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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman** (**Кириллица**), для текста на грузинском языке следует использовать **AcadNusx.** Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform_requirements.html
В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or compu-ter-printed on a single side of standard typing paper, with the left margin of **3** centimeters width, and **1.5** spacing between the lines, typeface - **Times New Roman** (**Cyrillic**), print size - **12** (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf
In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

ავტორთა საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx.** შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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THE PHENOMENOLOGY OF EARLY DEVELOPMENTAL DISORDERS AS A FORMATIVE FACTOR IN THE DEVELOPMENT OF ADDICTIVE BEHAVIOUR IN THE MODERN CONDITIONS OF UKRAINIAN SOCIETY

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Abstract.

Introduction: Children with early developmental disorders are at greater risk for developing addictive behaviors because of their emotional, cognitive, and social disabilities. This study analyzes Ukrainian people with early social isolation, stress, dysfunctional families, digital addiction, and lack of support to determine how these factors combine to increase the chances of addiction.

Methods: This research is based on phenomenological qualitative methodology. The participants included 20 adult Ukrainians aged 19-45 diagnosed with ADHD, ASD, or learning disabilities. Participants were recruited using purposive sampling. The analysis was conducted using NVivo 14 and RStudio software.

Results: The results identified that participants aged between 19-45 years and suffering from developmental disorders, with a nearly equal gender ratio (11 males, 9 females) and different occupational, educational, and family backgrounds, resulted in five prominent themes during the qualitative analysis. The themes include Early Social Isolation, Coping with Stress, the Influence of the Family Environment, the Role of Digital Addiction, and the Lack of Support Systems. Each theme showed different pathways that led to addiction, such as peer rejection, work/school pressure, dysfunctional families, digital overdependence, and lack of support and treatment. These themes were strengthened through focus group discussions with parents, caretakers, mental health professionals, and teachers, which called for integrated solutions.

Conclusions: The study emphasizes socio-environmental stressors that build on early developmental changes as a primary reason for addiction.

Key words. Early developmental disorders, addictive behaviors, social isolation, stress, digital addiction, Ukraine.

Introduction.

Addiction is one of the most complicated conditions to address as it encompasses biological, psychological, and social factors. Even though close scrutiny may suggest that the result of addictive behavior is the product of individual choices, it is self-evident that the choices and behaviors of people are intricately linked to their physical and social context where they live and work [1]. Chronic exposure to psychosocial stressors and the physiological responses they elicit activate the brain's hormonal response system [2].

ADHD, autism spectrum disorder, and several other learning disabilities all fall under early developmental disorders, which are conditions that affect a child's cognitive abilities, emotions, and social interaction [3-5]. Psychoanalysts consider the early developmental disorders as originated from critical unresolved conflicts in psychosexual stages of development a child may cope with through maladaptive behaviors like addiction [6,7]. Furthermore, this addiction vulnerability may also stem from early attachment disruption based on Mahler's separation-individuation theory and emotional dysregulation [8].

Children with these disorders tend to face difficulties related to their emotions and impulses as well as social interactions. This can continue into their teenage and adult years, making them more susceptible to addictive behaviors in the future [9,10].

It has also been demonstrated that the involvement of parents and teachers plays a key role in shaping the emotional intelligence of adolescents with cognitive disorders, which in turn strengthens their ability to socially adapt and may buffer them from maladaptive coping strategies such as addiction [11]. Likewise, the complex nature of ADHD requires early and comprehensive multidisciplinary intervention incorporating medical, educational, and social support which has shown to be effective in improving the emotional and cognitive development of young children, thereby reducing the risk of behavioral disorders later in life [12].

It has been proven that some adverse childhood experiences such as neglect and maltreatment increase the risk of substance use disorders and behavioral addictions [13,14]. This risk is primarily mediated through neurobiological changes due to trauma experienced early in life, which disrupts the functioning of critical reward, decision making, and emotional control systems in the brain [15]. From an object-relations standpoint (Bowlby, Bion), children denied of a secure primary attachment figure are likely to develop an inadequate self-structure and therefore become dependent on external sources of self-soothing, which may include addiction, to cope with emotional starvation [16,17].

