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Educators About New Addictions

Pedagodzy o nowych uzależnieniach

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RAPORTY Z BADAŃ

RECENZJE

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Introduction

"New addictions" is a heterogeneous category that is very broad and difficult to define. It is also difficult to unequivocally determine whether it is only a commonly used term that encompasses many behavioral disorders, or whether it is a fixed group of human behaviors that are relatively unambiguously defined. "New addictions"—also often called behavioral addictions—may refer to incorrect patterns of activities or behaviors, but it is difficult to say whether the category has been enumerated once and for all.

The International Classification of Diseases ICD-11 includes only two: gambling disorders and gaming disorders. They are well described in the literature and recognized in diagnostic studies. The concepts that explain them seem to be universal, as they often refer to risk factors or protective factors underlying many addictive behaviors, behavioral disorders, or addictions. New addictions are observed to exhibit the same clinical features as traditional, now relatively well-known substance addictions, including the desire to perform certain activities, impaired behavioral control or tolerance, and the goal of abstinence.

We invited primarily educators to publish articles in this issue, but psychologists, therapists, prevention specialists, active teachers, and scientists were also welcome—i.e., all those who in their professional work and scientific reflections deal with upbringing, education, the prevention of addictive behaviors and disorders, and addiction therapy. The current issue of our journal includes theoretical studies and research reports. The articles collected here focus on a selected issue, but do not cover all the issues of new addictions

in their entirety. This shows that the topic still requires scientific research: diagnostic and verification tests, as well as scientific concepts and theories based on them. The conditions and symptoms of addictive behaviors, disorders, or addictions—and then the most effective ways to prevent and treat them—should be sought because it seems important for all people involved in this contemporary social problem.

The present issue contains 10 scientific articles—both reviews and research—referring to various theoretical concepts and using various methodological paradigms and research strategies. Quantitative research predominates, but in-depth qualitative analyses also find an important place. The articles are organized so as to flow from conceptual findings and definitions of the problem, through detailed issues regarding the etiology, symptomatology, and mechanisms underlying new addictions, to descriptions of prevention and therapies addressed to adolescents and adults at risk of addiction or already struggling with behavioral addiction.

The first section of the journal (Articles and Dissertations) contains five texts based on prevention and treatment programs (Małgorzata Piasecka & Emil Podolak, *Oddziaływania terapeutyczne wobec osób z uzależnieniem w jednostkach penitencjarnych* [Therapeutic Interventions for Addicts in Prisons]), on analyses of existing data, i.e., literature reviews (Sonia Dzierzyńska-Breś, *„Nowe uzależnienia" – wprowadzenie w tematykę uzależnień behawioralnych* ["New Addiction": An Introduction to the Subject of Behavioral Addictions] and Robert Opora, *Model uzależnienia w rozumieniu filozofii grup samopomocowych a terapia poznawczo-behawioralna w leczeniu napadowego objadania się* [The "Addiction Model" in the Sense of Philosophy of Self-Help Support Groups and Cognitive Behavioral Therapy in the Treatment of Binge Eating]), or on the analysis of official documents (Lidia Wawryk, *Znaczenie diagnozy Opiniodawczych Zespołów Sądowych Specjalistów w sprawach nieletnich uzależnionych od internetu i gier komputerowych oraz ujawniających cechy nieprzystosowania społecznego* [The Importance of the Diagnoses of Advisory Teams of Court Experts in Cases of Minors Addicted to the Internet and Computer Games and Showing Signs of Social Maladjustment] and Edyta Sielicka, *Podstawa programowa jako szansa wspierania profilaktyki zachowań ryzykownych uczniów szkoły podstawowej w świetle koncepcji „resilience"* [The Core Curriculum as an Opportunity to Prevent Risky Behavior in Elementary School Pupils in Light of the Concept of Resilience]).

The Research Reports section contains five articles based on empirical research, most often correlational, concerning selected—not only behavioral—addictions, as well as preventive and therapeutic activities undertaken or recommended for addiction (Ewa Krzyżak-Szymańska & Andrzej Szymański, *Physical Exercise Addiction Among Students Based on the EDS-R Scale Adapted for Poland*; Martyna Kotyśko, *„Internet Gaming Disorder" wśród polskiej młodzieży – analiza profili latentnych symptomów zaburzenia* [Internet Gaming Disorder Among Polish Adolescents: A Latent Profile Analysis of Disorder Symptoms]; Monika Zięciak, *Wiedza kadry pedagogicznej młodzieżowych ośrodków wychowawczych w zakresie uzależnień nieletnich* [Knowledge of Underage Addiction Among the Teaching Staff of Youth Educational Centers]; Marta Pięta-Chrystofiak & Damian Brohs, *Zjawisko zażywania muchomora czerwonego (amanita muscaria) wśród uczestników internetowych grup dyskusyjnych* [Red Fly Agaric (*Amanita muscaria*) Consumption Among the Participants of Internet Discussion Groups]; and Anna Michalczyk, *Poczucie samotności i obniżony poziom samooceny w kontekście ryzyka uzależnienia od Internetu wśród słyszących i niesłyszących adolescentów* [Feelings of Loneliness and Reduced Self-Esteem in the Context of Internet Addiction Risk Among Hearing and Hearing-Impaired Adolescents]).

The issue also includes a review of a multi-author publication on a comprehensive speech therapy intervention for stuttering.

As the thematic editor of the current issue, I would like to thank the editorial team of *Studia Paedagogica Ignatiana* for entrusting me with this responsible task, which I have tried to fully meet. I am also grateful to P.T. Reviewers, without whose substantial dedication and time commitment, this issue could not have been created. Readers, educators, psychologists, therapists, students, and specialists in the field of prevention: I wish you inspiring reading and fruitful research and practice in the field of diagnosing, preventing, and treating "new addictions."

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Wprowadzenie

„Nowe uzależnienia" to kategoria niejednolita, bardzo szeroka i trudna do zdefiniowania. Trudno też jednoznacznie określić, czy jest to tylko powszechnie używane pojęcie, mieszczące w sobie wiele zaburzeń zachowania, czy już „domknięta" ilościowo lub w miarę jednoznacznie określona jakościowo grupa właściwości zachowania człowieka. „Nowe uzależnienia", nazywane też często uzależnieniami behawioralnymi, mogą dotyczyć nieprawidłowych wzorców wykonywania czynności czy prezentowania zachowań, trudno jednak stwierdzić, czy ich katalog jest raz na zawsze ustalony i zamknięty.

Międzynarodowa Klasyfikacja Chorób ICD-11 uwzględnia bowiem tylko dwa: zaburzenia uprawiania hazardu i zaburzenia związane z grami. Są one dobrze opisane w literaturze, rozpoznane w badaniach diagnostycznych, natomiast koncepcje je wyjaśniające wydają się uniwersalne, często bowiem odwołują się do czynników ryzyka lub czynników chroniących, leżących u podstaw wielu zachowań ryzykownych, zaburzeń w zachowaniu czy uzależnień. Na poziomie obserwowalnym „nowe uzależnienia" przejawiają te same cechy kliniczne co tradycyjne, w miarę głęboko rozpoznane obecnie uzależnienia od substancji, a wśród nich: pragnienie wykonywania określonych czynności, upośledzenie kontroli nad zachowaniem, tolerancję i cel, jakim może być abstynencja.

Zaproszenie do publikowania artykułów w niniejszym numerze naszego czasopisma zostało skierowane przede wszystkim do pedagogów, ale na jego łamach obecnie publikują także psychologowie,

terapeuci, profilaktycy, czynni nauczyciele i naukowcy, czyli ci wszyscy, którzy w pracy zawodowej i refleksji naukowej zajmują się wychowaniem, edukacją i profilaktyką zachowań ryzykownych, zaburzeń, a także terapią uzależnień.

W bieżącym zeszycie naszego czasopisma znalazły się opracowania teoretyczne i raporty badawcze. Artykuły tu zgromadzone koncentrują się na wybranym zagadnieniu, nie wyczerpują całościowo problematyki „nowych uzależnień", co pokazuje, że kategoria ta ciągle wymaga badań naukowych – diagnostycznych i weryfikacyjnych, a także budowania na ich podstawie koncepcji i teorii naukowych. Poszukiwanie odpowiedzi na pytania o uwarunkowania, symptomy, a następnie o najskuteczniejsze sposoby zapobiegania zachowaniom ryzykownym, zaburzeniom czy uzależnieniom oraz ich leczeniem, wydaje się bowiem ważne dla wszystkich osób zaangażowanych w ten współczesny problem społeczny.

W zeszycie umieszczono 10 artykułów naukowych, tak przeglądowych, jak i badawczych, odwołujących się do różnych koncepcji teoretycznych i sięgających do różnych paradygmatów metodologicznych oraz strategii badawczych. Dominują wśród nich badania ilościowe, ale pogłębione analizy jakościowe znajdują także istotne miejsce.

Artykuły uporządkowano koncepcyjnie w ten sposób, aby wychodząc od ustaleń pojęciowych i zdefiniowania problemu, kierować się ku zagadnieniom szczegółowym dotyczącym etiologii, symptomatologii i mechanizmów leżących u podstaw nowych uzależnień, by następnie opisać działania profilaktyczne i terapeutyczne adresowane do młodzieży i dorosłych zagrożonych uzależnieniem lub już borykających się z uzależnieniem behawioralnym.

Dział pierwszy czasopisma (Artykuły i rozprawy) zawiera pięć tekstów opartych na analizie danych zastanych, czyli na przeglądzie literatury (Sonia Dzierzyńska-Breś, *„Nowe uzależnienia" – wprowadzenie w tematykę uzależnień behawioralnych*; Robert Opora, Model *uzależnienia w rozumieniu filozofii grup samopomocowych a terapia poznawczo-behawioralna w leczeniu napadowego objadania się*) bądź na analizie dokumentów formalnych (Lidia Wawryk, *Znaczenie diagnozy Opiniodawczych Zespołów Sądowych Specjalistów w sprawach nieletnich uzależnionych od internetu i gier komputerowych oraz ujawniających cechy nieprzystosowania społecznego*; Edyta Sielicka, *Podstawa programowa jako szansa wspierania profilaktyki zachowań ryzykownych uczniów*

szkoły podstawowej w świetle koncepcji „resilience") czy programów profilaktyki i terapii (Małgorzata Piasecka, Emil Podolak, *Oddziaływania terapeutyczne wobec osób z uzależnieniem w jednostkach penitencjarnych*).

Dział Raporty z badań zawiera pięć artykułów opartych na badaniach empirycznych, najczęściej korelacyjnych, dotyczących wybranych, nie tylko behawioralnych uzależnień (Ewa Krzyżak-Szymańska, Andrzej Szymański, *Physical Exercise Addiction Among Students Based on EDS-R Scale Adapted for Polish Context*; Martyna Kotyśko, *„Internet Gaming Disorder" wśród polskiej młodzieży – analiza profili latentnych symptomów zaburzenia*; Monika Zięciak, *Wiedza kadry pedagogicznej młodzieżowych ośrodków wychowawczych w zakresie uzależnień nieletnich*; Marta Pięta-Chrystofiak, Damian Brohs, *Zjawisko zażywania muchomora czerwonego (amanita muscaria) wśród uczestników internetowych grup dyskusyjnych*; Anna Michalczyk, *Poczucie samotności i obniżony poziom samooceny w kontekście ryzyka uzależnienia od internetu wśród słyszących i niesłyszących adolescentów*) oraz działań profilaktycznych i terapeutycznych podejmowanych bądź rekomendowanych do realizacji w obszarze zapobiegania i leczenia uzależnień.

W zeszycie zamieszczono także recenzję publikacji wieloautorskiej dotyczącej kompleksowej interwencji logopedycznej w jąkaniu.

Jako redaktor tematyczny bieżącego zeszytu pragnę podziękować zespołowi redakcyjnemu „Studia Paedagogica Ignatiana" za powierzeniem mi tego odpowiedzialnego zadania, któremu starałam się w pełni sprostać. Wyrazy wdzięczności kieruję też w stronę P.T. Recenzentów, bez których zaangażowania merytorycznego i poświęcenia czasu ten zeszyt czasopisma nie mógłby powstać. Czytelnikom zaś, pedagogom, psychologom, terapeutom i specjalistom w zakresie profilaktyki, a także studentom, życzę inspirującej lektury oraz owocnych działań badawczych i praktycznych w zakresie diagnozy, profilaktyki i terapii „nowych uzależnień".

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Articles and dissertations

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Artykuły
i rozprawy

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"New Addiction": An Introduction to the Subject of Behavioral Addictions

ABSTRACT

The conceptualization of the term "addiction" has been the subject of great debate for decades. Because the term is associated with drug use or alcohol consumption, it is not surprising that most official definitions focus on substances. Despite this, there is a growing trend that sees a range of behaviors as potentially addictive. These "new addictions" include gambling, playing video games, shopping, and using the internet or social networks. The purpose of the article is to discuss the definitions interpretations of the term that can be found in the literature according to contemporary knowledge. The article is divided into three parts; the first reviews the terms and classifications related to new addictions, the second highlights the differences and similarities between activity addictions and substance addictions, and the final part provides a brief overview of behavioral addictions.

