmatic transformation of the social situation conditions of their development (pseudo-hyperactivity).

Tasks of the research:

1. To study the main achievements of research on psychological factors of injury-risk behavior in children, to identify and classify those factors.

2. To conduct a comparative analysis aimed at identifying statistically significant psychological factors contributing to recurrent unintentional injuries in children aged 5-10 years (an injury-prone age, according to statistics).

3. Identify patterns of increased activity in a healthy child and the association with their injury-risk behavior.

4. To propose recommendations for medical professionals that allow both doctors and psychologists to identify risk groups of children with injury-risk behavior that require additional supervision,as well as medical and psychological support for their families, based on the psychological factors of recurrent childhood injuries.

Scientific novelty.

- A detailed study of the unintentional childhood injuries factors allowed us to identify psychological factors of injury-risk behavior and classify them.

- For the first time, the variety of recurrent childhood injuries risk factors was structured into a matrix with the provisional title "Model of recurrent childhood injuries risk factors".

- New data have been obtained on the causes of injury-risk behavior in children, which are not so much the children themselves and their individual characteristics (increased physical activity, emotional sensitivity, state anxiety, lack of organization), but rather their upbringing, parental relationships and microcommunity (strained family relationships, unstable and extreme parenting style, unstructured social situation of child development).

- For the first time, the association between the recurrent unintentional injuries and increased physical activity of the child has been proven. Parents often mistake an increased activity of a healthy child (with no signs of neuropsychiatric disorder)and recurrent injuries for hyperactivity (a symptom of ADHD).

- Guidelines for doctors and psychologists (medical and psychological collaboration) have been determined within the framework of reducing the risks of unintentional recurrent childhood injuries: to assess the severity of factors causing injury-risk behavior in children, to differentiate between the increased activity of a healthy child and ADHD as a nosological entity, to determine the injury risks prognosis and the level of psychotherapeutic intervention, to assess if it's necessary to involve other specialists.

The practical significance of this study is to draw attention to the psychological aspects of the medical problem of recurrent childhood injuries. The results of the study will allow psychologists and doctors to identify risk groups of children prone to injuries and get timely medical and psychological support for their families.

The developed "Model of recurrent childhood injuries risk factors" shows the psychologist the possibility of creating a formal analysis of the injury-risk child behavior factors, which will allow to localize and predict the injury risks, to identify circumstances and people who might be held responsible for a child's injury, to plan rehabilitation measures based on psychotherapeutic intervention levels, and to create a system of injury prevention through medical and psychological support for families. The proposed method of preventing recurrent injuries (recommendations for doctors) with a work tool, a questionnaire for parents or guardians, will allow the doctor to assess the risks of recurrent injuries in a child as fast as possible (during the appointment), taking into account the injury risk score.

Theoretical and methodological basis of the research.

Medical and psychological science has accumulated extensive experience in studying the causes, mechanisms, consequences and prevention of injuries. The theoretical framework of the research is the achievements in the field of psychological science of the following scientists: F.G. Alexander, E.F. Dunbar, L. S. Vygotsky, E. Erickson, F.V. Ruplenenie, F.V. Mamaichuk, G.K. Ermakova, O.V. Vygolova, D.C. Grossman, B.A. Morrongiello, D.C. Schwebel, as well as the achievements in the field of medical science of the following scientists: VL. Andrianova, Sh.I. Magalova, T.S. Makarova, A.Yu. Spiridonova, A. V. Polunina, O.V. Golovko.

The accuracy of scientific statements and conclusions is ensured by a comprehensive approach to the study of children and their legal guardians using anamnestic, clinical, psychodiagnostic methods, as well as the representativeness of the sample. The following researchmethods were used for completing the tasks. The following projective techniques were used for the kids: "Non-existent animal" (M.Z. Dukarevich, P.V. Yanshin, 1990, G.F. Muzychenko, 2013), "Kinetic family drawing" (R.S. Burns, S.H. Kaufman, 2000), "Family sociogram" (E.G. Eidemiller, I.M. Nikolskaya V.V. Pushina, 2006), along with the

neuropsychological methods of express diagnostics (L.S. Tsvetkova, 2002). Parents were offered the following techniques: "Determing the child's temperament" method (B.S. Volkov, N.V. Volkova, 2009), "Hyperactivity criteria according to P. Baker and M. Alvord" test (V.V. Grebneva, M.V. Sadovsky, 2020; M.I. Lokhov, E.V. Fesenko, 2014), "Psychological portrait of a parent" method (G.V. Rezapkina, 2006), "Parents' subjective assessment of their parenting style" modified author's method (E.G. Eidemiller, V. Yustickis, 2006, L.V. Borozdina, 1999, S.Ya. Rubinstein, 2004, V.B Shapar', 2002).

Provisions put forward for defence.

1. Psychological factors that increase the risk of recurrent unintentional childhood injuries are represented by the following individual psychological characteristics of the child: emotional sensitivity, the child being affected by strained family relationships, state anxiety, lack of organization, aggressive tendencies, increased physical activity. At the same time, the child's increase in activity is often mistakenly interpreted by parents as a manifestation of hyperactivity and ADHD.

2. Psychological factors that increase the risk of recurrent unintentional childhood injuries are represented by the following characteristics of the child's development microsocial situation: unstable and extreme parenting style, lack of the social situation structure of the child's development.

3. Practical recommendations have been developed for doctors and psychologists. Doctor's practical tool is a questionnaire for parents or guardians, which was implemented in real medical practice. Psychologist's theoretical tool is a classification of childhood injuries factors with the provision title "Model of injury risk factors", which allows, during a diagnostic and expert examination, to identify people forming a microsocial environment that is injurious for a child, to find possible agents of constructive transformation, and to determine ways of medical and psychological interdisciplinary interaction.

Reliability and approbation of the results.

Statistical analysis of the data was performed to confirm the validity of the results obtained in this study. The obtained data was processed using the “Statistica 7.0 for Windows” software (StatSoft Inc., USA). Mann–Whitney U test, Kruskal-Wallis H test and Pearson's chi-squared test were used for statistical processing. The results were considered statistically significant at the level of $p \leq 0.05$.

Implementation of the results. The results have been implemented at the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, used in the training of students of the Department of Neurology with a course of neurosurgery and students of the Department of Traumatology and Orthopedics at the Federal State Budgetary Educational Institution of Higher Education Tyumen State Medical University.

The study was carried out within the Russian Fundamental Research Fund grant on the following topic: "Psychological factors of recurrent childhood injuries (organizational and clinical support)" (project No. 19-313-90036).

Approbation of the results. Thesis materials were reported and discussed at the following scientific conferences: X All-Russian Scientific and Practical Conference with international participation "Health is the Basis of Human Potential. Problems and solutions". St. Petersburg, Russia, November 20, 2015; International conference "Psychological Health: Life Resource and Potential". Krasnoyarsk, Russia, November 25, 2016; IV All-Russian Conference on Pediatric Neurosurgery. St. Petersburg, Russia, November 18-20, 2015; V International Conference "Fundamental and Applied Aspects of Recovering After Brain Injury: An Interdisciplinary Approach". Nizhny Novgorod, Russia, June 30, 2016; XVI All-Russian Scientific and Practical Conference "Polenov readings". St. Petersburg, Russia, April 19-21, 2017; Congress of the Eurasian Society of Pediatric Neurosurgeons. Minsk, Belarus, December 1, 2017; V International Congress in memory of A.R. Luria "Lurian Approach in International Science". Yekaterinburg, Russia, October 13-16, 2017; 53rd annual All-Russian Conference

of Young Scientists "Actual Problems of Theoretical, Experimental, Clinical Medicine and Pharmacy". Tyumen, Russia, March 26-29, 2019; International Conference "Neuropsychology Capacity of Our Brain". Kaunas, Lithuania, March 01, 2019; XXII International Scientific and Practical Conference "Fundamental and Applied Sciences Today". North Charleston, USA, April 20-21, 2020; Scientific and practical conference "Polytrauma in Children". Moscow -Tyumen, Russia, November 18-19, 2020; XXII International PTScience Research Competition, September 16, 2020 Diploma of the II degree; V All-Russian Congress on Pediatric Neurosurgery, Moscow, Russia, March 3-5, 2021; XIX All-Russian Scientific and Practical Conference "Polenov Readings". St. Petersburg, Russia, March 31-April 2, 2021; IX All-Russian Congress of Neurosurgeons. Moscow, Russia, June 15-18, 2021; X All–Russian Conference with international participation "Emergency Pediatric Surgery and Traumatology". Moscow, February 18-20, 2022.

Author’s contribution to the research.

The author of the thesis single-handedly developed a model of risk factors for recurrent childhood injuries, demonstrated its organizational and methodological capabilities, described how for every child with an unintentional injury it is possible to identify people whose competence should serve as a guidance, determine the degree of their responsibility for recurrent injuries, determine injury risks and family supervising possibilities. A questionnaire for parents or guardians, which can be offered by a medical professional during the diagnostic and treatment appointment of an injured child, has been developed based on the empirical study results. The questionnaire allows to identify and assess the risk of a recurrent injury in a child.

A method of preventing recurrent injuries in children who have sought medical help has been developed and tested. The "STOP-INJURY" technique for doctors has been implemented into practical healthcare, its results have been processed and analyzed by the author.

Length and structure of the thesis. The thesis is presented on 193 pages of typewritten text. It consists of the introduction, literature review, three chapters, conclusion, practical recommendations, reference list and appendix. The reference list contains 177 sources and includes 95 Russian and 82 foreign authors. The text contains tables and figures.

Chapter 1 Theoretical and methodological aspects of the recurrent childhood injuries problem

1.1. Significance of the recurrent childhood injuries problem

1.1.1. Prevalence assessment of the childhood injuries

In many countries unintentional injuries are considered one of the main causes of mortality and disability in preschool children. (M. Ruiz-Goikoetxea, 2018; DealL., 2000). Researchers pay a lot of attention to the microsocial factor that creates the risk of unintentional childhood injuries. (J.R. Ordonana, 2008, D.C. Schwebel, 2004), as well as characteristics of parent-child interaction, social status and values of parents (Azar, 2017; J. Ablewhite, 2015; P.G. Schnitzer, 2015; B.A. Morrongiello, 2007; D.C. Schwebel, 2008). The predominant contribution of environmental factors in childhood injuries compared to genetic factors was shown by a study of more than 1000 pairs of twins under the age of 5 years (Ordonana, 2008).

According to World Health Organization, the frequency of childhood injuries is increasing every year (WHO Report, 2008). According to UNESCO, the highest mortality rate from accidents is in children aged 5 to 14 years– up to 50%. In 2010 unintentional injuries accounted for 12% of the world's 5.1 million injury deaths among children aged 1 to 19 years, killing an estimated 627,741 children. Proportional mortality increased with age: from 12.6% among 1–4 year olds to 28.8% among 15–19 year olds. Despite this high rate, childhood injuries have not received much attention in global health care (O. Alonge, 2004).

The burden of injuries extends beyond mortality alone, imposing enormous economic costs on the health care system.

World Health Organization estimates that in children for every injury death there are 129 hospital admissions and 1635 pediatric emergency room visits (EuroSafe, 2016).

In Russia, the prevalence of childhood injuries is 100.2 - 104.2 cases per 1,000 children; Moscow remains the leader - 166.9 cases per 1,000 children, as well as St. Petersburg - 143.3 cases (SOGAZ insurance group, 2014), Volga Federal District - 116.4 cases in children under 14 years of age, Orenburg region - 108.5 cases per 1,000 children under 14 years (S.P. Mironov, 2014). Moreover, in children under 7 years, household injuries account for about 80% of all injuries (Russian Federal State Statistics Service). In the age structure of childhood injuries, the largest share is occupied by the ages of 11-14 years (33.8%) and 7-10 years (25.7%). It was noted that 67.5% of the injured children were boys. Children of school age (7-14 years old) are getting injured more often (E.A. Sharova, 2020; M.V. Gorbunov, 2006).

UNICEF has presented a standardized rating chart of the richest countries, ranking them according to unintentional and intentional injury deaths in children aged 1 to 14 years. Data on injury mortality rate per 100,000 children for 1991–1995 is presented, along with rates for 1971–1975. The chart shows that the situation in Sweden, the UK, Italy and the Netherlands is the best - with mortality rates below 7 per 100,000 people. In the US, Portugal, Mexico and South Korea, the rates are three to four times higher. Canada did better than the U.S. in reducing child injury deaths; Australia did better than New Zealand. Germany showed the best results with the rates decreasing by more than 70%. The UNICEF report highlights the possible strong link between injury deaths and social deprivation, and the lack of national-level data linking injury deaths to the social and economic conditions of families. UNICEF points out that "all injury prevention policies are linked to the lack of information" (UNICEF, 2001).

In Russia approximately every eighth child under the age of 18 seeks medical attention due to injuries (Russian Federal State Statistics Service). In

2014 medical institutions registered 3,23 million primary care visits due to injuries in children under 18 years. This is 100 000 visits more than in 2013, as per Russian Federal State Statistics Service. In the United States, every 3 minutes, 1 child is admitted to the emergency room with an injury caused by a toy. The annual injury rate per 10,000 children increased significantly by 39.9% from 18.88 in 1990 to 26.42 in 2011. The number and frequency of injuries peaked at age of 2 years: 63.4% of patients were boys and 80.3% of injuries occurred at home (V.M. Abraham, 2015). In Canada, injury rates peak at ages 2 and 13-17. Among the four most common types of injuries (78.6% of the total), superficial and open wounds were more common in children with lower socioeconomic family status (S.J. Gilbride, 2006).

Taking into account the statistical data, injuries occur in the following age groups in the following percentage ratio: infants - 3.5%, from 1-3 years - 9.5%, from 3-7 years - 22%, from 7-16 years - 65% (T. M. Andreeva, 2010; Healthcare in Russia, 2019: Statistical abstract/Russian Federal State Statistics Service. – M., 2019. – 170 p.). The incidence rate of children aged 0 - 14 years with a first-time diagnosed injury in 2018 was 2748, in 2015 it was 22220.1 per 100000 children. In 2018, the rate of all injuries per 100,000 children aged 0-14 years was 10618.3, and in 2015 – 10352.4 (Healthcare in Russia, 2019: Statistical abstract/Russian Federal State Statistics Service. – M., 2019. – 170 p.

Head injuries in children are extremely common: during the daily duty neurosurgeons register 45-65 patients, 1/3 - 1/4 of which are children who are treated for head injuries. According to statistical data from the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, the number of children who were treated by a neurosurgeon per day is on average 13 people, which is 4,500 children per year. Recurrent injuries are treated in ~ 60% children, ~ 40% are in children aged 5 to 10 years. Of these, there are more boys (~57%) than girls (~43%).

The prevalence of recurrent injuries as a problem is evidenced by the efforts to prevent childhood injuries (J. St George, 2015; B.A. Morrongiello, 2004). One of the main measures of childhood injuries prevention is monitoring children (parental supervision) (J. Ablewhite, 2015, B.A. Morrongiello, 2005). Being within the parent reach has been shown to significantly reduce the injury risk (P.G. Schnitzer, 2015). It is noted that it is important for children to explore their surroundings independently and allow children to learn about the injury risks through controlled risk taking (J. Ablewhite, 2015; J. St George, 2015). In the UK, the National Institute for Health and Clinical Excellence (NICE) administration recommends implementing preventative measures in homes where children with high injury risk rates live. Understanding and identifying injury risk factors is essential for these measures to be effective. Promising injury prevention strategies include: the use of protective fencing/shields, home visiting programs, mass education campaigns (WHO, Access date 16.01.2018).

Children who suffer one injury are at increased risk for further injuries. Parenting programs can reduce injuries in preschool children (J. Mytton, 2014)

Current trends are increasing the risks of childhood injuries. Solving the problem of recurrent childhood injuries, its prevention and correction requires interdisciplinary interaction between doctors and psychologists, neuropsychologists, the structure of which is lacking. The principle of interdisciplinary participation in solving this problem until 2030 (A.V. Beletsky, 2013; M.P. Flavin, 2006).

1.1.2. Key definitions of the research

Some parents fear for the child's life with good reason due to the fact that the child regularly receives various recurrent injuries: contusion of thorax, broken arm, burns, broken finger, concussion, compression fracture of the spine, etc.

Unfortunately, it is not until a significant number of injuries occur that parents, at least some of them, begin to question the pattern of injuries.

The scientific and practical literature uses different terminology for injuries. The terminology analysis shows that significant amount of definitions do not take into account the child's activity, although injuries are mainly related to his activity. Let's focus on the definition from the medical encyclopedia (Big Medical Encyclopedia / chief editor B.V. Petrovsky.- 3rd ed. - M.: Soviet Encyclopedia, 1974-1989. - T.1 - 30. Our study defines "injury" specifically as a physical injury, leaving out psychological or other types of injuries (moral, etc.).

The dictionary definitions analysis can divide the term “injury” into two groups:

1. Statistical definitions, for example, in the Great Soviet Encyclopedia: “Injuries are a combination of injuries in certain demographics over a certain period of time” (the same definition is given in the Medical Encyclopedia).

Philological definitions (formal), as in Ozhegov's dictionary: "Injury is an instance of getting injured".

The following definition of injury will be used in this research. Considering the definition of injuries given above: "Childhood injuries are injuries that a child receives as a result of his actions in various life situations." Accordingly, recurrent (childhood) injuries is being injured more than once during childhood. In the context of this thesis, injury-risk behavior will be defined as the behavior of all participants in the situation that increases the injury risk.

Microsociety is considered as one of the most significant factors of human socialization, and its influence is especially strong in childhood. A microsociety is a community operating on a certain territory, including family, neighborhood, peer groups, public, state, religious, private and educational organizations (A.V. Mudrik, 2011). The control function of the family contributes to the child's capacity for self-control. Otherwise, he will experience not only behavioral disorders, but also developmental delays.

The basis underlying the behavior of a preschooler is the phenomenon of the child’s egocentric position. In the child's mind there is only one view of the world around him - his own. (E.E. Danilova, 1999). Article 18 of the Federal Law On Education in the Russian Federation says: “Parents are the first teachers. They are responsible for laying the foundations for the physical, moral and intellectual development of the child's personality in early childhood."

Object of the research is injury-risk behavior of children aged 5 to 10 years (according to the statistics, this is a dangerous age injury-wise).

Cases of one-time injuries, as well as those caused by massive man-made or natural disasters, road traffic incidents and sports activity are not included in the research.

1.1.3. Research of the recurrent childhood injuries factors in medical science

Researchers from different fields agree that the symptomatology of both determining problems and the consequences of injury is an interdisciplinary area that combines the interests and efforts of doctors, psychologists and educators, and represents a large and independent medical and social problem (H. G. Belanger, E. Spiegel, 2010). Analysis of the available literature has shown that now increased attention is paid to the problem of injuries among the adult population (I.V. Grechukhin, 2011; M.V. Grigorieva, 2006; L.A. Mylnikova, 2009).

The medical community specifically reports on the timely prevention of sports injuries in children and adults, as well as the prevention of occupational injuries in adults, focusing on recurrent injuries. It also describes plans and recommendations for their prevention (A.S. Ryzhov, 2020; T. Bey, 2009; S. Jullien, 2021). The literature provides information on recurrent head injuries in child athletes (C.A. Refakis, C.D. Turner, 2017; F.P. Rivara, 1994).

Childhood injuries consequencescan often have a huge impact on children's health. Disability-wise and depending on the cause, circumstances and severity of the injury, childhood injuries can have severe psychological, educational, social and economic consequences (A. Niekerk, 2017).

Doctors, psychologists and other specialists divide childhood injuries into the following types: domestic, outdoor, sports, road traffic and school injuries. In the structure of injuries, domestic injuries account for 40.4%, outdoor injuries - 32.4%, sports - 12.7%, road traffic - 7.9%, school - 6.6% (A.V. Spiridonov, 2007).

The existing researches on the childhood injuries problem mainly focus on road traffic injuries, the statistics of injuries is described in detail. But, according to a number of researchers (A.V. Spiridonov 2003), this injury type accounts for only 3-6% in the structure of injuries, while the most common among children and adults are domestic and outdoor injuries, accounting for 60% to 86% in the structure of injuries. Ways of resolving domestic injuries have not been studied in such detail, most likely due to their unpredictable causes. There is no system of preventing and monitoring child injuries. (A. R. Khanbikova, T. M. Bogdanova, 2018).

A study conducted in Egypt described how protecting children from domestic injuries is a multipronged approach (A. Khaliq, 2017). Studies on school injuries show a tendency that the rate of serious incidents is significantly less in those educational institutions that take this problem seriously and professionally, and organize timely prevention (A.A. Gorlov, 1991, A.V. Spiridonov, 2003).

In the medical literature, a large number of studies aimed at studying the causes and consequences of traumatic brain injuries indicate that the classification of the causes and consequences of injuries has only been developed in the last decade, terminological discrepancies have not yet been eliminated (A. Yu. Makarov, 2002; Sh. I. Magalov, T. S. Pashaeva, 2002). And this is considering that scientists have been studying the problem of injuries for hundreds of years; for example, the groundwork for the traumatic brain injuries classification was laid

about 200 years ago. Despite the long-term study of these issues, the problem of the correlation (priority) of organic and mental factors in the forming of injuries remains unsolved, which is especially important for recurrent injuries (S. Meares et al., 2008).

M.I. Stepanova describes the characteristics of outdoor seasonal childhood injuries, focusing on the characteristics of the child. Childhood injuries increase by 20% in the summer. Children spend their energy on games, sometimes harmless pranks, impulsive actions (M.I. Stepanova, 2014).

In children, in response to head injury, a pathological response develops, accompanied by neurological symptoms, the severity of which correlates with the severity of the injury (T. Araki, 2017). The children's brain suffers less from traumatic damage due to immaturity of the nervous tissue (J. Stiles et al., 2000)

The circumstances of injury in children and adults differ significantly, therefore, in post-injury work, medical specialists need to comprehensively consider the characteristics of the factors that determined the child’s injury (V.N. Merkulov, 2019).

Among the injury related factors, gender and parental injuries are considered the significant ones. Factors do not work separately; there is always a combined effect that enhances or weakens their influence (O. V. Golovko, 2017). Medical workers play an important role in the injuries prevention. Based on the sufficient knowledge about the age and gender characteristics of children, they must promptly inform parents, kindergarten teachers, and educational institutions teaching staff about “injury-risk situations” and “injury-risk behavior.”

Thus, most researches do not study the causes of injuries, including recurrent ones, in detail, the mechanisms of domestic injuries occurrence are not described, the pathogenesis of the injuries occurrence is not described. In particular, the characteristics of the microsocial situation of an injured child, especially with recurrent injuries, are not sufficiently studied.

1.1.4. Opinions of the involved parties on solving the problem of recurrent childhood injuries

To understand (prove) what the problem of recurrent injuries looks like for different specialists, let's focus on the results of phenomenological interviews (in the group format) with various specialists and parents[1].

Inpatient doctors (neurosurgeons, trauma surgeons, surgeons, ophthalmologists, neurologists, pediatricians and many others) and outpatient specialists (neurologists, trauma surgeons, pediatricians, neuropsychologists, etc.) work with injured children. The emergency doctor reassures (if possible) the parents regarding the structural problems in the child (tissue or organ damage) and the need for surgery; neurologists recommend drug therapy; neuropsychologists identify functional and organic problems in the development of higher mental functions of the child.

Problems that doctors deal with. Parents of injured children address numerous questions to the emergency and elective care doctors, hoping they could prevent injuries. Parents describe the following typical situations: “By the age of five, the child has already been injured and hospitalized four times, two of them in the intensive care unit,” “As soon as you take your eyes off the child for a second, he’s already falling from somewhere,” “I'm afraid to even let go of his hand— he immediately runs onto the road and in front of the cars." Sometimes they bring a lot of examinations results, but the problem is still not solved, the child still gets injured. Some perceptive doctors try to draw the parents' attention to the family situation, but mostly they encounter resistance from the family members who are not ready to admit that injuries are a family problem. Sometimes doctors might recommend seeing a psychologist, but they do not have specific practical

[1]The phenomenological basis of the research is laid in the master's thesis of E.V. Zakharchuk “Psychological aspects of working with frequently injured children” (2013).

recommendations on how this should be done, no algorithms and developed workflow for treating children with the recurrent injuries risks.

Consulting psychologists could supervise families of children with injury-risk behavior. But parents of injured children rarely seek psychological help. In collective consciousness, the idea that recurrent injuries are a systemic phenomenon caused by a number of factors, most of which are within the family situation, has not been formed. Therefore, we again emphasize that parents are determined to solve the problem of childhood recurrent injuries mostly with the help of medical specialists - it is on them that parents pin their hopes.

It would be fiscally expensive to traditionally formulate the idea that the childhood injuries prevention and post-injury support can be carried out with the involvement of a consulting psychologist, using the mass media - advertising, educational programs, etc. People usually do not listen to the information about a certain problem until it affects them personally.

Neuropsychologists could be a link between doctors and psychologists. But the neuropsychological service is not sufficient enough (psychologists with knowledge and skills in the medical field are rare), and not every patient has the opportunity to contact such a specialist. According to the nomenclature (Order of the Ministry of Health and Social Development of the Russian Federation of August 22, 2005 No. 534 “On measures to improve the neurorehabilitation care organization”), only a neurologist can refer a person to a neuropsychologist with certain symptoms.

Parents generally blame the recurrent childhood injuries on children. They believe that there is something wrong with their child or children. They wonder why other children don't tend to get injured as often as theirs do.

They come up with various explanations, but they almost never consider themselves responsible. For example: “I got distracted just for one second, I always said, I didn’t think he was like this, he is always very active, overly active, he wants to go everywhere, I do everything for him, I never tell him "no", he is

reckless.” Though some parents do notice a correlation between the injury and their lack of supervision (D. Kendrick, 2013). "Lack of supervision" should be defined as some vague idea that includes a set of characteristics, for example, being responsible.

A person does not predict the consequences of his actions and is not ready for them (L.I. Dementiy, 2004). He simply does not have such mental alertness or it is not completely formed. Sometimes it looks like a low ability for logical thinking (foreseeing results). Although parenting is all about anticipating risks. Much of this can be facilitated by the experience of how the parents themselves were treated when they were kids.

As a result of the research, it is planned to develop recommendations that will mitigate the difficulties of doctors and parents, as well as to determine the limits of a psychologist’s capabilities; it is necessary to develop an approximate action chart.

1.1.5. Medical and psychological support for children with recurrent unintentional injuries in the childhood injury prevention system

Currently, collaboration between physicians and psychologists on the recurrent unintentional childhood injuries problem is not fully established. It is necessary to create the right trajectory of medical and psychological support aimed at reducing the recurrent unintentional childhood injuries risks, a number of specific tasks of medical and psychological support, to identify the main subjects of psychological impact, taking their characteristics into account.

Psychologists, possessing various psychological methods that are convenient for everyone individually, can work with children and parents, with timely treatment, recommended by the supervising doctor (E.N. Kopysheva, E.V. Pchelintseva, 2016; D.N. Isaev, 2001; V.A. Kovalevsky, 1997; Zh.G. Duskazieva, 2010).

1.2. Psychological risk factors for recurrent childhood injuries as a scientific problem

1.2.1. Child characteristics research

Researching the psychological causes of recurrent unintentional physical injuries is necessary to prevent childhood injuries, reduce their risk, and provide medical and psychological collaboration. It is crucial to understand the cause and effect of the childhood injuries. It is necessary to find out what psychological causes may contribute to systematic childhood injuries and influence the high global injury rate. It is worth paying attention to the individual characteristics of the child (D. Kendrick, 2013).

Different authors identify different causes of injuries. G. K. Ermakova, by way of example, draws attention to the need to take personality factor in the etiology of childhood injuries into account, and determines a number of main psychological causes of physical injuries: temperamental patterns (imbalance between excitation and inhibition, emotional instability); reduced attention span (concentration, allocation, shifting), low observation skill; underdeveloped sensorimotor coordination; increased risk proneness (G.K. Ermakova, 1983). A. A. Gorlov notes that childhood injuries can be caused by the actions of peers (33%), adults (24%), as well as the actions of the child himself (42.8%). In the latter case, the possible reasons include: 1) bad coordination and lack of necessary skills, inability to control their body; 2) insufficient awareness of the dangers of certain actions; 3) neglect of dangerous circumstances due to a stronger motive (demonstration of their “superpowers”); 4) specific psychophysiological states (fatigue, emotional stimulation, hastiness, game frenzy) (A.A. Gorlov 1991). However, it is unclear which factors are of primary and which are of secondary importance.

Based on the studied medical and social risk factors contributing to the occurrence of childhood injuries, O.V. Golovko constructed a model of creating a risk group of children with injuries that included all statistically significant injury risk factors. In shaping the health of the younger generation, where socio-economic factors (living conditions and lifestyle of children, their upbringing and development) play a significant role, among the medical and biological factors associated with injuries, gender and parental injuries are considered the statistically significant ones. The latter factor acts as an analogue of raising children with the "injury-risk behavior" stereotype (O.V. Golovko, 2017).

Most parents and close relatives blame the high childhood injury rates problem on the child's increased physical activity, restlessness and curiosity, combined with lack of motor skills and coordination of movements, as well as a diminished sense of danger. Thus, the child is unknowingly made responsible for the injury.

Most parents know about neurological-behavioral developmental disorder (ADHD, ICD-10, F 90.0 (disturbance of activity and attention) and F 90.1 (hyperkinetic conduct disorder), and many of them “diagnose” it themselves, calling, in their opinion, an overly active child hyperactive. Evidence shows that this is one of the possible causes of the “ADHD epidemic,” which modern scientists are talking about more and more often, and which has little to do with an actual disorder. When an active, mobile, healthy child gets injured, he often becomes responsible for the injury that has occurred.

ADHD (attention deficit hyperactivity disorder) is a mental and behavioral disorder that begins in childhood. R.A. Barkley believes that misrepresentation and excessive recommendation of medications in the media, combined with poor diagnostic criteria, contribute to the unnecessary detection and treatment of children with ADHD, leading to the risk factors ranging from school problems to criminal activity and risk behaviour. Children with ADHD typically have developmental delays of up to 30 percent (R. A. Barkley, 2006; R.T. Maxson,

2009; P.N. Pastor, C.A. Reuben, 2002). Children admitted to the emergency department with injuries were no more likely to have undiagnosed ADHD than children without injuries based on parental screening (Z.E. Pittsenbarger et al., 2008). Other authors note that recurrent injuries, including head trauma or burns, are considered potential indicators of true ADHD (DiScalaC. et al., 1998; Hui & Li Zhang, 2016). A meta-analysis of 32 studies showed that ADHD in children is associated with an increased risk of unintentional injury (M. Ruiz-Goikoetxea, 2018; B.A. Morrongiello, 2007).

ADHD is common in children, as evidenced by the studies conducted in various countries. Literature analysis revealed a wide variability of data on the prevalence of ADHD: rates in the USA range from 4 to 13%, in the UK - 1-3%, Germany - 9-18%, Italy - 3-10%, Czechoslovakia - 2-12%, China - 1-13%, Russia (Moscow and Moscow Region) - 15-28% (N.V. Pizova, 2013). The significant difference in the rates is most likely determined by the diagnosis practices and those criteria and scales that are taken into account by the specialists. The criteria might be different in different countries. Often doctors can rely on the parental description of behavior and their explanations. Thus, there is a need to study parents, which constitutes independent research tasks.

Study results in Europe show that there is indeed an increased risk of injury among Swedish schoolchildren with ADHD in comparison with children with, for example, autism spectrum disorder (ASD) (C. Bonander et al. 2016). Children with attention deficit hyperactivity disorder are at greater risk of fractures, thermal injuries and poisoning than children who don't have ADHD (V. Prasad, 2016).

Children with conduct disorders are more likely to suffer unintentional injuries. Therefore, teachers and doctors need to identify conduct disorders and help parents provide assistance to children (H. Zhang, 2016). A study of 1,400 children aged 6 to 18 years who were first diagnosed with ADHD in a children's polyclinic demonstrated that behavioral problems accompanying this syndrome, comorbid mental disorders play an important role in unintentional injuries (A.B.

Ayaz et al., 2016). This research refers to children with a confirmed neurological diagnosis, the injury risk among them is very high.

A cohort study was conducted using primary health care records (from 1998 to 2012). All children with ADHD (aged 3 to 17 years) were frequency matched by age group with children without ADHD. 15,737 children had ADHD and 291,894 children did not. 84.6% of subjects with ADHD were boys compared to 50.7% of subjects without ADHD. A screening study conducted in Turkey revealed that out of 1,413 children aged 6 to 18 years who were first diagnosed with ADHD, 12.8% experienced unintentional injuries. The predictors of injury were: male gender, destructive behavior tendencies and mother's low level of education. However, ADHD "imitations" in childhood are quite common: 15-20% of children occasionally show symptoms that look similar to ADHD. At the same time, the behavioral characteristics of active children do not go beyond the age norm, their higher mental functions are well-developed. In this regard, ADHD must be distinguished from a wide range of conditions that are similar to it only in outward symptoms, but differ significantly both in causes and methods of correction.

The literature also discusses the significance of research results in understanding gender differences in childhood injuries and risk-behavior.

The results confirm the idea that mothers expect more risky behavior from sons than from daughters, they are more concerned about the daughters getting injured than sons, and believe that they (mothers) can have a greater influence on the risky behavior of daughters than sons (B.A. Morrongiello, 2007). According to E.A. Sharova, relative equality between girls (46%) and boys (54%) was noted in terms of gender, by a slim margin of the latter (E.A. Sharova, 2020). The issue of gender characteristics in injuries remains unresolved and requires a more differentiated approach to the research of childhood injuries in different age groups.

According to statistical data from the State Budgetary Healthcare Institution of the Saint Petersburg Region Kirov Clinical Hospital, over the past 10 years, 2.5

million children and adolescents received traumatic brain injuries, 43 thousand of them became disabled, and more than 16 thousand died. Moreover, boys were injured significantly more often than girls. In 2008, boys and young men in the Novosibirsk region accounted for 29,411 cases of injuries, including 13,250 domestic and 12,880 outdoor injuries. As a result of childhood accidents, 415 eyes were injured, 1982 legs and 5024 arms were broken, in 4503 cases patients had bleeding open wounds. It is noted that girls are a little more cautious, however, they also get injured very often. 19487 injuries and poisonings were registered among girls, including 10165 domestic and 7623 outdoor injuries. Girls had 2474 broken arms and 1204 broken legs (Information portal Sibkrai.ru, News of Novosibirsk and the Novosibirsk region, June 2, 2009 https://sibkray.ru/news/7/22730/).

Male gender, psychological and behavioral problems, having a lot of siblings, and being a young mother were associated with increased injury risk in more than one cohort (J. Mytton, 2009). Adolescent boys had a significantly higher mortality rate due to unintentional injuries. Lifestyle, behavioral risks and male socialization are also worth mentioning (Sorenson S. 2020).

A study conducted in Scotland showed that boys were significantly more likely to die from injuries in all age groups except infancy (1-4, 5-9 and 10-14 years). For children in general, the most significant causes of fatal gender-related injuries were poisoning (m:f ratio 3.21).The number of men decreases significantly over time (J. Pearson, 2009). The presented literature data is contradictory, there are no clear statistical results on the gender ratio in unintentional childhood injuries.

Colleagues also cannot provide a consistent list of childhood injuries causes (S. Venkatesh et.al., 2012; M.C. Myhre et. al., 2012).

According to the literature, the information on the individual characteristics of the child as factors of the injury-risk behavior is insufficient.

1.2.2. Family characteristics research

It is important to understand how much responsibility falls on parents when supervising children with injury-risk behavior. Let's explore the parental responsibility as a recurrent injuries risk factor.

Close attention is paid to combining and creating a safe environment for children with strict adult supervision (L. Laflamme, 2001). A research of the parenting and injury prevention beliefs involving 145 mothers from disadvantaged neighborhoods of Philadelphia showed that mothers with a history of interacting with child protection services due to neglect of the child's basic needs and insufficient supervision ("child neglect"), significantly more often agreed with statements about the injuries being random, as well as with the fact that injuries make children stronger, than mothers from the comparison group who did not have a similar history (S.T. Azar, 2017). Data from the interviews with 222 parents who sought medical help in connection with childhood injuries on the specifics of child care at the time of injury and an hour before it, indicates that the characteristics of adult supervision are associated with the unintentional injuries risk in young children (P.G. Schnitzer, 2015).