In Ukraine, children are increasingly prone to early-stage developmental disorders as a consequence of the ongoing conflict and economic dire straits which appears to predispose them towards addictions as a way of coping with their distressing environment [18]. These patterns are further intensified by escalating levels of social instability and uncertainty, which according to recent sociological research, reflect deep-rooted

geopolitical and economic stressors influencing individual behavior and youth vulnerability [19]. Research claims that between the years of 1993 and 2019, the rate of nervous system diseases within children from radiologically controlled districts in Ukraine was 15.9 percent above the national average. Among children suffering from the consequences of the Chernobyl disaster, this figure increases to 44.5 percent, reflecting the enduring nature of these environmental effects on child development and neurology [20,21].

The Ukrainian population, especially the youth, has been experiencing deteriorating mental health since the onset of the conflict, primarily due to homelessness, bereavement, and fragmented schooling [22]. Additionally, Gestalt psychology (Koffka, Zeigarnik) enriches the understanding of addiction with the notion of self-experience fragmentation. "Unfinished business," emotionally unresolved experiences are what pushes an individual towards addictive substances or behaviors as a retake of emotional wholeness [23,24].

Depressive syndromes are also commonly found to coexist with substance dependence, particularly alcohol, forming a complex comorbidity that further reduces personal functioning and hinders long-term recovery [25]. Addiction is defined as a compulsive action taken regardless of the consequences. It occurs in three distinct stages: anticipation (craving), consumption (engagement on addictive behavior), and withdrawal (negative emotion state without the addictive behavior) [26]. People suffering from early developmental disorders usually have stronger urges to act on cravings and have low impulse control, as well as emotional regulation, making them more susceptible to addiction [27]. Additionally, both behavioral addictions, like gaming and gambling, and substance use disorder, have common neurobiological underpinnings, such as dopamine-induced reward-seeking behaviors that are triggered by dysregulation of the central nervous system [28,29]. Identifying the relationship between early developmental disorders and drug addiction enable effective prevention, use of AI (artificial intelligence) and intervention strategies that are hugely beneficial in Ukraine [30].

Objectives.

This study explores how the experiences of individuals with early developmental disorders in Ukraine contribute to addictive behaviors. It identifies key pathways including social isolation, stress, family influence, digital addiction, and inadequate support that shape addiction. Additionally, this study incorporates perspectives from caregivers, mental health professionals, and educators to develop integrated care models and community-based intervention strategies.

Methods.

Study design: This is a qualitative phenomenological study that aims to understand how individuals with early developmental disorders develop forms of addiction in modern Ukraine society through Husserl and Heidegger's phenomenology of lived experience approach [31]. Additionally, it adopts Freudian and Mahlerian psychoanalytic frameworks to capture the childhood developmental milestones and disruptions (0-6, 6-12 years) that are likely to impact addiction [32].

Participants:

Ukrainian adults (18-45) with early developmental disorders and addictions reflected on childhood attachment disruptions, trauma, and developmental difficulties.

Inclusion Criteria:

- Adults aged 18-45.
- Ukrainian nationality.
- Clinically or self-reported early developmental disorders (e.g., ASD, ADHD, learning disabilities).
- Experience with addiction (e.g., substance, digital, behavioral).
- Willingness and ability to provide informed consent.

Exclusion Criteria:

- Severe cognitive impairment or psychiatric conditions preventing effective communication.
- Current involvement in inpatient psychiatric care or detoxification programs.
- Inability to participate in an interview setting (e.g., severe language barriers, intellectual disability beyond mild-moderate range).
- Refusal or inability to give informed consent.

Sampling Technique:

Purposive sampling recruited participants meeting criteria, ensuring diversity in gender, socio-economic background, and location. Childhood factors like attachment, parental involvement, and emotional regulation were considered.

Sample Size:

A sample of 20 participants was recruited to achieve data saturation [33] and ensure comprehensive insights into the phenomenon.

Data Collection Methods:

Semi-structured interviews captured the addictive patterns, coping strategies, socio-environmental factors, and level of development ranging from zero to twelve years old. Focus groups with parents, caregivers, and specialists were conducted to investigate manifestations of early emotional disturbances and family influences. Data was collected through audio recording, cleaned by transcripted verbatim, and categorized and stored for confidentiality.

Data Analysis Procedures:

The phenomenological method using Colaizzi's technique helped detail the qualitative data analysis and theme extraction processes [34,35]. Analyzing qualitative data and extracting meaningful themes and patterns. Psychoanalytic analysis examined childhood disruptions influencing behaviors. Data was analyzed using NVivo and R studio.