KEYWORDS
new addictions, behavioral dependency, activity addiction, substance addiction, addiction

Introduction

The term *addiction* is commonly associated with disorders involving the use of psychoactive substances, such as alcohol, drugs, and tobacco. However, recent decades have seen the emergence of new, complex behaviors that involve compulsive activities. They are similar in their course and symptoms to the mechanism of addiction. The difference is that their object is not a chemical substance. Specialists

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in the field of addiction therapy have begun to pay attention to the very formation of the problem and the behaviors associated with it (Lelonek-Kuleta, 2015: 98). In the literature, the following terms have appeared: *new addictions*, *behavioral dependency*, and *activity addiction*. In brief, they refer to addictive behavior that an individual is unable to stop despite the disruption it causes in many aspects of the person's functioning (Ogińska-Bulik 2010). *New addictions* is a colloquial term used to emphasize the distinction from "old" addictions related to substance use (Guerreschi 2005). The term *behavioral addictions* is intended to emphasize the similarity to substance addictions. *Activity addiction* is an uncommon term, mainly used to emphasize the addictive nature of a behavior which is unrelated to substance use (Ogińska-Bulik 2010; Habrat 2016). Such discrepancy in terminology has been the subject of discussion for a very long time. The medical paradigm advocates a clear distinction between *addiction* and *dependence*. It is suggested that the former should be applied only to mental disorders caused by the use of psychoactive substances. The social paradigm proposes terms such as *behavioral addiction* or *addiction to activities* (Grzegorzewska, Cierpiałkowska 2018: 21).

In this article, I use the term *behavioral addiction* to describe an individual's involvement in an activity that results in negative consequences. This is dictated by several factors supported by the current state of knowledge and empirical findings (see Cierpiałkowska, Sęk 2016; Grzegorzewska, Cierpiałkowska 2018). The symptoms and mechanisms of both substance and behavioral addictions share significant similarities. Typically, they co-occur with each other or they can transform into the other when a person is trying to maintain abstinence. For example, addiction to psychoactive drugs may change into an addictive activity. The term *behavioral addiction* is widely used in the scientific and popular literature and has become a permanent part of the social consciousness (see Grzegorzewska, Cierpiałkowska 2018).

New addictions are poorly described in the diagnostic criteria and their etiology is insufficiently recognized. Thus, little is known about effective preventive or therapeutic interventions at this stage. However, the complex nature of behavioral addictions and the co-occurrence of other psychiatric problems are an important reason to address this topic. This article first presents, against the background of the existing knowledge on addiction, the definitions that have been

formulated regarding new addictions; it then summarizes selected behavioral addictions.

Behavioral addictions—definitions and diagnostic criteria

Medical and social science professionals are engaged in a debate over the correctness of the terminology used in this field. So far, two leading problems have emerged. One relates to the symptoms that identify a particular class of disorders. The other involves the pathological mechanisms which lead to the formation and maintenance of disorders (Grzegorzewska, Cierpiałkowska 2018: 20). These issues have led to three leading opinions:

1. Activity-related behaviors are similar to addictions and can refer to it. The important emphasis here is on the nomenclature and the descriptive language being used. Both dependency and addiction are thought of as harmful. In this understanding, *addiction* refers to addictions resulting from psychoactive substances. In contrast, *dependency* is used for dependence on an activity. In Polish, the term *nałóg* [dependency] is used in the medical terminology and its meaning coincides with how addiction is defined today (Lelonek-Kuleta 2015: 98; Grzegorzewska, Cierpiałkowska 2018: 21).
2. Behavioral addictions share some characteristics with obsessive-compulsive disorders. What they have in common is the function of the activities. They are meant to relieve tension and anxiety in the individual. The difference between the two is that behavioral addictions are oriented toward a goal which, when fulfilled, leads to pleasure. Obsessive-compulsive behaviors are not aimed at achieving specific results, but at coping with negative emotions. People who compulsively engage in activities feel a compulsion to perform and repeat them. They are overburdened by this state, but cannot end it.
3. We can think of behavioral addictions in terms of impulse control disorders. This is mainly influenced by the similarity between the symptoms and mechanisms and the co-occurrence of substance and activity addictions (Grzegorzewska, Cierpiałkowska 2018: 21–22). In clinical psychology, a behavioral addiction is considered to be

> a condition in which a person complains of the inability (despite attempts) to control their thoughts and behaviors, suffers from various problems (economic, interpersonal, or health) resulting from the compulsive repetition of these activities, and has a sense of helplessness and powerlessness in the face of the problem. (Cierpiałkowska, Sęk 2016: 391)

The above opinions are not mutually exclusive. The link between impulsivity and compulsivity was first noted in substance abuse research (Grzegorzewska, Cierpiałkowska 2018: 44). Impulsivity plays the key role in the early stages of the addiction process, in the form of a tendency to look for short-term benefits. In the later stages, associated with repetition, compulsive habits of substance use develop. It is similar with behavioral addictions. Impulsivity initiates the addictive behavior (e.g., a desire for pleasure), while compulsivity supports its repetition (e.g., tension relief). However, the relationship between impulsivity and compulsivity as a mechanism of behavioral addictions is still being researched (Grzegorzewska, Cierpiałkowska 2018).

Aviel Goodman (1990) is considered to have formulated the first definition based on diagnostic criteria:

> Addiction … [is] a process whereby a behavior that can function both to produce pleasure and to provide relief from internal discomfort is employed in a pattern characterized by (1) recurrent failure to control the behavior (powerlessness) and (2) continuation of the behavior despite significant negative consequences (unmanageability). (Goodman 1990: 1404)

He based his criteria on the DSM-3-R, directly referring to the concept of addictions, while emphasizing the psychological and behavioral aspects of the problem. His assumption, although it has received recognition in practice, has not yet obtained the status of an official clinical tool.

Figure 1. Criteria of behavioral addictions according to Aviel Goodman (1990)

Goodman (1990)
• Repeated failure to restrain the impulse to engage in specific behaviors • Increasing sense of tension immediately before engaging in the behavior in question • Pleasure or relief while engaged in a given activity • A sense of lack of control over engaging in the activity • The presence of five of the following symptoms: ▪ Frequent preoccupation with behavior/activities in preparation of a particular behavior ▪ Engaging in the behavior in question (in frequency and duration) well beyond the intended level ▪ Repeated attempts to reduce the frequency of, control, or stop the behavior in question ▪ Devoting more and more time to activities related to the behavior ▪ Increasing involvement in a behavior at the expense of home, work, school, or social responsibilities ▪ Giving up or limiting important social, occupational, and recreational activities because of engaging in the behavior in question ▪ Continuing a particular behavior despite experiencing persistent or recurring social, financial, psychological, and physical problems resulting from or exacerbated by that behavior ▪ Increasing tolerance—needing to increase the frequency or intensity of a behavior in order to obtain the same level of pleasure or relief as before ▪ Anxiety or nervousness when a particular behavior is unavailable • Symptoms persisting for longer than a month or recurring over a longer period of time

Source: Based on Goodman (1990) and Lelonek-Kuleta (2015: 99).

Mark Griffiths (2004) created another popular, six-factor model with criteria that indicate behavioral addiction. According to him, a diagnosis of addiction is contingent on the fulfillment of all of the factors. The boundary between passion/commitment to an activity and addiction to it is the addict being isolated from everyday life and suffering from the situation.

Figure 2. Criteria of behavioral addictions according to Mark Griffiths (2004)

Griffiths (2004)
• Salience of emotional preoccupation: the behavior becomes the most important activity in a person's life and dominates their thoughts, emotions, and behavior • Mood change: engaging in the behavior can be a strategy for coping with problems • Dose tolerance: the behavior must be performed with increasing intensity to deliver the desired satisfaction • Withdrawal symptoms: unpleasant feelings or physical symptoms when not engaging in the behavior • Interpersonal or intra-psychic conflicts as a consequence of engaging in the behavior • Conversion: the tendency to return to the behavior after a period of stopping or controlling it

Source: Based on Pospiszyl (2020: 243).

Based on the analysis of the diagnostic criteria described in the literature on the subject, Irena Grzegorzewska and Lidia Cierpiałkowska (2018) adopted the following operational criteria (Figure 3). In her theory as well, the diagnosis of behavioral addiction is only confirmed if all five symptoms occur.

Figure 3. Operational criteria of behavioral addictions according to Irena Grzegorzewska and Lidia Cierpiałkowska (2018)

Grzegorzewska, Cierpiałkowska (2018)
• Undertaking a given activity in order to change one's well-being: to gain pleasure, reduce pain, increase energy, calm down, or, in the final phase, to preserve one's ability to function normally (tolerance effect) • Over time, the need to intensify a given activity in order to achieve a desired/accepted state • Loss of control over the amount, frequency, and timing of certain activities • The appearance of withdrawal symptoms if an activity is abruptly curtailed, limited, or unavailable • More intense negative consequences resulting from exceeding the time spent on an activity, which is a direct or indirect indicator of loss of control

Source: Grzegorzewska, Cierpiałkowska 2018: 34.

In practice, terms related to activity addiction have been known and attempts to categorize it have been made for quite a long time (Lelonek-Kuleta 2015; Habrat 2016; Grzegorzewska, Cierpiałkowska 2018). Given the multitude of activities that can become addictions, it seems necessary to clinically and scientifically systematize behavioral addictions. Only the DSM-5 classification of the American Psychiatric Association (2013) includes pathological gambling as a *non-substance-related disorder*. The introduction of the term *disorder* helped to systematize scholarly work on the intensification of addictive behaviors—from normal use, through abuse (DSM-4) and harmful use (ICD-10), to addiction (both to substances and behaviors)—which made it possible to make this area of research more coherent (Lelonek-Kuleta, 2014: 16). This was contrary to the previous editions of the DSM-3 and the DSM-4, in which pathological gambling was classified as an impulse disorder. In the ICD-10, which has been valid in Poland since 1 January 2022 (though it has not been translated into Polish yet, so the classifications in the previous edition are still in use), the term *behavioral addiction* was not used or appeared only in the category of disorders of impulse control or compulsive-obsessive disorders.

"New" and "old" addictions

When considering the similarities and differences of substance addiction and activity addiction, it is necessary to look at the issue from the medical perspective as well. First of all, if the phenomenon falls into the medical category, diagnostic criteria and preventive and remedial procedures are developed. This has both positive and negative consequences. Reducing behavioral addiction to simplified physiological and psychological categories ignores the multifaceted approach to the issue. In terms of psychological mechanisms and conditions, the phenomena are similar. However, the social image of them, the way they are perceived, stigmatized, and excluded, the social damage they cause (conflicts with the law, loss of employment, conflicts in the family, etc.), and the availability of prevention and treatment differ significantly. This results in a wide range of consequences experienced by the individual with an addiction and their loved ones, and thus in the support they receive in their recovery.

On the other hand, the fact that various state bodies are allocating large amounts of money toward recovery strategies speaks in favor of analyzing behavioral addictions from the point of view of medicine. The prerequisite for considering a phenomenon to be a medical issue is the existence of a pathogenic factor. However, this is not the case with behavioral addictions; they stem from natural physiological mechanisms. The reinforcement of a given behavior is influenced by stimuli that facilitate and reward it (pleasure) and by those that condition it negatively (lack of reward). It is a reversible process (Habrat 2016: 21).

Many researchers (e.g., Ogińska-Bulik 2010; Grzegorzewska, Cierpiałkowska 2018) highlight methodological weaknesses and inadequacies in the understanding of behavioral addictions. Moreover, it is hard to resist the impression that the criteria for some of them are transferred by analogy to the criteria of existing substance addictions. The interpretation of them better fits the nomothetic model of explaining them mainly in terms of general laws and theories, rather than the idiographic model, in which the phenomena in question are well explained by an empirically confirmed theory (Habrat 2016: 22).

With the development of knowledge on the psychological and neurobiological mechanisms of addiction, similarities between substance addictions and behavioral addictions have been indicated. On biological grounds, there has been interest in the basis of learned behavior. Common neuronal pathways in the development of addictions have been pointed out. First of all, the function of the so-called reward center has been emphasized and the role of the dopaminergic and opioid systems in mechanisms of positive reinforcement and the role of serotonergic system in protective mechanisms have been confirmed (Lelonek-Kuleta 2015: 101; Habrat 2016: 33). A few studies in the field of genetics have also confirmed that substance abuse and behavioral addiction share a common pathogenesis and that the propensity for them can be inherited (Lelonek-Kuleta 2015: 101).

The current diagnostic criteria explain the term *addiction* as the sum of addictive behaviors (with psychological components and biological foundations) and biological pharmacological conditions (altered tolerance and abstinence symptoms). Thus, the term refers only to the abuse of psychoactive substances.

Withdrawal symptoms are a special area of discussion in research on behavioral addictions. The symptoms that occur when one is prevented from performing an activity are similar to the symptoms of withdrawal syndrome, but they are non-specific. Among other things, they can be a manifestation of frustration and can occur in the form of anxiety, irritability, or restlessness. In contrast, the symptoms that constitute diagnostic criteria are typical of withdrawal from a substance, such as increased sleepiness or appetite in the case of cocaine addiction (Habrat 2016: 34). Thus, in behavioral addictions, they are limited to the mental sphere. The disease course of psychoactive addictions varies depending on the substance in question. The initial step in the treatment of chemical addictions is detoxification, but not in behavioral addictions. As a result, the DSM-5 classification introduced a category of addictive disorders that included substance use disorders and gambling disorders, which highlights their similarity in terms of mechanisms while indicating their distinctiveness (separate subcategories).

Cierpiałkowska described two major views on the nature of addictions. Supporters of the first view treat them as a syndrome, while supporters of the other perceive them as a process (Grzegorzewska,

Cierpiałkowska 2018: 35–41). The multifactor model is one of the most popular models for explaining the origin of addiction development (Lelonek-Kuleta 2015: 101). It is based on the idea that addictions have the same origin. On the one hand, they result from complex and integrated biological, psychological, and social factors, while on the other hand, they depend on neurobiological and psychological contexts that increase a person's susceptibility to addiction. Therefore, they are treated as a syndrome with many aspects, both those related to substance and behavioral ones. This concept is reflected in ongoing research and it is confirmed, for example, in scientific articles on the co-occurrence of addictions or the substitution of one object of addiction for another. However, the authors of the concept are accused of focusing too much on diagnosis, while neglecting the analysis of the psychological processes behind the phenomenon (Grzegorzewska, Cierpiałkowska 2018).