S.M. Peters described recurrent injuries in children aged 0 to 10 years in South Africa. Results of the study showed that injuries occur as a result of both the child's characteristics and environmental risk factors (S.M. Peters, 2020). Parents' fears of subsequent injuries are also described in the study of children with recurrent injuries. it is noted that during the first year after the injury children are at higher risk of the recurrent ones. It was determined that preventive measures should be carried out in the first year after the injury occurred, since the perception of the subsequent injury risk is associated with the parental behavior (T. Ishikawa, L.C. Mâsse, M. Brussoni, 2018).

A comprehensive approach to the unintentional childhood injuries prevention based on the W. Bronfenbrenner's ecological systems theory and the

Haddon matrix is proposed. It is emphasized that behavioral risks arise from the child's family environment and the broader cultural environment, while the work of a psychologist plays an important role in preventing childhood injuries (D.C. Schwebel, 2019). D.C. Schwebel has published article after article introducing and assessing the prevalence of creative and new ways to reduce the childhood injuries risk by changing the behavior of children and adults monitoring children, as well as by manipulating the environment with which children and youth interact.

Despite the fact that most studies focus on the role of the mother or both parents, some theoretical developments suggest that parenting can be particularly effective in encouraging safe acceptance of injury risks. The results of a study involving 46 fathers of children under 3 years of age, conducted jointly by scientists from Australia and Canada, show that prolonged intense physical games with the father and encouraging perseverance in exploring the outside world are associated with lower rates of injury-risk behavior, while fathers encouraging risk behavior predicts a higher injury rate (St George et al, 2015).

The prevailing value of childhood injuries environmental factors in comparison with genetic ones was determined by a study of more than 1,000 pairs of mono- and dizygotic twins under the age of 5 years (J.R. Ordonana, 2008).

Studies try to understand childhood injuries through the characteristics of the social situation of the child's family development (I.V. Savchenko, 2021).

There are hidden or explicit references to the characteristics of the parent's personality as the source of attitude or treatment of the child in many descriptions of parental attitudes and behavior. A schizophrenogenic mother means first and foremost a set of personal traits, and only then a specific parental behavior and attitude (D. Bowlby, 2003).

The parenting characteristics that are the most important to consider when studying the etiology of behavioral disorders and the child's personality traits include the level of protection in the parenting process, the extent to which the child's needs are met, the number of demands towards the child in the family, and

the instability of the parenting style (A. Eidemiller, 2008; N.I. Olifirovich, 2006). Let's take a closer look at them.

Level of protection in the parenting system. Hyperprotection is manifested in the fact that the child does not feel the actual consequences of his actions. The parent protects the child from problems now, but prevents him from learning about responsibility and cause-and-effect relationships. For example, a six-year-old boy tries to get on the slide by himself, without asking for help. His mother asks him what he's doing.

The child says: "I can't get on the slide." "And you won't," says the mother, happily picks up the child and climbs with him up the slide. But independent action and effort is vital for a growing organism, necessary for his survival. If it's suppressed, the next time the child may fall, waiting in vain for someone to catch him.

Children regularly fall the from slides and constantly visit the trauma department. “I always held him,” says the mother, “but this time I decided that he's already big enough, and he unexpectedly fell over the railing.”

Hypoprotection means that the child is on the periphery of the parents’ attention, the parents “have no time for him.” They only talk to the child from time to time when something serious happens. Hypoprotection is characterized by a lack of supervision. A child with hypoprotective parents can be recognized by the following behavioral characteristics: shouting loudly, making faces, being naughty, taking things without permission, behaving defiantly at other people's homes, interfering with adult conversations. Often his behavior is unconscious, he is trying to attract attention to himself. Adult can consider such active behavior of a healthy child as hyperactive.

The extent to which the child's needs are met. Pandering means that parents strive to maximally and uncritically meet every need of the child — they spoil him. The child has difficulties with developing independence, which can increase the injury risk. Ignoring the child’s needs is a parenting style that is the opposite of

pandering and is characterized by the parent's insufficient desire to meet the child's needs. It mostly affects spiritual needs, especially the need for emotional contact, communication with parents. The child gains the attention by getting injured.

The number of demands towards a child in the family. Excessive prohibitions (dominance)is when a child "is not allowed anything"; this approach may be considered a basis for the "dominant hyperprotection" type of pathologizing education. The child is poorly adapted even to ordinary everyday situations.

Insufficient demands and prohibitions for the child stimulate the development of a hyperthymic and, especially, unstable personality type in the child. The child knows that running on a wet floor is not safe, but he is allowed to do it and it's fun, so he runs and falls.

Falling on his back when running on the wet floor can result in the spine or skull fracture, which is what doctors face in their medical and diagnostic practice.

Sanctions towards the child. Excessive sanctions (harsh parenting style) – punishment or sanctions must be doable, both for the child and for the parent. For example, punishing the child by prohibiting him to use his phone for a week is pointless, when on Monday the child will still take the phone to school to be able to call his parents.

Punishments or sanctions must be completed. Minimal sanctions - the child's sense of being safe in the world and of understanding how the world works depends on the parent's consistency.

The following parenting styles can be distinguished based on the parent-child relations: authoritarian, democratic, liberal and permissive.

The idea has not been formed in the collective consciousness that injury-risk behavior in children is caused by factors, some of which are within the family situation (A.V. Spiridonov, 2007; D.C. Schwebel, 2019).

1.2.3. Underlying psychological factors research

An extensive psychoanalytic review of injuries is presented in the literature. A. Erickson points out the psychological reasons of childhood anxieties forming into adult fears at various stages of personality ontogenesis. After the child's injury is healed, negative attitudes towards the expectation of complications after the injury may also form, as well as some fears of the recurrent injury (A. Erickson, 1996).

F. Alexander in his "Psychosomatic Medicine" work, aimed at studying the role of personality in injuries, defines an individual prone to injury as an impulsive person who immediately turns his momentary impulses into action (F. Alexander, 2002). In an unconsciously caused accident, he expresses his protest and revenge, atoning for his indignation with an injury.

F. Dunbar studied a large number of patients with fractures using contemporary psychiatric methods. She describes the injury-prone person as someone who is determined or even impulsive, focused on the immediate pleasure and satisfaction, tends to act on the spur of the moment, likes excitement and adventure and does not like to plan ahead and prepare for the future. The injury-prone individual is essentially a rebel; he cannot tolerate even self-discipline. He protests not only against the external dictate, but also against the power of his own mind and self-control (F. Alexander, 2002). Studies in which the person's emotional state was studied immediately before the accident are particularly valuable. K. Menninger (2001) showed that most accidents had an element of intent, although it was by no means conscious.

Most accidents are explained by unconscious processes. They belong to the category of phenomena that were described by Z. Freud as the errors of everyday life, such as forgetting to send a letter, misspelling or mispronouncing a word. Z. Freud demonstrated that basically such errors are not accidental, but unconsciously deliberate. Thus, most accidents are caused by unconscious motives, although they

usually have much more serious consequences than harmless errors of everyday life (Z. Freud, 2015). Psychoanalytic research has revealed the nature of unconscious motives that provoke people into injury-risk behavior. The most common motive is guilt, that a person tries to atone for through self-punishment. An unconsciously provoked accident serves this purpose. N. W. Ackerman (1936) gives a following example: a young man was driving his mother to the store, he begged her to let him use the car the next day to go fishing. She refused, after which he got anxious, "accidentally" pressed the accelerator pedal and drove the car into a ditch, injuring himself and his mother. In this case, a combination of revenge and guilt is obvious; the young man punished his mother and himself at the same time.

Psychoanalytic research views injuries, including recurrent physical unintentional injuries, as the result of unconscious processes. Their analysis reveals the conditional gain of injury. Probably, similar reasons occur in children, and if necessary, most likely, they can be reconstructed in a specific case with a child. However, firstly, psychoanalysts have noted the important role of the interpretive influences; and secondly, such procedures require long-term psychoanalytic therapy. And thirdly, thorough work with the client suggests at least some reflexivity. Pre-adolescent patients do not yet possess this reflexivity due to their age. Psychoanalysis results can be used as hypotheses, but it's impossible to use a method by which they were obtained as a research basis. In addition, the work that psychoanalysis covers is individual, and in this research we are talking about a big number of injuries (3 million cases being annually registered in medical institutions of Russia per Russian Federal State Statistics Service). Understanding the causes of injury is valid, but the method of this research is not appropriate.

Research of psychological factors contributing to the recurrent childhood injuries showed that researchers pay attention to the child himself and his social environment, but these factors are not organized and systematized in the literature.

Thus, according to the literature, there is an association between the individual psychological characteristics of the child (D. Kendrick, 2013; B.A. Morrongiello, 2007) and his social environment and unintentional injuries. However, they clearly lack details: which individual psychological characteristics of the child increase the recurrent unintentional injuries risk, which parenting type contributes to the recurrent unintentional injuries and what is its influence level. It does not specify how the factors that increase the recurrent unintentional injuries risk are connected.

According to the literature, there is not enough data on the individual characteristics of the child as factors of injury-risk behavior of the child. The idea has not been formed in the collective consciousness that injury-risk behavior in children is caused by factors, some of which are within the family situation (A.V. Spiridonov, 2007; D.C. Schwebel, 2019).

Subject of our study are psychological factors contributing to recurrent unintentional injuries in children aged 5 to 10 years.

1.3. Analysis of the recurrent childhood injuries risk factors: psychological, social and biological

To analyze the risk factors of recurrent unintentional childhood injuries, it is necessary to gradually identify "predictive" factors (risk factors–predictors), select those that can be influenced in order to minimize the risks of their recurrence, identify those that allow, if possible, to determine responsibility for the injury or for its prevention.

We divide the factors into groups depending on the risks predictability and the possibility of compensation by adults. Psychological factors - the risk is partially predictable, partially compensated by adults, considered an area of moderate adult responsibility, and largely depends on the child. Social factors - the risk is almost predictable, fully compensated by adults, considered an area of full

adult responsibility. Biological factors – the risk is completely predictable, partially compensated by adults, considered an area of high adult responsibility.

1.3.1. Individual psychological characteristics of a child

The list of psychological factors, as well as non-psychological ones, should be organized according to some basis, which in this case can be borrowed from the cultural and historical concept of L.S. Vygotsky (L.S. Vygotsky, 2004). Thus, the psychological factors of recurrent unintentional childhood injuries include the individual characteristics of a child: temperamental, character and personal.

Let's discuss the individual psychological characteristics of a child, that can be considered the recurrent injuries risk factors, one by one.

Temperament is an innate characteristic, which is primarily determined by the statical features of the person's nervous and endocrine system (A.V. Petrovsky, 2009). Possible factors of physical childhood injuries include such temperament traits as reactivity, activity, extraversion, emotional overexcitability, sensorimotor reactivity (agility or, alternatively, sluggishness when running and performing everyday actions).(G.S. Abramova, 2012; M. Holder 2010). From the outside, children may look overly active and even hyperactive, with a choleric and sanguine type of temperament. For example, two children are playing catch, running up to the road.The fast one ran and fell in the middle of the road, and the slow one did not have time to run. This situation can lead to an injury and endanger the health or Life of a child. At the same time, temperament, even if barely changes throughout life, can be limited - the child can be taught to cope with it, to “adapt” to it. Some parents are willing and able to engage in the development of the child in this direction, the other parents blame the difficulties on innate characteristics – on the temperament.

Knowing the temperament of a child, it is much easier to assess the situation, to understand what to expect him, what his strengths or weaknesses are, how to

develop and educate a child. For adults, most likely, the rules of behaving in injury-risk situations should be set out differently, taking into account the type of the child's temperament: energetic or slow.

Character is formed during the life based on the temperament In this research, the author agrees with the following definition of character: "character is a system of individual psychological characteristics of a person ... defining his typical behavior in standard situations" (E.L. Dotsenko, 2009, pp. 145-146).

Parents can partially influence the child's character, but to do that they must notice the child's characteristics in time, to understand in what situations injury risks arise and which behavior causes them. Generally, it looks like this: the parent noticed the risks, analyzed them according to the situation and the child's behavior in the situation, and offered alternative convincing options. Otherwise, the child gets a habit of spreading the usual (albeit unsuccessful) behavior in a certain situation to a larger scope of events. In localized situations, it is important for an adult to teach a child how to behave in a non-injurious manner. Again, we note that the responsibility lies with the parents.

"The behaviorally oriented part of character paradoxically combines unification (selection of the most effective behavior forms) and individualization (behaving uniquely)" (E.L. Dotsenko, 2009, p. 263).

Let's consider some personality traits that can lead to unintentional injuries. It is important to take impulsivity into account. If this trait manifests in uncontrolled reactions, it should be worked with and corrected, as such reactions can lead to injuries.

There are hundreds of character traits, some of them can be considered injury-risk traits. They in turn can be positive or negative: curiosity, perseverance, stubbornness, vitality, capriciousness, hysteria, lack of will, short temper, sluggishness, inattentiveness, restlessness, bitterness, irritability, lack of discipline, fear, fussiness, etc.

Parents must form and develop children's typical behavior in standard situations, since if the situation is not standardized by parents, then the child’s typical behavior is generalized to a larger scope of situations. List of standard situations: waking up to an alarm clock, crossing the road, heating up food and water, running on a wet floor, running daily around a room where a closet or TV has not been attached to the wall, etc.

From the parents' point of view, children can be convenient (quiet, obedient, docile) and sometimes inconvenient from birth (a little more troublesome than others). They are more persistent, more stubborn, more moody, sensitive and receptive, loud, talkative, agile. In most cases these children assert their view of the world through disobedience and activity. Their behavioral characteristics and emotional manifestations are not contemplated, it is their internal state, which they cannot and do not know how to control. At the same time, parents are often convinced that the child determines his own behavior, they tend to believe that it is unlikely to change someone, they say: "He is always like this ..." Although adults are supposed to help these children: by selecting the type of activity, sports, hobbies, organizing simple household chores that will help compensate for their characteristics, including injury-risk behavior.

A choleric, completely healthy child, can get injured because of his usual sharpness, hastiness, fast pace, impetuosity, and impatience. The child slams the door, stubs his toe, runs across the wet floor because he wants to go faster. Melancholic, due to his more inert temperament, can get injured, because he can't react to the danger signs in time: the school breaks or the roadways are too noisy for him, he has difficulties with determining the danger signs. So increased activity of a healthy child with a choleric temperament or chaotic, unruly, disorganized character can be interpreted by parents as ADHD (false syndrome). Taking into account the child's temperamental attributes and his character traits, a psychologist can help the parents – teach them how to interact effectively with the child in various areas of life: in everyday life, during studying and resting. As well as how

to anticipate and prevent child's behavior and his actions, reactions, emotional states, to choose appropriate parenting styles, and to help organize injury-safe behavior in a healthy child.

The following character traits can be associated with injury risks: aggressiveness, overconfidence, lack of empathy, lack of discipline, anxiety, indecision, over sociability, hyper-responsiveness, risk-taking, disregard for safety requirements and inability to follow them. For example, when a child is anxious, his tension increases, the general tension is duplicated by the muscle tension, which leads to clumsy movements and increases the injury risk. The child being affected by conflict in the family is an incorrectly built relationship with the child; if the child regularly sees arguments, his mental state is hyped, he becomes anxious, and does not want to follow the parental demands. This manifests in increased activity, which becomes the resulting variable.

Personal characteristics primarily mean the value-motivational characteristics of a healthy child, which determine his ability to control his own life, take responsibility for his choices, and consciously form his identity (E.L. Dotsenko, 2009). The foundations of a child’s personality are laid at an early age and through the influence of his family. Personality is mostly a social phenomenon; therefore, it is society (parents, close relatives and teachers) that have a great influence on its formation and development.

For example, a pugnacious child needs to be taught how to communicate, forgive (a personal deed), make friends and /or emotional maturity (the ability to manage emotional reactions, for example, when an offended child hits his head against a wall using an injury to attract attention). Correcting personality traits in childhood is possible and quite easy. From the parents' point of view, parenting often means controlling the actions of children and punishing them for misbehaving. Thus, parenting style plays an important role in raising a child (see below 1.3.2.).

Recognizing psychological characteristics of the child allows adults to partially predict the increased risk of recurrent unintentional injuries, which to a large extent depends on the child himself, namely on his innate characteristics, for example, temperament traits, which should be taken into account in the child's upbringing. Adults (parents and specialists, both psychologists and teachers) can compensate for risks quite successfully by influencing the child's character and relying on the child's personality in his upbringing. Thus, knowing and relying on the individual psychological characteristics of the child and taking them into account in the upbringing, adults can partially predict and compensate for the recurrent childhood injuries risks. Innate characteristics, such as temperament, play an important role in a child's development. Therefore, it's not about the adults bearing the full responsibility for the injury risk, but rather about their important and significant role and moderate responsibility in the childhood injuries prevention, if we consider the individual psychological characteristics of the child to be the cause of the recurrent unintentional childhood injuries.

1.3.2. Characteristics of the child development microsocial situation

In this work, the characteristics of the child development microsocial situation are defined as characteristics of the family and institutions: 1) individual psychological characteristics of parents and teachers 2) style of parenting and pedagogical education 3) socio-psychological characteristics of the family and the educational institution staff.

The family is the most important microcommunity in terms of having influence on the child. The individual psychological characteristics of parents include the characteristics of temperament, character and personality traits of an adult. The difference in temperament between the parent and the child greatly determines whether it is easy or difficult for a parent to raise a child, including setting rules and predicting the injury risks. Parents tend to react more negatively

and harshly, when a child's behavior is considered a sign of pamperedness or naughtiness. They don't believe that this behavior is caused by real emotions or needs. 2008; N.I. Olifirovich, 2006). Parents cannot significantly influence the child's temperament (see 1.3.1.), but they are quite capable of changing their attitude (D.S. Kornienko, 2012).

A parent's character can be a recurrent childhood injury risk factor if the parent is also lacks organization, hot-tempered, insecure, not responsible enough, impatient, anxious, risk-taking, pushy, erratic. Children partially copy their parents' behavior patterns, especially in preschool age. If temperament does not change, then character traits can be worked on and developed if the parent wishes to do so.

Often, adults dealing with a difficult child hope that someone somewhere can tell them exactly what to do, show the child what the right behavior is, and that following their advice will solve the problem. In this case, the level of maturity of the adult personality – the parent – is vital.

Who, acting as an individual, can take an active role in his life and consciously choose a behavior pattern, take responsibility for the safety of the child's life, and act consciously. For example, systematically, most likely, with a specialist (psychologist), to identify the most probable causes of childhood injury-risk behavior in given life conditions and subsequently minimize the recurrent childhood injuries risk.

Unfortunately, the idea has not been formed in the collective consciousness that injury-risk behavior in children is caused by factors, some of which are within the family situation (A.V. Spiridonov, 2007; D.C. Schwebel, 2019), more often it is blamed on the children themselves. Although to quote a well-known pedagogical wisdom: "A person receives everything - both good and bad - in the family" (A.S. Pugachev, 2012).

Depending on individual psychological characteristics, parents form a distinctive attitude towards the child - the parenting style (L.B. Schneider, 2000; J.A. Naglieri, S. Goldstein, 2011).

There are certain patterns that reflect the main parenting styles that may increase the recurrent unintentional childhood injuries risks. Depending on the parent-child relationship, the parenting styles can be divided into authoritarian, liberal and permissive. Authoritarian (strict) communication style is characterized by a low level of the emotional acceptance of a child, rejection by adults and an excessive level of control. The child has difficulties with becoming independent, develops a feeling of inferiority in the family, and anxiety from the constant stress.

Demands, prohibitions and rules are not to be discussed, they are approved and must be followed immediately. The demands can be very excessive and inadequate for the child's age, the system of rules and demands is rigid and unchanging. Parents do not accept the child's personal/emotional traits, feelings, wishes and experiences. In this case, by getting himself injured, the child might try to win the parents' attention, affection and care. A child who is not independent, who never crosses a road alone and always sticks with an adult, will have difficulties with crossing safely by himself.

As he grows older, responsibility for the child's life and development also remains in the hands of his parents, and his right to choose an independent development path is suppressed. Parents forbid the child to run around the room and did not bother, for example, to attach a closet to the wall. One day the closet fell when the children were playing, even though instead of running around, they tripped on the carpet. These relationships lead to internal conflict, because the child's true self is not taken into account, true wishes and needs are not satisfied. This child might attract attention to himself through excessive activity and injury.

Liberal (lenient) parenting style is characterized by a warm acceptance, low level of control in the form of overindulgence and forgiveness. This parenting style has practically no demands, prohibitions and rules, the level of control or guidance is insufficient, the child has no reasonable behavioral and psychological boundaries. The child is given total freedom. Parents think the child needs to figure out things by himself, using his life experience.

But if this experience is sitting on windowsills or balcony railings, then the consequences can be dire. Or the experience gained when a child jaywalks or crosses the road at a red light ("I saw a boy, he crossed the road, everything went fine"; "I saw a selfie being taken on a tree, but the doctors encountered another 9 years old child, who fell from the tree and broke his spine").

The actual level of parental help, support and protection is low. These parent-child relationship styles might be considered as recurrent unintentional childhood injuries risk factors.

Permissive parenting style is characterized by the parents being unconsciously distant towards the child and indifferent to his needs and feelings, not setting enough limits, mostly caring about their own problems. Parents are convinced that if their child is clothed and fed, then their job is done. "Carrot and stick" is the main parenting approach, with the punishment being followed immediately by a reward to prevent a child from having a tantrum. They often justify the child's antics and like to repeat: " So what? I misbehaved as a child, too, and grew up normal." Key words of the permissive parenting style: " Do whatever you want!"

E.G. Eidemiller and V. Justitskis determined the following parenting style factors that are the most important in regard to the formation of behavioral disorders and personality deviations in children: level of protection, the extent to which the child's needs are met, the amount and quality of demands towards the child, the degree of demands-responsibilities, the severity of sanctions.

Characteristics of the parents' educational efforts, in turn, can increase the injury risk. For example, hyperprotection, excessive sanctions, insufficient demands and responsibilities of the child create the general family disorganization and the unstable parenting style (E.G. Eidemiller, V.V. Justitskis, 2008).

Parental disorganization of the children's living space, as well as their inconsistency contribute to the impaired indicative basis of activity. The child does not know what to focus on, he is forced to try everything, he switches from one

task to another, most often cannot finish what he started, and this encourages him to activate his behavior. The child is interested in a lot of things but in fact, he is trying to find the lacking support and this outwardly manifests as his increased unfocused physical activity. When analyzing the socio-psychological characteristics of the family as recurrent unintentional injuries risk factors, we determined that the family characteristics are common for any other small group, namely: size, group members homogeneity, flexibility of group activities, group members performing functions and roles, and etc. (R.L. Krichevsky, E.M. Dubovskaya, 2001).

Sometimes it is important to take into account the number of adults raising a child, whether the family is full or not, the number of children in the family, nationality, employment, parental education (S.M. Peters, 2020; S.T. Azar, 2017; L. Laflamme, 2001).

Each characteristic can be a factor that increases a child's injury risk. For example, a nanny and grandparents help the parents with their child, and the child has already been to a trauma surgeon 6 times during the 8 years of his life with head injuries and injuries requiring surgery and hospitalization, among other things ("Too many cooks spoil the broth").

Raising a child "in the cult of illness", when he gets used to the idea that injury gives him rights, freeing him from chores, that because of it everyone should fulfill all his requests, protect him from problems, release him even from the easy duties, forgive his misbehavior and allow him things that others cannot do. As a result, when faced with life obstacles, a child usually needs to "go into illness" and he gets injured.

Recurrent unintentional childhood injuries risk factors can also be determined in other social structures (school, kindergarten, clubs, sections): individual psychological characteristics of teachers, parenting and educational style, socio-psychological characteristics of the family and the educational institution staff. In educational institutions there are recurrent unintentional

childhood injuries risk in the classroom, in class, during physical exercises, during school breaks, during out-of-school activities.

Considering that in kindergarten and school most of the child's emotional, social and mental development occurs, special requirements are placed on the teachers who must ensure this development. For effective work of the teachers, it is important to consider their individual and psychological characteristics: temperamental, character and personality traits.

Although the innate temperament characteristics do not determine the teacher's performance results, they affect the teaching process and methods (I.V. Matyukhin, 2016). As adults responsible for the development and education, teachers must understand and develop their own character traits.

Especially the following: restraint, patience, optimism, emotional balance, tolerance, goodness, accurate and quick reactions, while also maintaining tact and self-control, and remembering to be demanding.

As for the education style adopted in a general education institution, the institution independently chooses the forms, means and methods of education and upbringing in accordance with the Strategy of Development of Education in the Russian Federation for the period up to 2025 (approved by order of the Government of the Russian Federation from 29.05.2015 No. 996-R) and the charter of the general education institution. It is likely that certain socio-psychological characteristics of the general education institution staff can influence the childhood injury risks.

For example, characteristics like the lack of awareness, lack of discipline, lack of organization, lack of cohesion. A detailed analysis of the characteristics of the child development social situation in an educational institution (kindergarten, school, clubs, sections) as recurrent unintentional injuries risk factors is not provided in the framework of our research, but may be the subject of further works.

Characteristics of the child development microsocial situation are quite predictable, they are almost completely compensated by adults (parents and/or teachers), therefore, this research considers them an area of maximum adult responsibility.

1.3.3. Biological preconditions for recurrent injuries – improvement limits and false attributions

The main studies of the recurrent injuries biological preconditions for the most part consider this issue a related field of neurology, psychology, neuropsychology and psychiatry, which is a large and independent medical and social problem (S. Yu. Lavrik, 2014). This research paper organizes non-psychological factors contributing to the recurrent injuries occurrence increase according to their structural irreversibility degree, medical and/or psychological curability. If the described factors are present in the family and they are detected in a timely manner, parents can prepare their children and those around them for a safer life. There are the following biological preconditions for recurrent injuries:

1. Physical disability, which means that it's difficult or impossible for a child to control his limbs, impossible to hear warning signals, impossible to see high-risk objects or situations, the injury risk may increase, children with multiple disabilities have the greatest risk of initial and recurrent injuries (E. S. Tkachenko, 2019, Shi X.et al. 2015, Zhu, Xiang H, Xia X, Yang X, 2014). Recurrent injuries factors like overprotection and authoritarian parenting style can take on increasing importance when raising a disabled child.

2. Neurological disorders, for example, epilepsy. Accidental injuries are possible as a result of recurrent, uncontrolled epileptic seizures, especially with the loss of consciousness. Epilepsy patients have a risk of falling, which is not associated with an epileptic seizure (J.F. Tellez-Zenteno, 2008). A prospective cohort study conducted for 12 months in India among 420 children showed that

children with epilepsy have an increased injury risk and therefore need to be supervised (S. Sajjan, 2016). Childhood mental disorders, for example, early childhood autism (ICD 10 code - F84.0) can lead to injuries (N. N. Zavadenko, 2015). But even in this case, a psychologist can play an effective role through providing psychological support for the parents of children with central nervous system diseases. In this case recurrent injuries factors can take on increasing importance in the family (overprotection, sanctions, authoritarian parenting style).

3. Functional changes in the nervous system or other organs that are painful in nature, affecting the child's behavior, making him more susceptible to danger: weakness, headaches, sleep disorders, depression, irritability. Approximately 25% of children in the population have some kind of sleep problems. Hypersomnolence disorder (excessive daytime sleepiness) can lead to a decreased perception of danger signs, increasing the injury risk (E.A. Abashidze, 2008; V.C. Abad, 2005). Lack of sleep and fatigue cause symptoms similar to hyperactive behavior. It can be noted that children with neurological disorders do have an increased risk of unintentional injuries (J. Byrne, 2003).

Some of these disorders can be compensated on the behavior and daily routine level with the involvement of social services. Doctors might and should intervene in other disorders with the use of drug or physiotherapy, psychotherapy and fully or partially compensate these conditions. And despite the fact that the factors are non-psychological, their structured, timely social and psychological management allows to achieve good results in reducing the unintentional childhood injuries risks. But most of children with unintentional injuries in the population do not have neurological pathologies. Most parents and close relatives explain the problem of a high injuries rate in a child with his increased physical activity and restlessness.

Increased activity of the child is the most obvious sign in the frequently injured children behavior. It is a variable that integrates all the factors mentioned above. Taking into account this behavior sign, adults consider a child to be

responsible for the injury. Most parents "diagnose" hyperactivity, calling, in their opinion, an overly mobile child hyperactive.

4. Minimal cerebral dysfunction (MBD). In Russian medical literature, unlike foreign literature, the term MBD is used by neurologists, psychiatrists, and pediatric neuropsychologists to identify a wide range of neurological disorders that are classified in different sections of ICD-10. MBD is a collective concept and not a nosological entity. However, it should be noted that in clinical practice children often have a combination of symptoms that relate not to one, but to several diagnostic categories (O.S. Galitskaya, 2019). The child with hyperkinetic conduct disorder (ICD-10 codes: F-90, F-91), due to constant movement and inability to stand still, tries to climb somewhere, does not listen to the task until the end, has a scattered attention span, and impaired conscious inhibition (voluntary movements). Due to the described characteristics, the child has an increased unintentional injuries risk: falls, collisions, hitting body parts.

The prognosis is relatively good, because in a significant number of children, symptoms disappear in adolescence, only in 30-70% of cases the following clinical signs can be noticed in adults: excessive impulsivity, short temper, absent-mindedness, forgetfulness, restlessness, impatience, as well as unpredictable, rapid and frequent mood swings (N. V. Pisova, 2013).

To date, the term ADHD is unclassified. ICD-10 classified ADHD as a hyperkinetic disorder - a group of emotional and behavioral disorders that usually begin in childhood. In ICD-10 this disorder is coded as F90.0 - disturbance of activity and attention; F90.1 – hyperkinetic conduct disorder (attention deficit hyperactivity disorder - ADHD). In ICD-11 it is included in a new category and refers to neurodevelopmental disorders - disorders of the nervous system development. Neurologically, ADHD is a persistent and chronic syndrome for which no cure has been found.

Considering that the research result is important specifically for practical purposes, this thesis used the ADHD definition which is understandable to doctors, teachers, parents and accepted by the general public.

The literature review (1.2.2) paid significant attention to ADHD, because, as will be shown below, adults, most often parents or guardians, explain the unintentional recurrent childhood injuries with hyperactivity and inattentiveness, which is not always the case. A serious question arises: who, when and how could effectively supervise children with unintentional repeated injuries, reducing their risks, especially in children with externalizing behavior manifesting through increased physical activity. This is how the 2nd hypothesis of our research is formulated.

Biological preconditions of recurrent unintentional childhood injuries classify the injury risks as predictable (foreseeable); the risks are partially compensated by the adults and considered an area of maximum adult responsibility. Thus, there are a number of factors that increase the primary injury effect, but there are also factors increasing the recurrent injury effect, since there is secondary gain. Recurrent injuries are facilitated by the presence of a secondary gain from the first injury.

Thanks to the injury, the child achieves the following secondary gains: parents partially reduce punishments (sanctions), parents and the child become closer to each other emotionally and physically (parents take care of him during a difficult period of his life). Each injury allows the child to compensate for the low parental attention, at least partially. As a result, a stable semantic pattern is formed, which finds its behavioral manifestation in the child's increased activity and riskiness, which creates preconditions or implicit preparedness for the recurrent childhood injuries and an unconscious perception that any injury or illness is good.

Understanding the sources of injury will help the specialists, both a psychologist and a doctor, to determine who is responsible for the child injury-risk situations and to what extent. A person cannot be blamed for something that he had

no influence over, however, even if the cause of an unintentional injury is physiological and not psychological, responsibility is placed not on the illness itself, but on the extent to which the adults responsible for the child were able to take this characteristic into account: how they eliminated or reduced the injury risks, how they organized the daily routine, and instilled safe living skills.

1.4. Model of the recurrent childhood injuries factors

1.4.1. Explaining the suggested model of the re-injuries childhood factors

To ensure full consideration of all factors that determine the recurrent unintentional childhood injuries risks, the factors are reviewed and arranged into a table (Figure 1).

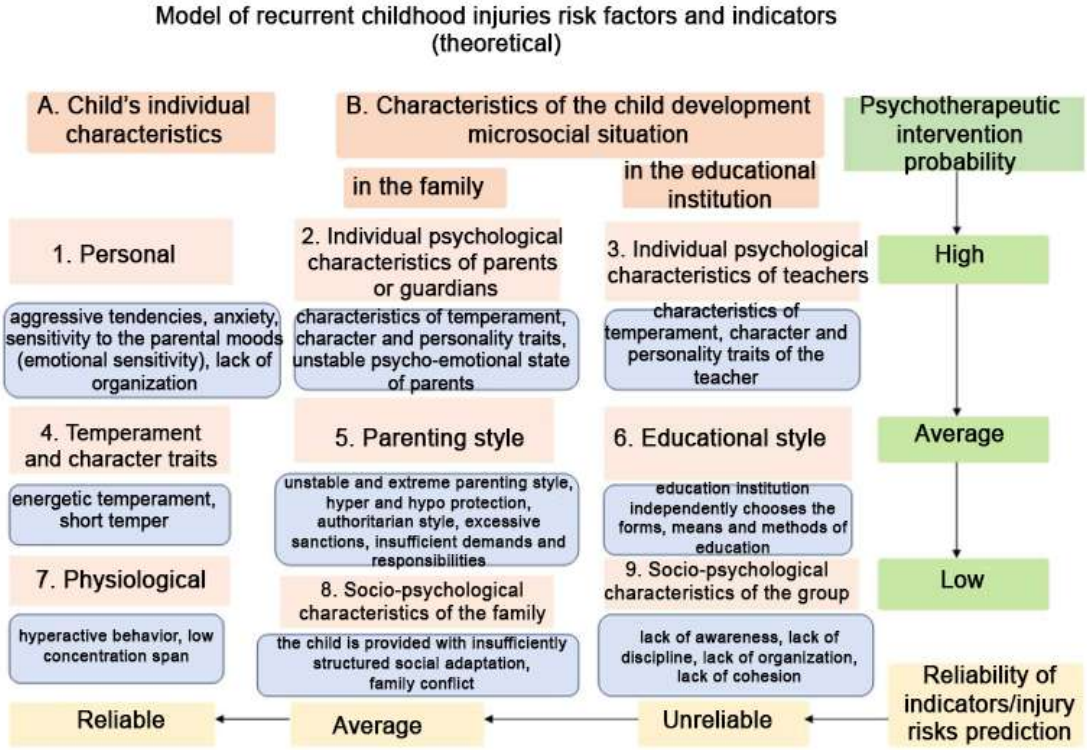


Figure 1. – Proposed model of recurrent unintentional childhood injuries risk factors

1st classification basis: Individual – Social. “Individual psychological characteristics of the child” (column A) and “Characteristics of the child development social situation” parameters (column B) are reflected in the model.

The first group of factors, the individual psychological characteristics of the child, includes: the child’s personal characteristics (cell 1), characteristics of his temperament and character (cell 4) and physiological characteristics (cell 7). The second group of factors - characteristics of the child development social situation. There are individual psychological characteristics of adults surrounding the child both in the family and in the educational institution. In the family, the child is surrounded by parents or guardians (grandparents, uncles, aunts, nannies). In kindergarten the child is surrounded by kindergarten teachers, in school - by teachers, in additional education institutions - by coaches. In turn, the second group of factors is heterogeneous and can be divided according to the degree of proximity or distance to the child: “In the family” (cells 2, 5, 8 in the model) and “In an educational institution” (cells 3, 6, 9). “Individual psychological characteristics of parents or guardians” (cell 2) and “Individual psychological characteristics of teachers” (cell 3) groups of factors reflect characteristics of adults who are close to the child. And the group of factors in the “Socio-psychological characteristics of the group” section (cell 9) are as far away from the child as possible.

2nd classification basis: the extent to which the factors depend on the specialists' ability to control them.

It should be noted that specialists (both doctors and psychologists) working with children have different opportunities to influence the recurrent childhood injuries problems and factors. Psychotherapeutic intervention for preventing recurrent injuries is more efficient and can be effectively provided to the child himself. Children with congenital pathology of the central nervous system, minimal brain dysfunction (ADHD as a nosological form (true syndrome)) have the weakest possibilities of psychotherapeutic intervention. And also, in relation to the socio-psychological characteristics of the family (single-parents, families with

low material wealth, large families). And extremely low impact potential at the level of socio-psychological characteristics of the educational institution staff.

Thus, the 2nd calculation (left column) in the proposed model organizes injury risk factors according the extent to which they depend on the availability of psychotherapeutic intervention to prevent childhood injuries, from highly dependent (cell 1) to practically independent (cell 9).