Ethical Considerations:

This research adhered to ethical standards in the collection of information, including acquiring informed consent, ensuring confidentiality, and getting ethics approval. A psychologist was present to help participants who became distressed during interviews, ensuring their well-being along with the integrity of the data.

Development.

This study investigates the influence of socio-environmental factors such as early social isolation, stress, dysfunctional families, digital addiction, and absence of support on the development of addiction among people suffering from developmental disorders.

Results.

Table 1 presents a detailed demographic profile of the 20 participants in the study, illustrating a diverse cross-section of Ukrainian society affected by early developmental disorders.

Table 2 organizes the core findings from the qualitative data analysis by listing five main themes that emerged from participants' narratives. For each theme, specific subthemes are outlined to capture the nuances of the experiences described.

Table 3 presents five key qualitative codes along with representative participant statements that vividly illustrate the pathways leading to addictive behaviors.

Table 4 focus group discussion summary offers a comprehensive overview of the insights and recommendations from three key stakeholder groups: Parents/Caregivers, Mental Health Professionals, and Educators.

Figure 1 shows the interrelationship between early developmental disorders and addictive behavior. This model illustrates how various developmental, psychological, and social factors contribute to the likelihood of addictive behavior. While each component is shown to have a direct correlation with addictive behavior, the updated model also presents the explicit interactions among the contributing factors, highlighting their multidirectional and interrelated nature. These interdependencies, such as how developmental disorders may lead to social isolation, how digital addiction may reinforce emotional dysregulation, or how family dysfunction may intensify coping difficulties, are now visually represented in the diagram. This more detailed portrayal underscores the complexity of the pathways involved and the need for further investigation into how these interconnected factors influence the development of addiction in individuals with early developmental disorders.

Discussion.

The study's sample of 20 participants, aged 19-45, includes diverse backgrounds, ranging from students to healthcare workers with varying education levels and family structures. It features individuals with ADHD, Learning Disabilities, and ASD, providing insight into how early developmental challenges contribute to addiction, supported by psychoanalytic theory. One study found that behavioral addictions have some features in common with substance use disorders, and a common element of these conditions is emotional dysregulation, which frequently accompanies the need to use substances [36]. Another study showed that adverse childhood experiences such as abuse, household substance abuse, etc., are widespread in Ukraine, and about 20.8% of children suffer from multiple ACEs, which augment the risk of addiction [37]. Also, untreated ADHD and ASD are linked to high levels of behavioral addictions due to executive functioning impairments in impulse control and attention regulation [38]. Children with ADHD may find difficulty in concentrating, and children with ASD may have distracting, over-sensitive nervous systems that complicate learning [39]. Deficits in executive functioning, particularly those related to self-regulation and metacognitive processes, have additional effects on the learning behavior of children with ASD [40].

Thematic analysis in this study revealed five overarching themes: early social isolation, stress coping mechanisms, family factors, digital addiction, and absence of social support systems, which exemplify the multifaceted nature of the relationship between early developmental disorders and surrounding environmental stressors and subtheme addiction. From a psychoanalytic standpoint, these parental disconnects, along with altering developmental trajectories, create negative internal schemata, which heightens one's likelihood of getting addicted to drugs. Subthemes further emphasize social rejection, academic and work pressures, dysfunctional home settings, digital overreliance, and inadequate resources. In further supporting evidence, one more study recently showed growing rates of PTSD and ADHD for displaced youth from Ukraine, making them more prone to addiction. The levels of ADHD