The model that treats addiction as a process also points to the role of substance addictions, which, in this case, are among the many risk factors correlated with behavioral addictions. In this approach, the individual intentionally engages in a given behavior. The goal is to achieve pleasure. The addiction itself develops gradually; it is accompanied by risk factors and co-occurring problematic situations. This approach makes it possible to identify those psychological processes that are specific to the development of a particular addiction. Thus, it makes it possible to construct evidence-based interventions, which is invaluable for effective therapy and interventions in practice (Grzegorzewska, Cierpiałkowska 2018).

Regardless of whether the object of addiction is a substance or a behavior, it brings suffering into the life of the affected person (in every aspect of their lives). Importantly, we can consider the consequences of addiction in the individual, familial, and the societal perspectives (Włodarczyk 2020: 40). Social ties are broken, social competence is lost, relationships are disrupted, and the addicted individual becomes increasingly isolated from people. These effects of addiction co-occur, creating new problems and reinforcing one another.

Selected types of "new addictions"

Sociocultural changes are triggering a strong need for possessions and intense experiences in modern society. An experience itself is becoming less important than the way it is recorded, for example, on social networks. The paradox of our time is living in a world full of goods and choices while experiencing a poverty of relationships. Relationships are weakening, as a result of which the human capacity to tolerate stressors of various kinds is also decreasing. Looking for regulation and ways to cope with stress, the individual turns to activities that will help reduce their bad mood. This section of the article discusses selected new addictions. They were selected based on the official DSM-5 classification. Addiction to gambling appears here under the category of substance use disorders and dependencies. Problematic internet use was considered for potential inclusion in this category and online gaming addiction was considered to require further research. Other addictions under consideration, in which no satisfactory evidence has been found, included addictions to shopping, sex, and physical exercise (this article discusses shopping addiction).

Gambling

First recognized as a disease and appearing in the 2000 DSM-5 classification under the category of impulse control disorders (Panasiuk K., Panasiuk B. 2016), pathological gambling was defined as a progressive and chronic disorder that involves a persistent inability to resist the impulse to gamble and interferes with or harms one's personal, familial, or professional pursuits (Kusztal, Piasecka, Nastazjak 2021: 18). Now, in the latest DSM-5 criteria introduced in 2013, gambling is in the category of psychoactive substance and addiction disorders (Figure 4). A gambling disorder is viewed as a continuum in which the number of identified symptoms determines its severity. Mild severity of the disorder involves the appearance of 4–5 criteria, moderate severity entails 6–7 criteria, and significant severity 8–9 criteria. Early remission, on the other hand, is evidenced by the absence of symptoms for 3–12 months; with persistent remission, the time extends beyond 12 months.

Figure 4. Gambling diagnostic criteria according to the DSM-5

Kryteria diagnostyczne DSM-5
A. Persistent or recurrent problematic gambling behavior leading to clinically significant harm or negative distress, as indicated by four or more of the following behaviors exhibited by the individual in the past 12 months: 1. Feeling the need to gamble for increasingly larger amounts of money in order to achieve the desired level of excitement 2. Becoming anxious or irritated when trying to reduce or stop gambling 3. Making unsuccessful attempts to control, reduce, and stop gambling 4. Feeling overwhelmed with gambling 5. Often gambling when feeling stressed 6. After losing money, often returning to the game another day to get even 7. Lying to hide the degree of gambling behavior 8. Jeopardizing or losing significant relationships, jobs, or educational or professional opportunities due to gambling 9. Becoming dependent on people who can help with their financial difficulties caused by their involvement in gambling. B. Gambling behavior is not better explained by the occurrence of a manic episode.

Source: Based on Panasiuk & Panasiuk (2016: 93).

The ICD-10 and the newer ICD-11 classifications, which are valid in Europe, also refer to gambling (Table 1). In the ICD-10 classification, pathological gambling was placed in the category of mental and behavioral disorders, in the subcategory of disorders of habits and drives. It was defined as "frequent, repeated episodes of gambling that dominate a person's life, leading to violations of norms and social, professional, material, and family obligations" (Pużyński, Wciórka 2000: 178). The introduction of the ICD-11 classification brought an important change (in Poland, the ICD-10 criteria are valid until it is translated): a subsection appeared for disorders due to substance use or addictive behaviors, which distinguished between disorders caused by substance use and those caused by addictive behaviors. Gambling use disorder and gaming disorder were placed in the latter group. The disorder is diagnosed when gambling behavior and other features are evident for at least 12 months, although the duration can be shortened if all diagnostic requirements are met and symptoms are severe.

Table 1. Gambling diagnostic criteria according to the ICD-10 and the ICD-11

ICD-10	ICD-11
1. Increased drive to search for an addictive agent 2. Increased tolerance to the agent (gradual decrease in pleasure when the same dose is delivered, or the need to increase the amount of the agent to achieve similar pleasure as at the beginning) 3. Compulsive need to gamble, at the expense of one's health and environment 4. Weakening of one's willpower 5. Obsession with gambling and persistence and recurrence of intrusive thoughts, even after years of abstinence 6. Self-deception and the use of excuses and other defense mechanisms to facilitate gambling 7. Physical exhaustion and lack of interest in non-gambling environments 8. Emotional burnout.	A pattern of persistent or repeated gambling behaviors that may be engaged in online or offline. These behaviors are characterized by: 1. Impaired control over gambling (e.g., onset, frequency, intensity, duration, termination, and context) 2. Prioritization of gambling to such an extent that it takes precedence over other life interests and daily activities 3. Continuation or escalation of gambling despite the occurrence of negative consequences.

Source: Based on Pospiszyl (2020) and Kusztal et al. (2021).

Three stages are usually distinguished in the development of a gambling addiction (see Woronowicz 2009: 468, Panasiuk K., Panasiuk B. 2016: 95–98, Pospiszyl 2020: 311). The first of these is referred to as the victory phase. At this stage, winning evokes a feeling of triumph and the gambler risks increasingly larger sums, hoping to succeed. The turning point for this phase, called the "big win episode," is when it becomes an obsession. The next stage, the loss phase, leads to an ambivalent feeling. On the one hand, there is a desire to give up; on the other hand, wishful thinking appears about the possibility of another win. The gambler is consumed by this vision, hoping only for revenge and to recoup the money which was lost. The addict's behavior begins to create problems in various areas of their life (family, work, etc.). The third phase, the desperation phase, begins when all manipulations and defense mechanisms stop working. The gambler feels the consequences of their behavior, for which they must bear responsibility. This stage is often perceived as the turning point after which the addict seeks help.

According to a 2017 survey by CBOS (the Centre for Public Opinion Research) (CBOS 2017), 0.4% of gamblers in Poland admitted to compulsive gambling. Men far outnumber women in this group (only 1/3 of the gamblers are women). Age is also

a significant factor. Teenagers most often choose slot machines, while young adults (20–35 years old) gamble in casinos. More than half of gambling addicts begin their gambling adventure between the ages of 10 and 14. According to the survey, e-gambling is very popular among Poles. The most common form is sports betting (Lelonek-Kuleta et al. 2020). It is difficult to estimate the extent of gambling problems, and the available studies have yielded ambiguous results. Most of the information on the prevalence of gambling disorders comes from the United States, Norway, and Canada. Depending on the location of the study and the diagnostic tool used, the percentage of gambling addicts in the population ranges from 0.1% to 2% (Grzegorzewska, Cierpiałkowska 2018: 153).

Problematic internet use

The internet has become an integral part of life, a place to work, and a source of gratification. Unfortunately, what benefits us can also harm us. Problematic use of the internet includes a variety of activities such as surfing the web, online gambling, cybersex, online shopping, compulsive information-seeking, and excessive use of social media. From the point of view of many researchers (e.g., Grzegorzewska, Cierpiałkowska 2018: 211), the internet as such is not a source of addiction; it only mediates in the development of addiction to certain activities. This is in line with the contemporary position which assumes that the term "internet addiction" is a mental shortcut that refers to engaging in various risky and addictive behaviors online. Harmful online use is now considered to include (1) harmful gaming, (2) harmful sexual involvement, (3) excessive and harmful information-seeking, (4) compulsive behavior, and (5) excessive and harmful social involvement (Grzegorzewska, Cierpiałkowska 2018: 211–212).

The American Psychiatric Association has considered including the diagnosis of pathological internet use in the DSM-5 classification. It suggested including four criteria relevant to diagnosing the problem: (1) excessive use, often associated with losing track of time or neglecting basic needs, (2) withdrawal, including feelings of anger, tension, and/or depression when not using a computer, (3) changing tolerance, using a computer with increasing frequency, including manifesting the need for increasingly better computer equipment,

more programs, and longer use of the internet, and (4) negative consequences, including arguing, lying, poor performance at work/school, social isolation, and fatigue (Grzegorzewska, Cierpiałkowska 2018: 212–213). Nonetheless, the 2013 DSM-5 classification did not include internet addiction as a disorder. Despite the lack of an official nosological classification, researchers have suggested their own diagnostic criteria. In the literature, Ivan K. Goldberg is considered one of the first researchers to address the phenomenon. He defined addiction as a situation in which people abuse the internet, which is associated with a number of negative physical and psychological consequences (Barłóg 2015). He also specified the symptoms by which this problem can be identified (Figure 5).

Figure 5. Criteria of internet addiction according to Ivan K. Goldberg

Goldberg
Addiction can be diagnosed when a minimum of three of the following symptoms appear: • Tolerance—a decreasing level of satisfaction resulting from using the internet for the same amount of time, leading to longer and longer online activity • Abstinence syndrome—appears only a few days after stopping online activity and involves at least two of the following symptoms: ▪ psychomotor stimulation ▪ anxiety ▪ obsessive thoughts about the internet and its content ▪ lower mood ▪ fantasies and dreams related to the internet ▪ arbitrary or involuntary movement of fingers in a manner characteristic of using a computer keyboard. In order to reduce the symptoms of abstinence syndrome, the person starts using the internet again. • Using the internet for longer than planned • The need to interrupt or limit internet use, but with unsuccessful attempts • Spending a lot of time on internet-related activities (organizing online material or reading books about the internet) • Reducing or abandoning professional, social, or recreational activities in favor of internet use • Continued use of the internet despite the awareness of developing physical, social, and psychological problems.

Source: Based on Barłóg (2015).

The phases of media addiction are best described in the context of compulsive internet use, but they can also apply to online gaming addiction. The addiction process itself is divided into four phases, each of which is associated with a critical moment (Panasiuk K., Panasiuk B. 2017: 69–70). The first stage, called engagement, entails occasional use of the internet that serves some specific purpose, such as

searching for materials for study or work. The time spent on this task does not yet interfere with the natural rhythm of life. Subsequently, there is a transition from occasional use to the next stage: substitution. At this stage, Internet usage becomes regular, at the expense of time spent on other activities. The person begins to isolate themselves socially and loses interest in other areas of life. Problems appear that become increasingly difficult to solve. Stage three is escape. A loss of control occurs. The addict gets into conflicts with relatives and manipulates their social environment. They escape from reality into the virtual world. The last stage (desperation) is an attempt to return to normal life. As a result of external circumstances, the addict is no longer able to use escape mechanisms and begins to seek help (Panasiuk K., Panasiuk B. 2017: 69–70; Pospiszyl 2020: 303–304).

Studies on internet addiction present the scale of the phenomenon itself, rather than reliably assessing the problem. They vary considerably depending on the culture and society under study and use inconsistent methodologies. Some studies are conducted on representative populations through surveys posted online, while others address specific groups with questionnaires. A 2001 study found that 10% of Europeans admitted to compulsive internet use or considered themselves addicted. It is worth mentioning that at the beginning of the 21st century, 17% of Poles used the Internet; while in 2019–2020 this percentage had risen to nearly 85% (Pospiszyl 2020: 305). Therefore, it can be estimated that the number of people currently addicted to this medium is higher. Nevertheless, given the methodological diversity, the variety of research tools used, the sociocultural context, and the rapid development of the internet itself, it seems that addiction rates can be both overestimated and underestimated, depending on the group being studied (Grzegorzewska, Cierpiałkowska 2018: 216).

Internet gaming addiction

The American DSM-5 classification introduced the term *internet gaming disorder* to describe the disorder related to using games as one that requires further analysis (Cyrklaff-Gorczyca, Kruszewski 2018). As suggested in the DSM-5 classification, there are nine diagnostic

criteria for gaming addiction (Figure 6). At least five of these symptoms must appear within 12 months for a diagnosis to be made.

Figure 6. Probable diagnostic criteria for computer game addiction, according to the DSM-5 classification

- Preoccupation with gaming
- Symptoms of withdrawal when gaming is not possible
- Tolerance—the need to become more and more involved in gaming
- Unsuccessful attempts to control one's gaming
- Loss of interest in previous pleasures and activities as a consequence of excessive gaming
- Continuing to engage in gaming despite the negative consequences of doing so
- Lying or deceiving family, therapists, and others about the time spent gaming
- Using games as a way to escape from problems or to regulate one's mood
- Risking or losing interpersonal relationships or work, school, or career due to excessive gaming.

Source: Based on Grzegorzewska & Cierpiałkowska (2018: 190).

The new ICD-11 classification also included this addiction as *gaming disorder*. It has been placed in the "addictive behaviors" subgroup and it refers to

> a disorder of gaming control and the increasing importance of gaming over other activities to the point that gaming dominates other daily activities and interests, as well as the continuation or escalation of gaming despite the negative consequences it entails. (Cyrklaff-Gorczyca, Kruszewski 2018: 47)

For a behavior to be qualified as a gaming addiction, there must be a 12-month period (in the case of severe symptoms, the time frame is shorter) during which there is a significant impairment of functioning in an important sphere of life.