3rd classification basis: the reliability of predicting the recurrent unintentional childhood injuries risks (bottom line) in the model arranges injury risk factors according to their ability to predict injury risks (the injury probability given the known factors). From a reliable prediction of injury risk (second column) to a completely unreliable prediction (far right column). This serves as the basis for additional opportunities for injury supervising by specialists.

Thus, it is likely that a healthy child is at risk for recurrent unintentional injury if certain psychological risk factors are present. This assumption constitutes the hypotheses of the research.

For the practical work of a consulting psychologist and other specialists working with childhood injuries, it is important to understand which group of factors the recurrent injuries causes belong to. This makes the correctional work less time-consuming, taking into account the child's characteristics and the individual psychological characteristics of the parents or guardians, teachers, and kindergarten teachers.

1.4.2. Organizational and methodological capabilities of the recurrent injuries childhood factors model

The research demonstrates the following capabilities of the proposed model of the recurrent unintentional childhood injuries risk factors (Table 1):

1. Working with the proposed model allows to monitor the influence of different specialists on the childhood injury situations by way of preventing and correcting recurrent unintentional childhood injuries.

Having assessed the risks for each cell of the model, the medical professional understands to which specialist the child and parents should be referred to for help. If we evaluate the factors of childhood injuries and how they change as we move along the model on the left side, we find a scale of professional fields cooperation - from a psychologist (upper left corner) to a doctor and neuropsychologist (lower left corner). If we examine the model along the upper side, there is a scale of interaction between a psychologist, a social educator or a counsellor (upper right corner). In the lower right corner of the model, the place of problem supervision is occupied by the organizational psychologist and the child care facilities administration. Thus, the model shows how the interaction between all key specialists (psychologist - neuropsychologist - doctor - social educator - organizational psychologist) is integrated.

2. The proposed model allows to qualify injury cases according to the degree of responsibility of the adults involved in the child getting injured. This is required both to determine the degree of adult responsibility, and to identify subjects that can influence the situation in the future in order to prevent recurrent unintentional childhood injuries.

For every child, in the event of an injury, it is possible to identify people whose competence should serve as a guidance, and determine the degree of their responsibility. If the case is sent to court, the model allows to correctly plan an expert examination and obtain a carefully weighed conclusion. When collecting the relevant data, it will be possible to indicate who bears the main responsibility (one of the parents, family, teacher, educational institution), and who has indirect responsibility. When the specialist identifies the vector (who) and the degree of responsibility (how much), it will be clear who or what should be prioritized. It will be possible to predict how difficult it will be to supervise the case in question.

Of course, if the case depends on the physiological problems of the child (for example, MBD), then correctional work will be more time-consuming than when working with the personal characteristics of the child or parents.

Doctor (trauma surgeon, neurosurgeon, surgeon, ophthalmologist, otolaryngologist, oral and maxillofacial Surgeon) is the first to treat an injured child at the medical institution, he is considered some sort of dispatcher of the injury situation. Our efforts are aimed at providing methodological assistance to him. After gaining an initial understanding of the current situation, he understands where to further refer the child and his family: to a neurologist, neuropsychologist, child or family psychologist, educational psychologist, or to involve the administration of the institution in the correction (for more details, see Chapter 3).

Understanding the sources of injury will help the specialists, both a psychologist and a doctor, to determine who is responsible for the child injury-risk situations and to what extent. It is known that one cannot blame a person for something that he has no influence over. However, even if the cause of an unintentional injury is physiological and not psychological, for example: MBD, cerebral palsy, responsibility is not placed on the illness, but on the extent to which the people responsible for the child were able to take into account this characteristic of the child's development. How they eliminated or reduced injury risks, how they organized the daily routine, and instilled safe living skills.

Chapter 1 resume

The problem of recurrent childhood injuries has been introduced into the range of research topics. The terms "recurrent childhood injuries" and "injury-risk behavior" were first introduced into the Russian-language professional discourse (medical and psychological).

Despite the topic being widely covered, researches on childhood injuries have not studied the causes of recurrent injuries, in detail, they don't describe the psychological mechanisms of the domestic injuries and the pathogenesis of the injuries, characteristics of the social situation of an injured child have been

partially studied. Thus, the need to systematize and classify the possible psychological risk factors of childhood injuries and identify the most likely ones among them is obvious.

Two groups of recurrent childhood injuries psychological factors have been determined: 1) individual psychological characteristics of a child and 2) characteristics of the child development microsocial situation (within the family and the educational institution). It has been demonstrated that a psychological factor that has been triggered once can be triggered again. Probable and significant indicators of the recurrent unintentional childhood injuries can be the temperament activity and hyperactive behavior of the child, aggressive tendencies and state anxiety, sensitivity to the parental moods (emotional sensitivity), lack of organization. In parents: temperament, character and personality characteristics of parents, their unstable psycho-emotional state, instability and extreme parenting style (hyper- and hypoprotection), authoritarian parenting style, excessive punishments, insufficient demands towards the child and family responsibilities, child's social adaptation being insufficiently structured by adults, family conflicts.

Based on the factors studied, this research developed a proposed model of psychological factors and indicators that contribute to recurrent unintentional childhood injuries. The model makes it possible to qualify injury cases according to the degree of responsibility of the adults involved in the child getting injured. Working with the proposed model allows to monitor the possibilities of different specialists influencing the childhood injury situations by way of preventing and correcting recurrent unintentional childhood injuries.

Currently, collaboration between physicians and psychologists on the recurrent unintentional childhood injuries problem is not fully established. It is necessary to create the right trajectory of medical and psychological support aimed at reducing the recurrent unintentional childhood injuries risks and to identify the main subjects of psychological impact, taking their characteristics into account.

Chapter 2. Organization and content of the empiric study

2.1. Aims and tasks of the study

The aim of the study is to identify psychological factors contributing to an increased risk of recurrent unintentional injuries in children aged 5-10 years old.

Tasks of the study:

1. Plan an empiric study: identify the child's individual characteristics (from personal to physiological), characteristics of the child's family development microsocial situations (parenting style adopted in the family, individual characteristics of the parents), which increase the recurrent unintentional childhood injuries risk.

2. Formulate the requirements of the procedure of identifying individual characteristics of a child and social situations of his development.

3. Develop a procedure for identifying factors in the following groups: child's individual characteristics and his family development microsocial situations.

4. Using the developed procedure, identify the child's individual characteristics and his family development microsocial situations.

5. Process the obtained data, compare the results with the hypotheses.

6. Interpret the obtained results and draw meaningful conclusions about compliance with the hypotheses.

2.2. Sample characterization

Collection of the study material was carried out in Tyumen on the basis of the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, Municipal Autonomous Educational Institution Gymnasium No.16, and

Municipal Preschool Educational Institution Kindergarten No. 83. The criteria for including patients in the study were physical unintentional childhood injuries, which required contacting the emergency department of the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2and the following doctors: a trauma surgeon, a neurosurgeon, a pediatric surgeon, an ophthalmologist, an oral and maxillofacial surgeon, an otolaryngologist and others once, twice or more (for the main group and 1 comparison group). The children were between 5 and 10 years old (pre-adolescence) at the time of the examination. According to statistics, this is an injury-prone age. Neuropsychological diagnostics is traditionally performed on children from the age of 5 (T.V. Ahutina, 2008). According to the terminology of the United Nations Population Fund (UNFPA), adolescents are individuals between the ages of 10 and 19. Exclusion criteria were cases caused by massive man-made or natural disasters, the presence of severe organic brain damage, concomitant somatic pathology, and disability. The children were examined after obtaining voluntary informed consent. The study protocol was approved by the Ethics Committee of the Federal State Budgetary Educational Institution of Higher Education Tyumen State Medical University.

The study involved 450 subjects: 225 dyads (child – child's legal representative). 3 groups were formed, taking into account the number of injuries in children. The main group included children with recurrent injuries (≥ 2), the comparison groups consisted of children with 1 injury and without any injuries. There were 75 children in each group.

Children were divided into groups based on medical history (injury). Each level of the independent variable matched children with different numbers of injuries. The study included children with various types of injuries: craniocerebral and spinal injuries, bruises, soft tissue wounds, fractures, dislocated ribs, fingers or limbs, nasal bones fractures, facial skeleton fractures, bruises of internal organs, burns, eye contusion, traumatic tooth extraction and others. The non-injured group

included children from the children's group (kindergarten and school) who have never been injured in their lives.

Children not younger than 5 years old were selected, because from this age they are available for neuropsychological diagnostics. Children not older than 10 years old (pre-adolescent age) were selected, because study interest is focused not on the causes of adolescence, but on the systems of childhood recurrent injuries, taking into account statistical data on childhood injuries. Cases of one-time injuries caused by man-made or natural disasters are not considered in the study. Of all the children studied, there were 156 boys and 69 girls, the average age was 7.1±0.5 years. The age of the child's legal representatives ranged from 24 to 76 years (average age was 35.6±1 year).

2.3. Research methods

Research methods were selected according to the aims and objectives of the study. However, there were a number of obstacles that we had to overcome. Since the study was conducted in the hospital emergency department, express techniques were chosen, which made it possible to take up a minimum of parental time and made it available to participants during the diagnostic and treatment process.

Informational basis of the study was the following: legislative and regulatory documents of the Ministry of Health of the Russian Federation, scientific journals and periodicals, electronic scientific publications, conference materials on the problem of unintentional childhood injuries and its prevention, and the role of interdisciplinary medical and psychological interaction.

The independent variable is the severity of childhood injuries. Levels of the independent variable (subject groups): main group - children with frequent injuries (number of injuries - 2 and >), comparison group 1 - children with one-time injuries (number of injuries - 1) comparison group 2 - uninjured children (number of injuries - 0). The dependent variable is factors that increase the likelihood of

unintentional childhood injury. Controlled variables are the age and gender of the children. The following parameters were measured. In a child: physical activity, emotional characteristics, position in the interpersonal system and the family communication patterns, temperament activity, being diagnosed with ADHD (ICD-10 codes - F90.0 (disturbance of activity and attention) and F 90.1 (hyperkinetic conduct disorder)). In parents: parenting style adopted in the family, core values, psycho-emotional state, self-esteem, parenting style, locus of control level. According to the proposed model of psychological risk factors of unintentional injuries (see 1.4), diagnostic methods were selected in order to cover a larger number of risk factors.

The following methods were used to assess the individual characteristics of the child risk factors group. For children: projective techniques: "Non-existent animal" (M.Z. Dukarevich, P.V. Yanshin, 1990, G.F. Muzychenko, 2013), "Kinetic family drawing" (R. S. Burns, S. H. Kaufman, 2000) express neuropsychological diagnostics. For parents: "Determining the child's temperament" technique (B.S. Volkov, N.V. Volkova, 2009), "Hyperactivity criteria according to P. Baker and M. Alvord" test (E.K. Lyutova, 2010; V.V. Grebneva, M.V. Sadovsky, 2020; M.I. Lokhov, E.V. Fesenko, 2014), as well as an examination of the child by a neurologist or psychiatrist.

It should be noted that projective techniques are considered the most efficient for determining emotional characteristics of the target group of children (from 5 to 10 years old). They are quite effective at this age, which is determined by their ability to study the basic, deep structures of the child's psyche, which are difficult to diagnose using other methods. Projective techniques correspond to the age capabilities of children and allow to explore children's
attitude towards the world, themselves, activities and their social role, to explore and identify personal traits, values and needs (K.Yu. Butrimova et al., 2016).

Projective techniques are a specific, heterogeneous group of psychodiagnostic methods. Data on the drawing techniques validity does not allow

to draw firm conclusions (E.S. Romanova, 2011). Studies, conducted in Hong Kong and Malaysia analyzed the validity of drawing techniques. Based on the study results, conclusions were drawn regarding the acceptable expert validity of drawing techniques (Chih-Ying Lia, 2014), it was determined that the obtained data can be used by psychologists in the medical psychology field, in psychological counseling and other areas where projective drawing techniques are used (M.G. Kochurov, 2021).

"Non-existent animal" projective technique is suggested for the personal characteristics of the child risk factors subgroup. The technique allows to assess anxiety level, self-esteem, tendency to act (activity), sense of self, the importance of other people's opinions, experiences of fear, aggression, rational decision-making, attitude towards their own actions and behavior, protection, anxiety. The technique is applicable for children from the age of 4 years. "Determining the child's temperament" technique, proposed by B.S. Volkov and N. V. Volkova is considered the best tool for the personality and temperament characteristics of the child risk factors subgroup. The child's legal representatives were asked to answer questions regarding the child's temperament.

For the physiological characteristics of the child (properties of his nervous system) risk factors subgroup, which is labeled cell 7 in the model, the "Hyperactivity criteria according to P. Baker and M. Alvord" test as well as an examination by a neurologist, psychotherapist and neuropsychologist were used. Often adults assume that a child is hyperactive based solely on the fact that he moves around a lot and is fidgety. This point of view is wrong, as other manifestations of hyperactivity (active attention deficit, impulsivity, cognitive features) are not taken into account in this case.

In Russia, ADHD is only diagnosed by a pediatric neurologist, psychoneurologist, and/or much less frequently by a pediatrician. It includes the medical history analysis: symptoms onset and severity, risk factors and presumed causes according to the anamnesis, family psychopathologies. To detect

abnormalities in somatic development and neurodevelopment, a general examination is conducted, where the doctor assesses the child's condition, identifies the developmental abnormalities, impairments of perception and speech, as well as hearing and vision. To diagnose mild cerebral pathology in children with ADHD, electroencephalography (N.L. Gorbachevskaya, 1996), magnetic resonance imaging or electroneuromyography are used. Other examinations are based on the individual clinical characteristics of the child, allergies, nocturnal enuresis, tics, impulsive obsession, neuroses and other disorders. Frequent cases of comorbid conditions in children with ADHD dictate the need for neuropsychological analysis and clinical investigation. First of all, the disorder symptoms should be differentiated from the regular high psychical activity common in many children (especially at preschool age): in children with ADHD, motor disinhibition is combined with an impaired kinesthetic movement and a visual spatial awareness; general muscular weakness, signs of ataxia and dyskinesia are noted during the neurological examination (O.V. Khaletskaya, 1998).

Neuropsychological examination of children was used in a practical aspect - to clarify problems associated with cognitive processes, minimal brain dysfunctions. When diagnosing ADHD in medical practice, it is essential specifically for finding alternative methods of medical care for the disorder. The diagnostics of mental processes in Russian specialists is based on A.R. Luria's method of general neuropsychological examination (A.R. Luria, 1969; E.D. Chomskaya, 1987). "Luria-90" is a neuropsychological express diagnostics developed by E.G. Simernitskaya and aimed at diagnosing specific challenges of young children.

The following techniques were used to assess the characteristics of the child’s family development social situationsrisk factors group. For children: "Psychological portrait of a parent", "Kinetic family drawing", "Family

sociogram". For parents: "Parents' subjective assessment of their parenting style" (author's method).

"Psychological portrait of a parent" method (G.V. Rezapkina) was used for the individual psychological characteristics of parents or guardians risk factors subgroup It allows to "paint a picture" of a parent according to the following scales: core values, psycho-emotional state, self-esteem, parenting style, lotus of control level. Variables were coded as the following core values: 1 - relationships with children; 2 - relationships with coworkers; 3 - personal experiences. Psycho-emotional state: 1 - satisfactory; 2 - unsatisfactory; 3 - unstable. Self-esteem: 1 - positive; 2 - negative; 3 - unstable. Parenting style: 1 - democratic; 2 - liberal; 3 - authoritarian; 4 - the style has not been formed. The parenting style adopted in the family risk factors subgroup used the same logic as in the "Family relationships analysis" children's technique (from 3 to 11 years) (E.G. Eidemiller, V.V. Justitskis, 2008). The technique uses the same scales, parents are asked to directly assess the characteristics of their parenting (instead of through answering questions). The assessment method is a subjective scaling (as in the Dembo-Rubinstein method) The independent variable is the recurrent injury rate.

The socio-psychological characteristics of the family risk factors subgroup used projective drawing techniques for children. The first is the "Family Sociogram" technique, which allows to identify the subject's position in the interpersonal relationship system and, in addition, to determine the nature of communication in the family – direct or indirect. The second is the "Kinetic family drawing" technique that allows to evaluate the following socio-psychological characteristics of the family: cohesion, estrangement, structure, hierarchy.

Methods for assessing the individual psychological characteristics of teachers, educational style adopted in a general education institution and the socio-psychological characteristics of the general education institution staff were not used, because they are not covered in this research paper. The fact is that the systematicity of these factors varies greatly in different situations and it's unlikely

that a single pattern will emerge. We need a systematic pattern rather than a specific factor, as it would be important for cases of examination.

Table 2 - Research criteria

Techniques	Criteria
1. “Non-existent animal” (M.Z. Dukarevich, P.V. Yanshin 1990; G.F. Muzychenko, 2013) IN A CHILD	1.Anxiety 2. Self-esteem,
2. "Kinetic family drawing" (R.S. Burns, S.H. Kaufman, 2000) IN A CHILD	1. Good family situation 2. Family conflict 3. The child feels inferior in the family 4. The child feels hostility in a family 5. Anxiety
3. "Family sociogram" (E.G. Eidemiller, I.M. Nikolskaya V.V. Pushina, 2006) IN A CHILD	1. High self-esteem 2. Low self-esteem 3. Adequate self-esteem 4. Self-centeredness 5. Family conflict
5. "Hyperactivity criteria according to P. Baker and M. Alvord" test (V.V. Grebneva, 2020; M.I. Lokhov, E.V. Fesenko, 2014) IN PARENTS	1. Assumed hyperactivity 2. Assumed absence of hyperactivity
6. Neuropsychological diagnostics IN A CHILD	1. Mental performance 2. Concentration span 3. Movements and actions 4. Gnosis 5. Speech functions 6. Memory 7. Intelligence
7. “Determination of a child’s temperament” (B.S.Volkov, N.V. Volkova, 2009) IN A CHILD	1. Sanguine type 2. Choleric type 3. Phlegmatic type 4. Melancholic type 5. Mixed type
8. Examination of a child by a neurologist or a psychiatrist, medical conclusion IN A CHILD	1. ADHD diagnosis is confirmed 2. ADHD diagnosis is not confirmed
9. "Parents' subjective assessment of their parenting style" (author's method) IN PARENTS	1. Protection level in the parenting process. 2. Extent to which the child's needs are met 3. Number of demands towards the child 4. Number of demands-inhibitions 5. Severity of punishment
10. “Psychological portrait of a parent” (G.V. Rezapkina, 2006) IN PARENTS	1. Core values 2. Psycho-emotional state 3. Self-esteem 4. Parenting style 5. Locus of control level

2.4. Study procedure

The following methods were used in the empiric study: clinical, clinical-psychological, psychodiagnostic, neuropsychological.

Clinical orientation in the psychological testing involves the integration of data related to a child's injury. Clinical method was used in the form of observing and interviewing the child and his parents, aimed at collecting an injury and life anamnesis. The interview was conducted with the child, his legal representative, his kindergarten teacher and his school teacher. The interview with parents included a study of the child's development socio-psychological situation, his relationships with parents, peers, and teachers. When talking to a child, it was important to put him at ease, which was achieved through casual, relaxed conversation, a smile, and encouraging gestures.

The anamnestic data study was carried out using the clinical-biographical method. The following medical data was analyzed: outpatient records, certificates, extracts. If the child's legal representative agreed to take part in the study, the methods described above were used for the family (see 2.1.2.).

Children projective techniques allowed to determine (according to the author's interpretation standards for each technique) the presence of criteria (factors) given in Table 2 in a child. The examination procedure consisted of drawing and then conducting an interview. The child was provided with a standard sheet of drawing paper, pencils, and an eraser. The following instructions were explained to the children: "Imagine and draw a non-existent animal and call it a non-existent name", "Draw your family however you want", "There is a circle on the sheet in front of you. Draw yourself and family members in the form of circles and write down their names." Each technique took the child 10-20 minutes. If the child was tired, the techniques were carried out on different days. When carrying out the technique, the child was given the opportunity to understand and perceive as much as he could, based on his psychological maturity. After carrying out

projective techniques, children and parents were interviewed, and their concerns were discussed.

Medical reports (neurologist or mental health specialist examination). The data was given by the parents or verified for each individual child at their polyclinic. If the child was not examined by a specialist, then the parents were given recommendations and referrals, the data was taken into consideration after seeing a doctor. ADHD is a medical diagnosis that can only be made by a neurologist or psychiatrist, and after thoroughly examining the child and consulting the parents.

Neuropsychological diagnosticswas conducted without the parents present. The status indicated an overall score, combining the analysis of such functions as concentration span, movement, gnosis, speech, memory, and intelligence. The neuropsychological examination began with a interview during which the child was asked questions on various topics - family, friends, hobbies, etc.

This stage allows to assess the emotional, personal and speech spheres. The main goal of the interview is to create a friendly environment and motivate the child to cooperate.

Working with the suggested techniques took every parent 1,5-2 hours. Then the interview was conducted with the parents, their concernswere discussed, explanations were given.

Feedback from the parents or guardians is an indirect confirmation of the correctness and validity (problem relevance) of the study. Adults noted that the explanations received as a result of this work are more clear than the explanations received earlier from other specialists (pediatricians, trauma surgeons, school educational psychologists).

Thus, it can be concluded that the study created conditions favorable for data collection and parents' awareness of the recurrent unintentional childhood injuries problem importance.

2.5. Processing of obtained data

For the convenience of statistical analysis of the data obtained using the projective techniques, the answers encoded according to the proposed techniques were used. Criteria (factors) identified, when interpreting the details and processing the obtained data was coded 1, their absence was coded 0.

For studying the tables of several categorical variables contingency, long-linear analysis calculations were used, which allowed to consider the combination of all variables. However, in this work, the main task was to identify how the recurrent childhood injuries rate is related to other variables. Combinations of other variables (not containing the "injury" variable) were not considered.

Parents' description of the child's behavior. Hyperactivity according to parents was coded 1, absence of hyperactivity was coded 0.

In the "Hyperactivity criteria according to P. Baker and M. Alvord" test parents used "+" to mark a symptom that manifests in their child.

The content of this technique is determined by three focal points: attention deficit, motor disinhibition and impulsivity. If at least 6 of the mentioned symptoms manifested, it would suggest hyperactivity in a child. After analyzing the total score, the presumed hyperactivity in the child (in parent's opinion) was coded 1, its absence was coded 0. Doctor's diagnosis. A confirmed ADHD diagnosis (nosological form) was coded 1 for statistical calculations; an unconfirmed diagnosis was coded 0. Accordingly, the chi-square criteria were calculated for each method separately.

Neuropsychological diagnostics. The presence of deficient symptom complexes detected during the neuropsychological diagnostics, indicating MBD and the risk of ADHD, was coded 1, its absence was coded 0. Considering that the sample subjects are sufficient in volume (75 people in each group – the main and comparison groups), it is possible to use single-factor analysis of variance in

statistical calculations for the neuropsychological examination data analysis (see Appendix D for calculations).

For the "Determining the child's temperament" method (B.S. Volkov, N.V. Volkova, 2009), the "A", "B", "C", "D" answers were calculated. The prevalence of answers "A" indicated the sanguine type of temperament in the child, "B"- -choleric, "C"- -phlegmatic, "D"- - melancholic. Equal answers distribution indicated the mixed type of temperament. Pronouncement of the child's temperament type (in parent's opinion) during data processing was coded 1, its absence was coded 0.

The data obtained using the ""Psychological portrait of a parent" method (G.V. Rezapkina, 2006) was processed using Pearson's chi-square test.

In the "Parents' subjective assessment of their parenting style" author's method parents rated their relationship with their child on a scale from 0 to 7. The distribution of data collected using the "Parents' subjective assessment of their parenting style" methodology differs statistically significantly ($p<0.01$) from the normal distribution. Therefore, the non-parametric Kruskal-Wallis H test should be used for data processing. Using the analysis allowed to determine whether there are significant differences in the distribution of three children groups in the scale: core values, psycho-emotional state, self-esteem, parenting style, locus of control level.

Statistical analysis of the data was carried out to confirm the validity of the results obtained in this study. The obtained data was processed using the “Statistica 7.0 for Windows” software (StatSoft Inc., USA). Mann–Whitney U test, Kruskal-Wallis H test and Pearson's chi-squared test were used for statistical processing. The results were considered statistically significant at the $p<0.05$ level.

Chapter 3. Results and discussion

3.1. Association between the recurrent injuries rate and the sex of the child

To determine a statistically significant association between the recurrent injuries rate and the sex of the child, the Pearson criteria χ^2 was used. According to the calculations (see Appendix), a statistically significant association between the sex of the child and the recurrent injuries rate was not determined ($p>0.05$). Thus, in our purposive sample (children from 5 to 10 years) the recurrent injuries rate in children of different sexes does not differ, and the global trend that boys are generally getting injured more often than girls is not confirmed (S.D. Ueliev, 2018). Increase in injury rate in boys in the children's population might be due to a group of children of other ages (up to 5 years or adolescents) or children who were only injured once.

3.2. Association between the recurrent injuries rate and the individual characteristics of a child

The association between the recurrent injury rate and the emotional characteristics of a child. There was a statistically significant association ($p<0.05$) between the recurrent injuries rate of the child and the anxiety scale in the "Non-existent animal" technique, and also a significant association ($p<0.001$) on the same scale in the "Kinetic Family Drawing" technique. The data is shown in Figure 1.

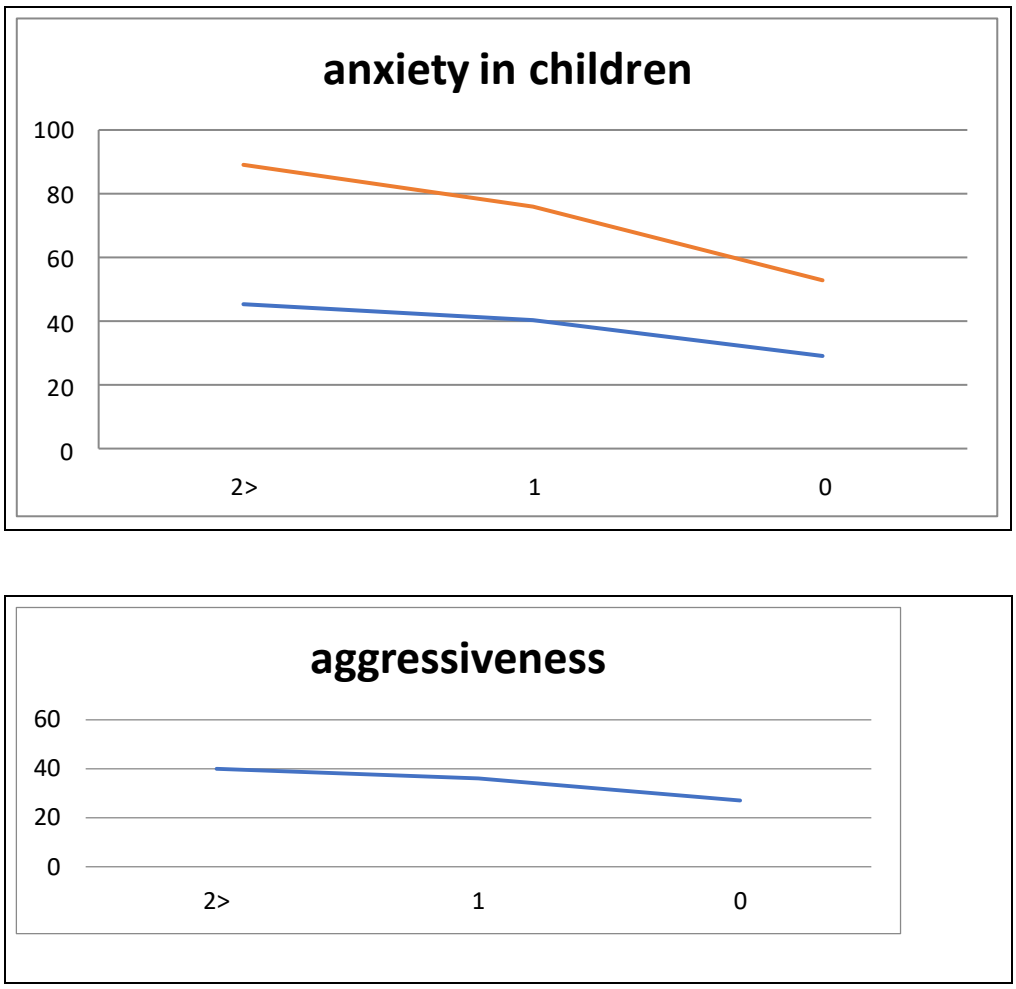


Fig. 1 - The manifestation of anxiety in children with different numbers of injuries ("Non-existent animal" and "Kinetic family drawing" techniques)

Statistically significant association ($p<0.001$) between the recurrent injuries rate of the child and the aggression scale in the "Non-existent animal" technique. Fig. 1 shows that anxiety manifests more often in re-injured children than in children of the control group (0 injuries). Children from the comparison group (1 injury) have a clearly intermediate value. The range is quite large, and the most values are between the other groups, with some proximity to children from the control group. This highlights that anxiety is an important precondition of recurrent childhood injuries.

The association between the recurrent injuries rate and the child's temperament.

In our research, no statistically significant association ($p>0.05$) was determined between the child's temperament (5-10 years old) and the recurrent injuries rate. Thus, it is likely that the recurrent injuries rate does not differ between children of different temperaments aged 5–10 years.

The association between the recurrent injuries rate and hyperactivity of the child.

The presence/absence of hyperactivity symptoms was determined in several ways: 1. according to the parents; 2. using "Hyperactivity criteria according to P. Baker and M. Alvord" test (indicative); 3. according to the doctor's diagnosis (true ADHD). Thus, the chi-square criteria were calculated for each method separately (for 1, 2 and 3 methods).

Hyperactivity according to the parents Statistically significant ($p<0.001$) differences in the frequency of hyperactivity (according to parents) in children with different recurrent injuries rates were determined. Thus, the association between the recurrent injuries rate of a healthy child and his increased activity, described by parents as hyperactivity, was determined.

"Hyperactivity criteria according to P. Baker and M. Alvord" test

There were no statistically significant differences ($p>0.05$) in the frequency of hyperactivity detected using the "Hyperactivity criteria according to P. Baker and M. Alvord" test in children with different recurrent injuries rate.

Hyperactivity according to the doctor's diagnosis

No statistically significant differences ($p>0.05$) in the frequency of hyperactivity (according to the doctor's diagnosis) in children with different recurrent injuries rates were determined.

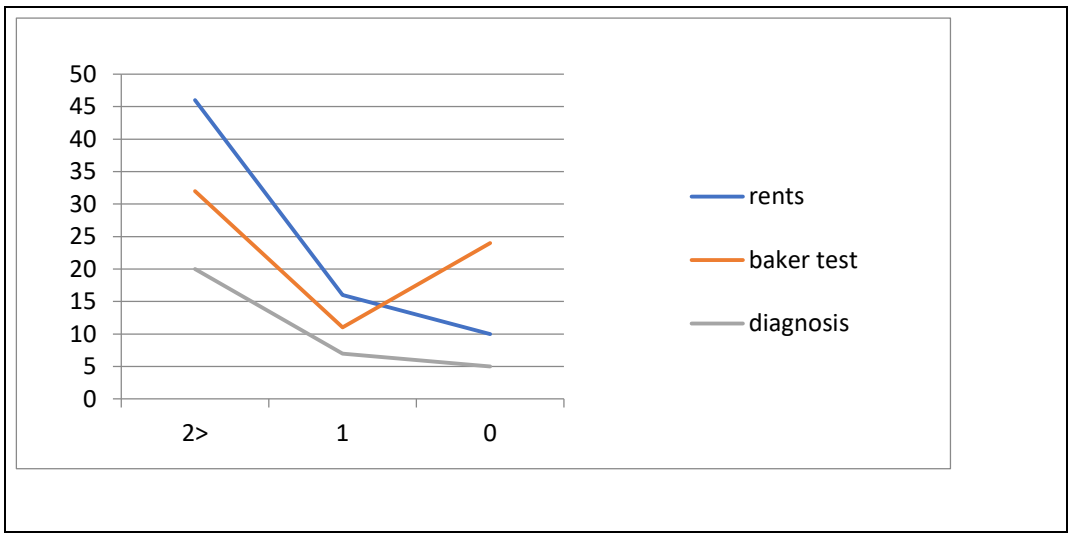


Fig. 2. Symptoms of hyperactivity determined by different assessment methods

Figure 2 shows that a significant number of parents of all the studied children groups tend to view their children as overly agile and active, and to describe them as hyperactive. Likely, in this case, a stereotype of mass consciousness is demonstrated, the tendency of parents to attribute behavioral difficulties (in this case, hyperactivity) to children, unconsciously blaming the injury on the children themselves and their behavior.

When parents had to objectify their opinion on the children's behavior by answering the questions of the "Hyperactivity criteria according to P. Baker and M. Alvord" test, the number of children who could be diagnosed decreased almost threefold. This observation gives a resource for educating parents – to teach them to pay attention to objective indicators.

Doctors, when examining a child, are not inclined to believe the adult's description of the child's behavior (46 descriptions (61.3%)). ADHD was diagnosed in 10 cases (13.3%). Therefore, the doctor gives an objective picture of the situation by diagnosing ADHD, while using the "Hyperactivity criteria according to P. Baker and M. Alvord" test we get mostly indicative data (V.V. Grebneva, M.V. Sadovsky, 2020). The "Hyperactivity criteria according to P. Baker and M. Alvord" test might have mainly an indicative value, but it is more

accurate than the parents' description of the behavior of a child with recurrent injuries.

Thus, parents and guardians are five times more likely to make mistakes in describing the child's behavior, labeling it as hyperactive. This attribution bias creates wrong goals for the injury prevention – it is not productive to focus all efforts only on the individual characteristics of a healthy child and his increased physical activity.

This confirms the hypothesis that the child is at risk for recurrent injuries if the following factors are present: aggressive behavior tendencies, anxiety, hyperactive behavior. The hypothesis was not supported by our sample in the attributing recurrent injuries to the child's temperament. The "child's lack of organization" recurrent injuries risk factor will be discussed below.

Other injury prevention goals can be clarified based on the following results.

3.3. Association between the recurrent injuries rate and the family characteristics

The association between the recurrent injuries rate and the individual psychological characteristics of the child's legal representatives.

"Psychological portrait of a parent" method (G.V. Rezapkina).

Self-assessment of parents or guardians

Statistically significant differences ($p<0.05$) between parents' self-esteem and the recurrent injuries rate of their children were determined.

Positive self–esteem is more common in parents whose children have never been injured and/or have a history of 1 injury – 50 (66.7%) and 46 (61.3%) cases respectively, in comparison to parents whose children have recurrent injuries - 31 cases (41.3%) ($p < 0.05$). Parents of children from the main group often have unstable self–esteem - 21 cases (28%) (Table 4).

It can be concluded that positive self-esteem is more common among parents of children in the comparison groups.

Table 3 – Dividing parents into groups according to their self-esteem

Parents' self-esteem		Number of adults in the groups and percentage of the sample		
		≥ 2 injuries	1 injury	0 injuries
Positive	Frequency	31*	46*	50*
	Percent	41,3%	61,3%	66,7%
Negative	Frequency	23 3	16	12
	Percent	0,7 %	21,3 %	16 %
Unstable	Frequency	21*	13*	13*
	Percent	28 %	17,3 %	17,3 %

Note: «*» - $p \leq 0,05$

Unstable parental self-esteem makes it hard to effectively interact with others and to deal with life challenges. Instability and unpredictability have an adverse effect on the family's emotional climate

Core values of parents or guardians

No statistically significant differences ($p>0.05$) in the frequency of occurrence of variants of core values of parents or guardians of children with different recurrent injuries rates were determined.

Psycho-emotional state of parents or guardians

No statistically significant differences ($p>0.05$) in the frequency of occurrence of different types of psycho-emotional state of parents or guardians of children with different recurrent injuries rates were determined.

The association between the recurrent childhood injuries rates and the parenting style

1. "Psychological portrait of a parent" method (G.V. Rezapkina).

Frequency of different parenting styles of children with different recurrent injuries rates is statistically significantly different ($p<0.05$). Differences are seen in the "Authoritarian" and "Democratic" parenting styles.