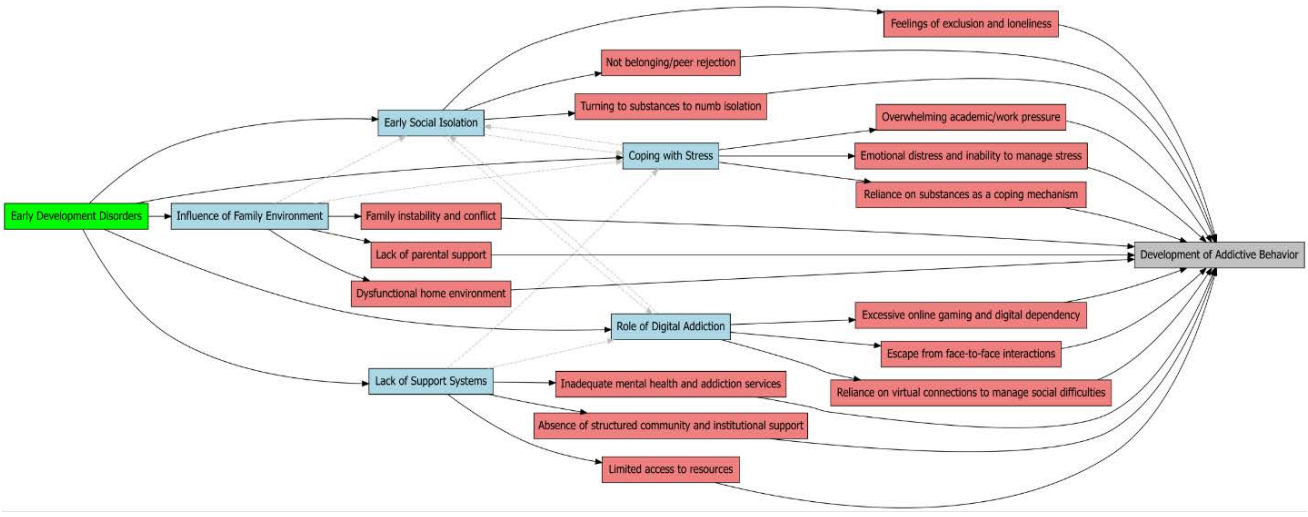

Figure 1. *Model of the relationship between early developmental disorders and addictive behavior.*

Table 1. *Individual participant demographics.*

Participant ID	Age	Gender	Occupation	Education	Family Structure	Location	Disorder Type
P1	28	Male	Unemployed	High school diploma	Lives with mother, father absent	Kyiv	ADHD
P2	24	Female	University student	Undergraduate (studying Psychology)	Lives with both parents, one sibling	Kyiv	Learning Disabilities
P3	35	Male	Construction worker	Secondary school education	Divorced, two children	Odesa	ADHD
P4	21	Male	Unemployed	High school graduate	Lives with mother and younger sister	Kharkiv	ASD
P5	40	Female	Unemployed	Higher education (bachelor's degree in history)	Lives alone	Vinnytsia	Learning Disabilities
P6	32	Female	Teacher	Master's degree in education	Married, two children	Dnipro	ADHD
P7	26	Male	Marketing specialist	Bachelor's degree in business administration	Lives with parents, no siblings	Kyiv	ADHD
P8	38	Female	Healthcare worker	Secondary school	Lives with husband and one child	Kyiv	ASD
P9	19	Male	Student (Part-time job in retail)	High school graduate, currently in university	Lives with both parents and older brother	Odesa	ASD
P10	45	Male	Factory worker	Secondary school	Divorced, lives alone	Kharkiv	ADHD
P11	22	Female	University student	Undergraduate (studying Biology)	Lives with parents, one older sister	Cherkasy	Learning Disabilities
P12	30	Male	IT specialist	Bachelor's degree in computer science	Lives alone	Dnipro	ADHD
P13	27	Male	Graphic designer	High school diploma	Lives with mother, father deceased	Kharkiv	ASD
P14	20	Female	Student	High school graduate	Lives with parents and younger brother	Kyiv	ASD
P15	33	Female	Retail worker	Secondary school	Divorced, one child	Kyiv	ADHD
P16	29	Male	Freelance writer	Bachelor's degree in literature	Lives with mother, father absent	Lviv	ADHD
P17	31	Female	Nurse	Bachelor's degree in nursing	Married, one child	Kharkiv	Learning Disabilities
P18	34	Male	Construction worker	High school graduate	Lives with father, mother deceased	Odesa	ASD
P19	22	Female	University student	Undergraduate (studying graphic design)	Lives with parents, two younger siblings	Kyiv	ASD
P20	37	Male	Delivery driver	Secondary school	Divorce, two children	Vinnytsia	ADHD

Note: *ADHD: Attention Deficit Hyperactivity Disorder; ASD: Autism Spectrum Disorder; IT: Information Technology.*

Table 2. *Main themes and subthemes.*

Main Theme	Subthemes	Participant ID
Early Social Isolation	Feelings of exclusion and loneliness Not belonging/peer rejection Turning to substances to numb isolation	P1, P6, P11, P16
Coping with Stress	Overwhelming academic/work pressure Emotional distress and inability to manage stress Reliance on substances as a coping mechanism	P2, P7, P12, P17
Influence of Family Environment	Family instability and conflict Lack of parental support Dysfunctional home environment	P3, P8, P13, P18
Role of Digital Addiction	Excessive online gaming and digital dependency Escape from face-to-face interactions Reliance on virtual connections to manage social difficulties	P4, P9, P14, P19
Lack of Support Systems	Inadequate mental health and addiction services Absence of structured community and institutional support Limited access to resources	P5, P10, P15, P20