More and more young people are also reaching for new technologies to play. A debate is developing among educators, psychologists, teachers, and parents about the consequences of this phenomenon. There is no simple answer here. On the one hand, the literature on the subject points to the beneficial effects of new technologies, such as the development of visual-spatial skills; the growth of knowledge and reading, counting, and language skills; and the formation of pro-social attitudes. On the other hand, we can see young people overwhelmed with games, losing control over the time they spend playing, ignoring other activities, and experiencing many negative consequences, all of which leads to addiction (Grzegorzewska, Cierpiałkowska 2018: 184–185). Games can provide an escape from a reality full of conflict,

negative emotions, or low self-esteem. According to a study conducted on a representative group of European adolescents (Muller et al. 2015), the percentages of adolescents (14–17-year-olds) addicted to computer games in each country were as follows: Greece—2.5%, Poland—2.0%, Iceland—1.8%, Germany—1.6%, Romania—1.3%, the Netherlands—1.0%, and Spain—0.6% (Muller et al. 2015).

Compulsive shopping

Researchers disagree on which category of mental disorders uncontrolled shopping falls into. Four types of disorders are most commonly mentioned: impulse control disorder, mood disorder, obsessive-compulsive disorder, and behavioral addiction, with the last two receiving the most attention. The term "compulsive buying" is not yet a valid definition. This type of activity can be defined as "an uncontrolled compulsion to buy, which adversely affects the functioning of the individual" (Grzegorzewska, Cierpiałkowska 2018: 314–315). Compulsive buying has not been classified in the current diagnostic criteria. However, according to the non-binding criteria of Helga Dittmar (Grzegorzewska, Cierpiałkowska 2018: 316), uncontrollable need is one of the key symptoms that distinguish normal buying from pathological buying. Compulsive buying also entails negative consequences in various spheres of life. Regarding the mechanisms of addiction, compulsive buying exists when three of the following symptoms occur:

> (1) the feeling of compulsion and/or a strong need to shop, (2) impaired control over refraining from shopping and over the length and frequency of time spent shopping, (3) experiencing anxiety, irritability, or worse moods when trying to reduce the opportunity to shop, and the subsiding of these states when the opportunity to pursue shopping plans arises, (4) spending more and more time shopping for satisfaction or a good mood that was previously achieved in less time, (5) progressive neglect of alternative sources of pleasure or one's interests in favor of shopping and acquiring funds for shopping, and (6) continuing to buy things despite the harmful consequences associated with such shopping. (Grzegorzewska, Cierpiałkowska 2018: 317)

The research on the prevalence of shopaholism indicates that in Europe, 1%–10% of the population are affected by this problem, while in the USA about 6% of people suffer from it (Grzegorzewska,

Cierpiałkowska 2018). In Poland, according to the findings reported by CBOS (2015), about 4% of people over the age of 15 struggle with compulsive buying. The majority of them are girls and women under the age of 24. This problem usually affects young people, and the reason for this, especially in the West, can be traced to the rich offer of various types of goods, the possibility of choosing them, easy access to them, and the culture of spending leisure time in shopping malls (Ogińska-Bulik 2016).

Conclusion

Terms such as "behavioral addictions," "activity addictions," and "new addictions," which were discussed above, have become a permanent part of the scholarly literature and practice. This has its positive aspects, such as reducing the controversy surrounding the overly broad use of the term "addiction" and investigating the consequences of being engaged in activities that are beyond one's control. On the other hand, the term addiction evokes negative, often stigmatizing associations. Excessive and reckless application of the term to specific forms of activity may create a lot of misunderstandings and may pathologize everyday life. Simplified descriptions of human behaviors can underestimate the real risks of addiction. At the moment, the best studied behavioral addiction is gambling. With the current state of knowledge, and especially in the absence of validated diagnostic criteria and longitudinal studies, it is too early to consider other behavioral addictions as full-fledged, independent disorders, much less to classify them as similar to substance addictions rather than impulse control disorders. More scientific evidence is needed to expand the knowledge of behavioral addictions to match that of substance addictions.

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The Importance of Diagnoses From Advisory Teams of Court Experts in Cases of Minors Addicted to the Internet and Computer Games and Showing Signs of Social Maladjustment

ABSTRACT

The article analyzes the significance of diagnoses from advisory teams of court experts (ATCEs) against minors addicted to the internet and computer games and showing signs of social maladjustment. The purpose of the article is to assess the importance of ATCE diagnoses in cases of minors revealing such symptoms. The research was based on the method of individual cases; two reports were selected for analysis from among the few available. The technique of document analysis was used on the ATCE reports. The main problem was to identify the role of the ATCEs in diagnosing and designing interventions for minors with signs of maladjustment, delinquency, and concurrent addiction to the internet and computer games. The analysis revealed the causes of abnormal behavior in minors and the mechanisms of these disorders and made it possible to select adequate measures against them.

KEYWORDS
social maladjustment, delinquency, internet addiction, computer game addiction, system of resocialization of minors, advisory teams of court experts, diagnosis of minors

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Introduction

The purpose of the article is to assess the importance of diagnoses delivered by advisory teams of court experts (ATCEs) in cases of minors revealing symptoms of internet and computer game addiction and symptoms of social maladjustment. Discussing the role of ATCEs in the diagnosis of minors first requires theoretical grounding: outlining the problem of internet and computer game addiction, presenting the essence of social maladjustment and its signs, and describing the way of dealing with minors. The author outlines and analyzes the diagnoses of minors with symptoms of internet and computer game addiction and with signs of social maladjustment who are under the court's supervision.

Selected types of addiction to the internet and computer games

Internet and computer game addiction are classified as behavioral addictions. The term *behavioral addiction* is used to describe compulsive activities which are repeated although they are harmful to daily functioning in various aspects of one's life and which are characterized by a strong desire or internal compulsion to engage in them (so-called hunger) with increasing frequency (increasing tolerance) and increasing difficulty in controlling the associated behaviors (Grzegorzewska, Cierpiałkowska 2018: 23). A review of the literature on behavioral addictions points to complex causes: biological (genetic/neurological), psychological (individual), and social (macro- and micro-social) causes which result in the "new addictions."

In this article, I introduce the phenomenon of addiction to the internet and computer games. This problem has been explored in scientific research in Poland for more than a decade (Kaliszewska 2005, 2007; Izdebska 2008; Bednarek, Andrzejewska 2009; Majchrzak, Ogińska-Bulik 2010; Pyżalski 2012; Jędrzejko, Rosik, Kowalski 2015; Rowicka 2015; Grzegorzewska, Cierpiałkowska 2018). Internet addiction disorder is also called internet addiction syndrome, WWW-holism, netoholism, netaddiction, pathological internet use, cyberaddiction, internet abuse, internet dependence, net-dependence, or cyber-dependence (Bębas 2012: 332; Klimczak 2012: 62, Pyżalski 2012: 93). Research on young people's internet use, carried

out in 2021 by CBOS (Center for Public Opinion Research), showed an increase in internet abuse as compared to the data from 2018. According to the research, more than a quarter of the respondents (26%) were teenagers at moderate risk of internet abuse, while one in 20 respondents (5%) showed more severe symptoms of addiction (Felisiak, Omyła-Rudzka 2022: 203).

Kimberly S. Young distinguishes the following subtypes of computer-related addiction: (1) *cyber sexual addiction*, e.g., viewing pornographic videos and pictures or participating in sex-oriented chatrooms, (2) *cyber-relationship addiction*, i.e., addiction to online social contact such as chatrooms and discussion groups or compulsive e-mailing, (3) *net compulsions*, (4) *online gambling addiction*, (5) *information overload*, i.e., searching for new information or browsing through databases, and (6) *computer addiction* (Woronowicz 2009: 477–478; Ogińska-Bulik 2010: 55; Grzegorzewska, Cierpiałkowska 2018: 212). Computer game addiction refers to playing single-player games (e.g., simulation, strategy, or role-playing games [RPGs]) or multiplayer games: massively multiplayer online games (MMOs), massively multiplayer online role-playing games (MMORPGs), massively multiplayer online first-person shooter games (MMOFPSs), massively multiplayer online real-time strategy games (MMORTSs), and others (e.g., e-sports or role-playing games) (Taper 2010: 169–173; Taper, Klimczak 2010: 83–86, Grzegorzewska, Cierpiałkowska 2018: 188).

The study of compulsive internet was pioneered by Kimberly S. Young and Mark Griffiths. Young formulated the criteria for internet addiction: a preoccupation with the internet, the need to spend more time online, attempts to limit the amount of time spent online, withdrawal symptoms when computers are unavailable, time management difficulties, difficulties in social functioning, underestimation of the amount of time spent online, and modification of mood through internet use (Young 1998; cf. Griffiths 1998; Griffiths 2004: 11–12; quoted in: Rowicka 2015: 7–8). Tao et al. (2007) presented a cyclical neuropsychological chain model of internet addiction which includes primary drive, euphoric experience, tolerance, abstinence, passive coping, and the avalanche effect (quoted in: Young et al. 2017: 25).

The criteria for internet addiction according to the DSM-5 are excessive involvement in online activities (associated with losing track of time and neglecting one's basic needs); withdrawal symptoms, such as feelings of anger, tension, and/or depressive states when not online; change in tolerance (increasing involvement in the internet); the need for better computer equipment (hardware and software) and more time online; and negative effects of excessive internet use, such as conflicts, arguments, poor performance at school or work, social isolation, and fatigue.

The criteria for gaming addiction in the DSM-5 are preoccupation with gaming; withdrawal symptoms when gaming is impossible; tolerance (a need for increasing time spent gaming); unsuccessful attempts to control gaming; loss of interest in previous pleasures and activities as a consequence of excessive gaming; continued engagement in gaming despite the consequences; deceiving family, therapists, and others about the time spent gaming; lying or hiding; using gaming as an escape from problems or as a way to regulate mood; and a risk of losing or compromising interpersonal relationships at work or school or jeopardizing career development due to excessive gaming (Grzegorzewska, Cierpiałkowska 2018: 190, 213).

To sum up, the addict suffers a number of consequences from addiction: (1) social consequences—disturbed social relationships, increasing social isolation/loneliness, neglect of school duties, neglect of social activities, and financial problems; (2) social and psychological consequences—emotional dysregulation and loss of behavioral control, disturbed sense of identity, irritability and nervousness, increased social tension and anxiety, disturbed sexual needs, cognitive disorder (e.g., obsessive thinking about the internet), narrowing of interests, and changes in communication skills; and (3) physical consequences—sleep problems, photogenic epilepsy, auditory hallucinations, skin, joint and muscle problems, or repetitive strain injuries (Kaliszewska 2007: 38–39; Grzegorzewska, Cierpiałkowska 2018: 198–199).

Sometimes the symptoms and effects of internet and computer game addiction are intertwined with other unfavorable symptoms, known as symptoms of social maladjustment, the essence of which are outlined below. I treat them separately in the article and I do

not link the symptoms of addiction with the symptoms of social maladjustment.

The essence of social maladjustment

Social maladjustment in young people has remained the subject of theoretical and practical analysis for years. In Poland, this subject has been taken up by many authors (e.g., Grzegorzewska 1959; Konopnicki 1971; Ostrihańska 1997; Pospiszyl, Żabczyńska 1985; Makowski 1994; Pytka, Zacharuk 1998, 2014; Urban 2000, 2001, 2008; Pytka 2000; Konopczyński 2006, 2014; Siemionow 2011; Opora 2016; Opora, Piechowicz, Jezierska 2017). A characteristic feature of maladaptive behaviors is that they are acquired throughout life, but they occur more often in some periods (e.g., during adolescence) and may form a single, unified system of negative behaviors, as a result of which the individual may tend to malfunction and behave in a dysfunctional manner (Jessor 2014: 241). Typical symptoms of social maladjustment in the family include running away from home, frequent conflicts, inadequate relationships with family members, rebellion, and failure to perform household duties. Social maladjustment at school presents as laziness, educational failure, violation of school rules, conflicts with teachers and peers, truancy, and failure to do homework, while maladjustment in one's peer group includes spending time in the company of troubled youths, belonging to subcultures, showing aggression toward peers, fighting, and being isolated and rejected by peers. Maladjustment may also be directed toward oneself, when it takes the form of self-harm, alcoholism, smoking, prostitution, promiscuity, drug addiction, substance abuse, etc. (Konaszewski, Kwadrans 2018: 59–60).

Lesław Pytka stresses the complexity of social maladjustment, which can be described from various perspectives as a variant of the child's social development that results in negative consequences for the child and their social environment; a type of behavioral disorder resulting from negative environmental conditions and imbalanced processes in the central nervous system; children's and adolescents' insusceptibility to typical upbringing methods, which prompts parents and educational institutions to look for special medical, psychological, and child-rearing interventions; personality disorders which

cause great difficulties for children and adolescents in adapting to the prevailing social norms and fulfilling life tasks; emotional disorders which disrupt coexistence with other people; and repetitive, fixed behaviors of non-compliance with basic rules of conduct that are considered valid for adolescents of a given age (Pytka 2000, quoted in: Rode et al. 2020: 102).

Students displaying symptoms of social maladjustment or addiction to the internet and computer games are handled by school staff, who have a variety of methods to prevent and reduce such symptoms. Sometimes these measures are insufficient, with young people showing advanced signs of addiction which lead to further socially maladaptive behavior. At this stage, it is advisable to initiate court-led interventions described in the legislation applicable to juveniles, in order to make an accurate diagnosis and to individualize interventions, as described below.