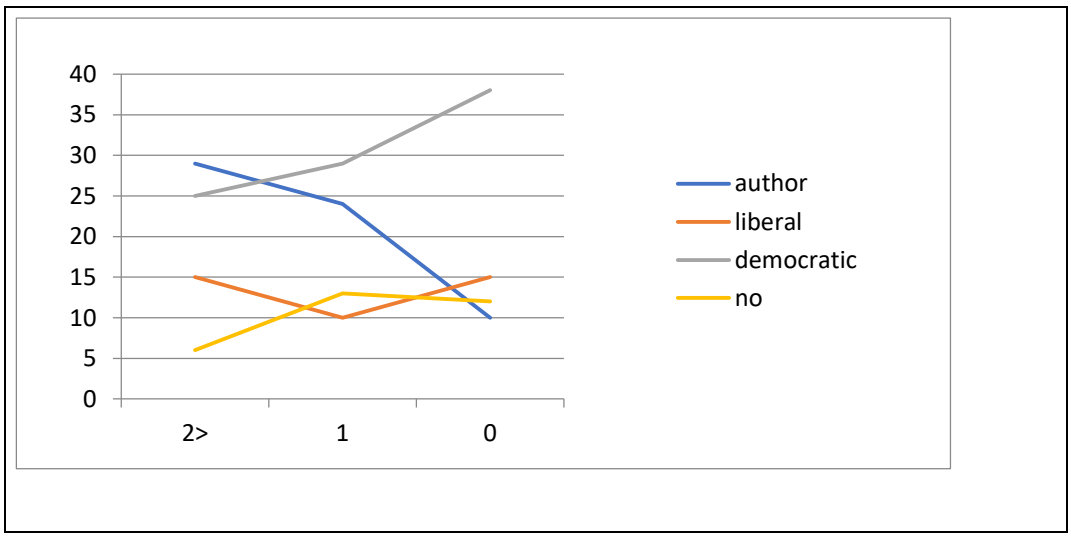


Fig. 3. Frequency of parenting styles of children with different recurrent injuries rates

As can be seen, a democratic parenting style is more common among parents of children from the control group (no injuries), an authoritarian parenting style is more common in families of children from the main group (2 and > injuries). The authoritarian (domineering) style is characterized by the adults trying to exert as much influence as possible over children, by their intention to suppress initiative, to completely control their behavior, interests and even desires, which is achieved through having control over the lives of children and punishing them.

2. "Parents' subjective assessment of their parenting style" method

Statistically significant ($p < 0.01$) differences were determined on the scales of "Parental protection in the children's upbringing" and "Punishing children for misbehaving". The data is shown in Table 5.

When assessing the modal value of variables, we note that parents in the main group are more likely to be overprotective (modal value of attribute 6), punish the children more harshly (modal value of attribute 5), these children (control and comparison groups) lack responsibilities (modal value of attribute 3), and the demands towards them are somewhat lower than for children from the control and the comparison groups (modal value of attribute 3).

Table 4 - Indicators of the parent-children relationship

(average values/modal value of the attribute)

Children groups (number of injuries)	**Punishing a child for misbehaving**	**Parental protection in the children's upbringing**	**Parents' consideration for the child's needs**	**Parental demands**	**Responsibilities of the child**
Main group (2 or more injuries)	4,82* (5)	4,72* (6)	3.59 (4)	3.48 (3)	3.26 (3)
Comparison Group (1 injury)	3,96* (3)	4,45* (3)	3.72 (4)	3.56 (4)	3.5 (3)
Control group (no injuries)	3,62* (3)	4,1* (1)	4.0 (4)	3.58 (4)	3.54 (4)

Note: "*" - $p<0.01$.

Parents of children who get injured more often tend to be more overprotective, the children get punished more harshly, at the same time these children do not have enough responsibilities in the family. Parental negligence towards children from the main group is determined. Parents protect their children, but their needs are not met and not being sufficiently taken into account, children are excessively punished. In such conditions, children find themselves in a state of contradictory imbalance, which can be regarded as disorientation and stress.

Note that in children from the comparison group, these values are intermediate, which indicates the non–random nature of the determined pattern - the presence of serious contradictions in the parents-children relationships of the main group. Parents try to do everything for the child, sparing him from "difficult" chores, since he is still "little". This, in turn, causes the child to "run straight into the illness", to get injured again and again. Somatization, a mechanism of psychological protection, is triggered (Zh.G. Duskazieva, 2010), which helps the child to avoid separation from the mother, making his own decisions, growing up and taking responsibility. The child begins to be ambivalent about the disease, unconsciously (and sometimes partially consciously) clinging to the psychological

benefits of his injury. So recurrent injuries in the child continue in a vicious cycle, reinforced by parents' attitude toward the child. Changing the parents' attitude toward the child (more attention, less demands, etc.) in the situation where the latter is sick, can change the child's mental state (his perception of the illness, motivation for recovery, etc.), which, in turn, will affect the illness progression (D.N. Isaev, 2001).

Analyzing the data obtained using the non-parametric Kruskal-Wallace H test, revealed that the "Protection" and "Punishments" scales level differs statistically significantly ($p<0.01$). The highest level of the "Protection" scale is among parents of children from the main group (2 and > injuries).

The highest level of the "Parents' consideration of the child's needs" scale is in the control group (0 injuries). The highest level of the "Punishing a child for misbehaving" scale is in the main group (2 and > injuries), the lowest – in the control group (0 injuries).

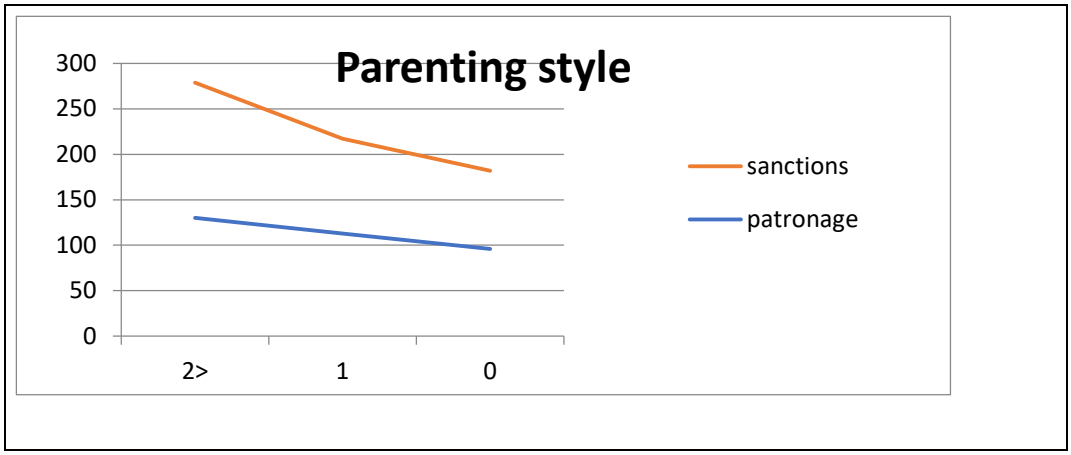


Fig. 4. Characteristics of the parenting style in the subject groups

Combination of recurrent injuries and emotional characteristics of the child: the child being affected by conflict in the family and feeling inferior.

Figure 5 shows that often injured children are being affected by conflict in the family more often, which distinguishes them from children of the comparison and the control groups. The range of values between the groups is sufficient. In this

regard, a child being affected by conflict in the family can be considered a precondition of recurrent childhood injuries. Children who get injured often feel inferior. The range of values between the groups is sufficient. In this regard, a child feeling inferior can also be considered a precondition for recurrent childhood injuries.

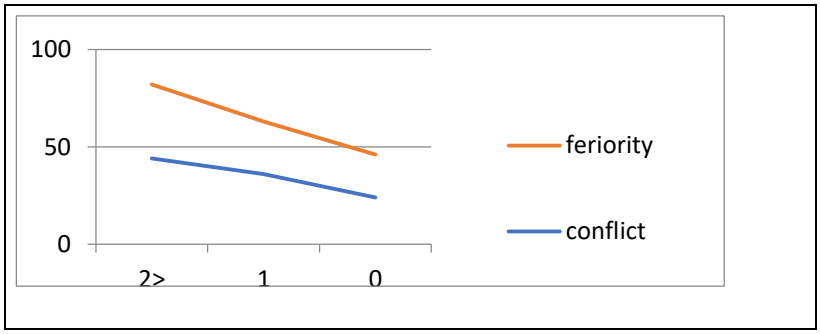


Fig. 5. The frequency of being affected by conflict in the family and feeling inferior. "Family sociogram" and "Kinetic family drawing" techniques.

Children with 2 or more injuries are more anxious, affected by the conflicts, and experience a sense of inferiority in the family, unlike children who have never been injured.

The hypothesisof the manifestations of the individual characteristics of a healthy child and his active transformation of the conditions of the social situation of his development, manifested by excessive physical activity (false hyperactivity), observed by parents, was confirmed. The "Child's disorganization" factor was also confirmed.

The increased activity of the child gets mistaken as a symptom of ADHD. The effect of a child's secondary injury depends on the primary unintentional injury. As a result, a stable semantic pattern is formed, which manifests through increased activity and risk behavior of a child.

This creates preconditions or implicit willingness for recurrent injuries in a child and the unconscious perception that any injury or illness is good. Due to the

recurrent injury, the child achieves some secondary gains: parents partially reduce punishments (sanctions) towards him; parents and the child become closer emotionally and physically (parents take care of him during a difficult period in his life). As a result, each injury allows the child to compensate for the lack of parental attention, at least partially.

3.4. Association between the recurrent injuries rate and the increased physical activity of a child

Section 2.2.2 describes the results of different ways of identifying hyperactivity in children: according to the parents, using the "Hyperactivity criteria according to P. Baker and M. Alvord" test (indicatively) and according to the doctor's diagnosis (true ADHD) (see Fig. 2).

In addition to the mentioned above, all children underwent neuropsychological express diagnostics in order to be able to conduct neuropsychological analysis of syndromes of underdevelopment of some higher cognitive functions.

Diagnostics helped to determine the presence or absence of MBD symptoms in children, which allowed to suggest a basis for true (diagnosed by a doctor) or false (not confirmed by a doctor) attention deficit hyperactivity disorder. If there were symptoms of MBD, the data was compared with the doctor’s diagnosis that had already been made before the research, or the child was referred to the doctor for consultation when symptoms were identified.

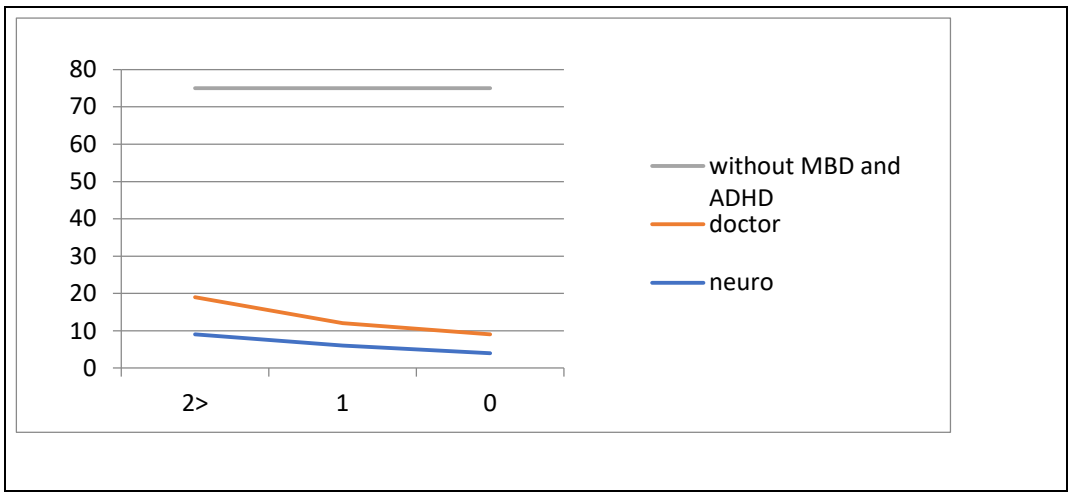


Fig. 6. Symptoms of MBD in children

In the main group of children, the number of children with MBD symptoms correlates with the number of children diagnosed with true ADHD. There are children with MBD symptoms and an ADHD diagnosis in each group, no statistical differences have been determined (Appendix D). Table 5 shows a general analysis of the association between the recurrent injuries rates and methods of identifying hyperactivity in a child.

Table 5 – The ratio of children in the study groups and methods of identifying hyperactivity in a child

Method of identifying hyperactivity	Number of children in groups / percentage of the sample		
	≥ 2 injuries	1 injury	0 injuries
According to the parents	46* (61,3 %)	32* (42,7 %)	20* (26,7 %)
"Hyperactivity criteria according to P. Baker and M. Alvord" test	16 (21,3 %)	11 (14,7 %)	7 (9,3 %)
Psychiatrist or a psychoneurologist examination	10 (13,3 %)	6 (8 %)	5 (6,7 %)
Neuropsychological examination	9 (12 %)	6 (8 %)	4 (5,3 %)

Note:"*" - $p \leq 0.05$

According to the neuropsychological examination results, symptoms of MBD were identified in each study group. In 9 out of 75 cases in the main group

(12%), and in 6 and 4 in the control and comparison groups – 8% and 6.7%, respectively. It should be noted that neuropsychological diagnostics is carried out without the participation of parents – the medical specialist relies on the objective data from tests and samples. Doctors also take into account the anamnesis, interviews, parents' descriptions of the child. Consequently, the result of the true ADHD diagnosis is slightly higher in the main group – 10 (13.3%) as opposed to 9 (12%). In general, the following pattern was determined. The doctor gives a true picture, when diagnosing the disease. The diagnosis is consistent with the typical neuropsychological description and the identified symptoms of MBD. Specialists also receive indicative data using the "Hyperactivity criteria according to P. Baker and M. Alvord" test, but it is are less reliable. So, the mass consciousness association that recurrent childhood injuries are caused by an illness, namely hyperactivity disorder, is not confirmed.

An alternative hypothesis of countering the stereotype that increased physical activity of the child is most often caused by neurophysiological preconditions or ADHD was confirmed. In fact, the injury-risk behavior of a child is often caused by him actively exploring the conditions of the microsocial situation of his development, manifested as excessive activity (false hyperactivity) - a general undirected activity variant (link to A.N. Leontiev).

The above means that it is not enough simply to educate parents on the problem of childhood injuries. It is important to understand that it is the parents who unconsciously shift part of the responsibility for the child's injuries to his increased physical activity. Interpreting the situation in their own way, they often even try to convince specialists (for example, pediatricians) of this, which is natural for a parent. The observed phenomenon has a huge potential for the psychological prevention of recurrent childhood injuries. But it is necessary to find a mechanism for returning this responsibility, given the huge scope of the problem that was stated at the beginning of the thesis.

Thus, the results of the research confirmed the proposed hypotheses. Psychological risk factors for recurrent childhood injuries may be represented by some of their individual characteristics and the child's development family situation: character traits, personal and physiological characteristics, parenting style, lack of the child's development microsocial situation structure. The increased physical activity of a child with injury-risk behavior is most often based on neurophysiological preconditions of hyperactivity as a nosological form (true syndrome) and the manifestation of individual characteristics of a healthy child and the active transformation of the conditions of the microsocial situation of his development (false hyperactivity).

Chapter 4. Cooperation of medical professionals in solving the recurrent childhood injuries problem

In cases of recurrent childhood physical unintentional injuries, the goal of the doctor is to correct / repair the damage: to perform surgery, do the procedures, bandage, plaster, prescribe drug therapy, give further recommendations. However, doctors are not searching for the cause of recurrent injuries, it is not their job and they don't have an opportunity to do so. Parents are ready to search for the injury cause, they actively ask such questions, but mostly they look for the answer in the child himself, most often they have no other ideas. A psychologist could be the one to find the cause and correct it, but parents rarely consult psychologists of their own volition or don't consult them at all. In turn, it is unusual for a psychologist to work on the problem of seemingly medical competence.

The purpose of this chapter is to show the prospects of using the results of the above research in the practice of doctors and psychologists working with bodily childhood injuries and their consequences, as well as to help parents in solving the problem of recurrent childhood injuries.

Tasks:

- develop a method for collecting data for assessing injury-risk behavior by doctors based on the existing techniques;
- to show the specialists the workflow for recurrent unintentional injuries using the developed injury risk model as an example;
- to design ways of creating a system (mainly in medical institutions) that allows to educate the population and refer children's legal representatives to specialists, mainly psychologists who can help the families reduce or eliminate the recurrent unintentional childhood injuries risk.

4.1. Possible doctor’s workflow and cooperation with other specialists through the child’s parents

Let's consider a possible algorithm for the doctor in referring adults with children with injury-risk behavior to a related specialist: a neurologist, neuropsychologist, child psychologist, family psychologist, educational psychologist, or involving the administration of the institution or law enforcement agencies in the correction. In this case, the doctor is considered some sort of dispatcher in a post-injury situation, he is the first one to see the injury and understands where to further refer the child and his family.

Doctor's work tool is a specially developed orientation questionnaire under the applied name "STOP INJURY".

4.1.1. Developing the questionnaire for the child’s parents based on the empiric study results

The orientation questionnaire, which reflects the empirical study results, suggested to parents or guardians by the doctor, will reveal the recurrent unintentional childhood injuries risk, determine whether an interview with the legal representative of the child is necessary and whether these is a need to additionally refer the family to related specialists: psychologists, neuropsychologists, neuropsychologists, teachers. Based on the interview, the parent will have the opportunity to make an informed decision about the necessity and importance of psychological work with the whole family or with each family member separately. The questionnaire will make it easier for the doctor to determine the degree of recurrent unintentional childhood injuries risk.

The general idea is as follows: the orientation questionnaire contains questions corresponding to the variables for which differences between the study groups were statistically detected (see Chapter 3).

An analysis of assessment methods for identifying hyperactivity in children shows that some parents in all children study groups tend to consider their children hyperactive. Thus, the research paper presents a stereotype of mass consciousness with a tendency to attribute behavioral difficulties (in this case, hyperactive behavior) to children. Thus, parents tend to unconsciously place responsibility on the children themselves. However, in addition to the stereotype, the differences caused by the fact of life are also visible, reaching more than a twofold decrease in non-injured children.

When parents had to objectify their opinion on the children's behavior by answering the "Hyperactivity criteria according to P. Baker and M. Alvord" test questions, the number of children who could be diagnosed decreased by almost 3 times. This observation gives a resource for educating parents – to teach them to pay attention to objective indicators. When examining a child, doctors are not inclined to believe the adult description of the child's behavior (parents or guardians). Their diagnosis is consistent with an objective neuropsychological conclusion – in the same dynamics, the number of children with hyperactivity decreases 4.5-5 times (from 61.3% to 13.3% and 12%). Consequently, the doctor and neuropsychologist present a more objective picture, when using the "Hyperactivity criteria according to P. Baker and M. Alvord" test allows to obtain only indicative data.

Thus, parents and guardians are 5 times more likely to make mistakes in describing the child's behavior when they consider him hyperactive. This attribution bias creates wrong goals for the injury prevention – it is not productive to focus all efforts only on the individual characteristics of a child. Other injury prevention goals can be clarified based on the following results.

When analyzing the association between the recurrent injuries and microsocial parenting conditions, statistically significant differences were revealed on the following scales: "Punishing a child for misbehaving" and "Parental protection" ($p \leq 0.05$). When assessing the modal value of variables, we note that

parents in the main group are more likely to be overprotective (the modal value of the trait 6), punish the children more harshly (5), these children (experimental and comparison groups) lack responsibilities (3), and the towards for them are somewhat lower than for children from the control group (3) The "Parents' consideration of the child's needs" variable is not included in the questionnaire, since there are no statistically significant differences between the subject groups (Table 6). Children with recurrent injuries are more likely to be affected by conflict in the family than children without injuries and with 1 injury ($p<0.001$), they are more anxious ($p<0.05$), prone to aggression, unlike children without a control group.

Table 6 – Indicators that statistically revealed the differences between the subject groups

Indicators of injury-risk behavior	Research methods
1. Hyperprotective parents	"Parents' subjective assessment of their parenting style"
2. Excessive punishment of the child	"Parents' subjective assessment of their parenting style"
3. Insufficient demands towards the child	"Parents' subjective assessment of their parenting style"
4.Insufficientfamily responsibilities of the child	"Parents' subjective assessment of their parenting style"
5. Child aggression	"Non-existent animal" (M.Z. Dukarevich, P.V. Yanshin, 1990, G.F. Muzychenko, 2013)
6. Child anxiety	1. "Non-existent animal" (M.Z. Dukarevich, P.V. Yanshin, 1990, G.F. Muzychenko, 2013) 2. "Kinetic family drawing" (R.S. Burns, S.H. Kaufman, 2000)
7. Child's attention span	Neuropsychological diagnostics
8. The child being affected by conflict in the family	3. "Family sociogram" (E.G. Eidemiller, I.M. Nikolskaya V.V. Pushina, 2006)
9. Increased activity of the child	Interview with the parents

A "Feeling of inferiority" ($p<0.05$) sign of injury risk (data obtained using the projective technique "Kinetic family drawing") is not included in the questionnaire, as it is difficult for parents to notice and verify this factor themselves. If parents notice, then, as a rule, they ignore it, or even if they don't ignore it, they are most likely afraid to tell about it, instead they give socially desirable answers. In the first versions of the questionnaire, when trial testing of parents, the scale is marked according to the parents' reactions. The "Feeling of inferiority" scale was inconclusive, in the questionnaire parents mostly chose the values of "zero".

Thus, it is difficult to expect parental awareness and motivation on this variable, due to the low informativeness of this scale, it is not used in the questionnaire. The "Parents' consideration of the child's needs" sign is also not included in the questionnaire, since there is no sufficient statistical significance of the parameter and its tendency is not determined.

Questions rationale.

The answer to the question "What is the number of the childhood injury: 1, 2, 3 or more" allows to assess the degree of the unintentional injury risk in a child (low, medium, high). The greater the number of injuries, the higher the risk of recurrent ones. Possibly, if the child is young, then the risk is higher. Question 2 on the number of children and the family size will allow to assess the level (degree) of adult attention – to determine how many adults have a child and/or children under their supervision.

The answers to questions 3-11 match the variables (Table 6): parental hyperprotection, increased activity of the child, insufficient demands towards the child, insufficient family responsibilities of the child, excessively punishing the child, child's aggression, anxiety, attention span deficit, the child being affected by conflict in the family.

The variables are set in the following order to ensure the convenient and natural perception, as well as parents' or guardians' motivation when filling out the

questionnaire: first are the questions that are easier to answer, they allow the responders to get accustomed and immerse themselves in the process.

Data collection procedure. The questionnaire consists of 11 questions, experience has shown that in can be filled out in no more than 5 minutes. Parents can fill it out while they are waiting for the results of additional tests after a doctor's examination: laboratory (blood test), introscopic methods (X-ray, tomography), etc.

The doctor offers the parents a questionnaire, explains (for instructions for the respondents, see the guidelines in the appendix) that in order to prevent childhood injuries, parents need to answer the questions in the questionnaire. Then the doctor will analyze the results and will be able to give the parents additional recommendations for the physical injuries prevention in a child.

The processing of the data obtained using the questionnaire is carried out by the doctor. He counts the total score (see the procedure in the guidelines in the appendix), scale numbers, highlighted in bold, are summed up (max. 27), then 1, 2, 3 or 4 points are added, depending on the number of injuries in the child (1st question).

The number of injuries is a correction factor. To calculate the total score of the questionnaire, we add respectively 1, 2, 3 or 4 points.

Interpretation of the results by the doctor: the higher the score obtained in the questionnaire, the higher the injury risk in a child. 16 points and above are considered an increased recurrent injury risk in a child.

To decide which specialist to see next, we rely on the answers as follows: refer to a family psychologist if the answers to questions 3, 4, 5, 6, 7 and 11 "worked"; refer to a child psychologist if the answers to questions 8, 9 and 10 "worked"; additionally refer to a neuropsychologist if the answers to questions 9 and 10 "worked".

4.1.2. Doctor’s workflow when treating an injured child

Three blocks can be determined in the doctor's workflow when treating a patient: collecting data, making a diagnosis, and giving recommendations to parents. The work on preventing recurrent unintentional childhood injuries can be aligned with these three blocks, placing certain emphasis on each block, which will be described in more detail. The general scheme is shown in Table 7.

Table 7 – Doctor’s workflow when treating an injured child

Doctor’s workflow stages	Medical	Time (min.)	Behavioral	Time (min.)	Total time (max.)
1. Collecting data	Examining the child	3	Observing the child and his parents	0	3
	Collecting anamnesis	1	Collecting anamnesis	1	1
	Examination (laboratory, clinical)	10-12	Questionnaire	5-7	12
2. Diagnosis	Medical diagnosis	1	Evaluation of the "Psychological diagnosis" questionnaire results	2-3	3
3. Giving recommendations to parents	Medical recommendations	2-3	Formulate an individual prevention-oriented plan Referral to a relevant specialist	2	3
			Psychological values of parents	3	3
17-20			13-25		

1. Collection of data: the doctor examines the child, verifies the anamnesis, life history, epidemiologic and allergology history, determines the injury mechanism, and assigns tests. In any case, the doctor carefully monitors the child, his condition, behavior, parent-child relations. Usually, doctors use this information very briefly. At the same time, if you think about it, it is obvious that, for example, the child does not obey his parents, he is overly active, restless, the parent(s) inaccurately answers the doctor's questions, cannot describe in detail the circumstances of the injury and formulate the cause of the injury. Certain extremes can be noted in the parent-child relationship. Hyperprotection: increased attention to the child, full control of his actions, resisting his independence. Or vice versa, hypoprotection: neglect, lack of attention from the adults, lack of emotional support, the adults poorly control their own previous demands, ignoring the child's difficulties. These relationship situations can be obvious to the doctor, and no additional time is required for this.

Collecting anamnesis is an integral examination procedure. In addition to collecting anamnesis, an indicative questionnaire has been developed (see below). At the appointment, the doctor observes the patient and the person accompanying him in any case, but these observations have no follow-through. When a doctor uses a questionnaire in his work, he has a right to give, among other things, additional recommendations, namely, to worry about preventing recurrent unintentional childhood injuries.

Parents can fill out the questionnaire while the child is undergoing further tests, when they are waiting in line. Filling out the questionnaire not only provides the doctor with additional information, but it might help to reduce anxiety in parents, reduce their stress, increase the feeling of concern for their current situation by the medical institution, increasing its subjective rating, since complex work is being done on the child. It should be noted that the doctor does not need additional time for this either.

2. Diagnosis. After obtaining the necessary data from the anamnesis and additional examination methods, the doctor only needs a minute to give a medical diagnosis, and another 1-2 minutes to evaluate the results of the questionnaire (if there is a nurse in the office, she can help with this matter – after calculating the questionnaire score, she can give it to the doctor for interpretation). Or, by looking at the questionnaire, you can see the protruding peaks, and immediately understand the extent of the new childhood injury risk.

3. Medical recommendations usually clearly define a further plan regarding the injury (bruise treatment, follow-up with a trauma surgeon, suture removal, drug therapy, etc.). In the aspect of the recurrent injuries prevention it makes sense to additionally refer the patient to a related specialist – a consulting psychologist. In this case two extremes are possible: parents will gratefully accept the information and follow the recommendations, or they will resist. The doctor's task is to convince the parents, if possible, to see other specialists as well.

The doctor should not argue or try to prove his point to the parents, it is enough for the him to speak clearly and inform the parents that they are in control of the situation, they know better, they have all the responsibility. It is important that if the parents have objections, the dispute would continue within the parent. An unfinished dialogue with a doctor will work as the Zeigarnik effect - parents will be able to remember the doctor's words for longer. Thus, it is not necessary for the doctor to seek consent and total acceptance of recommendations from the parent.

The doctor gives parents the opportunity to choose within their competence. It should be noted that parents' acceptance of the doctor's message regarding the necessary psychological work depends not only on the words of a specialist, but also on his intonation, the confidence in his voice, his understanding of the situation.

4.1.3. Recommendations for doctors (providing motivation in working with the questionnaire)

This paragraph describes how to ensure the motivation of doctors when including, albeit an insignificant, but still additional amount of work to the main workflow, namely a questionnaire developed for the purpose of preventing childhood injuries.

At the appointment, the doctor observes the patient and the person accompanying him in any case. But these observations have no follow-through, as a rule, the doctor does not give additional recommendations, especially beyond his qualifications – there is virtually no recurrent unintentional childhood injuries prevention. This difficulty is resolved or significantly mitigated if the doctor uses the questionnaire developed in the research in his work (see 3.1.2 and the full text of the questionnaire in the Appendix). True, not every doctor is ready to master new work patterns (diagnostics and prevention), and naturally there is reluctance, rejection of new things, and a fear of additional workload. Therefore, special attention in the research is paid to providing the motivation of doctors in working with the questionnaire. In addition to the questionnaire, the "STOP-INJURY: a technique for reducing the chance of recurrent injuries in children who have sought medical help" recommendations have been developed for doctors.

Doctors motivation in working with the indicative questionnaire is provided by the following recommendations prescribed for doctors:

The technique was deliberately given a vivid metaphorical name - "STOP INJURY".

At the very beginning, the recommendations remind of the statistics and growing childhood injuries rates: medical institutions in Russia register more than 3 million childhood injuries annually. Approximately every eighth child under the age of 18 seeks medical attention due to injuries.

We indicate the purpose of the technique – to ease the prevention of recurrent unintentional childhood injuries.

We describe the expected effects of the additional workload of the doctor: the number of recurrent injuries cases registered by medical institutions will decrease, parents or guardians will be able to take their share of responsibility for their child's injury, they will know what to pay attention to in order to avoid the childhood injuries recurrence.

We explain that the additional inclusion of this technique in the diagnostic and treatment process will take a minimum of time; filling out the questionnaire and analyzing its results takes no more than 4-5 minutes.

We provide a description of the questionnaire indicating all the scales (recurrent unintentional childhood injuries factors) so that the doctor could immediately navigate the depth of the problem.

We outline a brief step-by-step instruction for the doctor’s workflow: we clearly describe the procedure for collecting and processing data, as well as its interpretation.

Finally, it describes in detail what the doctor should tell the parents or guardians. Here are the already prepared convenient statements, so that the doctor does not waste time coming up with them:

-"Doctors are dealing with an injury that has already happened. The causes, as your answers show, should be looked for within your family situation or in your relationship with your child. A psychologist will do it best."

- "There are different options for what you are ready for and what you want. Or leave everything as it is and, most likely, the injuries will continue to happen until the child learns how to foresee the consequences. The child does not have enough resources yet, some major strategies are needed. A psychologist works with such mental strategies."

Thus, the doctor can quite briefly and clearly outline how to perform extremely important preventive work for recurrent unintentional childhood

injurieswith minimal effort. This is our motivational support to promote the results of this research into widespread medical practice.

4.1.4. Approbation of the proposed workflow of the doctor

This paragraph describes (qualitative description) to what extent the methodology and the parents and guardians questionnaire are understood and accepted by doctors. The technique is given the metaphorical name "STOP INJURY". The perception of the name was tested on several emergency doctors, they didn't have difficulties with understanding it. A typical response from the doctors: “The name is short, clear enough, clearly reflecting the essence of the technique.”

When testing the technique, 8 hospital doctors working with childhood injuries were asked the following questions: "Do you understand the technique?", "Will you be able to include the technique in your practice?", "Is it convenient for you to use the parents and guardians questionnaire during the patient's appointment?". The doctors replied that it was not only convenient for them to use the questionnaire, but it was extremely necessary in practice. Doctors see the proposed workflow as an opportunity to reduce the number of childhood injuries with a minimal effort. Recommendations for doctors help specialists understand the basis of their work, they describe them as: “understandable, especially valuable, short, clear, specific.” A typical phrase from the doctors was: "We have been expecting something like this for a long time, we often see children with recurrent injuries and find it difficult how and where to refer them properly in addition to the polyclinic." During the interview with the doctors, it became apparent that they were looking forward and ready to work in the proposed format in order to prevent unintentional childhood physical injuries.

A.N., trauma surgeon at the children's hospital of the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, 41 years old,

14 years of experience, Ph.D., said that he was ready to start today. V.V., neurosurgeon at the emergency room of the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, 45 years old, 17 years of experience, said that this work format is extremely important and necessary for practical healthcare. In this type of cooperation, there is a chance to collectively influence the increase in recurrent childhood injuries and not only the recurrent ones. The prospects and necessity of the work were discussed and agreed on with the chief physician of the State Budgetary Healthcare Institution of the Tyumen Region Clinical Hospital No. 2, a trauma surgeon, M.D. R.V. Paskov

Some editorial changes were made based on the results of the interviews with the doctors and their answers: detailed phrases were added that can help the doctor while interviewing the parents. The questionnaire procedure was interactive, adjustments were made cyclically, intermediate versions of questionnaires were excluded, they were not taken into account in the overall analysis of the results.

For the convenience of calculating scores, the numbers in the scales are highlighted in bold in the questionnaire, and it was specifically tested whether the respondents notice the highlighting or not. In most cases, the attention of the respondents was not focused on the highlighted numbers. Only a few respondents noticed this and asked why some of the numbers were bold. It was explained to them that this was necessary for statistics, which turned out to be quite enough for them and they proceeded with filling out the questionnaire.

The corresponding “results interpretation” section describes for the doctor how he needs to interpret the obtained result, namely, the higher the calculated total score, the higher the risk of further injury. Scores of 16 and above are considered an increased risk of the recurrent childhood injury.

For the doctor, examples are given of how to tell the parents about the result: "According to the results of the questionnaire, your child has an increased risk of the recurrent injury, you need the seek advice from other specialists." According to

doctors, this phrase is as comprehensive and understandable as possible. It is easy enough for the specialists to understand, accept and remember.

4.1.5. Evaluating the effectiveness of parents

This paragraph evaluates the effectiveness of the "STOP INJURY" technique in real medical practice (quantitative description) - see 3.1.3 above, as well as Appendix 2.

Data collection was carried out in the emergency room of the regional hospital, where injured children go round the clock to see a traum surgeon, a neurosurgeon, a surgeon, an oculist, an otolaryngologist, an oral and maxillofacial surgeon. At the appointment, the doctor gave a questionnaire to fill out to the legal representative of the child who sought medical help for an unintentional injury (Appendix 1). Filling out the questionnaire took no more than 3 minutes. The planned number of 500 questionnaires was collected within 2 months. 3 questionnaires were not completely filled out by the parents, so they were eliminated from the research.

Data processing. The data obtained were processed using the software package "Statistica 7.0 for Windows" (StatSoft Inc., USA). Mann–Whitney U test, Kruskal-Wallis H test and Pearson's chi-squared test were used for statistical processing. Hypotheses about the relationship between variables were accepted at the level of $p \leq 0.05$.

Among the children who participated in the study (n=497), there were 287 (57.7%) boys and 210 (42.2%) girls. Of these, there were 310 (39.8%) children in our target sample aged 5 to 10 years, 167 (53.87%) boys, 143 (46.12%) girls. The number of children with recurrent injuries from the entire sample: in the age group from 0 to 18 years - 319 (64.2%), from 5 to 10 - 199 (40%), of which 113 (56.8%) were boys and 86 (43.2%) were girls.

Discussion of the obtained data. The number of injuries. There is a statistically significant association ($p<0.001$) between the number of injuries and the injury risk score. Taking into account the injury risk score, it was checked to what extent the result can predict the recurrent unintentional childhood injuries risks. The scores for the questionnaire scales were used based on the factors and indicators determined in Chapter 3. According to the parents' answers, the values of the scales were summed up, and the total injury risk score was calculated. Consequently, the injury risk score actually fulfills its function of predicting the recurrent injuries risk. The maximum possible total score of the questionnaire is 31. The higher the score, the higher the risk of injury in a child.

The number of adults in the family. There is a statistically significant association ($p<0.05$) between the number of injuries and the number of adults in the family, both in the full sample (0-18 years old) and in our target (5-10 years old). The number of injuries in a child increases (up to 2-3 injuries or more) when more than 2 adults (3 or more) live together in a family or see each other often, having constant contact the child.

There is a statistically significant association ($p<0.001$) between the injury risk score and the number of adults in the family. With one adult in the family and with three adult family members, the injury risk score is higher. It likely that one of the adults lacks the strength, time, and opportunities to organize injury-safe behavior of a child or children. When analyzing a situation where there are three adults in a family constantly looking after a child, the proverb "too many cooks spoil the broth" can be applied. Several people responsible for parenting rely on each other, but each of them individually might not take their duties seriously, or every adult might set different rules for the child, have different demands. Since there are many adults, each of them probably hopes to shift the responsibility of raising a child for another adult. The child doesn't have a single system, he is overly cared for, every adult wants to do more good for the child, but this can limit his independence, adaptation and development.

The results of statistical processing were visualized in the form of boxplots (see Appendix).