Table 3. *Representative participant statements by code illustrating pathways to addictive behaviors.*

Code	Participant Statement
Early Social Isolation	P1: "From a young age, I always felt like I didn't belong. I was never able to fit in with the other kids... Over time, that isolation grew, and I started relying on substances to numb the pain of loneliness."
Coping with Stress	P2: "School was always difficult for me. I struggled with academics and had trouble making friends... Whenever I felt stressed, I would turn to drinking. It was the only way to escape the constant pressure."
Influence of Family Environment	P3: "My family situation was very unstable. My parents fought all the time, and there was a lot of yelling in the house... I believe that dysfunction at home, combined with my inability to focus, played a huge role in my addiction."
Role of Digital Addiction	P4: "I have ASD, and I've always found it hard to connect with people face-to-face. Digital platforms became my refuge... It got so bad that it impacted my studies and relationships."
Lack of Support Systems	P5: "In Ukraine, there's very little support for people like me. I've been dealing with addiction for years, and it's been difficult to find resources that can truly help... Without proper support, I couldn't see a way out."

Table 4. *Focus group discussion (FGD) summary.*

Stakeholder Group	Key Observations	Recommendations
Parents/Caregivers	- Children with early developmental disorders often experience social isolation and rejection from peers. - Early experiences contribute to maladaptive coping (e.g., substance use) later in life.	- Establish community-based support groups and family counseling services.
Mental Health Professionals	- Identified a strong link between early stress, unstable family environments, and the development of addictive behaviors.	- Provide targeted training on early developmental disorders and addiction prevention.
Educators	- Noted that reliance on digital platforms sometimes serves as a coping mechanism.	- Implement school-based mental health programs and early screening initiatives. - Offer teacher training to recognize and support students with developmental challenges.

were shown to spike from 10.2% to 12.6% after displacement, suggesting the trauma associated with the war and its effects on the developmental process [41]. The Ukrainian Longitudinal Study supports these findings by discovering phenomena of how people's behavior patterns change as a result of their childhood experiences [42]. Furthermore, contact with the social environment catalyzes erosion of well-being, behavioral norms, and psychosocial maturity among children with NDD and increases the chances of addiction [43]. Another study confirmed that social rejection exacerbates isolation, leading to poor mental health and increased addiction risk [44].

The current study incorporates illustrative quotes from participants, providing firsthand insights into their struggles and coping strategies. These narratives capture the emotional and mental burden of developmental disorders. Participants recounting their experiences of early social isolation reported feelings of extreme loneliness at times to an extent where they started using substances as an escape. Many emphasized how emotional struggles increased their reliance on substances or digital platforms, illustrating the intersection between distress and addiction. Family issues, digital overdependence, and lack of support highlight how developmental problems initiate a chain reaction of social, emotional, and systemic issues related to addiction. From the viewpoint of psychoanalytic theory, one can say that these disturbances originate from internal self-formation conflicts, which predispose the person to addiction.

Research supports these narratives in explaining how childhood trauma affects long-term mental health, often resulting in PTSD and substance abuse [45]. Emotional distresses and lack of adequate coping mechanisms is another vulnerable area for addiction [46]. Moreover, studies indicate that children suffering from ADHD and ASD have a higher propensity for developing anxiety and depression, multiplied among displaced children of Ukraine due to war, lowering the threshold for positive coping strategies and heightening addiction [47].

The lack of social, familial, and institutional support systems makes children with developmental disorders particularly prone to addiction, as noted by parents, caregivers, educators, and mental health professionals. These children's excessive digital consumption, academic difficulties, and poor home conditions, coupled with early peer rejection, are driving factors. One research paper from 2019 examined the impact of maternal coping and family communicative strategies on children's internalizing and externalizing behaviors, which are problematic in nature, focusing on the sociocultural complexities of Ukrainian families that require specific context-based solutions [48]. In another study, it was shown that secure attachment leads to affectionate relationships characterized by communication, intimacy, trust, and support, moderated by attachment [49]. Further study confirm that maternal depression and parenting styles are crucial psychosocial determinants of children's internalizing behaviors, once more adding to the importance of family structures with respect to addiction risk [50].