Legal regulations on minors—the role of advisory teams of court experts in the system of social rehabilitation of minors

For almost 40 years, the Act on Proceedings in Cases of Minors has been in force in Poland. Taking up the issue of legal regulations, I refer to the changes in the legislation on minors which took effect in June 2022 due to the new Act of 9 June 2022 on Supporting and Providing Social Rehabilitation to Minors. The law uses the term "deviance" to refer to attitudes and behaviors of minors that bear the hallmarks of social maladjustment. It is usually defined, for example, as a permanent tendency to behave in a certain way: to violate socially accepted norms, but also to engage in repeated behaviors that deviate from the accepted moral rules (Eichstaedt 2008: 37).

Article 2 of the Act of 9 June 2022 on Supporting and Providing Social Rehabilitation to Minors stipulates that action be taken against a minor in cases where they show signs of deviance or have committed a crime. In turn, Articles 3.1 and 3.2 state that a juvenile's case should be guided primarily by their welfare, with favorable changes in personality and behavior and, if possible, the proper fulfilment of parents' or guardians' obligations toward the minor and the interests of society in mind. The proceedings should take into

account the personal characteristics of the minor, in particular their age, state of health, level of mental and physical development, character traits, family situation, upbringing conditions and social environment, as well as the causes and degree of delinquent behavior and the nature of the offence and the manner and circumstances in which it was committed (Act of 9 June 2022 on Supporting and Providing Social Rehabilitation to Minors). The legislature emphasizes the need to take care of the juvenile's welfare and to individualize actions by collecting information about the minor and their environment, as well as indicates the need to act in accordance with this principle (Włodarczyk-Madejska 2018b). This principle involves the selection of appropriate means of dealing with the minor which will fulfill educational objectives and exert a good influence on them (Klaus 2009: 77).

The Act says that anyone who discovers circumstances indicating that a minor has engaged in deviant behavior has a social duty to counteract it and, above all, to notify the minor's parents or guardians, the school, the family court, the police, or another competent authority. The signs of depravation are described in Article 4§1: committing a prohibited act; violating the rules of social conduct; evading the obligation to attend school or study; using alcohol, drugs, psychotropic substances, their precursors, substitute drugs, or new psychoactive substances—hereinafter referred to as "psychoactive substances"; and practicing prostitution. Arts. 6 and 7 of the Act also detail the measures that can be applied to minors (Act of 9 June 2022 on Supporting and Providing Social Rehabilitation to Minors).

In selecting appropriate measures for dealing with minors, the court may cooperate with auxiliary institutions. One such institution is the advisory team of court experts (ATCE), which plays an important role in diagnosing minors who show traits of social maladjustment and depravation, profiling interventions with respect to juveniles, and other tasks. The history of the ATCE began in 1967 (formerly "diagnostic and selection institutions"; the name has been changed several times). Even before 1976, there was a tradition in Poland of psychological and educational centers carrying out research. However, not until the creation of diagnostic and selection institutions did it become possible to comprehensively describe such people (Sokołowska 1977: 29). In 1978, a decree of the Minister of Justice

brought about another change. Not only did the name of the institutions change, but so did the scope of their tasks, their subordination, and the rules of their operation. From that time on, the institutions were called "family diagnostic and consultation centers" (FDCC), and they became specialized institutions providing diagnoses, specialized care, and counselling in care and criminal cases involving minors and family matters (Ostrowska 2008: 232–233). Their diagnoses were linked to the principle of individualization, which involved conducting the relevant personal/cognitive tests. The premise of individualization encompassed criteria related to (1) the minor's personality, (2) the type of acts they have committed, and (3) their family background and living situation, which the court was obliged to take into account at every stage of the proceedings—especially when adjudicating measures against minors (Grześkowiak et al. 1984: 20–21). Many authors also analyzed the thoroughness and reliability of the diagnostic process, including Krystyna Ostrowska and Ewa Milewska (1986) and Stanisław Nieuciński (1985). In accordance with the Regulation of the Minister of Justice of May 13, 1983, these FDCCs were subordinated to the court where they were located. They conducted psychological, pedagogical, medical, and social examinations, issued reports on minors and their parents and guardians, and provided family counselling and specialized care for minors, as well as assistance to youth detention centers and juvenile shelters (Stańdo-Kawecka 2000: 252; Witucki 2022: 36–37).

According to Paweł Ostaszewski (2010: 10), one of the main objectives of juvenile proceedings was to design the best way to influence a given minor. The chosen measures also resulted from the Act on Proceedings in the Cases of Minors, which was in force at that time, primarily from Article 25 of this Act, which stipulated that the family court could request a report from, for example, an FDCC if it needed a comprehensive diagnosis of the juvenile's personality, requiring pedagogical, psychological, or medical knowledge or to determine an appropriate way to influence the juvenile. These reports were obligatorily issued before the court's decision to place the minor in a proper institution, which resulted from Art. 25§2 (Bojarski, Skrętowicz 2011). Research indicates that more than 80% of family court decisions followed the suggestions of those centers (Bojarski, Skrętowicz 2011: 117).

Since 2015, the legal basis for the functioning of FDCCs (Regulation of the Minister of Justice of August 3, 2001 on the organization and scope of family diagnostic and consultation centers), according to the Decision of the Constitutional Tribunal of October 28, 2015 (U 6/13), was considered to be incompliant with Art. 84§3 of the Act of October 26, 1982 on the Proceedings in the Cases of Minors and with Art. 92 Para. 1 of the Constitution. That is why, on the basis of the Act of August 5, 2015 on advisory teams of court experts, those centers were changed into ATCEs on January 1, 2016 (Włodarczyk-Madejska 2018b: 242). Thus, the valid act which regulates the functioning of ATCEs is the Act of August 5, 2015 on advisory teams of court experts (Journal of Laws 2015, item 1418). According to Article 1.1, (1) ATCEs operate in district courts and their task is to prepare—upon the order of the court or the public prosecutor—reports in family and guardianship cases and in juvenile cases, on the basis of psychological, pedagogical, or medical examinations. (2) The teams, upon the order of the court, also mediate, conduct interviews in juvenile matters, and provide specialist counselling for minors and their families. (3) The teams may cooperate with facilities that implement court decisions. Article 2.1 defines the composition of the team, which includes specialists in psychology, pedagogy, pediatrics, family medicine, internal medicine, psychiatry, and child and adolescent psychiatry. Article 3.1 specifies that the team prepares reports for courts and prosecutors in the jurisdiction of the proper district court in which the team works; in particularly justified cases, the team may issue a report for courts and prosecutors from outside the team's region (Act of August 5, 2015 on advisory teams of court experts). Another important aspect was standardizing the methodology for issuing reports, provided in the Regulation of the Minister of Justice of February 1, 2016 on the standards of methodology of preparing reports in advisory teams of court experts (Journal of Laws 2016, item 76, as amended). Each time, the scope of the report must be determined by the evidence; in juvenile cases, it should also determine the minor's degree of delinquency and should issue recommendations for further actions related to them (Rode et al. 2020: 44).

Justyna Włodarczyk-Madejska's research from 2015–2016 shows that, when issuing judgments, the courts had a diagnostic report (pursuant to Article 25§2 of the Act) in 99% of cases of minors

against whom they applied the strictest measures under Article 6 of the valid Act on Proceedings in the Cases of Minors. Reports were also issued in other situations when, for example, the minor showed mental disorders or caused certain educational problems that indicate a disorder, or there was a need for a detailed diagnosis of the juvenile's problems (Włodarczyk-Madejska 2017; 2018b: 171, 180). The research conducted among judges shows that they considered the diagnostic report to be the most helpful evidence in the decision-making process (87.7%). Other studies showed that 80% of the judgments converged with the suggestions of the diagnostic team (Włodarczyk-Madejska 2018b: 214; 2019: 192). As the literature on the subject shows, studies have also shown some use of diagnostic report in court decisions regarding minors (cf. Strzembosz 1984; Kołakowska-Przełomiec 1990; Woźniakowska-Fajst 2010). Nevertheless, Włodarczyk-Madejska emphasizes the need for diagnostic teams for the entire system of justice, and the importance of these tests and the reports based on them for the adjudication process and for taking action with regard to minors and their upbringing environment (Włodarczyk-Madejska 2017: 71).

Therefore, ATCEs diagnose the functioning of teenagers who show the symptoms of social maladjustment. It also happens that, apart from maladaptive symptoms, minors have other problems, for example, various types of disorders, including addiction to psychoactive substances, but also, more and more frequently, behavioral addictions, such as addiction to the internet or computer games. An individual diagnosis of the various areas of the juvenile's functioning makes it possible to determine the proper approach in their case.

Examples of minors diagnosed by an ATCE who reveal symptoms of social maladjustment/depravation and/or internet/computer game addiction

Presented below are some examples of diagnoses of socially maladjusted minors showing signs of internet/computer game addiction. The descriptions were made available for the purpose of this article by the head of the advisory team of court experts in Zielona Góra. I did not have my own diagnoses of minors from 2022, as such adolescents

are hardly ever diagnosed. These diagnoses were made before June 2022, and thus according to the requirements of the Act of October 26, 1982 on Proceedings in the Cases of Minors. They were the few diagnoses concerning juveniles addicted to the internet/computer games. They were selected deliberately and the data was anonymized (fictitious names were used in the analyses). Mainly, the pedagogical part was used, supplemented with some excerpts from the psychological part, from which conclusions were drawn. In making the diagnoses, an analysis of the files, interviews with the parents and minors, and observations and pedagogical/psychological diagnostic tests were used.

The diagnoses referred to the court's thesis of establishing the degree of delinquent behavior of minors and the reasons for their improper functioning, as well as indicating the type of educational measure that should be applied in a given case. The analysis of selected cases made it possible to learn about various aspects of minors' functioning (including in family and school), to identify the causes and symptoms of social maladjustment—in these cases, evasion/improper fulfillment of school obligations (which turned out to be the result of internet addiction)—and to determine the need for therapeutic interventions, and not only educational measures. The research was based on the method of individual cases, using the technique of document analysis. The main objective was to identify the role of ATCEs in making the diagnoses and designing the interventions for minors showing signs of deviance and concurrent internet/computer game addiction. The aim of this article was to assess the importance of the ATCE in diagnosing symptoms of social maladjustment and internet/computer game addiction, primarily in order to identify the causes and mechanisms of juvenile functioning and the trajectory of addiction development, and to indicate guidelines for working with these minors.

Characteristics of individual cases

Case 1: Bartosz, aged 17

Family situation: The minor's parents had an informal relationship that lasted several years. Their relationship was unstable and ended when the boy was about two years old. The father abused

alcohol. He was only part of his son's life from time to time; in recent years the boy had no contact with him. The minor's mother became involved with new partners several times. She married her first partner and gave birth to the minor's stepbrother, with whom the minor has a disturbed relationship. The stepfather was close to him, but the mother's relationship ended in divorce. Another of his mother's partners did not accept him and used psychological violence against him. Currently, the boy's mother is living with another partner. The stepbrother has a good relationship with this man, but the minor is in conflict with him. The mother does not emotionally accept her son; she remains distanced from him and has no upbringing influence on him.

School functioning, symptoms of maladjustment, and actions taken: The minor started elementary school a year earlier and completed it without delays. He then started to attend a vocational technical school. Initially he was fulfilling his school obligations, but later he started to skip lessons and avoid studying. In the following school year, he was not involved in the pandemic-related distance learning, which was why he was not promoted to the next year. He formally resumed his classes in Year 2, but he received many failing marks in the winter term. He underwent an examination at the psychological/educational counselling center, with a view to changing schools. This did not occur as a result of his mother's negligence. The court initiated an investigation due to the fact that the minor did not submit to his mother's parental authority and he was not fulfilling his obligation to attend school. At the end of the year, he was placed under the supervision of a probation officer for the duration of the proceedings.

Symptoms of addiction: During the period of distant learning, he stopped logging on to lessons and spent his time on the internet playing games. He was aggressive toward his mother when she tried to restrict his access to the computer. He neglected his hygiene and completely disrupted his sleep schedule. He increasingly withdrew from social activities, limited his contact with others, and for about a year spent most of his days in bed, playing on the computer, reacting with aggression to attempts to limit this activity. He benefited from meetings with a therapist at a prevention and therapy center, but he discontinued the therapy. He saw a psychiatrist and was recommended pharmacotherapy, which he also eventually discontinued.

He received inpatient psychiatric treatment in the hospital with a diagnosis of "other disorders of habits and drives (impulses)—gaming addiction" (F 63.8). After leaving the hospital, he briefly followed medical recommendations (to continue his psychiatric treatment, pharmacotherapy, and psychotherapy). He was not monitored by his mother in this respect. The boy conceals information about his internet addiction. He does not smoke cigarettes; he does not consume alcohol or use drugs. He has not made any suicide attempts.

Styles of functioning: When it comes to education, he is intellectually lazy, disorganized, and lacking cognitive interest. He is introverted, passive in terms of functioning style, and reluctant to establish and maintain relationships. In relations with his peers, he treats them with superiority and arrogance for fear of rejection. He lacks empathy and therefore has difficulty establishing and maintaining relationships with others. In the home environment with his reconstructed family, he is on the sidelines; he isolates himself and escapes into the virtual world. He tends to experience states of depressed mood and can be aggressive in situations of heightened negative emotions. In the process of socialization, he has learned to control life situations, to establish relationships based on fear, offence, and humiliation, to defend his needs and rights, and to avoid fulfilling his duties and complying with the expectations of adults whom he does not hold in authority.

Conclusions: The minor reveals an average level of depravation, with no symptoms of antisocial functioning. The abnormal functioning is related to his limited development in terms of stimulation, inappropriate socialization in childhood, emotional and upbringing negligence, as well as low cognitive, school, and social competences. An important cause of his functioning is his family, which he perceives as an environment full of tension and conflict. These tense relationships were undoubtedly shaped by his childhood, the absence of his biological father, and his mother's unstable relationships with men to whose expectations he, as a child, had to adjust. His mother's partners had left, which negatively affected his emotional development in forming proper emotional bonds with others. In adolescence, his defective habits and dysfunctional cognitive and personality characteristics came to the fore, which, to some extent, contributed to his inadequate school and social functioning.