The sex of the child. There is a statistically significant association ($p<0.05$) between the number of injuries and the sex of the child in the total sample of children (0-18 years) and there is no statistically significant association ($p>0.05$) in the target sample (5-10 years). Taking into account the average rank value (257.31), it is determined that boys get injured more often. In the full sample (0-18 years old) the statistical significance is probably due to adolescent children, where the real number of injuries accumulated with age was estimated.

On the contrary, there is no statistically significant association ($p>0.05$) between the injury risk score and the sex of the child in the full sample of children (0-18 years old) and there is an association ($p<0.05$) between the injury risk score and the sex of the child in our target sample (5-10 years old). Taking into account the average rank value (165.31), it is determined that the injury-risk score increases in boys aged 5 to 10 years. In our target group of children (5-10 years old) the statistical significance is probably due to the number of injury risk factors that make up the total score. What can be regarded as an increase in the injury risk in these children at an older age (after 10 years). According to the global report of WHO and UNICEF, as well as the data from the information and analytical center of the insurance company “Kompetenz”, our research confirms the global trend that teenage boys get injured more often than teenage girls (S.D. Ueliev, 2018).

Number of children in the family. There was no statistically significant association between the number of children in the family and the number of injuries in a child, the injury risk score was not determined ($p>0.05$).

It is likely that family relationships, the family atmosphere, and the parenting style chosen by parents or guardians are effective for both one child and the rest of the children in the family. The injury risk in a child is not affected by the number of children in the family.

Anonymity of the questionnaire. There was no statistically significant association between the number of injuries in children, the injury risk score and the anonymity of the questionnaires filled out by the adults ($p>0.05$). By assessing the anonymous questionnaire submission rate, the accuracy of data filled out by adults was verified. Anonymous data should have been more truthful, but no statistical difference was determined between the anonymous and not anonymous submission of the questionnaire. This means that adults filled out the proposed questionnaire quite truthfully, so the results of the questionnaire survey can be considered real and genuine.

Thus, it can be concluded that the developed technique has shown quite high efficiency. It allows to assess the injury risk in a child (in numerical terms), to specify unintentional injuries risk factors.

3.2. Characteristics of psychological support for children with recurrent injuries

Based on the results of the research, statistically significant factors of recurrent physical unintentional childhood injuries were:

In parents: hyperprotection, excessively punishing the child, insufficient demands towards the child, insufficient family responsibilities of the child. In children: child's aggression, anxiety, attention span deficit, the child being affected by conflict in the family, increased physical activity.

Thus, if a child shows signs of injury-risk behavior, the psychologist needs to work with the whole family as well as with the child individually. Lack of organization in the family affects the childhood injuries – what happens externally in the child's activity (in the family) is transferred to the internal projection – internalized.

Based on the results of empiric study, we take the liberty of formulating possible correctional tasks for the parents:

- provide the parents with an opportunity to take an active position in their life, consciously choose the behavior patterns, and take responsibility for the safety of their children's lives;

- help the parents understand the family processes, in particular, show the motivational dynamic that determines the injury risk in a child;

- help to make a conscious action: systematically, together with a specialist, identify the most likely causes of injury-risk behavior in children in these specific living conditions;

- help to understand how the specialist will help the child and how the parents themselves can help the child;

- provide the opportunity to understand the necessity and importance of structure in everyday activities: discipline in trivial social situations, making sure that the child has a sufficient number of rules that stop them from behavior extremes (creating risks of grave mistakes and injuries);

- to provide an opportunity for parents to realize the need to agree with family members on the same demands, and punishments, so that the demands for the child would be consistent;

- to realize the need to outline the range of responsibilities necessary for the child – those that would allow to stabilize his activity at the optimal level for a particular child;

- to assess the importance of the child's independence in making everyday decisions (when the cost of a mistake is small) and performing routine actions;

- to realize the importance and necessity of the emotional (in some cases maybe spiritual) bond with the child.

Based on these correctional tasks, the psychologist can directly determine the tools for solving them. He can choose the tools familiar to him, more accessible, etc.

The specialist’s efforts to solve these problems are ultimately aimed at stopping the series of injuries in a child.

To provide guidance in the recurrent childhood injuries situation, the doctor is offered a technique for preventing recurrent injuries in children who seek medical help (recommendations for doctors). The psychologist’s work tool (theoretical guideline) will be the developed “Model of recurrent childhood injuries risk factors”, a detailed description of which is presented in Chapter 1, Section 1.4. The methodology and the model for the specialists will act as an indicative basis for professional support of families with children with recurrent unintentional physical injuries.

The model allows to assess the severity and nature of the recurrent injuries risks in a child. A psychologist analyzes the situation. The following attention vectors can be determined in the consulting psychologist's work with frequently injured children: focusing on the model, it is necessary to understand which of the factors specified in it are actualized in the development situation of a given child. An important point in the analysis of the development situation is identifying the people who form a injury-risk microsocial environment for a given child: parents, grandparents, nannies, teachers... Among them we find probable agents of constructive transformation.

The psychologist can assess the risks for each cell of the model separately, this will make it clearer which specialist should be collaborated with and which specialist parents and guardians should be referred to for additional help If we examine the model along the left side, there is a scale of cooperation between the fields of the psychologist (upper left corner), neuropsychologist and a doctor (lower left corner). And along the upper side there is a scale of interaction between a psychologist, a social pedagogue, a counsellor (upper right corner). In the lower right corner of the model, the place of problem supervision is occupied by the organizational psychologist and the administration of child care facilities. Thus, the

model shows how different specialists interact within the framework of injury prevention in children.

Understanding the sources of injury will help to determine who is responsible in the child injury-risk situations and to what extent. One cannot blame a person for something that he has no influence over.

If the cause is physiological, not psychological, for example: cerebral palsy, minimal brain dysfunction (MBD) in a child, responsibility is not placed on the disease, but to the extent to which the people responsible for the child were able to take into account this characteristic of the child's development. For example, how much they have eliminated or reduced the risks associated with the locomotor skills characteristics, etc. So, it is necessary to organize daily routine around a child with disabilities adaptively, provide an opportunity to acquire the skill to ensure a safe existence.

Social educators are responsible for establishing communication between children and peers, they work with children with behavioral difficulties (antisocial children), and participate in the children's education.

The administration of a general education institution is responsible for organizing a safe space for children, shaping and monitoring the education style adopted in the institution.

When the psychologist identifies the vector (who) and the degree of responsibility (how much), it will be clear who or what should be prioritized. It will be possible to predict how difficult it will be to supervise the case in question. If it depends on the physiological problems of the child, then correctional work will be more time-consuming than in the case of working with the personal characteristics of the child or parents.

A consulting psychologist may (depending on the task) require a specialist's opinion (confirming document). A neuropsychologist can help alleviate concerns by performing a special diagnosis of higher mental functions in a child at this stage of his development. Syndromic neuropsychological analysis gives reason to draw a

conclusion about an impairment of certain analytical systems or their interaction, or about the relevant brain systems dysfunction, i.e., to make a niveau diagnosis. Neuropsychological examination also gives a direction in which work should be carried out. The attention deficit hyperactivity disorder (ADHD) can only be diagnosed by a doctor, usually a neurologist or a psychiatrist. So, it is necessary to refer the patient to these specialists, especially when solving official and legal tasks.

Thus, depending on the result of the situation assessment (factors, risks ...), the psychologist can decide with which kind of related specialists it is necessary to establish contact and cooperation. The same plan can be used when organizing a survey to draw up a specialist's opinion as determined by the court, at the request of social protection services and others.

After completing the situation assessment, the consulting psychologist will much more accurately outline the goals for intervention, formulate the tasks for further consulting work.

4.2. Recommendations for psychologists (possible workflow)

To reduce the recurrent unintentional childhood injuries risks, the "STOP INJURY" recommendations for psychologists have been developed (see Appendix), which are intended for children, family, social psychologists: for everyone who is willing to work effectively with recurrent childhood injuries, reducing the recurrent unintentional childhood injuries risks.

CONCLUSIONS

The results of the research allow us to draw the following conclusions:

1. A literary and informational search has shown that the first group of psychological factors of injury-risk behavior in children includes the individual psychological characteristics of the child: personal characteristics of the child, temperament characteristics, character traits and physiological characteristics. The second group of factors is represented by the characteristics of the child development social situation: individual psychological characteristics of adults surrounding the child, parenting style and socio-psychological characteristics of the family or a group. It was determined that the injury risk factor that was triggered once can be triggered again.

2. Among all families with children who sought medical help for injuries, recurrent injuries account for more than half (~60%) of cases. The terms "recurrent childhood injuries" and "injury-risk behavior" were first introduced into the Russian-language professional discourse (medical and psychological).

3. Probable and significant indicators of recurrent unintentional childhood injuries have been identified. In children they can be the following: temperament activity, hyperactive behavior, aggressive tendencies, state anxiety, sensitivity to the parental moods (emotional sensitivity), lack of organization. In parents: temperament, character and personality characteristics of parents, their unstable psycho-emotional state, instability and extreme parenting style (hyper- and hypoprotection), authoritarian parenting style, excessive punishments, insufficient demands towards the child and family responsibilities, child's social adaptation being insufficiently structured by adults, family conflicts.

3. It was determined that parents sometimes mistake increased activity of children from 5 to 10 years old for a symptom of hyperactivity disorder. With an objective medical examination, the diagnosis is confirmed in children with recurrent injuries by a doctor only in 13% of cases.

4. Parents unconsciously shift part of the responsibility for the child's injuries to his increased physical activity. The observed phenomenon has a huge potential for the psychological prevention of recurrent childhood injuries. The recurrent childhood injury effect increases, since there is a secondary gain from the first injury. Due to the injury, the child achieves some secondary gains: parents partially reduce punishments (sanctions) towards him, parents and the child become closer to each other emotionally and physically (parents take care of him during a difficult period in his life). Each injury allows the child to to compensate for the lack of parental attention, at least partially. As a result, a stable semantic pattern is formed, which is expressed in the increased activity and risk behavior of a child, creates the preconditions or implicit willingness for recurrent injuries in a child and the unconscious perception that any injury or illness is good.

5. "Reducing the recurrent unintentional childhood injuries risk" practical recommendations have been developed for psychologists. The developed "Model of recurrent childhood injuries risk factors and indicators" shows the psychologist the possibility of creating a formal analysis of the injury-risk child behavior factors, which will allow to localize and predict the injury risks, to identify circumstances and people who might be held responsible for a child's injury, to plan rehabilitation measures based on psychotherapeutic intervention levels, and to create a system of injury prevention through medical and psychological support for families.

6. A recurrent childhood injuries prevention technique has been developed for a medical practitioner (recommendations for doctors). The doctor's work tool is a questionnaire for parents and guardians, which allows to assess the childhood injuries risks as fast as possible (during the appointment), taking into account the injury risk score.

7. Recommendations for psychologists and doctors act as an indicative basis for their professional support of families with children with recurrent unintentional physical injuries.

Resume

The conducted research of psychological factors of recurrent unintentional childhood injuries confirms the assumption that a number of factors influence the recurrent childhood injuries, some of which are within the family situation of the child's development.

Statistical analysis of psychological factors has shown that probable and significant indicators of recurrent unintentional childhood injuries at the age of 5-10 years can be the temperament activity and hyperactive behavior of the child, aggressive tendencies and state anxiety, sensitivity to the parental moods (emotional sensitivity), lack of organization. As well as temperament, character and personality characteristics of parents, their unstable psycho-emotional state, instability and extreme parenting style (hyper- and hypoprotection), authoritarian parenting style, excessive punishments, insufficient demands towards the child and family responsibilities, child's social adaptation being insufficiently structured by adults, family conflicts.

Parents sometimes mistake increased activity of children from 5 to 10 years old for a symptom of hyperactivity disorder. So, parents unconsciously shift part of the responsibility for the child's injuries to his increased physical activity. The observed phenomenon has a huge potential for the psychological prevention of recurrent childhood injuries. The recurrent childhood injury effect increases, since there is a secondary gain from the first injury.

The developed in this research questionnaire for doctors for identifying injury risks can become part of the injury risks prevention techniques. The results of the research, the proposed model of the recurrent injuries risk factors and indicators may be of great practical importance in the psychological prevention of recurrent childhood injuries. Based on the developed recommendations for psychologists, they can supervise families with children with injury-risk behavior.

The doctor needs to notice the problem in time and recommend a psychologist's consultation to the parents.

Prospects for further research in this direction are associated with a more detailed study of the recurrent unintentional childhood injuries psychological factors and the further development of reliable tools for doctors and psychologists. This research obtained data that indicates injury risk factors in the age of 5-10 years, however, to get the full picture, it is necessary to study children with injuries of both an earlier age (from birth) and adolescence, which will allow to determine the key risk factors for injuries at different ages of the child.

References

1. Alexander, F. Psychosomatic medicine. Principles and application. Principles and practical application / F. Alexander. - from English S.Mogilev. - M.: EKSMO - Press, 2002. – 352 p.
2. Alipbaeva, S.B. Methods of diagnosis of hyperactivity syndrome with attention deficit in the conditions of psychological, medical and pedagogical consultation / S.B. Alipbaeva, S.B. Bekbolatova // Psychiatry - Medicine: Healthcare of Kazakhstan, 2013. - Vol. 8. – P. 64-66.
3. Andreeva T. M. Traumatism in the Russian Federation based on statistical data // Social aspects of public health. 2010. No.4. P. 1-10.
4. Akhutina, T. V. Neuropsychological diagnostics, examination of writing and reading of younger schoolchildren / edited by T. V. Akhutina, O. B. Inshakova. - Moscow : Sphere : V. Sekachev, 2008. – 125 p.
5. Baindurashvili, A.G. Child traumatism. The view of a clinician and an insurer: in 2 volumes / A.G. Baindurashvili, N.N. Marevskaya, K.S. Solovyova // Pediatrician. - St. Petersburg.: 2010. - Vol. 1. - P. 96-180.
6. Batarshev, A.V. Diagnostics of temperament and character / A.V. Batarshev. - St. Petersburg, St. Petersburg, 2013. – 168 p.
7. Burns, R.S. Kinetic drawing of the family. Introduction to understanding children through kinetic drawings / R.S. Burns, H.S. Kaufman. - M.: Sense, 2000. – 146 p.
8. Beletsky A.V., Lomat L.N. Child injuries in the Republic of Belarus: prevention strategy and ways of its implementation for 2013-2015. Medical news. 2013; 7: 4 – 12
9. Bozhovich L.I. Personality and its formation in childhood. St. Petersburg: Peter. 2008. 398 p.

10. Hard facts about unintentional injuries and violence in the WHO European Region // Facts and Figures of WHO/Europe. Rev. 1. Racioppi F. Copenhagen, Bucharest, 2009. – P. 1 – 56.
11. Volkov, B.S. Child psychology: From birth to school / B.S. Volkov, N.V. Volkova. - 4th ed. - St. Petersburg: St. Petersburg, 2009. - 240 p .
12. World Health Organization. Bulletin of the World Health Organization. World Report on the Prevention of Childhood Injuries: [Electronic resource]. – WHO, Geneva, 2008. - URL: http://www.who.int/ru/news-room/fact-sheets/detail/falls .
13. Vygolova, O.V. Traumatism of school-age children in Vologda and its prevention. Medical and pedagogical aspects of the health of the child population / O.V. Vygolova // Interuniversity collection of scientific papers. -Vologda, 1995. – P. 76.
14. Vygotsky, L.S. The problem of cultural development of the child / L.S. Vygotsky // Psychology of human development. – M.: sense; Eksmo, 2004. – 1136 p.
15. Vygotsky, L.S. Collected works: in 6 t. t. 4: Child psychology / Edited by D. B. Elkonin / L.S. Vygotsky; edited by A.V. Zaporozhets. – M.: Pedagogy, 1982. – Moscow, 1984. – 431 p.
16. Gaibov, S. S.-H. Epidemiology of traumatic brain injury in children in conditions of intensive urbanization / S. S.-H. Gaibov, E. V., Zakharchuk, D. P. Vorobyev, I. A. Lebedev, R. T. Kim, A. A. Minchenkova // Russian Pediatric Journal. 2020. No.3. P. 178 – 182.
17. Galitskaya, O.S. Clinical polymorphism of minimal brain dysfunction / O.S. Galitskaya, N.P. Gribova / Smolensk Medical Almanac. - 2019. - No. 3. – P. 27 – 32.
18. Garbuzov, V.I. Nervous and difficult children / V.I. Garbuzov. - Moscow:AST; SPb: Astrel - SPb., 2006. – 351 p.

19. Gorbachevskaya N. L., Yakupova L. P., Zavadenko N. N., Sorokin A. B., Suvorinova N. Yu., Grigorieva N. V. Electrophysiological study of children's hyperactivity. – Human Physiology, 1996, vol. 22, No. 5 – P. 49-55.
20. Gorbunov M.V., Medical and social aspects of traumatic brain injury in children (based on the materials of the Ulyanovsk region): autoref. dis. ... Candidate of Medical Sciences. M., 2006. – 28 p.
21. Gorlov, A.A. System of injury prevention in children: psychological aspects / A.A. Gorlov, E.K. Vishnevetskaya // Pediatrics. - 1991. - No. 1. - P. 69 – 73.
22. Grebneva, V.V. On the problem of developing a methodology for diagnosing individual characteristics of motor activity of a growing person / V.V. Grebneva, M.V. Sadovsky // Modern high-tech technologies. - 2020. - No. 1. – pp. 63-67.
23. Grechukhin, I.V. Actual problems of accounting, analysis and prevention of injuries: [Electronic resource] / I.V. Grechukhin // Modern problems of science and education. - 2011. - No. 6. - URL: https://science-education.ru/ru/article/view?id=5036
24. Guliyeva, K.S. Social risk factors of injury in children: [Electronic resource] / K.S. Guliyeva // Youth Scientific Forum: Natural and medical sciences: a collection of articles based on the materials of the XLV International scientific and practical conference. - Orenburg, 2017. - Vol. 5 (45). – P. 56.
25. Danilova, E. E. The value of primary school age // Age and pedagogical psychology: a textbook / comp. I. V. Dubrovina, A.M. Parishioners, V. V. Zatsepin. Moscow: Academy, 1999. 455 p.
26. Dolgova, V.I. Management of the process of self-regulation in younger schoolchildren / V.I. Dolgova // Psychological sciences. - 2019. - No. 1. - pp. 203-205.23, pp. 203 – 205

27. Report on the prevention of childhood injuries in Europe. - WHO, Copenhagen, 2009. – 99 p .
28. Dotsenko, E.L. Psychology of personality: a textbook for students of higher educational institutions studying in the direction and specialties of psychology / E.L. Dotsenko. - Tyumen: Publishing House of the Tyumen State University, 2009. – 511 p.
29. Dukarevich, M.Z. Drawing of a non-existent animal. Practicum on psychodiagnostics / M.Z. Dukarevich, P.V. Yanshin // Psychodiagnostics of motivation and self-regulation. - Moscow: Publishing House of Moscow. un-ta, 1990. - pp. 54-73.
30. Duskazieva Zh.G. The influence of parental attitude on the development of psychosomatic pathology in children. [Electronic resource] // Medical psychology in Russia: electron. scientific journal 2010. N 3. URL: http:// medpsy.ru (accessed: 01.12.2022).
31. Ermakova, G.K. Psychological and pedagogical characteristics of children who have been injured / G.K. Ermakova // Prevention and treatment of injuries in children. - L.: Leningr. n.-I. det. orthopedist. G. I. Turner Institute, 1983. pp. 57-63.
32. Zhikrivetskaya, E.A. Formation of the basics of life safety in preschool children / E.A. Zhikrivetskaya, E.G. Grebenkova // Actual problems of humanities and natural sciences. - 2014. - No. 11-2. – Pp. 1-5.
33. Zavadenko, N.N. Hyperactivity and attention deficit in childhood: a textbook for universities / N.N. Zavadenko. - 2nd ed., reprint. and additional - M.: Yurayt Publishing House, 2018. – 274 p.
34. Zakharchuk, E. V. Individual psychological characteristics of children at risk of repeated unintentional injuries / Zakharchuk E. V. Dotsenko E. L., Gaibov S. S.-H. // Issues of mental health of children and adolescents. 2021. Volume 21. No. 4. pp. 18-24.

35. Zakharchuk, E. V. The role of microsocial factors in the formation of traumatic behavior of a child // Psychology. Psychophysiology. 2021. Volume 14 No. 1. pp. 53-61.
36. Zakharchuk, E. V. Psychological factors of traumatic behavior in children / Zakharchuk E. V., Dotsenko E. L., Gaibov S. S.-H. // Consultative psychology and psychotherapy. 2021. Volume 29. No. 4. P. 10 – 26.
37. Isaev, D.N. Emotional stress, psychosomatic and somatopsychic disorders in children / D.N. Isaev. - St. Petersburg: Speech, 2005. – 400 p.
38. Kagan, A.V. Methodological and practical principles of the formation of a multilevel rehabilitation system for children 0-4 years old / A.V. Kagan, E.V. Plotnikova, Yu.V. Gorelik // Preventive and clinical medicine. – 2020. - № 4 (77). – Pp. 60-67.
39. Kovalev, S.V. Psychology of the modern family: Informational and methodological materials for the course. Ethics and psychology of family life: A book for a teacher / S.V. Kovalev. – M.:Enlightenment,1988. – 164 p.
40. Kovalevsky V.A. Personality development of a somatically ill preschooler, junior schoolboy and teenager. – Krasnoyarsk: KSPU, 1997. – 124 p.
41. Kopysheva, E. N., Pchelintseva E. V. Medical and psychological support of psychosomatic children in the rehabilitation system // ANI: pedagogy and psychology. 2016. No.1 (14), pp. 189-192.
42. Kornienko, D.S. Personal properties of a parent and a child's temperament as predictors of child-parent relations / D.S. Kornienko., A.V. Krasnov // fundamental research. - 2012. – No. 11-5. – P. 1140-1144/
43. Kochurov, M.G. Validity of the projective drawing technique "house-tree-man" in the diagnosis of psychosomatic disorders / M.G. Kochurov // International Scientific Research Journal. – 2021. - №1-3 (103). – P. 83 – 88.

44. Kraynyukov, S.V. Personality characteristics of adolescents with compression fractures of the spine / S.V. Kraynyukov // Bulletin of St. Petersburg University. Sociology. - 2015. - No. 1. - Ser.12. - P. 87-94.
45. Krivtsova, M.A. Personality temperament and its properties / M.A. Krivtsova, A.V. Avramenko, A.A. Klimenko // Unique research of the XXI century. -2015. - № 5 (5). – P. 105 - 111.
46. Krichevsky, R. L., Dubovskaya E. M. Social psychology of a small group: A textbook for universities. — M.: Aspect Press, 2001. – 318 p.
47. Kuzmishina T.L., Amelina E.S., Permyakova A.A., Khokhlova E.A. Styles of family education: domestic and foreign classification. – M., 2014. – P. 16-25.
48. Kulesh, D.V. Prevention of childhood injuries: Methodological recommendations / D.V. Kulesh, D.M. Frolova, L.V. Antipina. - Irkutsk, 2016. – 28 p.
49. Markova N.M. Features and manifestations of authoritarianism in child-parent relations // The world of science. Pedagogy and Psychology, 2020 No.3. – P.1-11.
50. Matyukhin I.V. - Reflection of a teacher's temperament on his psychomotor skills // Modern education. – 2016. – No. 1. – P. 68-91. The correct link to the article: Matyukhin I.V. — Reflection of the teacher's temperament on his psychomotor skills // Modern education. – 2016. – No. 1. – P. 68 – 91.
51. Morosanova, V. I. Subject and personality in the psychology of self-regulation: [collection of scientific papers] / edited by V. I. Morosanova. - Moscow : Publishing House of PI RAO ; Stavropol : SevKavSTU, 2007. – 430 p .
52. Mudrik, A.V. Human socialization: studies. manual for students. higher. studies. institutions / A.V. Mudrik - 3rd ed., ispr. and additional - M.: Publishing House of the Moscow Psychological and Social Institute, 2011, 736 p .

53. Silchenko I.V., Zherebtsov S.N., Dudal N.N., Beizerov V.A. Cultural and historical psychology L.S. Vygotsky and personality problems in the modern world, to the 120th anniversary of his birth. Collection of scientific articles / Ministry of Education of the Republic of Belarus, Educational Institution "Gomel State University named after Francisca Skaryna". – Gomel: GSU, 2016. – 346 p.
54. Lavrik, S.Yu. Minimal brain dysfunction: prevalence, risk factors, clinical, neurophysiological and neuropsychophysiological aspects / S.Yu. Lavrik, S.V. Domitrak, V.V. Shprach // Acta Biomedica Scientifica. – 2014. – No. 1. – p. 95.
55. Levi, V.L. Non-standard child / V.L. Levi. – M., 1998. – 134 p.
56. Levitina, E. V. Differential diagnosis of brain contusions and strokes in children // Levitina E.V., Nemkov A. G., Zakharchuk E. V. Neurology and neurosurgery of childhood. No.1 (35) 2013. P. 64-68.
57. Lokhov, M.I. Psychodiagnostic and psychocorrective methods for attention deficit hyperactivity disorder (ADHD) in children / M.I. Lokhov, E.V. Fesenko // Special education. – 2014. – No. X. – P. 51 – 57.
58. Lyutova, E.K. Cheat sheet for parents. Psychocorrective work with hyperactive, aggressive, anxious and autistic people / E.K. Lyutova, G.B. Monina. - SPb:. Speech, 2007. – 136 p .
59. Magalov, Sh.I. Consequences of mild closed craniocerebral injuries: questions of terminology and classification / Sh.I. Magalov, T.S. Pashaeva // Neurological Journal. - 2002. - Vol.7, no.6. - P. 16-19.
60. Makarov, A.Yu. The consequences of traumatic brain injury and their classification / A.Yu. Makarov // Neurological Journal. - 2002. – No. 2. – P. 38 – 41.
61. Medical and social risk factors affecting the occurrence of injuries in children / O.V. Golovko, E.L. Borshchuk, T.N. Pavlenko, D.N. Runner // Modern problems of science and education. – 2017. – No. 2. – pp. 25 – 27.

62. Merkulov, V.N. Pediatric traumatology. Library of a specialist doctor / V.N. Merkulov, A.I. Dorokhin, K.M. Bukhtin; edited by S.P. Mironov. - Tver: GEOTAR – Media, 2019. – 256 p.
63. Moiseenko, D.A. Injury prevention in children: A collection of tips for parents on injury prevention in children / D.A. Moiseenko. - Nizhnevartovsk: MAU CRO, 2016. – 18 p.
64. Muzychenko, G.F. Projective technique "Non-existent animal". Guidelines and results of a psychodiagnostic study of adult patients with various disorders of the emotional and personal sphere / G.F. Muzychenko. - St. Petersburg: Speech, 2013. – 555 p.
65. Mylnikova, L.A. Relevance of injury prevention in the Russian Federation. Possible solutions / L.A. Mylnikova // Emergency medical care. – 2009. – No. 2. – P. 4-7.
66. Nemsadze, V.P. Child traumatism / V.P. Nemsadze, G. Ambernadi. - M., 1999. – 270 p.
67. Pisova, N.V. What is attention deficit hyperactivity disorder? / N.V. Pisova // Medical Council. – 2013. – No. 1. – P. 60-64.
68. Polunina, N.V. The state of children's health in modern Russia and ways to improve it / N.V. Polunina // Bulletin of Roszdravnadzor. – 2013. – No. 5. – P. 17-24.
69. Pokhilko, A.S. Psychological characteristics of adolescents with spinal pathologies: specialty 19.00.04 "Medical psychology": abstract of the dissertation for the degree of candidate of psychological sciences. - St. Petersburg, 2010. – 23 p.
70. Projective diagnostic methods in modern socio-cultural conditions. Actual problems of development and application practice / K.Y. Butrimova, E.V. Vasina, E.A. Fedurina, V.A. Ehrentraut // PEM: Psychology. Educology. Medicine. – 2016. - № 2. – P. 100 – 122

71. Psychological and deontological aspects in the rehabilitation of children with injuries and orthopedic pathology / G.K. Ermakova, V.M. Parfenov, E.V. Kozyukov, O.P. Zaidel // Traumatism and treatment of injuries in children: a collection of scientific papers edited by prof. V. L. Andrianov. / L.: Leningr. n.- I. det. orthopedist. G. I. Turner Institute, 1987. – P. 21 – 29.
72. Pugachev, A. S. The influence of family on personality / A. S. Pugachev // Young Scientist. – 2012. - № 7 (42). – Pp. 310 – 313.
73. Rodionov, V.A. Interaction of a psychologist and a teacher in the educational process / V.A. Rodionov, M.A. Stupnitskaya. – Yaroslavl, 2001. – 149 p.
74. Romanova, E.S. Graphic methods in practical psychology: textbook / E. S. Romanova. – M.: Aspect Press, 2011. – 400 p.
75. Ruplenenie, F.V. Childhood traumatism in the age aspect, its prevention and the role of the public in combating it: 14.00.22 "Traumatology and orthopedics": abstract of the dis. for the degree of Candidate of Medical Sciences / F.V. Ruplenenie. - Riga, 1978. – 27 p.
76. Ryzhov, A.S. Injury prevention in physical culture and sports classes / A.S. Ryzhov // Nauka 2020. - 2017. - №5 (16). – P. 57 – 68.
77. Savchenko, I.V. Features of traumatic injuries in children and factors determining them (literature review) / I.V. Savchenko, T.S. Avtomonova, M.S. Martinen // Medicine: theory and practice. – 2021. – Vol. 6, No. 2. – pp. 46 – 53.
78. Satyr, V. Psychotherapy of the family / V. Satyr. - St. Petersburg: Speech, 2000. – 288 p.
79. Certificate of state registration of the computer program No. 2013610235 Russian Federation. The automated system of correction of speech and behavioral disorders in children "Egoza". 01.10.2012; published 09.01.2013 / Zakharchuk E. V., Nemkov A. G., Zykov A. N. / copyright holder of LLC

"Center for Scientific Research". – Registered in the Register of computer programs.

80. Certificate of state registration of the computer program No. 2016618356 Russian Federation. The program of correction of speech and behavior disorders in children 27.05.2016; published 27.07.2016 / Nemkov A. G., Zakharchuk E.V., Polyakov D. A., Nemkova Ya. V., Zakharchuk I. A. / copyright holder LLC "Center for Scientific Research". – Registered in the Register of computer programs.
81. Certificate of state registration of the computer program No. 2014617051 Russian Federation. A test program module for correcting speech and behavior disorders in children. 13.05.2014: published 10.07.2014 / Nemkov A. G., Zakharchuk E.V., Polyakov D. A., Nemkov
82. Simernitskaya, E.G. Neuropsychological technique of express diagnostics "Luria-90" / E.G. Simernitskaya. – M.: Znanie, 1991. – 48 p.
83. Sominov, A. B., Prevalence and structure of traumatic brain injury in a number of subjects of the Russian Federation / Sominov A. B., Lebedev I. A., Dreval O. N., Gaibov S. S.-H., Zakharchuk E. V., Nekrasov D. A. // Ural Medical Journal. Yekaterinburg. № 193, 2020. P. 156 – 160.
84. Spiridonov, A.V. Medical and social prevention of child injuries in a large city, taking into account the type of family: on the example of the city of Kazan: 14.00.33 "Public health and healthcare": abstract of the dissertation for the degree of medical sciences - Kazan, 2007. – 21 p.
85. Starovoitenko, E.B. Psychology of individuality. New models and concepts / E.B. Starovoitenko, V.D. Shadrikov. - M.: MPSI. – 2009. – 384 p.
86. Stepanova, M.I. Prevention of childhood injuries in the summer period / M.I. Stepanova // National education. - 2014. - №2 (1435). – P. 111-116.
87. Stupnitskaya, M.A. Traumatism in school-age children: cause and prevention / M.A. Stupnitskaya // School of Health. – 2001. – No. 4. – p. 196.

88. Traumatism, orthopedic morbidity, the state of traumatological and orthopedic care for the population of Russia / Edited by S. P. Mironov. - M.: FSBI CITO named after N. N. Priorov, 2014. – 132 p.
89. Ueliev S.D., Uteuliev E.S., Saparbekov M.K. Epidemiology and prevention of childhood injuries // Bulletin of KazNMU. 2018. No. 3. – from 363 to 365.
90. Federal Law No. 124 – FZ of 24.07.1998 "On basic guarantees of the rights of the child in the Russian Federation": adopted by the State Duma of the Federal Assembly of the Russian Federation on 03.07.1998.
91. Freud, Z. Psychopathology of everyday life Enlightenment / Z. Freud – M., 2015. – 192 p.
92. Khanbikova, E.R. The problem of traumatism and its prevention, features of the course of injuries in the Saratov region / E.R. Khanbikova, T.M. Bogdanova // International Student Scientific Bulletin. – 2018. – No. 5. – p. 53.
93. Schneider, L.B. Psychology of family relations. Course of lectures / L.B. Schneider– M.: April-Press, Publishing house EKSMO-Press, 2000. – 512 p.
94. Eidemiller, E. Psychology and psychotherapy of the family / E. Eidemiller, B. Justickis. – 4th ed., reprint. and additional – St. Petersburg: Peter. - 2008. – 672 p.
95. Erikson, E. H. Childhood and society: translated from English / E. H. Erikson – 2nd ed., reprint. and additional – St. Petersburg: Lenato, ACT, University Book Foundation, 1996. – 592 p.
96. Ablewhite, J. Parental perceptions of barriers and facilitators to preventing child unintentional injuries within the home: a qualitative study / J. Ablewhite, I. Peel, L. McDaid, et al. // BMC Public Health. - 2015. - Vol.15. - P.280. – URL: doi: 10.1186 / s12889-015-1547 – 2.
97. Ackerman, N.W. Accidental self-injury in children / N.W. Ackerman, L. Chidester // Archives of Pediatrics. – 1936. – Vol. 53. – P. 711.

98. Alonge, O. Reducing the global burden of childhood unintentional injuries / O. Alonge, A.A. Hyder // Archives Disease Childhood. – 2004. – Vol. 99. – P. 62 – 69. – URL: doi.org/10.1136/archdischild-2013-304177.

99. Andrejeva J. // The Impact of TRX suspension training on patient‘s balance, coordination and quality of life after traumatic brain injury / J. Andrejeva, M. Kasradze, A. Mockiene, R. Radziuviene, J. Zakharchuk // Georgian Med News. 2020 Jan; (298):119 – 122. PMID 2141863

100. Barkley, R.A. Psycological Treatment for ADHD / R.A. Barkley // Journal of Clinical Psychology. – 2002. – 63. – P. 30 – 42.

101. Belanger, H.G. Neuropsychological performance following a history of multiple self-reported concussions: a meta-analysis / H.G. Belanger, E. Spiegel, R.D. Vanderploeg // Journal International Neuropsychological Society. – 2010. – Vol. 16. – P. 262 - 267.

102. Between a history of traumatic brain injuries and conduct disorder during youth in a population sample of Canadian adults associations / G. Ilie, C.M. Wickens, E. Vingilis, et al. // Psychiatry Research. – 2017. – Vol. 258. – P. 184 - 188.

103. Borse, N. CDC Childhood injury report: patterns of unintentional injuries among 0 – to 19 – year olds in the United States, 2000-2006 / N. Borse, D.A. Sleet // Fam Community Health. – 2009. – Vol. 32 (2). – P. 189. - URL: doi: 10.1097/01.FCH.0000347986.44810.59.

104. Child coping and parent coping assistance during the peritrauma period in injured children: [Electronic resource] / M.L. Marsac, J.H. Mirman, K.L. Kohser, N. Kassam-Adams // Families, Systems, Health. - 2011. - Vol. 29(4). - P. 279 -290. - URL: https://doi.org/10.1037/a0026465

105. Child coping, parent coping assistance, and post-traumatic stress following paediatric physical injury: [Electronic resource] / M.L. Marsac, K.A. Donlon, F.K. Winston, N. Kassam-Adams // Child: Care, Health

Development. – 2013. Vol. 39(2). – P.171-177. – URL: doi: 10.1111/j.1365-2214.2011.01328.x.

106. Childhood injury prevention counseling in primary care settings: a critical review of the literature / J.L. Bass, K.K. Christoffel, M. Widome [et al.] // Pediatrics. – 1993. – Vol. 92. – P. 544-550.

107. Children at risk of injury: [Electronic resource] / B.S. Bruce, J.P. Lake, V.A. Eden, J.C. Denney // Journal Pediatric Nursing. – 2004. – Vol. 19 (2). – P. 121 – 127. – URL: doi: 10. 1016/ S0882-5963(03)00144 – 1.