Additionally, the current study placed a spotlight on the fact that peer rejection and social shunning during childhood contribute to the development of problems in later life while calling for a multi-pronged approach to mitigation. Supporting this, another study on maternal coping and family communication factors brought up children's behavioral patterns and specialized approaches to mental health for Ukrainian families [51]. Another study found that high peer relationships are positively associated with secure attachment, but that gender and family structure moderate the intensity of these relationships [52]. It has also been shown that maternal depression and parenting styles portray a prediction of children's actions and behaviors, which signifies the centrality of family context in addiction prevention [53]. The combination of poor social and economic factors in early development poses potential risks of addiction in adolescents and calls for pre-emptive action [54]. The current study presents a model of how the sequence of events starting from the presence of social and digital overuse isolation, stressful family environment, and the aggravated effects of Adverse Childhood Experiences increases the risk for addiction and shows the detrimental effect on underdeveloped children.

Limitations.

Despite careful design, this study has several limitations. The sample size, though sufficient for qualitative saturation, limits generalizability. Self-reported data may be subject to recall bias, particularly regarding early childhood experiences. Additionally, cultural and societal changes in Ukraine may influence participants' perceptions, which might not reflect broader populations or future trends. The psychoanalytic interpretation is also inherently subjective, shaped by theoretical lenses that may not capture all dimensions of participants lived experiences.

Conclusion.

The current study highlights the complex interrelationship between various forms of early developmental disorders and the emergence of addiction in contemporary Ukraine. People with ADHD, Learning Disabilities, or ASD come from diverse socio-economic, educational, and family backgrounds, showing that the risk of addiction cuts across various personal circumstances. Qualitative analyses captured core themes of Early Social Isolation, Coping with Stress, Influence of Family Environment, Digital Addiction, and Lack of Support Systems. Rejection from peers, excessive academic and work-related demands, and volatile home situations shift one's coping mechanisms toward maladaptive patterns. Digital spaces that are deemed safe for individuals with ASD to retreat often become compulsive access points in the absence of stratified coping mechanisms. Focus groups assert the great need for integrated approaches. Parents and caregivers of preschoolers call for early assistance, while mental health specialists and teachers want to provide services for children with neurodevelopmental problems and other addictions. The shift from developmental vulnerability to addiction must be challenged through focused early interventions such as family therapy, mental health interventions, and school-based support.

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Conflict of Interest.

The author declares that there is no conflict of interest.

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Semi-Structured Interview Questionnaire

Section 1: Demographic Information

Participant ID: _____ Age: _____ Gender: □ Male □ Female Occupation: _____

Education Level: □ Secondary school □ High school diploma □ Bachelor's □ Master's

Family Structure: □ Lives with both parents □ Single parent □ Lives alone □ Married □ Divorced

Location (City/Region): _____

Disorder Type: □ ADHD □ ASD □ Learning Disabilities □ Other: _____

Section 2: Interview Questions

A. Early Childhood Experience

1. Can you describe your earliest memories from childhood?
2. What kind of relationship did you have with your parents or caregivers?
3. Did you experience any disruptions in your family life during childhood?
4. How would you describe yourself as a child, behaviorally and emotionally?

B. Attachment and Emotional Development

- When you were upset as a child, how did you usually react?
- Who, if anyone, helped you regulate your emotions as a child?
- Did you feel emotionally safe and supported growing up? Why or why not?

C. Social Interactions and Isolation

- What were your experiences like with classmates or neighborhood children?
- Can you recall times when you felt left out, bullied, or rejected by others?
- How did you respond emotionally or behaviorally to these experiences?

D. Coping Strategies and Stress

- What were the main sources of stress in your school or family life?
- How did you cope with emotional or academic pressure?
- When did you begin engaging in behaviors that later became addictive?

E. Digital Use and Avoidance Behaviors

- How did you use digital media or online platforms during childhood and adolescence?
- Did you prefer spending time online to being around people? Why?
- Did digital platforms (e.g., games, social media) help you cope with stress or emotions?

F. Family and Environmental Influence

- Can you describe the emotional climate of your household growing up?
- Were there consistent rules, routines, or support from your caregivers?
- Did family conflict or lack of involvement impact your behavior or emotions?

G. Access to Support and Mental Health Services

- Have you ever sought help from a therapist, counselor, or support group?
- What barriers did you face in accessing support services?
- What kind of emotional or community support would have helped you earlier?