Interventions with the juvenile should be aimed at organizing his daily activities and lifestyle, including periodic breaks from internet access, and should encourage other activities. He requires constant control of his behavior and activity and some changes in lifestyle, with possible outpatient psychiatric treatment and psychological support. The optimum corrective measure in the minor's current situation would be to consider placing him in a Youth Rehabilitation Center. He also requires urgent treatment and specialist help for behavioral addiction.

Case 2: Adam, aged 15

Family situation: The minor is an only child, coming from a marriage that ended in divorce. After his parents separated, the boy lived with his mother and periodically met with his father. He eventually moved to his father's home, i.e., to the apartment where the parents had lived before the family dissolved. The parents established alternate custody of the boy. Both parents have a university degree and a job. They do not reveal abnormalities in their behavior; they satisfactorily secure their living conditions. They have no parental influence on the social and school functioning of the minor, who has escaped their parental control and, in many aspects of his social life, decides for himself. He has problems at school and in social functioning.

School functioning, symptoms of maladjustment, and actions taken: In elementary school, he functioned normally in terms of education and peer group. Problems in school functioning began to emerge during the period of remote learning in Year 8, which coincided with the break-up of his family. The boy was skipping school; he was not logging on to online lessons, working in class, or doing homework. This resulted in him being held back for the year and failing to graduate from elementary school. It also prompted an investigation following a letter from the boy's school to the court. In addition to his learning problems and disregard for his school obligations, the minor displayed negative behavior toward his mother, teachers, and school staff. The parents were helpless in the face of their son's behavior. He was placed under the supervision of a probation officer for the duration of the case. He continued to fail in his

compulsory education obligations and was again at risk of not being promoted and not graduating from elementary school. At the request of the probation officer, his parents sent him for examination at the psychological/educational counselling center, with a view to being declared in need of special education and being placed in a youth sociotherapy center, which eventually took place and allowed the boy to finish elementary school.

Symptoms of addiction: The boy does not participate in any extracurricular activities or activities outside the virtual world. He spends most of his time on the internet: he makes friends online and can play for up to 7 hours a day. He reacts impulsively and defensively to attempts to stop him from using the computer. He has given up all other activities. His rhythm of everyday life is disrupted: he sleeps until midday and only meets friends in the city. He denies and downplays his problems. He reacts defensively and does not feel responsible for the consequences of his behavior. He reveals mood changes ranging from apathy to irritability and aggressiveness. He admits that he has a history of experimenting with alcohol and cigarettes. He has not harmed himself and has no criminal record.

Styles of functioning: At school, he does not make use of his potential intellectual abilities and resources; he is not motivated to learn or achieve success at school. He disregards the norms and rules of social conduct. The boy shows signs of behavioral and emotional disorders, as well as internal conflicts typical of adolescence. He suppresses negative emotions and rebels against adults. Adam has fears of abandonment and the future, so he "escapes" from reality into the virtual world. His family situation is very important to his functioning: he is growing up in a broken family and he stays with each parent in turn. Relations between the minor and his mother are disturbed and emotionally tense; he disrespects her and resents his father. The boy strives for independence and the ability to decide for himself. He does not recognize any authorities: he adopts an antagonistic, judgmental attitude and is verbally and physically aggressive toward his mother. The break-up of the parents' marriage, the disturbed relationship between them, and the lack of consistency in his upbringing have all undoubtedly strained the minor's already emotionally fragile psyche.

Conclusions: The boy's inadequate functioning results from emotional and social factors (family situation), repressed negative emotions of anger and irritation, and lifestyle changes and disorders in everyday functioning stemming from the uncontrolled, compulsive computer use and withdrawal from other forms of activity typical of his age.

An appropriate solution would be to continue the probation officer's supervision of the minor and to oblige him to attend classes at the youth center, supervised by the probation officer, and to participate in voluntary work. It is also advisable for him to undertake therapy for internet/computer game addiction.

General conclusions

When analyzing the diagnostic reports of minors with signs of deviance and symptoms of addiction to the internet and computer games, it should be stated that they are prepared according to the principle of the good of the minor and the principle of individualization. The information presented above shows that in Bartosz's case, despite educational and upbringing support from educators at school and supervision by a probation officer, his functioning did not improve. He did not have any strategy for solving his school problems. He spent many hours on the internet playing computer games. He had symptoms of behavioral addiction (to the internet) as well as motivational, volitional, and socioemotional disorders. Attempts at psychiatric treatment and therapy were unsuccessful. The teenager did not respect authority figures. He remained alone in the family; he had no loved ones and he closed himself off in his own world. Adam is a teenager with good intellectual aptitude, which he did not use in the process of education and personal development due to behavioral disorders and problems in emotional, motivational, and volitional functioning. He showed features of behavioral computer addiction, resulting in withdrawal from other activities and social functioning. He was subject to a process of deviance because his behavior deviated from the norms and rules of emotional and social functioning for a person at his age.

The analyses show that the symptoms of addiction are interrelated and should be considered causes of social maladjustment. In

addition, a holistic analysis of the juveniles' functioning revealed the causes of their functioning. In both cases, this referred to the original source of the disorder resulting from, among other things, personal predispositions and a malfunctioning family environment. This link and dependency is indicated by the research of Helena Kołakowska-Przełomiec (1978: 319–343), who notes that it is mainly the inappropriate atmosphere of family life (antagonisms and conflicts in the family, family breakdown, cohabitation, alcoholism, and inappropriate or even hostile attitudes toward children) that contributes to the child's maladjustment. Other factors include a lack of sufficient care and control, a lack of interest in the child's affairs, and a lack of appropriate role models. In addition, inappropriate attitudes of parents (e.g., inconsistency and strictness toward children) create a sense of anxiety, harm, and frustration in the children. The final link may be providing poor role models to the child (corrupted moral standards in the family or criminal behavior). Both diagnoses have shown the development of social maladjustment in the minors, which, according to Lesław Pytka (1993), is shaped by different factors: negative reactions to inappropriate influences from the social environment and the failure to satisfy the child's developmental needs (reactive behavior), the consolidation of negative reactions to the social environment because of this failure (disorders), and the autonomization, identification, and formation of a negative, antagonistic/destructive identity (maladjustment) (Wysocka 2008: 28; cf. Pytka 1993).

Conclusion

Adolescents today face many challenges growing up in a world of radical changes. The key task for this period of life, i.e., the formation of a mature, independent identity, is based on models drawn largely from the internet, where the modern adolescent has transferred most of their affairs. The years 2020 and 2021 (COVID-19 pandemic) showed that education, too, can function—to some extent—online. Active, time-consuming, often excessive participation in the virtual world, with its social networks and engaging online games, should be considered a sign of the times and a natural consequence of growing up in the postmodern culture shaped by the incredible development of communication technologies (Siemionow 2022: 23). Such

functioning may aggravate various problems faced by adolescents, which was certainly more noticeable during the pandemic. The cases of minors presented herein exemplify different signs of depravation, which resulted in problems at school, family conflicts, disrespect of authorities, and some features of addiction: over-involvement in online activities (noticeable loss of a sense of time and neglect of basic needs), withdrawal symptoms (anger, tension, and/or depressive states when not online), increasing online involvement (change in tolerance), increasing time spent online, and consequences of excessive internet use, including conflicts, quarrels, poor school performance, social isolation, and fatigue. These problems are also the source of the youths' deviance because, in both analyzed cases, the primary problem was the family environment. As Aneta Paszkiewicz points out, the consequences of living in a malfunctioning family are usually borne by the minor. Unable to cope with various difficulties, without sufficient support from loved ones, they fall into various conflicts and addictions, which sometimes resemble symptoms of delinquency. In effect, it becomes necessary to take steps toward the social rehabilitation of the minor. Juveniles often act under the influence of momentary impulses which—due to their not yet fully formed personality—they are unable to control. If we add to this the family's parenting negligence, it can be seen that juvenile offenders are often the victims of the conditions in which they live (Paszkiewicz 2015: 13). According to Joanna Jezierska and Justyna Siemionow, minors with behavior disorders are the "product of pathologies in family systems," which indicates a problem in the family (and its dysfunction as a system). The goal of young people's deviant behavior is often getting the attention of their parents. Unfortunately, when it comes to socially maladjusted young people, this call for help—for care, love, and involvement from their parents—is often ignored. This intensifies the dysfunctional behavior and increases the suffering experienced by the juvenile (Jezierska, Siemionow 2020: 66–67). Taking legal action, particularly a thorough diagnosis carried out by an ATCE, makes it clear how important it is to specify the reasons, degree of delinquent behavior, and suggestions for a proper medical, upbringing, or corrective measure—a measure that "would exert the best influence on the minor's social rehabilitation" (Andrzejewski 2022: 145). Social maladjustment is a complex category, which is why there is a need

to analyze the features and sensitivity of a socially maladjusted person and their social environment. This requires adopting different theoretical perspectives—psychological, pedagogical, and sociological—which, taken together, make it possible to better understand and explain the faults in socialization or upbringing, which is characteristic of a complementary (interdisciplinary) approach (Wysocka 2008: 308). New directions of research also indicate the need to include risk factors and protective factors in the model of diagnosing juvenile depravation. Such factors should refer to the theory of resilience or vulnerability, which not only helps explain behaviors with features of deviance, but can also suggest ways of reinforcing protective factors (e.g., individual or family-related ones) by emphasizing them. They also make it possible to determine the possibilities (or limitations) of the juvenile's development, thus taking into account their future behavior. Suggestions for therapeutic, educational, or rehabilitation interventions are a strength of the juvenile diagnosis model (Rode et al. 2020: 172).

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The Core Curriculum as an Opportunity to Prevent Risky Behaviour in Primary School Pupils in Light of the Concept of Resilience

ABSTRACT

The effectiveness of addiction prevention for children and adolescents currently seems to stir up a lot of emotions and calls to verify the theory behind it. The shift from defensive prevention to positive prevention is becoming successful, yet remains insufficient in education. One interesting approach to the process of preventing addiction in children and adolescents is the concept of resilience, which posits that an individual's resilience helps them positively adapt to or persist in difficult situations which are considered risky for their proper functioning. At the same time, the lack of awareness about addiction among children and adolescents and the rising threats posed by young people's substance use and addictive activities suggest that schools should be one of the first sites of systemic solutions for support and prevention. Based on these assumptions, the author analysed the general education core curriculum for pupils in years 4–7 of primary school, in order to verify its goals and educational content in relation to the established indicators for building resilience in students. The results illustrate a lack of consistency or connections between the

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resilience, prevention in schools, addiction, risky behaviour, core curriculum

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various educational goals and content, which indicates an inability of schools to consciously design educational content that strengthens pupils' individual resources of resilience.

Introduction

Nationwide surveys on risky behaviour among Polish students should certainly raise pedagogical concerns. In 2019, an international research project called the "European School Survey Project on Alcohol and Drugs" was carried out. Its goal was to conduct a representative survey of year 3 students of (then) junior high schools (aged 15–16) and year 2 students of high schools (aged 17–18) in Poland (Sierosławski 2020). The survey showed that alcohol was the psychoactive substance most widely used by children and adolescents: 80.0% of students in the younger group (15–16 years of age) and 92.8% of students in the older group (17–18 years of age) had drunk alcohol at least once in their lives. The young age of alcohol and drug initiation in Poland is also worrying. Studies show that children as young as 11 or 12 years old are already experimenting with alcohol, as the average age of alcohol initiation is 12.5 years (Wojcieszek et al. 2021: 52). Thus, this happens during junior high school. Moreover, 49.9% of students from the younger age group and 65.5% from the older age group had smoked at least once in their life. Experimenting with tranquilisers or sleeping pills was reported by 15.1% of students in the younger group and by 18.3% in the older group. Likewise, 21.4% of the younger students and 37.0% of the older students had used cannabis or hashish at least once (Sierosławski 2020). The author of the report also claims that, based on the research, it can be estimated that around 2% of young people may be at risk of problematic gambling (Sierosławski 2020). This data is supplemented by a report published in 2019 by the Empowering Children Foundation (the Polish name is "Dajemy Dzieciom Siłę"), which describes data from a survey of 1,017 teenagers. Among the study group, 11.9% of respondents were problematic internet users, 11.4% had partial symptoms of problematic internet use and 0.5% had increased symptoms of internet use. These results differ by gender and age: the problematic internet users were more often girls than boys (13.9% vs. 9.3%; $p<0.05$); they were also more likely to be older (15–17 years) than younger (12–14 years;

15.0% vs. 9.5%; p<0.05) (Makaruk, Włodarczyk, Skoneczna 2019: 30). Other available studies conducted in Poland also report similar data, which raises concerns about the addiction risks of children and adolescents,1 while also pointing to other areas of risk that are less recognised, such as addictions to sex, exercise or studying.

Reinforcement of resilience as a preventive task

Awareness of the relatively ineffective past prevention and the growing knowledge of health education, health psychology and neurodidactics confirm the need to search for more effective forms of counteracting risky behaviour. The postulate to design preventive actions using the concept of resilience seems to deserve particular attention. The very concept of resilience was initially introduced by Crawford Stanley Holling to help understand the ability of ecosystems to maintain themselves in their original state despite being subject to changing conditions, and therefore to understand the determinants of their stability (Holling 1973: 14). In psychology and psychiatry, the term has attracted interest in relation to the developmental determinants of children and adolescents with experiences of difficult, traumatic situations; it first appeared in studies by Norman Garmeze (1985), Emma E. Werner (1989) and Michael Rutter (1987). Subsequently studied by interdisciplinary teams (Walker et al. 2004; Folke et al. 2010), it evolved and was operationalized in number of scholarly papers (Cicchetti, Garmezy 1993; Luthar, Cicchetti 2000; Rutter 2006; Herrman et al. 2011, Southwick et al. 2014).