108. Comparison of ISS, NISS, and RTS score as predictor of mortality in pediatric fall: [Electronic resource] / K.D. Soni, S. Mahindrakar, A. Gupta et al. // Burns Trauma. – 2017. – Vol. 8. – P. 5 – 25. – URL: doi: 10.1186/s41038-017-0087-7.

109. Conroy, C. Trauma as a public health issue / C. Conroy // Trauma Quarterly. – 1985. – Vol. – P. 69 – 75.

110. Danseco, E.R. Incidence and costs of 1987-1994 childhood injuries: demographic breakdowns / E.R. Danseco, T.R. Miller, R.S. Spicer // Pediatrics. – 2000. – Vol. 105.

111. Davis, C.S. Unintentional injury in early childhood: its relationship with childcare setting and provider: [Electronic resource] / C.S. Davis, S.E. Godfrey, K.M. Rankin // Maternal Child Health Journal. – 2013. – Vol. 17(9). – P. 1541-1549. – URL: doi: 10.1007/s10995-012-1110-z.

112. Deal, L. Unintentional injuries in childhood: analysis and recommendations: [Electronic resource] / L. Deal, D. Gomby, L. Zippiroli, R. Behrman // Future Children. - 2000. – Vol. 10(1). – P. 4 – 22. – URL: doi:10.2307/1602823

113. DiGuiseppi, C. Individual-level injury prevention strategies in the clinical setting / C. DiGuiseppi, I.G. Roberts // Future Child. – 2000. – Vol. 10. – P. 53 – 82.

114. DiScala C, Lescohier I, Barthel M, Li G. Injuries to children with attention deficit hyperactivity disorder. Pediatrics. 1998;102:1415 – 21.

115. Dunbar, H.F. Your Child's mind and body; a practical guide for parents / H.F. Dunbar. - New York: Random House, 1949. – p. 324

116. Factors related with unintentional injuries in children with newly diagnosed attention-deficit/hyperactivity disorder: [Electronic resource] / A.B. Ayaz, M. Ayaz, E. Şentürk et al. // International Journal Injury Control Safety Promotion. -2016. – Vol. 23 (1). – P. 93-98. – URL: doi: 10.1080/17457300.2014.969279.

117. Father – child interactions and children's risk of injury: [Electronic resource] / J. StGeorge, R. Fletcher, E. Freeman et al. // Early Child Development Care. – 2015. - Vol. 185(9). – P. 1409 – 1421. – URL: doi.org/10.1080/03004430.2014.1000888.

118. Flavin M.P., Dostaler S.M., Simpson K., Brison R.J., Pickett W. Stages of development and injury patterns in the early years: a population-based analysis. BMC Public Health. 2006; 6:187 – 197.

119. Garzon, D.L. Contributing factors to preschool unintentional injury: [Electronic resource] / D.L. Garzon // Journal Pediatric Nursing. – 2005. – Vol. 20(6). – P. 441 – 447. - URL: doi: 10.1016/j.pedn.2005.03.014.iew.

120. Gore, G. School injuries and preventive policies and programs. Canadian journal of public health. Revue canadienne de santé publique / G. Gore, H. Magdalinos, I. Pless. – 2004. – Vol. 95, № 6. – P. 424 – 4288. – URL: 10.1007/BF03403986.

121. Grossman, D. The History of injury control and the epidemiology of child and adolescent injuries: [Electronic resource] / D. Grossman // Future Children. – 2000. – Vol. 10 (1). - P. 23 – 52. – URL: http: doi:10.2307/1602824.

122. Holder, M., Klassen A. Temperament and happiness in children. Journal of Happiness Studies. 11. – 2010, P. 419 – 439. 10.1007/s10902-009-9149-2.

123. Improvement in quality and quantity of prevention measurement of toddler injuries and parental interventions / L. Peterson, D. DiLillo et al. // Behavior Therapy. – 2002. - №33. – P. 271 – 297.

124. Injuries and poisonings in out-of-home child care and home care / W.J. Gunn, P.F. Pinsky, J.J. Sacks, L.B. Schonberger // American Journal Diseases Children. - 1991. – Vol. 145 (7). – P. 779 – 781.

125. Injuries in the European Union. Summary of injury statistics for the years 2012–2014. Amsterdam: European Association for Injury Prevention and Safety Promotion (EuroSafe); 2016.

126. Injury risks in schoolchildren with attention-deficit/hyperactivity or autism spectrum disorder: Results from two school-based health surveys of 6- to 17-year-old children in Sweden: [Electronic resource] / C. Bonander, L. Beckman, S. Janson, C. Jernbro // Journal Safety Research. – 2016. - № 58. URL:http:+doi%3A+10.1016%2Fj.jsr.2016.06.004.+Epub+2016+Jul+1.+Bonander+C1%2C+Beckman+L2%2C+Janson+S2%2C+Jernbro+C2.

127. Joffe, A.R. Injury admissions to pediatric intensive care are predictable and preventable: A Call to Action / A.R. Joffe, A, Lalani //Journal Intensive Care Medicine. – 2006. -Vol. 21, issue 4. – P . 227 – 234.

128. Jullien, S. Prevention of unintentional injuries in children under five years. BMC Pediatr 21, 311 (2021). https://doi.org/10.1186/s12887-021-02517-2).

129. Khaliq, A. Assessment of childhood domestic injuries among joint and nuclear families of karachi / A. Khaliq, H. Amreen, S.Siddiqui, G. M. Nasir // Open Journal Social Sciences. – 2017. – Vol.5, № 2. – P. 50 – 59. –URL: doi: 10.4236/jss.2017.52006.

130. Laflamme, L. Pupil injury risks as a function of physical and psychosocial environmental problems experienced at school. Injury prevention: journal of the International Society for Child and Adolescent Injury / L. Laflamme, E. Menckel // Prevention. – 2001. – Vol. 7. – P. 146 – 149. – URL: doi: 10.1136/ip.7.2.146.

131. Maternal depression child behavior and injury / K. Phelan, J. Khour, H. Atherton, R.S. Kahn // Injury Prevention: Journal International Society Child Adolescent Injury Prevention. - 2007. – Vol. 13(6). - P. 403–408. – Режим доступа. –URL: doi:10.1136/ip.2006.014571.

132. Matheny, A. Psychological characteristics of childhood accidents / A. Matheny // Journal Social Issues. - 1987. – Vol. 43(2). – P.45 – 60.

133. Maxson RT, Lawson KA, Pop R, Yuma-Guerrero P, Johnson KM. Screening for attention-deficit/hyperactivity disorder in a select sample of injured and uninjured pediatric patients. J Pediatr Surg. 2009; 44:743 – 8.

134. Miller, T. The cost of childhood unintentional injury and the value of prevention / T. Miller, E. Romano, R. Spicer // Future children. – 2000. - № 10. – P . 137 – 163.

135. Miller, T.R. Injury prevention counseling by pediatricians: a benefit-cost comparison / T.R. Miller, M. Galbraith // Pediatrics. – 1995. – Vol. 96 (1), pt. 1. – P.1 – 4.

136. Morrongiello, B. A. Understanding children's injury-risk behaviors: The independent contributions of cognitions and emotions: [Electronic resource] / B.A. Morrongiello, S. Matheis // Journal Pediatric Psychology. – 2007. – Vol. 32 (8). P. 926 – 937. – URL: http: doi:10.1093/jpepsy/jsm027.

137. Myhre M.C.,Thoresen S., Grogaard J.B., et al Familial factors and child characteristics as predictors of injuries in toddlers: a prospective cohort study BMJ Open 2012;2:e000740.doi:10.1136/bmjopen-2011-000740

138. Mytton, J., Towner E., Brussoni M., Gray S. Unintentional injuries in school-aged children and adolescents: Lessons from a systematic review of cohort studies. Injury prevention: journal of the International Society for Child and Adolescent Injury Prevention. 15. 111 – 24, 2009.

139. Niekerk, A. Prevention of childhood injuriesт / A. Niekerk // South African Medical Journal. – 2017. – Vol. 107 (3). – P. 182. – URL: 10.7196/SAMJ.2017.v107i3.12364.

140. Ordonana, J.R. Unintentional Injuries in a twin study of preschool children: environmental, not genetic, risk factors: [Electronic resource] / J.R. Ordonana, A. Caspi, T.E. Moffitt // Journal neurology, neurosurgery psychiatry – 2008. – Vol.33 (2). – P.185-94. – URL: doi:10.1093/jpepsy/jsm041.

141. Parental attitudes and knowledge of child safety. A national survey / M.R. Eichelberger, C.S. Gotschall, H.B. Feely, et al. // American Joyrnal Disiases Children. - 1990. – Vol. 144. – P. 714 – 720.

142. Parenting interventions for the prevention of unintentional injuries in childhood / D. Kendrick, J. Barlow, A. Hampshire [et al.] // Cochrane Database Systematic Review. – 2007. – Vol. 17. - № 4. –URL: doi: 10.1002/14651858.

143. Pastor PN, Reuben CA. Identified attention-deficit/hyperactivity disorder and medically attended, nonfatal injuries: US school-age children, 1997-2002. Ambul Pediatr. 2006;6:38–44.

144. Pearson, J., Jeffrey S., Stone D.H. Varying gender pattern of childhood injury mortality over time in Scotland. Arch Dis Child. 2009 Jul;94 (7):524 - 30. doi: 10.1136/adc.2008.148403

145. Pediatric injury prevention counseling priorities / L.R. Cohen, C.W. Runyan, S.M. Downs, J.M. Bowling // Pediatrics. – 1997. – Vol. 99. – P. 704 – 10.

146. Pittsenbarger ZE, Grupp-Phelan J, Phelan KJ. Comparing the frequency of unrecognized attention deficit hyperactivity disorder symptoms in injured versus noninjured patients presenting for care in the pediatric emergency department. Pediatr Emerg Care. 2008;24:438 – 41.

147. Predictors of injury mortality in early childhood / S.J. Scholer, E.F. Jr. Mitchel, W.A. Ray // Pediatrics. – 1997 – Vol. 100 (3), pt. – P. 1342 - 7. – URL: doi: 10.1542/peds.100.3.342. PMID: 9282703.

148. Predictors of unintentional injuries to school-age children seen in pediatric primary care / K. Bradbury, D.M. Janicke, A.W. Riley, J.W. Finney // Journal Pediatric Psychology. – 1999. – Vol. 24 (5). – P. 423 – 33.

149. Rao, V. Neuropsychiatric sequelae of traymatic brain injury / V. Rao, C. Lyketsos // Psychosomatics. – 2000. – Vol. 41, № 2. – P.95 – 103.

150. Rawson, A.J. Accident Proneness / A.J. Rawson // Psychosomatic Medicine. – 1944. – Vol. 6 (1). – P. 84 – 94.

151. Relation of caregiver alcohol use to unintentional childhood injury / A. Damashek, A. Damashek, N.A. Williams Sher [et al.] // Journal Pediatric Psychology. - 2009. - Vol. 34(4). – P. 344 – 353. –URL: http: doi: 10.1093/jpepsy/jsn097.

152. Rhodes, K.V. Child injury risks are close to home: parent psychosocial factors associated with child safety: [Electronic resource] / K.V. Rhodes, T.J. Iwashyna // Maternal Child Health Journal. - 2007. – Vol. 11(3). – P. 269–275. –URL: doi:10.1007/s10995-006-0171-2.

153. Risk for injury in preschoolers: Relationship to attention deficit hyperactivity disorder / J. Byrne, H. Bawden, T. Beattie, N. DeWolfe // Child Neuropsychology. – 2003. - № 9. - P.142 – 151.

154. Risk of unintentional injuries in children and adolescents with ADHD and the impact of ADHD medications: A systematic review and meta-analysis / M. Ruiz-Goikoetxea, S. Cortese, M. Aznarez-Sanado, et al // Neuroscience Biobehavioral Reviews. – 2018. – Vol. 84. – P. 63 – 71.

155. Royal, S.T. Non-legislative interventions for the promotion of cycle helmet wearing by children: [Electronic resource] / S.T. Royal, D. Kendrick, T. Coleman // Cochrane Database Systematic Reviews. – 2005. – Vol. (2). – 1 электрон, опт. диск (CD-ROM).

156. Rzucidlo, S.E. Beyond the physical injuries: child and parent coping with medical traumatic stress after pediatric traum / S.E. Rzucidlo, M. Campbell

//Journal Trauma Nursing: Official Journal Society Trauma Nurses. – 2009. – Vol. 16 (3). – P. 130 – 135. – URL: doi:10.1097/JTN.0b013e3181b9e078.

157. Sajjan S. Injuries in children with epilepsy: A hospital-based study / Sajjan S., Puneet J. et.al. // Indian Pediatrics. – 2016. – Vol. 53. – P. 883 – 885. – URL: 10.1007/s13312-016-0952-7.
158. Schieber, R. Legislative and regulatory strategies to reduce childhood unintentional injuries / R. Schieber, J. Gilchrist, D. Sleet // Future Children. – 2000. – Vol. 10 (1). – P. 111 – 136. –URL: doi:10.2307/1602827.
159. Schwebel, D.C. Pediatric unintentional injury: behavioral risk factors and implications for prevention / D.C. Schwebel, J. Gaines // Journal Developmental Behavioral Pediatrics. – 2007. – Vol. 28 (3). – P. 245 – 254. – URL: doi:10.1097/01.DBP.0000268561.80204.2a.
160. Schwebel, D.C. Why "accidents" are not accidental: Using psychological science to understand and prevent unintentional child injuries / D.C. Schwebel // American Psychologist. - 2019. - Vol. 74 (9). - P.1137-1147. – URL: doi: 10.1037/amp0000487.
161. Schwebel, D.C., Bounds M. The Role of parents and temperament on children's estimation of physical ability: links to unintentional injury prevention. Journal of pediatric psychology. 28. 505 – 16. 2003.
162. Shi, X. Unintentional injuries in children with disabilities: a systematic review and meta-analysis: / X. Shi, J. Shi, K.K. Wheeler, L. Stallones // Epidemiology. – 2015. - № 2. – URL: https://www.ncbi.nlm.nih.gov/pubmed/?term=Inj+Epidemiol.+2015+Dec%3B2(1)%3A21.+Epub+2015+Sep+15%2C+Shi+X1%2C2%2C+Shi+J2%2C3%2C+Wheeler+KK2%2C3%2C+Stallones+L4%2C+Ameratunga+S5%2C+Shakespeare+T6%2C+Smith+GA2%2C7%2C+Xiang+H8%2C9%2C10.
163. Social cognition, child neglect, and child injury risk: The contribution of maternal social information processing to maladaptive injury prevention beliefs within a high-risk sample / S.T. Azar, E.A. Miller, M.T. Stevenson,

D.R. Johnson // Journal Pediatric Psychology. – 2017. – Vol. 42(7). – P. 759 – 767.

164. Socio-economic status and types of childhood injury in alberta: A population based study / S.J. Gilbride, C. Wild, D.R. Wilson, et al. // BMC Pediatrics. - 2006. – Vol. 6. – P 1. – URL: https://doi.org/10.1186/1471-2431-6-30

165. Supervision and risk of unintentional injury in young children: [Electronic resource] / P.G. Schnitzer, D. Dowd, R.L. Kruse, B.A. Morrongiello // Injury prevention. – 2015. – Vol. 21. – P.63-70. – URL: doi: 10.1136/injuryprev-2013-041128.

166. The Association of parental coping and childhood injury / M. Nocera, A. Gjelsvik, R. Wing, S. Amanullah // Child Health Journal. – 2016. – Vol. 20 (11). – P.2357-2366. – URL: http: doi: 10.1007/s10995-016-2059-0.

167. The effectiveness of a home visit to prevent childhood injury / W.J. King, T.P. Klassen, J. LeBlanc, et al. // Pediatrics. – 2001. – Vol. 108 (2). – P. 382-388. – URL: doi: 10.1542/peds.108.2.382.

168. The feasibility of using a parenting programme for the prevention of unintentional home injuries in the under-fives: a cluster randomised controlled trial: [Electronic resource] / J. Mytton, J. Ingram, S. Manns [et al.] // Health Technology. – 2014. – Vol. 18 (3). – P.1 – 184. – URL: doi: 10.3310/hta18030.

169. The risk of injuries in children with Attention deficit-hyperactivity disorder (ADHD) in England / V. Prasad, K. Sayal, J. West et al. // Injury Prevention. – 2016. – Vol. 22. – A130.

170. The role of supervision in child-injury risk: Assumptions, issues, findings, and future directions: [Electronic resource] / G. Saluja, B.A. Morrongiello, D. Haynie, et al. // Journal Pediatric Psychology. – 2005. –URL: http: doi: 10.1076/icsp.11.1.17.26310.

171. Traumatic stress, depression, and recovery: Child and parent responses after emergency medical care for unintentional injury: [Electronic resource] / N.

Kassam-Adams, A. Bakker, M.L. Marsac, et al. // Pediatric Emergency Care. – 2015. – Vol. 31(11). – P. 737 – 742. – URL: http: doi: 10.1097/PEC.0000000000000595.

172. UNICEF. A league table of child deaths by injury in rich nations. - Florence: UNICEF Innocenti Research Centre, 2001. – p. 28.
173. Unintentional childhood injury: a controlled comparison of behavioral characteristics: [Electronic resource] / H. Zhang, Y. Li, Y. Cui, et al.// Pediatric. – 2016. – Vol. 29. – P. 16-21. – URL: doi: 10.1186/s12887-016-0558-1.
174. Unintentional injuries among Chinese children with different types and severity of disability: [Electronic resource] / H. Zhu, H. Xiang, X. Xia, X. Yang // Annals Epidemiology. – 2014. – Vol. 24 (1). – P. 23 – 28. –URL https://www.ncbi.nlm.nih.gov/pubmed/?term=(Zhu+H%2C+Xiang+H%2C+Xia+X%2C+Yang+X%2C+Li+D%2C+Stallones+L%2C+Du+Y.+Ann+Epidemiol.+2014+Jan%3B24(1)%3A238.+doi%3A+10.1016%2Fj.annepidem.2013.10.015.+Epub+2013+Nov+1.
175. Unintentional Injuries in Preschool Age Children: Is There a Correlation With Parenting Style and Parental Attention Deficit and Hyperactivity Symptoms: [Electronic resource] / E.E. Acar, O.B. Dursun, İ.S. Esin, et al. // Medicine (Baltimore). – 2015. – Vol. 94 (32). – e1378. – URL: http: doi: 10.1097/MD.0000000000001378.
176. Venkatesh, Soma & Chandrasekaran, Venkatesh & Soundararajan, Palanisamy. (2012). Unintentional Childhood Injuries: A Cause for Concern. Research and Reviews: Journal of Medical and Health Sciences.
177. Zakharchuk, E. Neuropsychological and/or psychological factors traumatic behavior of children under the age of 10 years / Zakharchuk E., Dotsenko E., Khvesko T., Andrejeva J. // International journal of psychology: a biopsychosocial approach, 2020 №23 (09.02.2020) DOI: https://doi.org/10.7220/2345-024X.23.

Appendix

APPENDIX 1

Questionnaire for parents and guardians

Dear parents, please answer the following questions about your child.
Your answers will help improve the childhood injuries prevention.

- What is the number of the childhood injury that requires medical attention?1st 2nd 3s more than 3
- The following people live together in the family or see each other often, and are in constant contact with the child:
- mother, father, grandmother, grandfather, nanny (underline), brothers____, sisters____ (specify the number).
- Please read carefully and evaluate your child using the scales below. For this:

A. Check out the contents of the scale – both on the left and on the right.

B. Put a mark in the middle column (circle) that will correspond to your ideas about the child.

We often try to help the child in solving everyday problems	3—2—1—0—1—2—3	We allow the child to solve everyday problems independently
The child is inactive, rather contemplative	3—2—1—0—1—2—3	The child is almost constantly moving
We rarely forbid the child anything, he's allowed a lot of things	3—2—1—0—1—2—3	We try to protect the child from a lot risks, so we forbid a lot of things
Our child doesn't have a lot of responsibilities in the family. Sometimes it is difficult to involve him in chores	3—2—1—0—1—2—3	The child has quite a lot of responsibilities in the family. He is often busy with household and other chores
The child should be punished as little as possible, it is better to support him	3—2—1—0—1—2—3	The child should be punished, otherwise he cannot be raised properly
The child's is often aggressive	3—2—1—0—1—2—3	Our child is quiet, calm
The child often shows excessive anxiety	3—2—1—0—1—2—3	The child is mostly calm
The child easily concentrates on the task	3—2—1—0—1—2—3	It is difficult for our child to focus on one thing
The child easily gets involved into family conflicts	3—2—1—0—1—2—3	The child is not involved in family conflicts

Date: _____
Full name of the child:_____ Age: _____Sex:_____
Full name of the respondent: _____
Doctor:

APPENDIX 2

STOP INJURY

Methods of prevention of repeated injuries in children (recommendations for doctors)

These practical recommendations are intended for those who work with childhood injuries.

Medical institutions in Russia annually register more than 3 million injuries in children. Thus, approximately one in eight children under the age of 18 goes to hospitals in connection with injuries.

The purpose of the methodology is to optimize the prevention of repeated unintentional injuries in children.

The technique allows to evaluate and carry out preventive work of repeated injuries of the child. It is based on the results of a scientific study of factors indicating the possibility of repeated injuries in children, depending on their individual characteristics and the situation in the family.

Expected efficiency

• The number of repeated visits of children with injuries will be reduced, thereby reducing the burden on doctors.

• The motivation of parents or their surrogates to take on their part of responsibility for the child's injury will increase.

• Parents will know what to pay attention to in order to avoid the recurrence of injuries in children.

General procedure

1. The doctor issues a questionnaire to be filled out to the legal representative of the child (the filling time is up to 3 minutes).

2. After looking at the questionnaire, the doctor quickly, in 1-2 minutes, analyzes the family situation of the child's development, the likelihood of repeated injury.

3. The doctor, if necessary, gives parents recommendations to contact additionally a psychologist (child or family) or a neuropsychologist.

Description of the questionnaire

The first question about the number of injuries allows us to assess the overall risk of unintentional injury in a child: low, medium, high. The greater the number of injuries that have already occurred, the higher the risk of repeated ones.

The second question about the number of children and the composition of the family allows you to assess the degree of adult attention.

Questions 3 to 11 reflect factors indicating the possibility of repeated injuries in the child:

3 – hyperprotection on the part of parents,
4 – increased activity of the child,
5 – insufficient requirements of the child,
6 – insufficient responsibilities in the family of the child,
7 – excessive sanctions against the child,
8 – aggressiveness of the child,
9 – anxiety of the child,
10 – lack of concentration in the child,
11 – feeling of conflict in the family by the child.

Data collection procedure

The doctor suggests that parents or their surrogates fill out a questionnaire. The filling time is 3-5 minutes. You can fill out the questionnaire while waiting for the results of additional examinations.

Respondents need to explain that the survey is conducted in order to prevent repeated injuries in the child. The task of parents or their surrogates is to carefully read the questionnaire questions and answer them truthfully.

Processing of the received data

The total score is calculated as follows: the numbers that hit the pole of the scale highlighted in bold are summed up. The numbers are added to the received sum: 1, 2, 3 or 4, depending on the number of injuries in the child (1st question).

According to the results obtained, the doctor gives parents recommendations for the prevention of repeated physical unintentional injuries in the child. For example, like this:

"According to the results of the questionnaire, your child has an increased risk of repeated injury, you need the advice of other specialists."

To determine which specialists to refer, the doctor focuses on the answers:

- directs to a family psychologist if the answers to the questions under the numbers "worked": 3, 4, 5, 6, 7 and 11;

- directs to a child psychologist if the answers to the questions numbered 8, 9 and 10 "worked";

- additionally directs also to a neuropsychologist if the answers to the questions numbered 4, 9 and 10 "worked".

Thanks to the work of the above specialists, the number of repeated injuries in children will be reduced in the future, and the workload of doctors will decrease. It remains to convince parents to contact these specialists.

It would be appropriate to tell them the following: "Doctors are dealing with an injury that has already happened. The reasons, as your answers show, should be looked for in the family situation, and in your relationship with the child. A psychologist can do it best", "I'm sorry that your child had a trauma (I understand your feelings)... To determine how to prevent subsequent injuries, I recommend contacting a psychologist", "There are different options for possible actions based on what you are ready for and what you want. Or leave everything as it is and, most likely, the injuries will continue until the child learns to predict the consequences himself. Or help a child who still lacks skills, give him some new strategies for organizing his behavior. Such strategies are exactly what a psychologist does."

To the questions (or objections) of parents (What to say to a psychologist), you can offer the following: "Tell us that the doctor carefully examined our child, studied the results of the questionnaire and recommended that we contact a psychologist, a neuropsychologist to reduce the likelihood of repeated injuries."

As a result of a conversation with a doctor, parents will have an additional opportunity to make an informed choice in favor of contacting recommended specialists, to realize the importance of psychological work with the family or with each of its members individually.

APPENDIX 3

STOP INJURY

Reducing the risk of repeated unintentional injuries in children

(recommendations for psychologists)

These practical recommendations are intended for children, family, social psychologists: for all those who are ready to work effectively with repeated childhood traumatism. These methodological recommendations are based on the results of the dissertation candidate's research: "Factors of repeated traumatism in children (medical and psychological support)".

The psychologist's clients are children not only with mental injuries, but also with unintentional physical injuries

The problem is that clients rarely turn to a psychologist with a question about the possibility of preventing the risks of unintentional repeated injuries in children, since the idea has not been formed in the mass consciousness today that the traumatic behavior of children can be caused by factors, most of which are within the family situation (microsocial conditions).

Medical institutions in Russia annually register more than 3 million injuries in children. There is an increase in the number of visits to doctors: pediatricians, neurologists, surgeons, traumatologists, including in connection with the need to assess the consequences of injuries that have occurred and to find out the possibilities of preventing subsequent physical injuries in children.

The circumstances of the occurrence of injuries in children and adults differ significantly, therefore, in post-traumatic work with a child and parents, specialists need to comprehensively take into account the nature of the consequences, the structure of the complications that have arisen, the factors that caused the fact of the child's injury, since their repeated triggering threatens to neutralize all rehabilitation efforts. To the extent that these features influenced the first traumatic event, they are able to cause repeated injuries in children (Schwebel, 2019).

Routing of children with repeated injuries among specialists is not effectively established today. We are talking about domestic injuries, the advantage of mild and moderate injury. In the structure of repeated unintentional (the violent factor is excluded) the following injuries were noted: craniocerebral and spinal trauma of varying severity, soft tissue bruises, lacerated, cut wounds, fractures, dislocations of ribs, fingers or limbs, fractures of the bones of the nose, facial skeleton, sprains of the ligamentous apparatus, bruises of internal organs, burns, contusions of the eyeballs, traumatic extraction of teeth and others).

Referral to families at risk of repeated injuries to children can be given by doctors for whom the "Stop injury" technique has been developed and tested. With its help, doctors have the opportunity to identify children at risk of repeated injuries and recommend them to work with a psychologist. It is unlikely that clients with this problem will go to psychologists immediately and en masse, but their appeals should be expected. This category represents a potential large number of clients of a psychologist.

After emergency doctors (traumatologists, surgeons, neurosurgeons) have provided assistance, a child with repeated injuries often finds himself without the further supervision of the necessary specialist. At least two difficulties are found here:

Difficulties of parents. Who to contact with unresolved issues: "Why did this happen?", "Can it happen again?", "Who is to blame?", Especially after repeated injury: "Why with us?", "How to prevent the next time?", "Why do some children live without injuries, while others get them often?". Parents try to explain the reasons for the frequent injuries of children with increased motor activity, restlessness and curiosity, imperfection of motor skills and coordination of movements, a reduced sense of danger and fear of heights, etc. But the question is "what to do?" does not disappear.

Difficulties of doctors. Parents of traumatized children ask what to do, puzzle outpatient doctors with numerous questions, pinning hopes on them for the prevention of injuries. It happens that they bring a large set of examinations, but the problem is not solved, the child does not stop exposing himself to injuries. "Some astute doctors, although it goes beyond their competence, try to pay attention to the family situation, to the educational habits of parents" [36]. As a rule, they encounter resistance from family members, unwillingness to realize the problem of injury as a systemic one – their family difficulty.

And then they guess to recommend a psychologist. Rare pediatricians (probably "reasonably lazy") immediately send the family to a counseling psychologist. So it is quite logical that re-traumatized children and their parents are transformed from patients of doctors into clients of psychologists. The latter already have productive work schemes, but lack specific subtleties in understanding this subject area.

The results of the presented study allow psychologists to better understand the cause-and-effect relationships in the occurrence of repeated injuries in children and more accurately set advisory tasks.

The goal is to optimize the risks of repeated unintentional injuries in children, taking into account the peculiarities of the factors of repeated injuries in children aged 5-10 years, to outline the prospects for overcoming them in psychological counseling

Among all the factors of repeated injuries in children, 2 groups can be distinguished.

The first group includes the individual characteristics of the child: from personal to physiological. It is noted that such children have a high propensity to risk, motor disinhibition, emotionally unstable, behave inadequately in stressful situations, they are usually not self-critical, overestimate their abilities and capabilities (Morrongiello B.A., Matheis S. 2007). Their emotional properties and temperament qualities are discussed separately. Thus, the responsibility for repeated injuries in children is mainly assigned to the children themselves.

Less often, studies are found in which repeated childhood traumatism is tried to be understood through the peculiarities of the social situation of the child's development in the family. At the same time, the individual psychological characteristics of parents or persons replacing them, the parenting style adopted in the family, the socio-psychological characteristics of the family are discussed (Eidemiller, Justickis, 2008). However, it was not possible to find systematically organized studies in the literature available to us.

A comprehensive approach to the prevention of unintentional injuries in children is proposed, it is emphasized that behavioral risks arise from the child's family environment and wider cultural environment, while the work of a psychologist plays an important role in preventing childhood injuries (Schwebel, 2006).

Model of risk factors for repeated childhood injuries –
distribution of opportunities for interaction of specialists

All the variety of possible factors of (repeated) traumatization identified in the scientific literature were ordered into a matrix that acts as a means of modeling the situation of child development. The model is formed by two dimensions (Fig. 1): horizontal: Individual (features of the child) – Social (his situation of development); and vertical dimension: The degree of dependence of risk factors on their controlling subjects.

With the help of the developed model, it is possible to reveal the risk factors for repeated unintentional injuries in children and the distribution of opportunities for interaction between specialists.

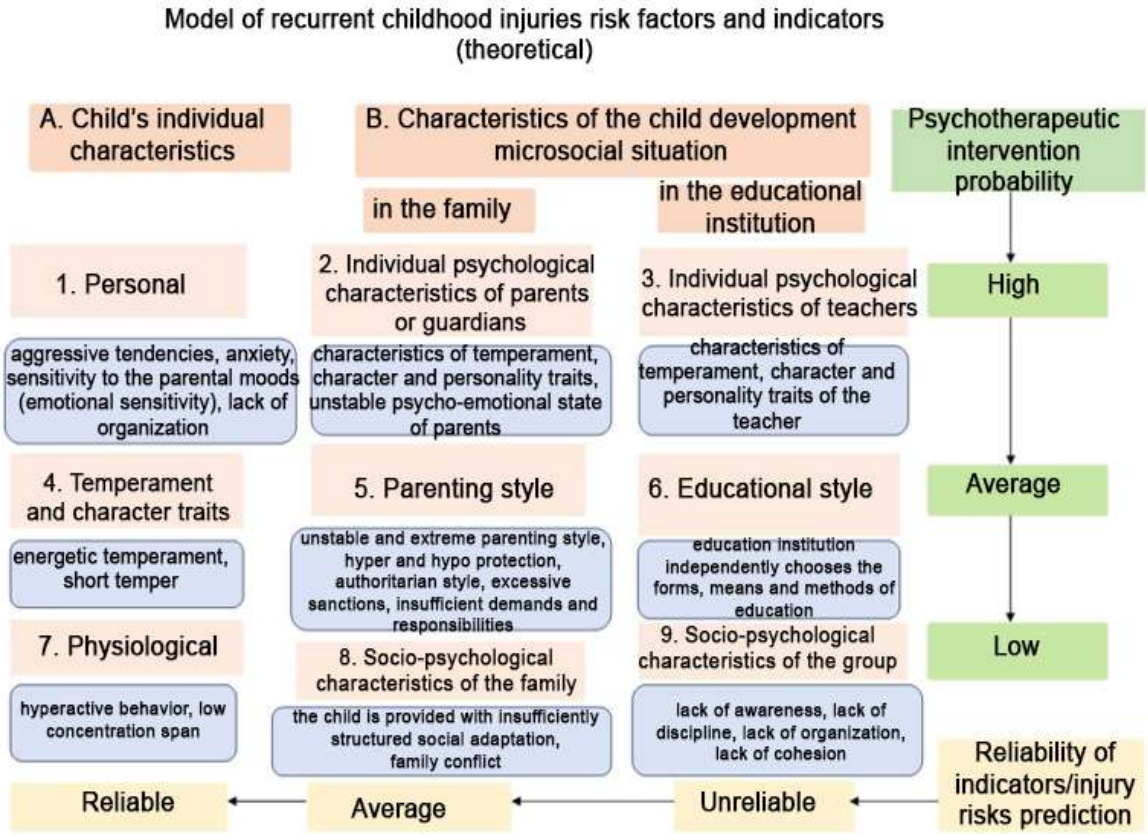


Figure 1. – Proposed model of recurrent unintentional childhood injuries risk factors

Factors that cause traumatic behavior in a child

Focusing on the model (see the table), it is important to understand which of the factors specified in it are actualized in the specific situation of the development of this child. The study shows both the validity of the model and how important the role of the family situation is (cells 2, 5 and 8). Based on the results of the study, statistically significant factors of repeated injuries revealed clinical, individual psychological and socio-psychological risk factors of traumatic behavior of the child.

Hyperactivity acts as a clinical risk factor, as individual psychological factors: increased anxiety, lack of a sense of security (the idea of one's own family as a conflict one) and socio-psychological – some characteristics of child-parent interaction (authoritarian communication style), features of educational influences – hyperprotection, the presence of a significant number of sanctions, insufficient responsibilities and organization of the child, permissiveness is practiced. For example, a child eats a lot of sweet dishes, does not brush his teeth daily, does not harden, parents do not develop children's creative abilities, which indicates immature style characteristics of upbringing. Parents care little about imputing everyday rules to their children.

As well as socio – psychological risk factors for repeated injuries are some personal characteristics of parents, in particular, their unstable self-esteem.

So the central link among the risk factors of traumatic behavior becomes the parenting style adopted in the family. Shortcomings of adults in the upbringing of re-traumatized children were found. Exactly:

• hyperprotection makes it difficult for a child to become independent;

• partially discipline in small social situations – they do not give enough rules, they do not structure the daily routine and other daily activities of the child, which unreliably protects children from extremes in behavior that generate risks of gross mistakes and repeated unintentional injuries;

• they do not fully explain the social rules to the child – they do not set enough safe patterns of activity;

• do not give feasible responsibilities to the child – those that would allow to stabilize the activity of the child at the optimal level for him;

• the family members have not fully agreed on the same requirements and uniform sanctions against the child;

• form weakened internal restrictions, disproportionately severely punish the child, than disorientate him in the system of assessments and criteria "good / bad".

• provide the child with insufficient independence in making everyday decisions (when the cost of a mistake is small) and performing routine actions, poorly take into account the needs of their children, giving them a feeling of a deficit for emotional and other acceptance;

• they show less emotional (M.B. in some cases spiritual) closeness than is necessary for the child.

If we evaluate the factors of the child's injury, as they change as they move in the model on the left, then we find a scale of cooperation between the fields of activity of specialists from the psychologist (upper left corner) to the doctor and neuropsychologist (lower left corner). When considering the model from above, a scale of interaction of specialists from a psychologist is built (upper left corner) to a social pedagogue or a psychologist-educator (upper right corner). In the lower right corner of the model, the niche of problem curation is occupied by an organizational psychologist and the administration of children's institutions. Thus, the model shows how the interaction of all key specialists (psychologist, neuropsychologist, doctor, social pedagogue and organizational psychologist) is combined.

It is difficult to predict the risks of repeated injuries based only on the socio-psychological characteristics of the staff of the educational institution (cells 3, 6, 9). It is much

more reliable to assess the risks of repeated traumatization based on the peculiarities of the family situation of the child's development (cells 2, 5, 8), and even better – based on the analysis of the characteristics of the child himself (cells 1, 4, 7).

Thus, the model allows for each individual case of a child's injury to indicate the factors that should be guided in the consultative process, to determine the degree of responsibility of the people involved in the events, as well as whose competence can be relied on in this work. With the identified vector (on whom) and the measure of responsibility (how much), it will become clear with whom or with what it is necessary to work in priority order. If the judicial authorities are involved in the case, then the model gives the expert psychologist the opportunity to correctly plan the examination and draw up a balanced expert opinion. When collecting the necessary information, it will be possible to indicate on whom the main responsibility lies (on a particular parent, family, teacher, institution), and on whom it is indirect. The scheme can also be used when organizing a survey to draw up a specialist's opinion or an expert opinion – as determined by the court, at the request of social protection structures and others.

Hyperactivity true and false

It is noteworthy that parents consider their children hyperactive (based on child behavior), 64% of them insist on the diagnosis of "hyperactive child" and would like to receive medication therapy

After conducting neuropsychological diagnostics to identify minimal brain dysfunctions in traumatized children, it was revealed that true hyperactivity was detected only in 8% of cases where parents and sometimes doctors (pediatricians, surgeons) consider children to be hyperactive. Therefore, basically we are dealing with false hyperactivity.

The explanation of the mechanisms of false hyperactivity formation is seen in the following. "A child living in poorly structured (micro) social conditions is constantly forced to deal with high uncertainty about the consequences of his actions. On the one hand, this opens up wide opportunities for maneuver in front of him, which encourages him to try out different ways to test himself. On the other hand, it is necessary to pay with high tension (chronic stress) and increased anxiety, which leads to a decrease in sensitivity (protective desensitization) to possible risks, makes it difficult to assess the degree of their reality. There is a special pattern of behavior that is appropriate to define as traumatic behavior (behavior that increases the risk of injury to the child). Participants in a traumatic situation are not only the children themselves, but also their parents or people involved in contact with children in various social institutions – kindergarten, school, etc. (Ponsford et al., 2008). The child tries to cope with biological (less often) and social (mostly) factors through his activity. The more problems a child faces, the more any “hyper”

appears in his behavior. Parents do not realize that the traumatic behavior of their children is mainly due to intra-family factors, such as the daily routine, the style of relationships between parents and family members, the individual characteristics of children, etc. With the help of trauma, the child partially harmonizes relations with parents, so it is not surprising that a secondary benefit of traumatic behavior occurs" [36].

Unlike children with false hyperactivity, children with true hyperactivity tend to have some minimal brain dysfunction. Behavioral disorders in them are associated with poor coordination and mobility, insufficient fine motor skills, impaired mutual coordination of movements and moderate ataxia, emotional lability, some delay in mental development, difficulties in perception and assimilation of educational material, speech defects, mild neurological disorders (Alipbaeva, Bekbolatova, 2013). The absence of these signs makes it possible to doubt the claims of parents that their children are hyperactive.

If you need a supporting document. Perhaps a consultant psychologist will need to get a specialist's opinion. A neuropsychologist will help remove doubts by performing a subtle (decisive) diagnosis that allows you to identify the presence or absence of neural prerequisites for hyperactivity (a defect in brain functions). The syndromic neuropsychological analysis gives grounds to conclude about the violation of certain analyzer systems or their interaction, or about the dysfunction of the corresponding brain systems, i.e. to make a topical diagnosis. The child should be referred for examination, asking to assess the presence of neural prerequisites for hyperactivity.

The diagnosis is made only by a doctor, usually a neurologist or a psychiatrist. Ideally, based on the conclusion of a neuropsychologist, more often only on the basis of examination and neurological tests, respectively, it is worth referring to him rather to solve official and legal tasks.

Neuropsychological examination, in addition, is the first step to recovery work, because it indicates violations of mental functions, dysfunction of certain brain areas, and, therefore, indicates the direction in which work should be carried out. The latter should be directed not to the symptom, but to overcoming the causes – to restore the basic mental processes of the motor sphere (subject actions), perception (of different modalities), the subject-shaped sphere and others, relying on preserved forms of activity – gaming, educational.

Based on the results of the study, the author developed and tested an express questionnaire "STOP TRAUMA" for doctors, which allows assessing the risks of traumatic behavior of children and (16 points and higher is considered an increased risk of repeated trauma

in a child) which specialist to contact next for supervision: a family psychologist, a child psychologist or a neuropsychologist.

Advisory work

A psychologist-consultant, when detecting traumatic behavior in a child, should work both with the family (with the conditions and the persons organizing them) and with the child (with the results of the internalization of these conditions and subjective responses to them).

Vectors of attention in the work of a psychologist-consultant with frequently traumatized children:

1. To find out whether the behavior of this child generates an increased risk of repeated unintentional injuries (in the anamnesis of 2 or more unintentional injuries requiring medical care). To clarify whether they applied independently or the family was referred to a consultation by a doctor, whether they filled out an express questionnaire from a doctor (STOP INJURY), whether the injury risk score is known.

2. To assess the manifestation of significant factors of repeated injury in children and adults:

2.1. Analyze the individual psychological characteristics of the child.

1) The portrait of a "frequently traumatized child through the eyes of parents often looks like this: active, mobile, fearful, inquisitive, inattentive, impatient, sluggish, capricious, harmful, quarrelsome, aggressive, persistent, etc. The consultant can assess the severity of these signs in the behavior of the child and those around him as totality (in the limit – everywhere and always), and by the intensity of their manifestation in certain situations. Individual psychological characteristics (according to the cut ...) of a frequently traumatized child: increased anxiety, lack of a sense of security (the idea of one's own family as conflicted).

2) Differentiate between true and false hyperactivity. Depending on the result, the psychologist evaluates and decides with which kind of related specialists it is necessary to establish contact and establish cooperation: with a neurologist or a neuropsychologist.

2.2. Analyze the features of the social situation of the child's development in the family.

1) Clarify in the conversation the socio-psychological characteristics of the family: how many adults are involved in the upbringing, how many family members (it also happens that "seven nannies have a child unattended") and children in the family. It is difficult to influence these characteristics, but it can be analyzed for use in dealing with the problem of recurring injuries. An important point of the analysis of the situation is the identification of persons forming a microsocial environment that is traumatic for this child: one of the parents,

grandparents, nannies, teachers… From among them, find and probable agents of constructive transformation (with them, probably, and start).

2) Pay attention to the style of family education and personal characteristics of parents: some child-parent interactions are characterized by an authoritarian style of communication and some features of educational influences – hyperprotection, the presence of a significant number of sanctions, insufficient requirements and responsibilities in the family of the child and the personal characteristics of parents, in particular, their unstable self-esteem.

3. Upon completion of the analysis of the situation, the psychologist-consultant will much more accurately outline the targets for intervention, formulate the tasks of further advisory work.

Stages of the work of a psychologist consultant when working with a family,

having a child with repeated unintentional injuries

The consultant needs to interact with the whole family, and the parents themselves determine their fears and concerns, are aware of their view of the current situation.

1) Initially, it is necessary to identify the level of understanding by parents of the nature of difficulties for themselves and for a child with traumatic behavior and the level of adaptation of the family to this. In the event that parents cannot speak clearly, the counselor needs to ask questions himself, demonstrating confidence that he understands and shares their concerns.

2) Clarifying the facts. At this stage, parents tell the facts of family life and the development of the child (as they can). For example: "Why with them?", "How to prevent the next time?", "Why do some children live without injuries, and they get injured often?".

3) Informing the family by the consultant. At this stage, there is not only the transfer of information to the family, but also a check of how the parents realized the problem of the child's traumatic behavior.

Correctional tasks can presumably be as follows:

- to distribute areas of responsibility for the possibility of preventing risk factors of repeated unintentional injuries in a child between a parent, a psychologist and other specialists;

- to help parents understand how specialists will help the child and how parents themselves can help;

- to provide an opportunity for a parent to take an active position in relation to their life, to make an informed choice of behaviors, to take responsibility for the safety of children's life on themselves;

- to allow parents to understand the processes taking place in the family, in particular, to show the motivational dynamics that determine the risk of injury to the child;

- to help adults to commit a conscious act: systematically, together with a specialist, parents identify the most likely causes of traumatic behavior of children in these specific living conditions;

- to help parents realize the need to agree on the same requirements and sanctions between family members at the same level in order to make the requirements for the child uniform;

- to provide an opportunity for parents to realize the need and importance of structuring daily activity, disciplined behavior in small social situations, to make sure that the child has a sufficient number of rules that reliably protect them from extremes in behavior that generate risks of gross mistakes and injury;

- to bring family members to the realization of the need for sufficient responsibilities of the child – such that would stabilize his activity at the optimal level for him;

- evaluate and show the importance of the child's independence in making everyday decisions and performing routine actions (do not run on a wet floor, lay an anti-slip mat in the bathroom, stop at a red traffic light, do not push other children during a break in the crowd, etc.)

- to give parents or their surrogates a chance to realize the importance and necessity of spiritual (M.B. in some cases spiritual) closeness to the child. A child with trauma can win attention to himself and take care of himself.

When working with injuries of children younger than 5 and older than 10 (adolescents), the same factors and the same trends persist, only the closer to the neonatal age, the stronger the focus of the consultant's attention shifts to the family, additional physiological hormonal factors and new stages of personal development are connected in adolescence.

Efforts to solve these tasks are ultimately aimed at interrupting the chain of injuries in the child, reducing the risks of repeated injuries. The choice of methods of work depends on the preferences and the nature of the qualification of the psychologist-consultant, who is free to choose the means familiar to him.

References

1. Alipbaeva, S.B. Methods of diagnosis of hyperactivity syndrome with attention deficit in the conditions of psychological, medical and pedagogical consultation / S.B. Alipbaeva, S.B. Bekbolatova // Psychiatry - Medicine: Healthcare of Kazakhstan, 2013. - Vol. 8. - P. 64-66.

2. Eidemiller, E. Psychology and psychotherapy of the family / E. Eidemiller, V. Justickis. - 4th ed., reprint. and add. – St. Petersburg.: Peter. - 2008. - 672 p.

3. Morrongello, B. A. Understanding the behavior of children associated with the risk of injury: an independent contribution of cognitive abilities and emotions: [Electronic resource] / B.A. Morrongello, S. Matheis // Journal of Child Psychology. - 2007. – Volume 32 (8). P. 926 – 937. – URL: http: doi:10.1093/jpepsy/jsm027.

4. Ponsford, J.L. Taking into account demographic data, severity of trauma, cognitive and emotional status / J.L. Ponsford, K. Draper, M. Schoenberger // Journal of the International Neuropsychological Society. – 2008. – Volume 14. – P. 233-242.

5. Shwebel, D. S. Does the time spent in kindergarten affect the risk of unintentional injury? : [Electronic resource] / D. S. Shwebel, K.M. Brezausek, J. Belsky // Journal of Child Psychology. - 2006. – Volume 31(2). – P. 184-193.

6. Shwebel, D. S. Why "accidents" are not accidental: using psychological science to understand and prevent unintentional childhood injuries: Electronic review / D. S. Shwebel // American psychologist. - 2019. – Volume 74 (9). – P. 1137-1147.

APPENDIX 4

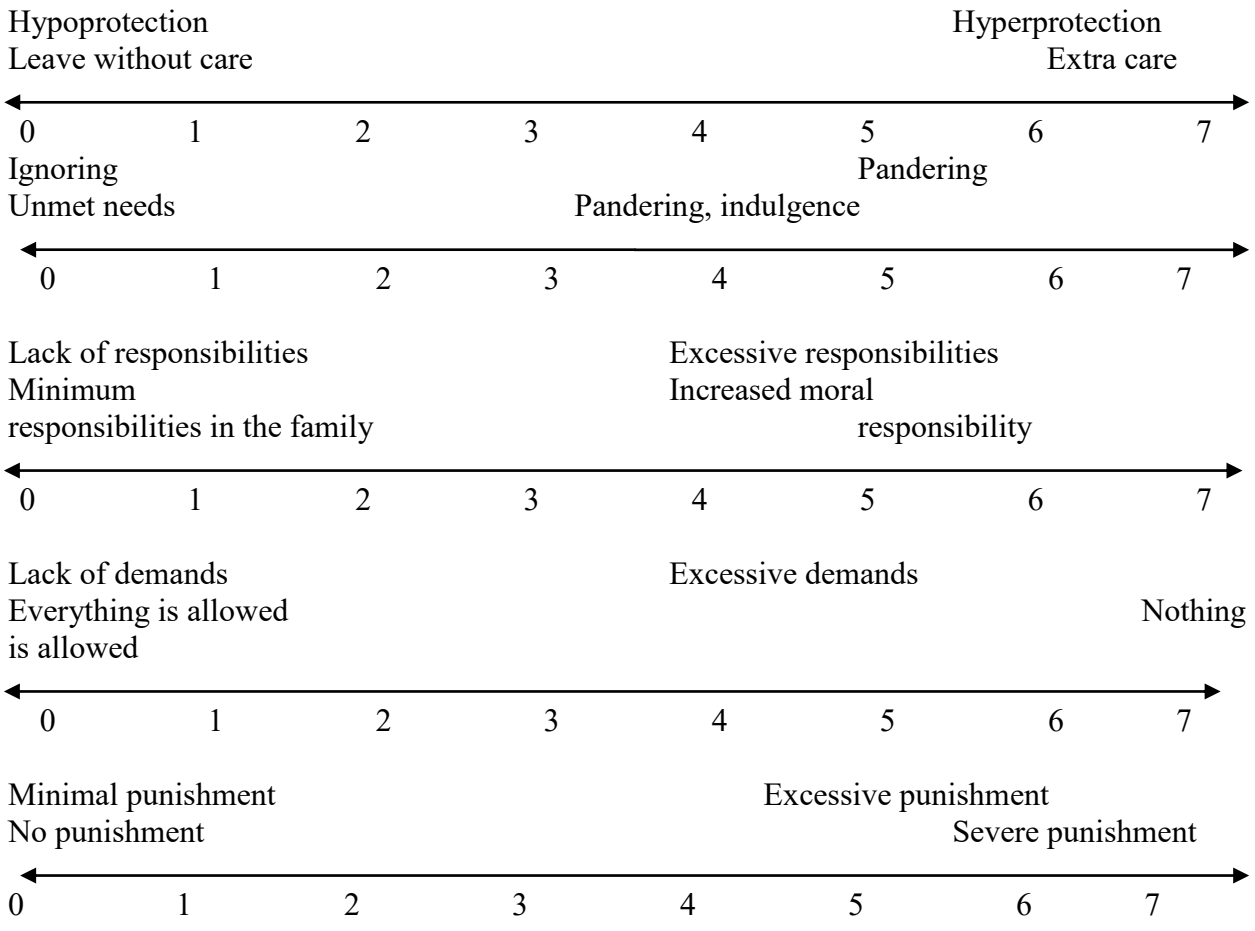
"Parents' subjective assessment of their parenting style" method

Dear parent!

Please describe your relationship with your child using the scales given below (explanations are given in the appendix). For this:

1. Read the contents of the scale (for clarification, see full description on the second sheet)

2. Mark the scale that matches your relationship with the child.



Appendix to the methodology

1. The level of protection in the process of education.

Hyperprotection (hyperprotection) – You give your child an extremely lot of effort, time, attention; strive to constantly be around the child, solve all the problems that arise for him, his upbringing has become the central thing in your life, the main thing that life is dedicated to. You vigilantly monitor the behavior of the child, sometimes limit his independent behavior, worry that something may happen to him.

Hypoprotection – the child from time to time appears on the periphery of your attention, "hands do not reach him", You often "do not reach him".

2. The degree of satisfaction of the child's needs.

Indulgence – You strive to maximize the satisfaction of any needs of the child, parental "pamper" him.

Ignoring the needs of a teenager – Your desire to meet the needs of a child is very weak. The child lacks emotional contact, communication with you, You almost do not know what the spiritual needs of the child are.

3. The number of requirements for a child in the family.

Excessive responsibilities – increased moral responsibility. The responsibilities of the child in this case are very great, sometimes seem exorbitant, at the limit of his capabilities.

Insufficient responsibilities – the child has a minimum number of responsibilities in the family, he is forgiven a lot. As a result, it is difficult for you to involve your child in any housework.

4. The number of requirements-

Excessive demands-prohibitions (dominance) –the child "can't do anything". You put before him a huge number of requirements that limit his freedom and independence.

Insufficiency of requirements-prohibitions – the child "everything is possible". Even if there are some prohibitions, the child easily violates, without fear of punishment.

5. The severity of sanctions.

Excessive sanctions (strict parenting style) – You are committed to severe punishments and strict prohibitions. You have an overreaction even to minor violations by the child.

Minimality of sanctions – You tend to do without punishments of the child or apply them rarely. More often you rely on encouragement, doubt the need for any punishments of children.

APPENDIX 5

Analysis of a clinical case of a family with children who have repeated injuries and were treated at the Regional Clinical Hospital No. 2

We will discuss the case of parents dealing with repeated traumas of children in order to show the possibility of using the proposed model and the technology of setting correctional tasks for psychologists.

A clinical case. A psychologist's conversation with the mother of a re-traumatized child (a psychologist's consultation is recommended by a doctor).

Description of the case. A woman, 35 years old, works, has been married for 10 years, has 2 children: a girl of 6 years and a boy of 8 years. According to the woman, children are welcome. She complains that her son is often traumatized: "I'm afraid to leave the children alone at home, they can destroy the house and die themselves." In education, a woman does not have clear principles and rules: family members prefer to get up at lunch, go to bed after midnight, watch TV for hours or fool around. Mom occasionally allows her son to skip school. Nowadays, women are increasingly aggressive towards people in general, including children. Connects a bad mood with difficulties at work, with large amounts of work.

The mother believes that the children have difficulties, because they are unreasonably afraid: the daughter is afraid of the dark, and the son has become afraid of dogs. At the same time, she notes that children, especially her son, behave fearlessly everywhere: in the yard, on the playground, at home, climbing on the table and even on the closet. She is sure that injuries cannot be prevented, so it is necessary to prepare somehow if a terrible injury happens. Mom wants to know what amulets need to be purchased. She wants to get specific instructions on how to prepare for a possible future, for one that she "anticipates", for her expectations about a terrible injury. She wants to buy the "right" amulets, since children can no longer be changed. They will still be injured, especially the son. The woman assumes that the reason is in the children. As a mother, she feels obliged to make every effort and warn children against serious injuries. She sees a way out only in mysticism, otherwise, her children will someday die or become disabled.

The woman would like to receive recommendations from doctors, but they do not give her exhaustive answers to the above questions. She believes that the decision first of all needs to be made by herself. Advice can further aggravate the situation. Discussing the issue of trauma in the family may bring even earlier realization of her fears. She does not involve her parents in solving

this problem, believing that they already help her a lot: they actively participate in the upbringing of children, spend a lot of time with them. With the father of the children, she has not solved serious issues for a long time, since they do not have a serious relationship, they just live together.

According to the woman, her son is re-traumatized, because she turned out to be "not like all people." She believes that she was just unlucky with increased injuries, since otherwise both of her children are almost wonderful, independent, loving.

The woman did not discuss her concerns with her relatives, she turned to a psychologist for a consultation, because the doctor advised, but she does not trust the psychologist. The result of the questionnaire filled out by the mother for parents and their surrogates is 19 points.

Case analysis. Mom complains about the increased mobility of the boy. She describes the child as hyperactive and sees part of the problems precisely in the difficulties of the boy's behavior, his increased motor activity, in himself. In order to analyze the type of upbringing, our author's method "Subjective assessment of parents of their type of upbringing" was offered to mom. As a result of the analysis of the mother's responses, it was revealed that the family adheres to hyperprotection, excessive sanctions and low requirements for children. Using the questionnaire "Psychological portrait of a parent" (G.V.Rezapkina), the features of a woman's priority values, her psycho-emotional state, self-esteem, and parenting style were determined. Her own experiences turned out to be her priority values, her mother's unstable psycho-emotional state, negative self-esteem, and authoritarian parenting style were noted.

The neurologist's examination and neuropsychological examination revealed no signs of hyperkinetic behavior disorder (ICD F90) in the boy. In this regard, the presented clinical case illustrates the results of our study well.

As a result of a conversation with mom and with the help of projective tests: "Non-existent animal", "Kinetic drawing of the family", "Family sociogram", the following individual characteristics were noted in the boy: anxiety, fearfulness, emotional rejection, feeling of inferiority in the family situation.

Consider the options for possible behavior of the child's mother. The choice of it can be different. Probably, the woman is guided by the following motives: "I want everything to be like all people", "I want to warn children", "I want normal children", "I don't want to swear with children about their increased activity", "I want everything to be fine", "I'm afraid of trouble", "I'm afraid not in time", "I know that I can only hope for myself" and so on.

Alternative values are found in the list of motives of a woman. Firstly, she wants the children to have normal behavior, in other words, to be like most children. However, at the same time, it

transmits social disorganization to children: a tendency to live without a regime. Secondly, she does not want to discuss the problem either with her parents or with specialists - she is afraid of causing trouble. The woman is sure that only she can help herself. However, he does not believe in his own strength, relying on amulets. She wants to figure out which ones are right. Mom finds herself in a situation of choice and the need to commit an act.

Let's consider several ways out of this situation, each of which is characterized by its own capabilities and limitations in terms of a woman's personal growth.

1st option. The woman does nothing, waits for events to develop: the children will grow up and stop being injured, and possibly get seriously injured, then, in her opinion, she will be forced to discuss this problem. At the same time, the woman runs away from taking responsibility, which does not contribute either to her personal growth or to reducing the threat of traumatization of her child. She is in a state of uncertainty. Uncertainty itself is perceived negatively by people. A person is not able to determine the ratio of motives, which of them is more significant, which of their subordination in the hierarchy of motives should be accepted.

What will he get in this case:

• her self-esteem will be preserved: I am independent, I am determined, I am enterprising, I know that I can only hope for myself;

• will have at least some children;

• will not bear the burden of responsibility.

What pays:

• spends time;

• increases the risk of injury in children.

What are the consequences:

• the issue of traumatic behavior of children has not been resolved, the causes have not been identified;

• children continue to be injured.

2nd option. A woman buys amulets, relieves herself of responsibility, shifting it to mysticism, worries less about children. The causes of traumatic behavior have not been clarified, the direction of exposure is unclear, and the risk of injury remains high. As a person, she becomes weaker, embarks on the path of personal self-destruction. Refusing to pay with responsibility, she pays with the destruction of her personality.

Likely consequences:

• her self-esteem will be preserved: I am independent, I am determined, I am enterprising, I know that I can only hope for myself;

• she has "protected" children;
• does not bear the burden of responsibility, she shifted it.
What pays:
• spends time;
• traumatic behavior of children.
What are the consequences:
the causes of traumatic behavior have not been identified.

3rd option.

If we assume that children will stop getting injured, then their behavior will become like most children with normal activity. But this situational change will not contribute to personal growth. For personal growth, a woman needs to take an active position, take responsibility. She can continue working with a consultant psychologist, find out the causes of traumatic behavior, determine the level of violations in the family, in children, in personality, in physiology. But in this case, she will not take concrete measures. In her opinion, a premonition about severe injuries may come true.

What will get:
• the need to make a decision about the reasons for the violation of children's behavior;
• internal voltage;
• unrealized desire.
What pays:
• health.

Consequences:
• destruction of the client's personality;
• difficulties in relationships with children, in their upbringing.
the 4th option.

A woman will run away from freedom of choice and responsibility in an illness, in an accident. For example, she will inadvertently injure herself, since her every day will be complicated by worries and fears for the lives of children, and heavy thoughts will distract attention. Her life

may be complicated by the struggle with somatic ailments. Subjectively, it is easier to endure bodily pain than to experience mental pain.

What does he get in this case:

• temporary "calm down", as there is no need to strain about the choice, she is not up to the choice;

• retains his idea of himself as experiencing, worrying, suffering.

What pays:

• health.

Consequences:

• destruction of personality;

• persistence of difficulties in upbringing;

• traumatic behavior of children, the reasons have not been clarified.

The 5th option.

A woman will decide to discuss her concerns with a specialist, tell about what she wants, what she is ready for, what efforts she will make. She can find out that the causes of traumatic behavior of children lie not so much in the children themselves as in the methods of their upbringing, in the relationship between parents, in the microsocium. In this case, she may face the need to work on her behavior and on relationships. This will be a mature act.

What will get:

• the ability to help children reduce the risk of injury;

• improving relationships with children;

• the possibility of personal power.

What will he pay with:

• effort to work on yourself;

• blissful irresponsibility, spontaneity of lifestyle.

Consequences:

• personal growth will become more holistic, more flexible;

• self-knowledge in a new capacity as a parent;

• self-discipline.

Let's consider and describe how the presented clinical case is reflected in our model (see 1.4)

Case N 1 clearly demonstrates the peculiarities of the social situation of the child's development (column B), in particular, the individual psychological characteristics of parents or persons replacing them (cell 2). Here, the possibility of psychotherapeutic intervention is high, and the risk forecast is average. According to the parenting style adopted in the family (cell 5), the possibility of psychotherapeutic intervention is average, the risk forecast is also average.

As a result of a psychodiagnostic examination using the same techniques that were used to solve research problems in this work, we found the following features:

1) the features of the parenting style that indicate the risk group: hyperprotection, excessive sanctions and insufficient requirements for the child, which exactly correlates with cell 5 of our model;

2) the individual characteristics of the parent contributing to the traumatization of the child: unstable psycho-emotional state and negative self-esteem of the mother. This clearly fits into cell 2 of the model. Therefore, it can be concluded that the presented clinical case is quite within the competence of a family psychologist.

3) the individual characteristics of the child falling into the risk group: anxiety, fearfulness, emotional rejection, feeling of inferiority in the family situation clearly correspond to cell 1 of the model. In this case, the scope of competence in correction belongs to a child psychologist.

According to the results of neuropsychological diagnostics and examination by a neurologist, the presence of physiological problems in the development of higher mental functions and behavior in the boy was not revealed (despite the fact that the mother insisted that the boy was hyperactive), therefore, this case is not related to cell 7 of the model, where correctional capabilities correspond to the competence of a neuropsychologist and neurologist.

In addition, some social features of the family composition were identified. According to mom, the father lives in the family as a cohabitant, the grandparents actively participate in the upbringing of children. This feature of the family correlates with cell 8 of our model: "Socio-psychological characteristics" and indicates the possibility of connecting to correctional work to prevent repeated injuries in a child and a social pedagogue.

In the light of the tasks facing the psychologist-consultant, we can talk about the main one: the need to help parents or persons replacing them, to understand why the child has repeated injuries, to realize personal responsibility in the prevention of repeated traumatization.

From the conversation with my mother, we see a mixture of beliefs: "a parent should do something about the behavior of children, at least buy amulets, and if he does nothing, then he does not care about children," "if children are injured, then they are the reason." Such beliefs of the mother suggest the existence of reasons for physical unintentional injuries, hiding not only in the child.

Client: "As a mother, I have to be caring, I have to protect my children in any way. If I'm not like that, then I'm indifferent and irresponsible...", "everyone has children like children."

Possible questions from the consultant: From whom did you hear this idea? Who did you discuss it with? What exactly were you told? What is your attitude to this idea now? What ways do you see to protect children from injury, name 5-7. Describe which children "everyone has" and how does your child differ from them? Describe a child who is not injured at all.

What are its features? Describe the worst injury that can happen? What do you think is the mechanism of action of amulets? Name a few options that, in your opinion, can protect children from injury. Imagine why your children are not like everyone else. Describe your children and their behavior if they stop being injured.

Correctional tasks: it is necessary to provide the client with the opportunity to take an active position, make an informed choice, take responsibility for the safety of children's life. Understanding the processes taking place in the family will help a woman to make a conscious act: systematically, together with a specialist, to identify the causes of traumatic behavior of children, to determine the direction of correctional work, to distinguish what a specialist can help her and which one, and what she, as a loving mother, can and should do herself, and so on. In this case, the mother chooses herself: what, how, where and when she will do. The responsibility falls on her.

APPENDIX 6

1. Calculations for individual variables

1.1 Variable codes

Child injury levels:

1 - 2 and > injuries; 2 - 1 injury; 3 - 0 injuries.

Gender:

1 - boy; 2 - girl.

Self-esteem in the "Non-existent animal" and "Family sociogram" methodology:

1 - low; 2 - adequate; 3 - overestimated;

Temperament:

1 - sanguine; 2 - choleric; 3 - phlegmatic; 4 - melancholic; 5 - mixed.

Priority values:

1 - relationships with children; 2 - relationships with colleagues; 3 - own experiences.

Psychoemotional state:

1 - prosperous; 2 - dysfunctional; 3 - unstable.

Self-assessment:

1 - positive; 2 - negative; 3 - unstable.

Parenting style:

1 - democratic; 2 - liberal; 3 - authoritarian; 4 - the style has not been formed.

1.2 The relationship between the level of repeated injuries and the sex of the child

To determine the presence/absence of a statistically significant relationship between the level of repeated injuries and the sex of the child, the Pearson criterion $\chi 2$ was used.Calculations were carried out in the SPSS 23 program.

Table 1 – Table of sampling frequencies by child's gender and the level of repeated injury

			Gender of the child		
			boy	girl	Total
Injury	Injury 2 and >	Number of injuries	56	19	75
		Expected Quantity	52,0	23,0	75,0
	1 Injury	Expected Quantity	50	25	75
	Quantity	Expected Quantity	52,0	23,0	75,0
	No injuries	Expected Quantity	50	25	75
	Number	Expected Quantity	52,0	23,0	75,0
Total			156	69	225
			156,0	69,0	225,0

Combination table Injury * Sex of the child

Table 2 – Chi-square criterion

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	1,505a	2	,471
Likelihood relations	1,534	2	,464
Linear-linear connection	1,124	1	,289
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 23.00.

1.3 The relationship between the level of repeated injuries and the temperament of the child

Table 3 – Table of sample distribution frequencies by child's temperament and the level of repeated injury

			Temperament					Total
			sanguine	choleric	phlegmatic	melancholic	mixed	
Injury	2 and > injuries	Quantity	15	22	18	11	9	5
		Expected quantity	18,0	16,3	17,3	12,7	10,7	5,0
	1 injury	Quantity	19	15	18	13	10	5
		Expected number	18,0	16,3	17,3	12,7	10,7	5,0
	of no injuries	Quantity	20	12	16	14	13	5
		Expected quantity	18,0	16,3	17,3	12,7	10,7	5,0
Total		Quantity	54	49	52	38	32	25
		Expected quantity	54,0	49,0	52,0	38,0	32,0	25,0

Table 4 – criterion $\chi 2$

	Quantity	Degree of freedom	Asymptotic significance (2-sided)
criterion $\chi 2$	5,337	8	,721
Likelihood relations	5,275	8	,728
Linear-linear connection	,433	1	,511
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 10.67.

1.4 The relationship between the level of repeated injury and hyperactivity of the child

The presence/absence of hyperactivity was determined in three ways:
- according to the doctor's diagnosis;
- using the test of P. Baker and M. Alvord;
- according to the parents.
Accordingly, the chi-square criteria were calculated for each method separately.

1.4.1 Hyperactivity according to the doctor's diagnosis

Table 5 – Table of sampling frequencies by the presence/absence of hyperactivity of children according to the doctor's diagnosis and the level of their repeated injuries

			ADHD diagnosis		Total
			no	yes	
Injury	2 and >	Quantity	66	9	75
		Expected quantity	68,3	6,7	75,0
	1 Injury	Quantity	69	6	75
		Expected quantity	68,3	6,7	75,0
	No injuries	Quantity	70	5	75
		Expected quantity	68,3	6,7	75,0
Total		Quantity	205	20	225
		Expected quantity	205,0	20,0	225,0

Table 6 – criterion χ2

criterion χ2	1,427a	2	,490
Linear-linear connection	1,388	2	,500
Likelihood relations	1,311	1	,252
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 6.67.

1.4.2 Hyperactivity according to the test of P. Baker and M. Alvord

Table 7 – Table of sample distribution frequencies by the presence/absence of hyperactivity of children detected using the P. Baker and M. Alvord test, and the level of their repeated traumatism

			ADHD Test		
			no	yes	Total
Injury	2 and >		59	16	75
			63,7	11,3	75,0
	1		64	11	75
			63,7	11,3	75,0
	0		68	7	75
			63,7	11,3	75,0
Total			191	34	225
			191,0	34,0	225,0

Table 8 – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	4,227	2	,121
Likelihood relations	4,273	2	,118
Linear-linear connection	4,191	1	,041
Number of allowed observations	225		

1.4.3 Hyperactivity according to parents

Table 9 – Table of sampling frequencies by the presence/absence of hyperactivity of children according to parents, and the level of repeated injuries

			ADHD		
			-	+	Total
Injury	2 ≥		29	46	75
			42,3	32,7	75,0
	1a		43	32	75
			42,3	32,7	75,0
	0		55	20	75
			42,3	32,7	75,0
Total			127	98	225
			127,0	98,0	225,0

Cross table

Table 10 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	18,367a	2	,000
Likelihood relations	18,743	2	,000
Linear-linear connection	18,250	1	,000
Number of allowed observations	225		

To determine the significance of differences in the proportions of the trait, the criterion "Fisher Angular transformation" was used. The results of comparisons of the proportions of children with signs of MMD and hyperactivity, depending on the method of assessment, as well as comparisons of the proportions of children, depending on the number of injuries, are presented in the table.

Table 11 – Results of comparisons of the proportions of children with signs of MMD and hyperactivity, depending on the method of assessment, as well as comparisons of the proportions of children, depending on the number of injuries

A method for assessing the presence of hyperactivity	2 ≥	1	0	The level of statistical significance, p
1. According to the parents	46 (61,3%)	32 (42,7%)	20 (26,7%)	0,034* 0,001*** 0,059
2. Alvord and Baker Test (parents' survey)	16 (21,3%)	11 (14,7%)	7 (9,3%)	0,460 0,068 0,448
3. Diagnosis of a psychiatrist, a psychoneurologist	10 (13,3%)	6 (8%)	5 (6,7%)	0,425 0,273 1,000
4. Objective neuropsychological examination	9 (12%)	6 (8%)	4 (5,3%)	0,583 0,244 0,742
The level of statistical significance, p	p12<0,001*** p13<0,001*** p14<0,001*** p23=0,282 p24=0,189 p34=1,000	p12<0,001*** p13<0,001*** p14<0,001*** p23=0,300 p24=0,300 p34=1,000	p12=0,010* p13=0,002** p14<0,001*** p23=0,765 p24=0,530 p34=1,000	–

Comparisons, there are significant differences between the proportions of re-traumatized and injured 1 time, and very highly significant differences between re-traumatized and without injuries, while there are no differences between the proportions of injured 1 time and without injuries – according to parents. According to the results of the Alvord and Baker test (a survey of parents), the doctor's diagnosis and an objective neuropsychological examination, no significant differences were found between the proportions of those injured a different number of times, this is due, however, to small statistics of such cases, and not so much with their ratio. When comparing the proportion of children identified as hyperactive in various ways, there are very significant differences between those identified from the words of the parents, and the rest of the methods – for re-traumatized, and for injured 1 time. For children without injuries, the differences are also significant, but not so high – when comparing the proportions of hyperactive

children according to parents and according to the Alvord and Baker test. this is partly explained by the initially lower statistics of children without injuries, in comparison with the number of children with injuries. When comparing other assessment methods with each other (the Alvord and Baker test, the diagnosis of a psychiatrist, neuropsychological examination), regardless of the number of injuries in children, there are no statistically significant differences. In this case, this is due not only to small statistics, but also in general with the agreement of assessments, especially according to the doctor's diagnosis and according to objective neuropsychological examination. The evaluation of the Alvord and Baker test, although it gives inflated values compared to the doctor's diagnosis and neuropsychological research, however, it tends to them more than to the inflated results of the assessment of hyperactivity from the words of parents.