Currently, there is no consensus on the adoption and widespread recognition of a single operational definition of the concept of resilience, but most researchers agree that it is a type of resistance that involves positive adaptation or the ability to maintain or regain mental health despite experiencing adversity that poses an increased risk

1 A list of available reports on the problem of addiction of children and adolescents is provided by the National Agency for the Solution of Alcohol Problems (https://www.parpa.pl/index.php/badania-i-informacje-statystyczne/raporty-z-badan), the National Bureau for Drug Prevention (https://www.kbpn.gov.pl/portal?id=1768880) and the National Centre for Drug Prevention (https://www.uzaleznieniabehawioralne.pl/do-pobrania).

to an individual's functioning (Rutter 2006; Herrman et al. 2011; Wysocka 2012). The concept of *resilience* differs from that of mental health or social competence mainly in that it focuses on differences in individuals' responses to comparable experiences. This means that the attitude characterised as resilience should be considered a dynamic process (Rutter 2000: 651; Luthar, Cicchetti 2000: 858; Masten 2014: 9) in conjunction with the individual's trajectory of experiences (Rutter 2000, 2006). Thus, it is assumed to influence the ability of individuals to cope with challenging situations, to adapt to changing conditions and to adopt constructive ways of coping with emerging adversity. Therefore, understood as a process, resilience is not a statistical trait and requires a multidimensional research perspective (Cicchetti, Garmezy 1993: 499; Masten 2014: 10).

Scholars have identified a number of factors that influence resilience, such as biological traits, psychological traits and dispositions, but also social support or participation in social systems such as family, school and friends (Herrman et al. 2011). Thus, it seems that factors influencing the development of resilience can be considered analogous to those that promote mental health (Herrman et al. 2011), although their influence is still considered in the context of individual experience. However, now it is worth mentioning the emerging concept of *ego-resiliency*, which views resilience as an individual's (fixed) traits and personal resources (Block J. H., Block J. 1980). This concept was used to develop the Ego-Resiliency Scale measurement questionnaire, considered a reliable psychometric measurement tool (ER89) (Block, Kremen 1996) which is eagerly used by some resiliency/resilience researchers (Kołodziej-Zaleska, Przybyła-Basista 2018: 161).

Polish scientists are not unanimous as to the proper translation of the word *resilience* (Heszen, Sęk 2007: 395). Thus, in order to avoid methodological doubt and anxiety over misinterpretations of the most frequently used translation—*odporność*[2] (Luthar, Cicchetti 2000: 862)—adopting the perspective of Krzysztof Ostaszewski

2 The concept of "resilience," according to Suniya S. Luthar and Dante Cicchetti, in post-scientific interpretations can be understood as endurance, which, if misunderstood, may lead to actions aimed at strengthening perseverance as a collective feature or to concentration on personal traits (Luthar, Cicchetti 2000: 862).

(Ostaszewski 2014), I decided to use the English version of the concept of *resilience*. In future, however, it seems appropriate to adopt the concept of "*rezyliencja*" in the Polish research methodology (Junik 2011).

The concept, although mainly researched in relation to children and adolescents experiencing prolonged stress, trauma and difficult situations—e.g. poverty, violence, disasters or lack of parental care (Werner 1995; Rutter 2006; Masten 2014)—has important implications for intervention strategies, prevention and therapeutic activities (Rutter 2006: 3), including those for addiction prevention. When it comes to designing addiction prevention, using the concept of resilience is part of what is widely recognised as effective positive prevention (Borucka, Ostaszewski 2008; Szymańska 2015: 31). This is because it is based on reinforcing people's potential, which is in line with strategies that support the processes of resilience (Rutter 2000; Junik 2011), especially with a strategy based on positive experiences that neutralize or compensate for risk (Rutter 2000; Junik 2011). At the same time, it is worth emphasizing that the strategy does not contradict the hitherto promoted concept of risk and protection, but adds a new, individual dimension to it (Rutter 2006). Resilience as a positive adaptation to risk influences the implementation of the strategy of coping with stress and difficulties, so it can also prevent the activation of addiction mechanisms. At the same time, it is worth remembering that children with high levels of resilience also need support and may be vulnerable to difficulties at different points in their lives (Cicchetti, Garmezy 1993: 500).

Spaces of general education according to the concept of resilience

School plays a significant role in the lives of children and young people and can be a place for their emotional, social and intellectual development and growth, but it can also be a source of difficult experiences and trauma. It is a systemically designed space of mutual influences between adults and children, so every activity undertaken at school is expected to be consciously aimed at enhancing the potential of all its participants. The framework for education in the school

system is set by the Act of 14 December 2016—Education Law (Journal of Laws 2017, item 59), which stipulates that the school's educational activities are defined by the school's curricula and the school's educational and preventive programme. The Education Law is accompanied by the Regulation of the Minister of National Education of 28 March 2017 on general teaching plans for public schools (Journal of Laws 2017, item 703). It should be noted that preventive programmes are developed independently by individual schools on the basis of an annual diagnosis of needs (Act of 14 December 2016—Educational Law, Art. 26.2), and therefore their quality and method of implementation result from schools' needs and potential, as well as from their possibilities and resources. It can be assumed that the document standardising educational activities across Poland is the set of curricula in the Regulation of the Minister of National Education of 14 February 2017 on the core curriculum for preschool education and the core curriculum for general education for primary schools, including for pupils with moderate or severe intellectual disabilities, general education in first-degree vocational secondary schools, general education for special needs vocational schools and general education for post-secondary schools (Journal of Laws 2017, item 356). The core curriculum contains "sets of educational objectives and learning content, including skills, described in the form of general and specific requirements for knowledge and skills that a student should possess at the end of a specific educational stage, as well as educational and preventive tasks of the school" (Act of 14 December 2016—Educational Law, Art. 4, para. 24), so it is a set of requirements, objectives and content that determine the obligatory scope of educational tasks for the teacher to undertake in the subject they are teaching.

Recognising the theory of resilience as valuable in the process of designing risk behaviour prevention, I decided to investigate the extent to which resilience processes and mechanisms are developed in students at the second stage of primary school through the objectives and curricular content of schools. Therefore, I searched the provisions regarding the objectives and educational content in the core curriculum for those that enable or oblige the teacher to strengthen the factors that develop resilience in students.

The analysis was focussed on the objectives and content of classes in years 4–8. This stage includes the education of students aged 9–14, i.e. just before the period of developing (or for some students, initiating) risky behaviours such as using addictive substances or taking risks, as the data above shows. At this stage, the classroom system changes from integrated teaching to lesson- and subject-based teaching. In year 4 pupils spend 24 hours per week at school learning particular subjects; they spend 25 hours at school in years 5–6, 32 hours in year 7 and 31 hours in year 8. These lessons are the structurally dominant form of a student's functioning at school (Regulation of the Minister of National Education of 28 March 2017 on general teaching plans for public schools, appendix 1). For many teachers they constitute the main educational task.

In the first stage of designing the analysis, based on the literature, protective factors were identified that were considered significant in enhancing resilience. Then, these factors were related to the area of school education, resulting in the removal of unrelated ones from the main groups of protective factors (family relationships, personal competences, social competences, social support and personality structures—see Friborg et al. 2003). The next step involved relating the identified factors to the indicators adopted in the commonly used Resilience Scale (RS) (Ahern et al. 2006). After the verification process, the following indicators were adopted in the research:

1. reinforcing skills and values that make it possible to use one's talents and abilities (Werner 1995: 83)
2. building a positive self-image and self-esteem (Emery, Forehand 1996: 40, 42)
3. encouraging students to cope with difficulties and building students' self-confidence (Werner 1995: 82–83)
4. enhancing development by instilling positive values, including those related to health and well-being (www.resiliencecenter.com)
5. developing a sense of one's own value and effectiveness (Werner 1995: 82; Rutter 1993: 629; Masten, Best, Garmezy 1990: 431)
6. reinforcing the network of peer support (Werner 1995: 83; Michel 2014: 106).

The analysis was also extended to identify, in the educational objectives and content, direct references to knowledge on the mechanisms

of addiction (A), the dangers of using addictive substances (B) and topics of behavioural, violent and sexual addictions (C) (Kania 2016: 113). The results of the analysis are presented in Table 1.

Table 1. Analysis of the objectives and content of education in years 4–7 in relation to indicators of protective factors (1–6) that support the development of resilience mechanisms in students.

Subject[3]	Educational objectives/indicators of protective factors (1–6)	Direct content/ indicators of protective factors (1–6)	Year	Indirect content/ indicators of protective factors (1–6)	Year
Polish	IV. Self-education IV.5 (1)			IV.2 (1) IV.4 (1) IV.5 (1)	7–8
Modern foreign language				XI (6)	4–8
Music					4–7
Art	II. Improvement of artistic skills: artistic expression reflected in individual and group activities (1) (6)				4–7
History					5–7
Citizenship Education	II. Understanding oneself and recognizing and solving problems: II.1 (5), II.2 (1), II.3 (4), II.4 (4), II.6 (4), II.7 (4). II.8 (3) III. Communication and cooperation: III.1 (5), III.2 (5), III.3 (6), III.4 (6), III.5 (5)	V.1–2 (C) VIII.5 (C)		I.1–6 (2, 5, 6) II.1–2 (4) III.3 (3, 5) III.5 (1) IV.1–7 (4, 5) V.1–2 (3) VIII.5 (4,5) IX. 1–5 (3, 4, 5)	8
Science	III. Shaping attitudes: III.5 (5), III.6 (6)	V.8 (A, B)	4	IV.6 (4, 5) V.1 (4, 5) V.10 (4, 5)	4
Geography	III. Shaping attitudes: III.1 (1), III.4 (4), III.9 (5)				5–8

3 The list does not analyse subjects which, although included in the core curricula, are not compulsory, which means that they cannot be regarded as covering all students with their learning objectives and content. These are education for family life, ethics, national or ethnic minority language and regional language (Kashubian).

Subject[3]	Educational objectives/indicators of protective factors (1–6)	Direct content/ indicators of protective factors (1–6)	Year	Indirect content/ indicators of protective factors (1–6)	Year
Biology	V. Knowledge of issues related to human health: V.1 (5) VI. Attitude towards nature and the environment: VI.2 (5)	III.7.5 (A, B) III.9.6 (A, B) IV.3 (B)	7 7	III.9.4 (3)	7
Chemistry		IX.2 (B)	7–8		5–8
Physics					7–8
Mathematics					4–8
IT	IV. Developing social competences such as communication and cooperation in a group, including in virtual environments, participating in team projects and project management (6) V. Compliance with the law and safety rules; … assessing the risks associated with technology and taking them into account for the safety of oneself and others (C)	V.1 (C) V.3 (C)	4–6 4–6	IV.2 (6) IV.1 (6) IV.4 (1)	4–6 7–8 7–8
Technology	V. Developing technological creativity: V.1–3 (1, 5)			I.5 (6)	4–6
Physical Education	IV. Developing the ability to understand the relationship between physical activity and health, engaging in health-promoting behaviour (4, 5)	IV.3 (A, B) IV.4 (A, B, C)	7–8	IV.1.1 (5) IV.1.5 (5) IV.1 (4) IV.2 (2, 3, 4) Social competences (1, 2, 3, 4, 5, 6)	4–6 4–6 7–8 4–8
Education for Safety	IV. Shaping individual and social attitudes that support health (5)			IV.1–7 (3, 4, 5)	8

Source: Based on the Regulation of the Minister of National Education of 14 February 2017 on the core curriculum… (Journal of Laws 2017, item 356).

The focus on learning goals and content in this analysis results from an assumption that they are obligatory. Many authors point out that various factors can support individuals' resilience, including students' functioning at school, the awakening of their potential, the school

atmosphere (Garmezy 1993; Skuza, Pierścińska-Maruszewska 2014), the preparation of the teaching staff and their ability to establish relationships with students (Herrman et al. 2011: 260) or the students' sense of educational success. These factors point to the need to think of school in terms of systemic activities and mutually influencing conditions. In this system, the structurally dominant form of contact and fulfilment of educational tasks is lessons, so it seems legitimate to analyse their formal framework, which has a significant impact on multidimensional thinking about school education. Analysing the learning objectives and content of the core curriculum for years 4–8 in relation to selected indicators for building resilience, we can observe a lack of consistency and correlation between the learning objectives and the content. The objectives are only represented in the educational content in individual subjects, while the content is often not anchored in the objectives. This inconsistency also applies to the way in which the curricula of individual subjects are structured and the links between them, particularly when it comes to the development of attitudes, skills or social competences. This fragmentation results in a systemic imbalance in thinking about school education as part of students' lifelong development and something that matches their needs. The language of the curriculum also indicates this incoherence: when the records were designed, no conceptual grid was created for cross-curricular correlation, an example of this being the inconsistency in or lack of objectives related to attitudes.

Despite these methodological difficulties, it is possible to identify individual provisions in the learning objectives that have been adopted and the content that refers to the process of building resilience. These references can mainly be identified with the indicators of reinforcing skills and values that allow for the use of talents and abilities (1), developing self-esteem and self-efficacy (5) and strengthening peer support networks (6). It should be noted, however, that in this aspect there is also a noticeable lack of consistency between the learning objectives and the content for these subjects. Only in the curriculum for Citizenship Education and Physical Education can references be seen to provisions centred around building self-esteem (2), and to a limited extent provisions on encouraging overcoming difficulties (3) (Table 2).