1.5 The relationship between the level of repeated traumatism of children and the priority values of parents

Table 12 – Table of sampling frequencies by the psycho-emotional state of parents and the level of repeated traumatism of children

			Prioritization_values			
			relationships with children	relationships with colleagues	own experiences	Total
Injury	2 ≥		29	20	26	75
			35,3	17,7	22,0	75,0
	1		35	19	21	75
			35,3	17,7	22,0	75,0
			42	14	19	75
			35,3	17,7	22,0	75,0
Total			106	53	66	225
			106,0	53,0	66,0	225,0

Table 13 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	4,748a	4	,314
Likelihood relations	4,774	4	,311
Linear-linear connection	3,623	1	,057
Number of allowed observations	225		

1.6 The relationship between the level of repeated traumatism of children and the psycho-emotional state of parents

Table 14. – Table of sample distribution frequencies according to the psycho-emotional state of parents and the level of repeated traumatism of children

			Psychoemotional state			
			prosperous	dysfunctional	unstable	Total
Injury	2		24	30	21	5
			29,3	24,3	21,3	5,0
	1		29	27	19	5
			29,3	24,3	21,3	5,0
	0		35	16	24	5
			29,3	24,3	21,3	5,0
Total			88	73	64	25
			88,0	73,0	64,0	25,0

Table 15 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	7,128a	4	,129
Likelihood relations	7,419	4	,115
Linear-linear connection	640	1	,424
Number of allowed observations	225		

1.7. The relationship between the level of repeated traumatism of children and parents' self-esteem

Table 16 – Table of sampling frequencies by parents' self-assessment and the level of repeated traumatism of children

			Self-esteem positive	negative	unstable	Total
Injury	2 ≥		31	23	21	75
			42,3	17,0	15,7	75,0
	1		46	16	13	75
			42,3	17,0	15,7	75,0
	0		50	12	13	75
			42,3	17,0	15,7	75,0
Total			127	51	47	225
			127,0	51,0	47,0	225,0

Table 17 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	11,111a	4	,025
Likelihood relations	11,177	4	,025
Linear-linear connection	7,479	1	,006
Number of allowed observations	225		

1.8 The relationship between the level of repeated traumatism of children and parenting style

Table 18 – Table of sampling frequencies by parents' self-assessment and the level of repeated traumatism of children

			Style_education Liberal	Democratic	authoritarian	has not formed	Total
Injury	2		25	29	15	6	75
			30,7	21,0	13,0	10,3	75,0
	1		29	24	9	13	75
			30,7	21,0	13,0	10,3	75,0
	0		38	10	15	12	75
			30,7	21,0	13,0	10,3	75,0
Total			92	63	39	31	225
			92,0	63,0	39,0	31,0	225,0

Table 19 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	16,750a	6	,010
Likelihood relations	18,132	6	,006
Linear-linear connection	,006	1	,939
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 10.33.

1.9 The relationship between the private scales of parenting style and the level of repeated traumatism of children

Hypothesis: for parents of children with different levels of repeated injuries, the severity of parenting style scales varies.

The independent variable is the level of repeated injuries.

The dependent variable is the level of severity of parenting style scales (patronage, consideration of needs, requirements, sanctions).

The distribution of data collected using the Parenting Style methodology differs statistically significantly ($p<0.01$) from normal. Therefore, the nonparametric Kruskal-Wallace H criterion should be used for data processing.

However, the samples are quite large (75 subjects in each group), so the use of variance analysis is acceptable.

Therefore, the calculations are given in two versions.

1.9.1 Nonparametric Kruskal-Wallace criterion

Table 20 – Table of ranks of the Kraskal-Wallace criterion H Ranks

	Injury	N	Average Rank
Patronage	2 ≥	75	129,98
	1	75	113,03
	0	75	95,99
	Total	225	
Account_consumption	2 ≥	75	101,76
	1	75	108,88
	0	75	128,36
	Total	225	
Responsibilities	2 ≥	75	102,13
	1	75	116,83
	0	74	118,61
	Total	224	
Requirements	2 ≥	75	109,79
	1	75	114,07
	0	75	115,14
	Total	225	
Sanction	2 ≥	75	148,84
	1	75	104,25
	0	75	85,91
	Total	225	

Table 21 – Calculation of the Kruskal-Wallace H criterion

	χ2	degree of freedom	Asymptotic significance (2-sided)
Patronage	10,761	2	,005
Account_consumption	7,269	2	,026
Responsibilities	3,154	2	,207
Requirements	,303	2	,859
Sanction	39,299	2	,000

1.9.2 Single-factor analysis of variance

Table 22 – Criterion of uniformity of variance

	2,693	2	222	,070
Patronage	1,939	2	222	,146
Account_consumption	1,735	2	221	,179
Responsibilities	,537	2	222	,585
Requirements	,236	2	222	,790
Sanction				

This criterion allows us to understand whether the use of the method of variance analysis is correct. In this case, there are no statistically significant differences (p>0.05) between the variances, respectively, the use of variance analysis is permissible.

Table 23 – Results of variance analysis ANOVA

		Сумма квадратов	ст.св.	Средний квадрат	F	Значимость
Patronage		16,062	2	8,031	5,049	,007
		353,120	222	1,591		
		369,182	224			
Account_consumption		6,676	2	3,338	2,836	,061
		261,307	222	1,177		
		267,982	224			
Responsibilities		3,204	2	1,602	1,541	,217
		229,792	221	1,040		
		232,996	223			
Requirements		,347	2	,173	,144	,866
		267,413	222	1,205		
		267,760	224			
Sanction		57,556	2	28,778	23,912	,000
		267,173	222	1,203		
		324,729	224			

1.10 The relationship between the level of repeated traumatism of children and the indicators of neuropsychological examination. In the study, the samples are sufficient in size (75 subjects in each group), which allows the use of single-factor analysis of variance.

One-factor analysis of variance

Table 24 – Criterion of uniformity of variance

				Significance
Concentration of attention	1,485	2	222	,229
Movement	,224	2	222	,799
Gnosis	1,835	2	222	,162
Speech	,348	2	221	,707
Memory	,250	2	222	,779
Intelligence	,365	2	217	,694
Total score	,162	2	222	,850

This criterion allows us to understand whether the use of the method of variance analysis is correct. In this case, there are no statistically significant differences ($p>0.05$) between the variances, respectively, the use of variance analysis is permissible.

Table 25 – Results of ANOVA variance analysis

		The sum		The average square	F	Significance
Concentration of attention		4,016	2	2,008	3,589	,029
		124,180	222	,559		
		128,196	224			
Movement		1,087	2	,543	1,482	,230
		81,413	222	,367		
		82,500	224			
Gnosis		,607	2	,303	1,131	,325
		59,533	222	,268		
		60,140	224			
Speech		1,309	2	,655	1,791	,169
		80,752	221	,365		
		82,061	223			
Memory		1,616	2	,808	2,458	,088
		72,947	222	,329		
		74,562	224			
Intelligence		,242	2	,121	,332	,718
		78,890	217	,364		
		79,132	219			
Total score		38,587	2	19,293	1,757	,175
		2437,853	222	10,981		
		2476,440	224			

1.11 Calculation of private schools

Pearson's χ2 criterion was used for data processing.

1.11.1 Nonexistent Animal Method - Anxiety Scale

Table 26 – Table of sampling frequencies on the Anxiety scale and the level of repeated injury Combination Table Trauma *Anxiety

			Anxiety		
			,00	1,00	Total
Injury	2	Number of injuries	30	45	75
		Expected Quantity	37,0	38,0	75,0
	1	Number of injuries	35	40	75
		Expected Quantity	37,0	38,0	75,0
	0	Number of injuries	46	29	75
		Expected Quantity	37,0	38,0	75,0
Total		Number of injuries	111	114	225
		Expected Quantity	111,0	114,0	225,0

Table 27 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	7,148a	2	,028
Likelihood relations	7,201	2	,027
Linear-linear connection	6,798	1	,009
Number of allowed observations	225		

1.11.2 Family Sociogram methodology - Family Conflict scale

Table 28 – is a table of sample distribution frequencies on the Family Conflict scale and the level of repeated injuries. Combination Table Injury *Conflict in the family

			Conflict in the family		Total
			,00	1,00	
Injury	2	Number of injuries	38	37	75
		Expected Quantity	49,0	26,0	75,0
	1	Number of injuries	45	30	75
		Expected Quantity	49,0	26,0	75,0
	0	Number of injuries	64	11	75
		Expected Quantity	49,0	26,0	75,0
Total		Number of injuries	147	78	225
		Expected Quantity	147,0	78,0	225,0

Table 29 – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	21,311a	2	,000
Likelihood relations	22,968	2	,000
Linear-linear connection	19,810	1	,000
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 26.00.

1.11.3 Method Kinetic drawing of the family – A nxiety scale

Table 30 - Table of sample distribution frequencies on the Anxiety scale and the level of repeated injury Combination Table Trauma * Anxiety

			Anxiety		Total
			,00	1,00	
Injury	2	Number of injuries	31	44	75
		Expected Quantity	40,3	34,7	75,0
	1	Number of injuries	39	36	75
		Expected Quantity	40,3	34,7	75,0
	0	Number of injuries	51	24	75
		Expected Quantity	40,3	34,7	75,0
Total		Number of injuries	121	104	225
		Expected Quantity	121,0	104,0	225,0

Table 29 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	10,871a	2	,004
Likelihood relations	11,041	2	,004
Linear-linear connection	10,680	1	,001
Number of allowed observations	225		

For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 34.67.

1.11.4 Method Kinetic drawing of the family - the Feeling of inferiority scale

Table 32 – Table of sample distribution frequencies on the Feeling of inferiority scale and the level of repeated injury

			Kinetic drawing of the family - Feeling of inferiority		
			,00	1,00	
Injury	2	Number of injuries	37	38	75
		Expected Quantity	46,0	29,0	75,0
	1	Number of injuries	48	27	75
		Expected Quantity	46,0	29,0	75,0
	0	Number of injuries	53	22	75
		Expected Quantity	46,0	29,0	75,0
Total		Number of injuries	138	87	225
		Expected Quantity	138,0	87,0	225,0

Table 33 – – criterion χ2

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's χ2	7,534a	2	,023
Likelihood relations	7,517	2	,023
Linear-linear connection	7,164	1	,007
Number of allowed observations	225		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 29.00.

2. Multidimensional calculations

2.1 Discriminant analysis

For a preliminary assessment of variables distinguishing groups of children with different levels of repeated traumatization, a discriminant analysis was carried out. Due to the specifics of the data (most of the variables are binary, and quantitative variables are not normally distributed), the use of discriminant analysis is rather incorrect, and in this case it is exploratory in nature, allowing you to pre-determine a set of discriminating variables - to see which variables remain in the analysis if we consider the entire set of variables at the same time. That is, in fact, these are the most significant variables that distinguish these three groups of subjects.

Discriminant analysis was carried out by the method of step selection.

Table 1 – Statistics of deleted and entered variables in the analysis

Entered/deleted variables a,b,c,d									
		Wilkes ' Lambda							
						F			
step	introduced	Statistics	1	2	3	Statistics	1	2	Significance
1	Sanctions	,822	1	2	216,000	23,313	2	216,000	,000
2	Insufficiently differentiated relations	,765	2	2	216,000	15,405	4	430,000	,000
3	Conflicts in the family	,708	3	2	216,000	13,443	6	428,000	,000
4	Aggression	,680	4	2	216,000	11,331	8	426,000	,000

At each step, a variable is introduced that minimizes the total Wilkes lambda.

a. The maximum number of steps is 80. b. The minimum quotient F for input is 3.84.

c. The maximum quotient F for deletion is 2.71. d. The F level, tolerance or VIN are insufficient for further calculations.

This table shows variables whose differences between the groups are statistically significant ($p<0.01$). These variables include: Sanctions (Parenting Style Methodology); Insufficiently differentiated attitude towards family members (Family Sociogram Methodology); Conflicts in the family (Family Sociogram Methodology) and Aggression (Non-Existent Animal Methodology).

Table 2 – Summary of canonical discriminant functions

Function	Eigenvalue	% variance	Total %	Canonical Correlation
1	,447a	96,5	96,5	,556
2	,016a	3,5	100,0	,127

a. The first 2 of the canonical discriminant functions were used for the analysis.

The table shows the informativeness of discriminant functions. The first one explains 96.5% of the total variance of the data.

Table 3 – Functions in centroids of groups

Injury	Function	
	1	2
2≥	,870	-,068
1	-,128	,178
0	-,742	-,110

Non-standardized canonical discriminant functions calculated in group averages

In this case, we can conclude how the groups are distributed at the poles of the centroids. Accordingly, the higher the value of the first function, the higher the level of repeated injury.

Table 4 – Standardized coefficients of canonical functions

Coefficients of the standardized canonical discriminant function		
	function	
	1	2
Sanctions	,643	-,436
Aggression	,362	,275
Conflicts in the family	,445	,788
Insufficiently differentiated relationships in the family	-,561	,271

This table allows you to understand the ratio of contributions of each variable to each of the canonical functions. Accordingly, for the first function, the greatest contribution is made by the variables Sanction (the positive pole of the function) and Insufficiently differentiated relations in the family (the negative pole). The smallest contribution of the variable Aggression.

Thus, the higher the level of the variable Sanction, the higher the level of injury.

2.2. Loglinear analysis

The data on the results of the "Non-existent animal", "Family sociogram", "Kinetic drawing of the family" methods are presented in binary data (there is a sign/there is no sign), therefore, a long-line analysis was used for their processing. Calculations were carried out in the SPSS 23 program.

Loglinear analysis is used in the analysis of conjugacy tables of several categorical variables. The analysis considers combinations of all variables among themselves. However, in this work, the main thing was to identify how the level of repeated traumatism is related to other variables, then when analyzing the combination of other variables with each other (not containing the variable "trauma") not considered.

2.1.1 "Non-existent animal"

Table 1- Effects of K-order and higher orders

	K	degree of freedom	Likelihood relations		Pearson		Number of iterations
			Хи-квадрат	Значимость	Хи-квадрат	Значимость	
K-factor effects and higher order effects	1	2303	1296,674	1,000	4987,160	,000	0
	2	2291	1062,246	1,000	3144,405	,000	2
	3	2227	569,045	1,000	2042,684	,998	16
	4	2027	190,166	1,000	264,908	1,000	20
	5	1621	8,735	1,000	4,710	1,000	7
	6	1061	1,011	1,000	,532	1,000	3
	7	529	,167	1,000	,086	1,000	2
	8	185	,000	1,000	,000	1,000	2
	9	40	,000	1,000	,000	1,000	2
	10	4	,000	1,000	,000	1,000	2
K-factor effects	1	12	234,428	,000	1842,755	,000	0
	2	64	493,200	,000	1101,721	,000	0
	3	200	378,879	,000	1777,776	,000	0
	4	406	181,431	1,000	260,198	1,000	0
	5	560	7,724	1,000	4,178	1,000	0
	6	532	,844	1,000	,445	1,000	0
	7	344	,167	1,000	,086	1,000	0
	8	145	,000	1,000	,000	1,000	0
	9	36	,000	1,000	,000	1,000	0
	10	4	,000	1,000	,000	1,000	0

The degree of freedom used for these checks is not adjusted for zero values in the structure and sample zeros. Criteria using this degree of freedom can be conservative.

a. Checks that k-factor effects and higher-order effects are zero.

b. Checks that k-factor effects are zero.

Analysis of the effects of K-order and higher orders shows that the interaction of variables, starting from the fourth order, does not significantly affect the model. At the same time, among the interactions of the first, second and third order there are those that have a significant impact on the model.

The table below shows the results of particular relationships of variables, while only those results where the level of repeated injury is present as one of the variables are left in the table.

Table 3 – P articular relationships

Effect	degree of freedom	Partial chi-square	Significance	Number of iterations
Trauma -Self-Esteem-Conflict	4	5,829	,212	17
Trauma- Self-Esteem-Egocentrism	4	,721	,949	20
Trauma-Conflict-Egocentrism	2	8,073	,018	20
Trauma-Self-Esteem-Undif. Relationships	4	31,913	,000	6
Trauma-Conflict-Undif. relationships	2	28,014	,000	6
Trauma-Egocentrism-Undif. relationships	2	6,202	,045	20
Trauma-Self-Esteem-Insuf. dif. relat.	4	5,819	,213	20
Trauma- conflict. - indif. relationships	2	3,422	,181	20
Trauma Egocentr. Insuf. Dif. relationships	2	8,463	,015	20
Trauma -Undifferentiated relationships	2	1,643	,440	20
Injury- Self-assessment	4	3,451	,485	4
Trauma - Conflict in the family	2	19,215	,000	4
Trauma - Egocentrism	2	7,428	,024	4
Trauma Undifferentiated	2	,009	,995	4
Trauma-Insuf. differentiated relationships	2	24,070	,000	4

Data analysis shows that the three-factor interaction Injury has the greatest statistical significance (p<0.001)*Self-assessment* Undifferentiated "I", followed by Trauma*Conflicts in the family* Undifferentiated "I".

Of the two-factor interactions, the most significant (the largest chi-square) are Trauma*Insufficiently differentiated relationships and Trauma*Conflicts in the family.

2.2.3. "Kinetic drawing of the family"

Table 4 – Effects of K-order and higher orders

		degree of freedom	Likelihood relations		Pearson		Number of iterations
	K		Хи-квадрат	Significance	Chi-square	Significance	
K-factor effects and higher-order effects	1	95	581,995	,000	982,040	,000	0
	2	88	542,326	,000	959,947	,000	2
	3	68	262,119	,000	245,474	,000	11
	4	38	33,821	,663	37,049	,513	20
	5	13	,707	1,000	,385	1,000	4
	6	2	,000	1,000	,000	1,000	3
K-factor effects of b	1	7	39,669	,000	22,093	,002	0
	2	20	280,208	,000	714,472	,000	0
	3	30	228,298	,000	208,425	,000	0
	4	25	33,114	,128	36,664	,062	0
	5	11	,707	1,000	,385	1,000	0
	6	2	,000	1,000	,000	1,000	0

The degree of freedom used for these checks is not adjusted for zero values in the structure and sample zeros. Criteria using this degree of freedom can be conservative.

a. Checks that k-factor effects and higher-order effects are zero.

b. Checks that k-factor effects are zero.

c. Statistically significant effects of the first, second and third orders.

Table 5 – Particular relationships

Effect	Degree of freedom	Partial chi-square	Significance	Number of iterations
Injury Favorable family situation Anxiety	2	102,704	,000	16
Trauma Favorable family situation Conflict	2	,174	,917	20
Trauma Anxiety Conflict	2	3,462	,177	20
Trauma Favorable family situation Feeling of inferiority	2	2,608	,271	18
Trauma Anxiety Feeling of inferiority	2	4,811	,090	17
Trauma Conflict in the family Feeling of inferiority	2	6,904	,032	19
Trauma Favorable family situation Hostility	2	1,488	,475	20
Trauma Anxiety Hostility	2	,358	,836	20
Trauma Confl_family Hostility	2	4,123	,127	20
Trauma A sense of incompleteness Hostility	2	10,664	,005	20
Trauma Favorable family situation	2	1,085	,581	11
Trauma Anxiety	2	6,138	,046	11
Trauma Conflict in the family	2	,964	,617	11
Trauma Feeling of inferiority	2	2,256	,324	11
Trauma Hostility	2	,498	,779	11

2.3. Decision Tree

Data processing was carried out in SPSS 23 by the method of constructing a decision tree (classification tree). The decision tree is a logical classification algorithm based on the search for internal patterns in the data.

Table 6 - Model Summary

Specifications	Construction method	
	Dependent variable	Injury
	Independent variables	Gender of the child, Age of the child, Aggression, Anxiety, Self-esteem, Egocentrism, Fear of activity, Tendency of activity, Impulsivity, Internal conflict, Neurotic reactions, Self-esteem, Conflict in the family, Egocentrism, Undifferentiation, Insufficiently differentiated relationships, Favorable family situation, Anxiety, Conflict in the family, Feelings of Inferiority, Hostility, ADHD doctor, ADHD Test, ADHD parent, Temperament, Priority values, Psycho-emotional state, Self-esteem, Style of Education, Patronage, Consideration of needs, Responsibilities, Requirements, Sanctions, Concentration, Movement action, Gnosis, Speech function, Memory, Intelligence, But General score
	Check	no
	Maximum number of levels	3
	Minimum number of observations in the parent node	100
	Minimum number of observations in a child node	50
Results	Independent variables are included	Sanctions, Insufficiently differentiated relations
	Number of nodes	5
	Number of end nodes	3
	Depth	2

Table 7 – Risk assessment

Evaluation	Standard error
,511	,033

Construction method: CHAID Dependent variable: Injury

The probability of incorrect classification is 51 %

APPENDIX 7

Table 1 – Comparison of questionnaire data on the relationship with the number of injuries in a child

Comparison criteria	Age of children	
	0 - 18 (n=497)	5 -10 (n=310)
Injury Risk Score (Spearman Correlation coefficient)	0,385 p<0.001	0,404 p<0.001
Number of adults in the family (Pearson chi-squared)	21,866 Df=9 p<0.01	20,36 Df=9 p<0.05
Sex of the child (Pearson chi-squared)	10,29 p<0.05 average ranks: 257.31 - boys 237.65 - girls	7,042 p>0.05 no connection
Number of children in a family (Pearson chi-squared)	no connection p>0.05	no connection p>0.05
Anonymity of filling out the questionnaire (Pearson's chi-square)	no connection p>0.05	no connection p>0.05

Significant differences are highlighted in bold

Table 2 – Comparison of questionnaire data on connection with injury risk score

Injury risk score	Age of children	
	0 - 18 (n=497)	5 - 10 (n=310)
Number of adults in the family (Kraskal-Wallace criterion H)	9,716 middle ranks 258,04 – 1 234,45 – 2 288,90 – 3 250,10 – 4 p<0.05	11,602 middle ranks 162,35 – 1 140,48 - 2 184,34 – 3 167,14 – 4 p<0.01
Sex of the child (Mann-Whitney criterion U)	no connection p>0.05	middle ranks p<0.05 165,31 – boys 144,04 – girls
Number of children in a family (Kraskal-Wallace criterion H)	no connection p>0.05	no connection p>0.05
Anonymity of filling out the questionnaire (Mann-Whitney U criterion)	no connection p>0.05	no connection p>0.05

Significant differences are highlighted in bold

Comparison of questionnaire data for parents and persons replacing them

The whole selection

1. The relationship of the injury risk score and gender

The U Mann-Whitney criterion was used to compare the groups

Table 3 – Ranks for calculating the Mann-Whitney U criterion

	Gender	N	middle ranks	Sum of ranks
Injury risk score	boy	287	257,31	73847,50
	girl	210	237,65	49905,50
	Total	497		

Table 4 – Mann-Whitney U criterion for comparing the injury risk score with the floor

Statistical criteria	Injury risk score
U Manna-Whitney	27750,500
Wilcoxon's W	49905,500
Z	-1,512
Asymptotic significance (2-sided)	,130

a. Grouping variable: Gender

There was no statistically significant relationship ($p>0.05$) between the injury risk score and gender.

2. The relationship between the injury risk score and the number of children in the family

The Kraskal-Wallace H criterion was used to compare the groups.

Table 5 – Ranks for calculating the Kruskal-Wallace H criterion

	Number of children in the family	N	middle ranks
Injury risk score	1,00	167	173,44
	2,00	127	178,69
	3,00	45	192,97
	4,00	12	222,50
	5,00	5	106,90
	Всего	356	

Table 6 –Kraskal-Wallace H criterion for comparing the injury risk score in families with different numbers of children

Statistical criteria a,b	
	Injury risk score
Chi-squared	5,943
degree of freedom	4
Asymptotic significance	,203
a. Kraskel-Wallis criterion b. Grouping variable: Number of children in a family.	

There was no statistically significant relationship ($p>0.05$) between the injury risk score and the number of children in the family.

3. The relationship between the number of injuries and the number of children in the family. Cr. Pearson's chi-square

Table 7 – Combination table Number of children in the family * Number of injuries

		Number of injuries				
		1,00	2,00	3,00	4,00	Total
Number of children in the family	,00	51	47	26	17	141
	1,00	53	55	31	28	167
	2,00	50	42	18	17	127
	3,00	16	13	7	9	45
	4,00	6	0	4	2	12
	5,00	2	2	1	0	5
Total		178	159	87	73	497

Table 8 – Pearson chi-square criterion

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	11,924[a]	15	,685
Likelihood relations	16,063	15	,378
Linear-linear connection	,004	1	,950
Number of allowed observations	497		

a. For the number of cells 8 (33.3%), a value less than 5 is assumed. The minimum assumed number is 73.

Table 9 – Correlation coefficients of Phi and V Kramer

		Value	Approximate significance
Nominal/nominal value	Fi	,155	,685
	V Kramer	,089	,685
Number of allowed observations		497	

Symmetric measures

There was no statistically significant relationship ($p>0.05$) between the number of injuries and the number of children in the family.

4. The relationship between the injury risk score and the number of adults

Table 10 – Ranks for calculating the Kruskal-Wallace H criterion

	Number of adult family members	N	Average rank
Injury risk score	1,00	51	258,04
	2,00	274	234,45
	3,00	86	288,90
	4,00	86	250,10
	Всего	497	

Table 11 – Kruskal-Wallace H Criterion

	Injury risk score
Chi-squared	9,716
degree of its own	3
Asymptotic significance	,021

Statistical criteria a,b a. Kraskel-Wallis criterion b. Grouping variable: Number of adult family members

A statistically significant relationship ($p<0.05$) between the injury risk score and the number of adults in the family was revealed. With three adults, the injury risk score is higher.

Table 12 - Pairwise comparison of groups. Mann-Whitney U Criterion

	Number of adult family members	N	middle ranks	Sum of ranks
Injury risk score	2,00	274	170,99	46850,00
	3,00	86	210,81	18130,00
	Всего	360		

Table 13 - Statistical criteria

	Балл травмоопасности
U Манна-Уитни	9175,000
W Вилкоксона	46850,000
Z	-3,107
Асимптотическая значимость (2-сторонняя)	,002

a. Grouping variable: Number of adult family members

It was found that statistically significant ($p<0.05$) differences in the level of injury risk score exist between families with 2 and 3 adults. In families with three adults, the level of injury

risk score is higher. There were no statistically significant differences (p>0.05) in the pairwise comparison of the other groups.

5. The relationship between the number of injuries in the family and the number of adults. Cr. Pearson's chi-square

Table 14 – Combination table. Number of adult family members * Number of injuries

		Number of injuries				Total
		1,00	2,00	3,00	4,00	
Number of adult family members	,00	21	21	4	5	51
	,00	102	93	43	36	274
	,00	22	24	26	14	86
	,00	33	21	14	18	86
Total		178	159	87	73	497

Table 15 – Pearson chi-square criterion

			Asymptotic significance (2-sided)
Pearson's Chi-square	21,866[a]	9	,009
Likelihood relations	21,314	9	,011
Linear-linear connection	5,722	1	,017
Number of allowed observations	497		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 7.49.

Table 16 - Symmetric measures

		Value	Approximate significance
Nominal/nominal value	Fi	,210	,009
	V Kramer	,121	,009
Number of allowed observation		497	

A statistically significant relationship (p<0.05) between the number of injuries and the number of adults in the family was revealed.

6. The relationship between the level of anonymity and the level of injury risk

Table 17 - Cu. U Manna-Whitney

	Full name	N	Average rank	Average rank
Injury risk score	specified surname	391	247,99	96963,50
	anonymously	106	252,73	26789,50

Table 18 - Statistical criteria

	Injury risk score
U Manna-Whitney	20327,500
Wilcoxon's W	96963,500
Z	-,302
Asymptotic significance (2-sided)	,762

a. Grouping variable: FULL name

There was no statistically significant relationship (p>0.05) between anonymity and injury risk score

7. The relationship between the level of anonymity and the number of injuries.

Cr. Pearson's chi-square

Table 19 - Number of injuries * Full name

		ФИО		
		specified last name	anonymous	total
	1,00	149	29	178
	2,00	124	35	159
	3,00	66	21	87
	4,00	52	21	73
total		391	106	497

Table 20 - Chi-square criteria

	value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	5,552[a]	3	,136
Likelihood relations	5,546	3	,136
Linear-linear connection	5,354	1	,021
Number of allowed observations	497		

a. For the number of cells 0 (0.0%), a value less than 5 is assumed. The minimum assumed number is 15.57.

Table 21 - Symmetric measures

		Value	Approximate significance
Nominal/nominal value	Fi	,106	,136
	V. Kramer	,106	,136
Number of allowed observations		497	

There was no statistically significant relationship (p>0.05) between anonymity and the number of injuries.

Children aged 5 to 10 years

1. The relationship of the injury risk score and gender

Table 22 – Ranks for calculating the Mann-Whitney U criterion

	Gender	N	Average rank	Sum of ranks
Injury risk score	boy	167	165,31	27607,50
	girl	143	144,04	20597,50
	Total	310		

Table 23 – Cu. U Mann-Whitney for comparison of injury risk score by gender

	Injury risk score
U Manna-Whitney	10301,500
Wilcoxon's W	20597,500
Z	-2,089
Asymptotic significance (2-sided)	,037

Statistical criteria

a. Grouping variable: Gender

A statistically significant (p<0.05) relationship between the injury risk score and the sex of the child was revealed. The injury risk score in boys is higher than in girls.

2. The relationship between the injury risk score and the number of children in the family

Table 24 – Ranks for calculating the Kruskal-Wallace criterion H

	Number of children in the family	N	Average rank
Injury risk score	1,00	101	105,54
	2,00	83	112,94
	3,00	25	129,10
	4,00	10	125,95
	5,00	3	77,50
	Всего	222	

Table 25 – Kruskal-Wallace H Criterion

	Injury risk score
Chi-squared	4,158
Degree of freedom	4
Asymptotic significance	,385

a. Kraskel-Wallis criterion

b. Grouping variable: Number of children in a family

There was no statistically significant relationship (p>0.05) between the injury risk score and the number of children in the family.

3. The relationship between the number of injuries and the number of children in the family

Pearson's chi-square criterion was used for calculations.

Table 26 – Number of children in the family * Number of injuries

		Number of injuries				
		1,00	2,00	3,00	4,00	Total
Number of children in the family	,00	33	32	16	7	88
	1,00	29	41	17	14	101
	2,00	35	29	12	7	83
	3,00	7	11	4	3	25
	4,00	5	0	3	2	10
	5,00	2	1	0	0	3
Total		111	114	52	33	310

Table 27 – Pearson chi-square criterion

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	13,807[a]	15	,540
Likelihood relations	17,776	15	,275
Linear-linear connection	,043	1	,836
Number of allowed observations	310		

a. For the number of cells 10 (41.7%), a value less than 5 is assumed. The minimum assumed number is ,32.

Table 28 – Cramer's Phi and V criteria Symmetric measures

		Value	Approximate significance
Nominal/nominal value	Fi	,211	,540
	V. Kramer	,122	,540
Number of allowed observations		310	

There was no statistically significant relationship (p>0.05) between the number of injuries and the number of children in the family.

3. The relationship between the injury risk score and the number of adults. The N. Kraskal –Wallace criterion

Table 29 – Ranks for calculating the Kruskal-Wallace H criterion

	Number of adult family members	N	Average rank
Assessment of the risk of injury	1,00	36	162,35
	2,00	165	140,48
	3,00	56	184,34
	4,00	53	167,14
	Всего	310	

Table 30 – Statistical criteria a,b

	Injury risk score
Chi-squared	11,602
degree of freedom	3
Asymptotic significance	,009

a. Kraskel-Wallis criterion

b. Grouping variable: Number of adult family members

A statistically significant relationship ($p<0.01$) between the injury risk score and the number of adults in the family was revealed. With three family members, the injury risk score is higher.

Table 31 - Pairwise comparisons using the Mann-Whitney U criterion

	Number of adult family members	N	Average rank	Sum of ranks
Injury risk score	2,00	165	102,99	16993,00
	3,00	56	134,61	7538,00
	Всего	221		

Two and three adults

Table 32 - Statistical criteria

	Injury risk score
U Manna-Whitney	3298,000
Wilcoxon's W	16993,000
Z	-3,208
Asymptotic significance (2-sided)	,001

a. Grouping variable: Number of adult family members

Statistically significant ($p<0.01$) differences in the level of injury risk in families with two and three adults were revealed. In families with three adults, the level of injury risk is higher.

Table 33 – Two and four adults

	Number of adult family members	N	Average rank	Sum of ranks
Injury risk score	2,00	165	104,75	17284,00
	4,00	53	124,28	6587,00
	Всего	218		

Table 34 – Statistical criteria

	Injury risk score
U Manna-Whitney	3589,000
Wilcoxon's W	17284,000
Z	-1,968
Asymptotic significance (2-sided)	,049

a. Grouping variable: Number of adult family members

Statistically significant ($p<0.05$) differences in the level of injury risk in families with two and four adults were revealed. In families with four adults, the level of injury risk is higher.

4. The relationship between the number of injuries and the number of adults

Table 35 – Number of adult family members * Number of injuries

		Number of injuries				Total
		1,00	2,00	3,00	4,00	
Number of adult family members	1,00	15	15	2	4	36
	2,00	64	64	23	14	165
	3,00	12	17	19	8	56
	4,00	20	18	8	7	53
Total		111	114	52	33	310

Table 36 – Chi-square criteria

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	20,360a	9	,016
Likelihood relations	19,611	9	,020
Linear-linear connection	3,524	1	,060
Number of allowed observations	310		

a. For the number of cells 1 (6.3%), a value less than 5 is assumed. The minimum assumed number is 3.83.

Table 37 – Symmetric measures

		Value	Approximate significance
Nominal/nominal value	Fi	,256	,016
	V Kramer	,148	,016
Number of allowed observations		310	

A statistically significant relationship ($p<0.05$) between the number of injuries and the number of adults in the family was revealed. If there are more than three adults involved in the upbringing of a child, the injury risk score is higher.

6. The relationship between the injury risk score and the anonymity of filling out the questionnaire.

Table 38 – Ranks

	Last name First name	N	Average rank	Sum of ranks
Injury risk score	указал фамилию	255	156,32	39861,00
	аноним	55	151,71	8344,00
	Всего	310		

Table 39 – Statistical criteria a

U Manna-Whitney	Injury risk score
Wilcoxon's W	6804,000
Z	8344,000
Asymptotic significance (2-sided)	-,347
U Manna-Whitney	,729

a. Grouping variable: full name

No statistically significant relationship was found (p>0.05)

Table 40 – Number of adult family members * Number of injuri

		Last name First name		Total
		specified last name	anonymous	
Number of injuries	1,00	95	16	111
	2,00	93	21	114
	3,00	42	10	52
	4,00	25	8	33
Total		255	55	310

Combination table Number of injuries * full name

Table 41 – Chi-square criteria

	Value	degree of freedom	Asymptotic significance (2-sided)
Pearson's Chi-square	1,913[a]	3	,591
Likelihood relations	1,880	3	,598
Linear-linear connection	1,777	1	,183
Number of allowed observations	310		

Table 42 – Symmetric measures

		Value	Approximate significance
Nominal/nominal value	Fi	,079	,591
	V Kramer	,079	,591
Number of allowed observations		310	

No statistically significant relationship was found (p>0.05)

The relationship between the number of injuries and the injury risk score

The whole sample (all children)

There is a statistically significant relationship (p<0.001) between the number of injuries and the injury risk score.

Table 43 – The N. Kraskal-Wallace criterion (this is a comparison of groups)

	Number of injuries	N	Average rank
Injury risk score	1,00	178	183,85
	2,00	159	252,08
	3,00	87	314,09
	4,00	73	323,59
	Всего	497	

Table 44 – Statistical criteria a,b

Chi-squared	Number of injuries
degree of freedom	74,726
Asymptotic significance	3
Chi-squared	,000

a. Kraskel-Wallis criterion
b. Grouping variable: Number of injuries

There is a statistically significant relationship (p<0.001) between the number of injuries and the injury risk score.

Table 45 – Spearman Correlation Coefficient

			Number of injuries	Injury risk score
Spearman	Number of injuries	The correlation coefficient	1,000	,385**
		is significant. (two-sided)	.	,000
		N	497	497
	Number of injuries	Correlation coefficient	,385**	1,000
		Value. (double-sided)	,000	.
		N	497	497

**. The correlation is significant at 0.01 (two-way).

Sample from 5 to 10 years

Table 46 – N. Kraskal – Wallace criterion

	Number of injuries	N	Average rank
Injury risk score	1,00	111	115,95
	2,00	114	154,40
	3,00	52	206,61
	4,00	33	211,77
	Всего	310	

Table 47 – Statistical criteria a,b

	Injury risk score
Chi-squared	51,830
degree of freedom	3
Asymptotic significance	,000

a. Kraskel-Wallis criterion
b. Grouping variable: Number of injuries

There is a statistically significant relationship (p<0.001) between the number of injuries and the injury risk score.

Table 48 – Spearman Correlation Coefficient

			Number of injuries	Number of injuries
Spearman	Number of injuries	Correlation coefficient	1,000	,404**
		Meaning. (double-sided)	.	,000
		N	310	310
	Injury risk score	Correlation coefficient	,404**	1,000
		Meaning. (double-sided)	,000	.
		N	310	310

**. The correlation is significant at 0.01 (two-way).

There is a statistically significant relationship (p<0.001) between the number of injuries and the injury risk score. The higher the injury risk score, the greater the number of injuries