Table 2. Analysis of learning objectives and content in years 4–7 in relation to indicators of protective factors that enhance the resilience-building process of students

Indicator	Objectives	Subjects	Year
(1) Reinforcing skills and values that make it possible to use talents and abilities	Polish	Polish	7–8
	Art		4–7
	Citizenship Education	Citizenship Education	8
	Geography		5–8
		IT	7–8
	Technology		4–6
		Physical Education	4–8
(2) Building a positive image of oneself		Citizenship Education	8
		Physical Education	4–8
(3) Encouraging students to overcome difficulties	Citizenship Education	Citizenship Education	8
		Biology	7
		Physical Education	4–8
		Education for Safety	8
(4) Supporting development through teaching positive values	Citizenship Education	Citizenship Education	8
	Science	Science	4
	Geography		5–8
	Physical Education	Physical Education	4–8
		Education for Safety	8
(5) Developing self-esteem and self-efficacy	Citizenship Education	Citizenship Education	8
	Science	Science	4
	Geography		5–8
	Biology		7
	Technology		4–6
	Physical Education	Physical Education	4–8
	Education for Safety	Education for Safety	8
(6) Reinforcing the system of peer support	Art		4–7
	Citizenship Education	Citizenship Education	8
	Science		4
	IT	IT	4–8
		Technology	4–7
	Physical Education	Physical Education	4–8
		Contemporary Foreign Language	4–8

Source: Own study.

As can be seen from the analysis, only the curriculum for Physical Education includes a direct reference to the development of social competences. It is also one of only two subjects that fulfil all the selected indicators; the second subject is Citizenship Education. It is also worth mentioning that Physical Education also contains educational content directly related to knowledge of the mechanisms of addiction, the dangers of using addictive substances and the subject of behaviour bordering on behavioural, violent and sexual addictions. This content is also covered in lessons of Science, Chemistry and, with regard to behavioural risks, IT and Citizenship Education.

Of note is the commentary on the value of health education for prevention which is found in the introduction to the core curriculum. However, health education does not function as a separate subject, and its content is included in the subjects of Physical Education and Education for Safety. The initial records also emphasise the value and importance of using the project method in education as a way to strengthen group communication, social and creative skills and constructive problem-solving (Regulation of the Minister of National Education of 14 February 2017 on the core curriculum…).

In this context, it also appears important that specific goals and content be assigned to particular age groups of pupils: the aims and content identified as supporting the process of building resilience predominantly begin at the educational stage of years 7–8. This is a developmental period that involves experimenting with addictive substances and is therefore a time of increased risky behaviour. At this educational stage, one should rather expect additional selective prevention measures, which should be adjusted to the needs of specific schools. In turn, in both the aims and content of general education, provisions indicating the need for content that aids the development of all spheres of students' lives, including those that build resilience, should be obligatory at all stages of education. Their absence seems significant, especially as the importance of this postulate is underlined by the analysis of the general objectives of the core curriculum, which are part of the introduction to the curricula of particular subjects. They indicate that the creators of the curricula were aware of the need to perceive the students' development through all aspects of their functioning (Regulation of the Minister of National Education of 14 February 2017 on the core curriculum…). Unfortunately, the analysis

did not reveal a conscious, planned and consistent implementation of this postulate. At the same time, it drew our attention to deficiencies in linking educational goals and content, which prevent the adoption of a coherent concept of human development in the educational activities carried out in schools. The analysis identified content that indicates potential for schools to strengthen the resilience-building process, but it is considerably limited due to the fact that it refers to individual, isolated provisions of educational objectives and/or content, and is not based (as mentioned above) on a coherent, theoretical concept of supporting the development of young people.

Conclusion

The first and primary source of children's and adolescent's experiences is the family environment, while the first space of systemic, obligatory measures aimed at supporting children is school. Emmy E. Werner points to well-functioning school systems as an important focus of an external support system (Werner 1989: 80), while Małgorzata Michel (Michel 2014: 120) emphasizes the unique importance of applying the concept of resilience in practice, also at the level of social prevention and rehabilitation. The interest that is growing around the use of resilience in pedagogical practice, including in preventive efforts in schools, seems to confirm that its value is being appreciated more and more (Junik 2011; Borucka, Pisarska 2012; Michel 2014; Ostaszewski 2014). With the assumption that some factors which activate addiction mechanisms are high-risk situations, deficits in practical life skills and destructive life orientation (Mellibruda 1997: 81), building and enhancing resilience can be an important form of support and prevention of addictions. After all, reinforcing the process by which a person acquires the ability to use their internal and external resources in order to positively adapt to difficulties they encounter helps in re-education or neutralisation of the risk of jeopardising their integral functioning (Michel 2014: 106). However, its implementation in pedagogical activities requires a conscious study of its determinants and the factors that build resilience in students. Above all, however, it would require recognition of the need to create and implement all educational activities, such as the creation of core curricula based on a selected, coherent scientific

concept. This would make all education efforts, including the teaching of academic skills, consistent in supporting the development of adolescents.

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The "Addiction Model" in the Sense of Philosophy of Self-Help Support Groups and Cognitive Behavioural Therapy in the Treatment of Binge Eating

ABSTRACT

Addictions may appear in many normal and even everyday human behaviours. Mechanisms typical of addiction can also be seen in other disorders identified in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), for example, binge eating.

The article points out the similarities between the symptoms of binge eating and addiction to psychoactive substances. The traditional understanding of addiction is adopted, referring to the philosophy of self-help groups and the strategic and structural concept. Next, the differences between these disorders are discussed. The article then presents the differences between the adopted model of addiction and cognitive behavioural therapy in the treatment of binge eating. Reference is also made to research on the mechanisms underlying the disorder. Subsequently, based on these differences, which primarily concern cognitive, affective and behavioural aspects, the implications for therapy in people with binge eating disorder are presented.

For the purpose of the article, the diagnostic criteria for binge eating disorder and for alcohol use disorders presented in the DSM-5 are used. In addition, the literature on the subject was analysed and

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binge eating, addition, therapy, control, clinical differences

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the collected information was supplemented with observations from the author's clinical practice.

Introduction

Nowadays, there are a growing number of observations and studies indicating the prevalence of various addictions, referred to colloquially as dependencies (Cierpiałkowska 2018). Words such as "alcoholism," "drug addiction," "pharmacophilia," "nicotine addiction," "sex addiction" and "workaholism" are appearing more and more frequently, not only in specialised therapeutic institutions, but also in everyday conversations and the media. The best known types of these disorders are related to the use of drugs which influence human mental states. Some people think that addictions are limited only to pathological use of these and similar substances. However, it turns out that addiction, understood as a serious and dangerous disorder of an individual's health, can also involve many behaviours that belong to a normal and even basic way of life. Thus, in certain circumstances, behaviours related to sexual life, work, physical exercises, playing games or eating may take an addictive and dangerous form. Common denominators can certainly be found for these disorders, which does not exclude the possibility of differences.

The aim of this article is to point out similarities and differences between psychoactive substance use disorder and a new disorder introduced in the DSM-5, called binge eating. The article adopts a traditional understanding of addiction, referring to the philosophy of self-help groups and the strategic/structural concept. The following analysis outlines the differences between the adopted model of addiction and cognitive behavioural therapy in the treatment of binge eating. To this end, reference was made to research on the mechanisms underlying this disorder. Learning about these relationships is of an applied nature, as it may be relevant to the treatment of problems associated with binge eating.

In view of the selected assumptions, the question arises as to whether, even if binge eating as such is not an addiction, the similarities between it and substance abuse point to a potential dependence. Could both problems be the result of the same underlying disorder?

Binge eating disorder is a newly identified eating disorder, included in the most recent Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The disorder is characterised by a recurrent loss of control over the amount of food eaten and the manner in which it is eaten, as well as the psychological consequences of overeating. According to the DSM-5 classification, the basic criteria of binge eating are as follows:

A. recurrent episodes of uncontrolled eating
B. co-occurrence with episodes of at least four of the following symptoms:
    1. eating much faster than normal
    2. eating until uncomfortably full
    3. eating large portions despite not feeling physically hungry
    4. eating alone due to embarrassment/anxiety about eating
    5. feelings of self-loathing, depression or guilt after overeating
C. marked distress because of uncontrolled eating
D. unrestrained eating at least once a week for three months
E. lack of repetitive compensatory activities in relation to unrestrained eating.

Binge eating disorder is diagnosed among 15.7%–40% of obese individuals. In the general population, the percentage is much lower, between 1.12% and 6.6% (Bok-Sosnowska 2017). In the scientific and medical fields, due to a certain analogy with alcohol addiction, one may find oneself thinking of binge eating as if it were alcohol dependence. Therapists and researchers have been arguing about the definition of addiction for many years. According to the DSM-5, psychoactive substance use disorder is defined as the underlying behaviour of people who misuse substances. It should be noted that in the DSM-5, the criteria for alcohol use disorder are the same as for any other psychoactive substance use disorder. In the revised version of the DSM-5, alcohol use disorder is categorised into degrees of severity according to the number of symptoms observed in the last 12 months. These symptoms of alcohol use disorder include:

- drinking alcohol in larger quantities or for longer periods than intended
- a persistent desire to drink alcohol or accompanying unsuccessful attempts to reduce or control drinking

- spending a lot of time obtaining alcohol, drinking and dealing with the consequences of these actions
- experiencing cravings for alcohol or a strong need to drink
- recurrent use of alcohol that results in neglecting major responsibilities at work, school or home
- consumption of alcohol despite continuing and recurring social and interpersonal problems caused or aggravated by alcohol
- limiting or abandoning important social, occupational or leisure activities because of alcohol
- repeated consumption of alcohol in situations where it is risky to do so (e.g. driving a car or operating machinery under the influence of alcohol)
- use of alcohol despite continuing or recurring physical or mental problems, possibly caused or aggravated by the use of alcohol
- the development of alcohol tolerance: needing to drink significantly more to achieve the desired effect, or with an apparent significant reduction in the effect when using the same amount of alcohol
- the presence of characteristic withdrawal symptoms due to cessation or reduction of drinking, or drinking alcohol/taking similar substances with the intention of easing or avoiding withdrawal symptoms.

Method

The diagnostic criteria for binge eating disorder and the diagnostic criteria for alcohol use disorders in the DSM-5 were used to achieve the goal formulated in this article. In addition, an analysis of the literature on the relevant issues was conducted. The resulting information was supplemented with observations from the author's own clinical practice.

The similarities between the symptoms of binge eating and substance abuse are first pointed out. Then, the differences between these disorders are discussed. Next, the differences between the traditional addiction model and cognitive behavioural therapy in the treatment of binge eating are presented. Also, reference is made to research on

the mechanisms underlying the disorders in question. Finally, based on the differences, suggestions for the treatment of people with binge eating disorder are presented.

Discussion

There are theories which assume that compulsive overeating involves three aspects: physical, emotional and spiritual (Pawłowska, Kalka 2015). According to these theories, compulsive overeating, like addiction, can be stopped but not cured. The traditional model of addiction in the treatment of compulsive overeating refers to a physiological mechanism that is also found in alcohol addiction. People who experience compulsive overeating usually have a biological inclination towards certain foods, which makes them addicted to them. They are unable to control the consumption of such foods, as a result of which their consumption of these foods increases. Due to the biological nature of this problem, it is impossible to cure it. Rather, such people must accept their tendency and adjust their lives accordingly.

The term *addiction*, on the other hand, is nowadays used in a haphazard and vague way to refer to almost any form of repetitive behaviour (Wilson, Zandberg 2012). This strips it of its value. Using it in such a casual way suggests that everyone has an addiction of some kind.

Parallels can be seen between traditional substance abuse and binge eating, which can lead to thinking of binge eating as an addiction. In the case of binge eating, as in the case of addiction to narcotics, a person craves or desires to engage in this behaviour. Also, in both cases we can see a loss of control over the behaviour, as well as irresistible and recurring thoughts about the behaviour. Each of these behaviours can be used to get rid of unpleasant emotions. In addition, people experiencing the disorders in question deny and try to hide the problems that arise. Despite the harm they experience, they are unable to refrain from this behaviour. This usually manifests in unsuccessful attempts to cope with the problem.

These similarities do not mean that these behaviours are the same. By focussing solely on similarities, one may overlook differences that are relevant to their understanding and treatment. The first significant difference between binge eating and substance abuse that can

be pointed out is that binge eating does not involve eating a specific type of food. People suffering from binge eating do not favour certain foods over others (Hebebrand, Albayraki et al. 2014). If the disorder was an addiction, a person would likely prioritise selected foods over others. The primary symptom of a disorder manifested by binge eating is the amount, and not the type of food consumed.

Another difference is the existence, in the case of binge eating, of a determination to rigorously control the food consumed. In contrast, alcohol addicts are not internally motivated to avoid alcohol, which leads to a loss of control (Mellibruda, Sobolewska-Mellibruda 2013). The degree to which an addicted person feels ready to change depends on the influence of intrinsic and extrinsic motivational factors, making them go through specific phases of readiness to change (Holt, Kranitz, Cooney 2013). It can be concluded that, as with weight loss, the real challenge in the context of addictions is to maintain change. There are a variety of self-help groups that aim to help addicts in the process of change. They differ in the degree of emphasis they place on abstinence. The largest and most popular self-help institution for addictions is groups based on the 12-step programme (Miller, Forcehimes, Zweben 2022). In their programmes, the primary goal of addiction treatment is to arouse a determination to abstain from the addictive behaviour (Miller, Forcehimes, Zweben 2022). In the case of binge eating, when an individual comes for help, this determination is already present in the form of desire for strict food control (Ziauddeen, Farooqi, Fletcher 2012). Then, the patients themselves often claim that "they want to control their control". The irresistible desire to control the food is itself a problem because it sustains binge eating (Gearhardt, White, Potenza 2011).

An additional difference that can be identified between binge eating and substance abuse is that overeaters feel fearful of engaging in this behaviour. The desire for a lower body weight among most binge eaters is accompanied by an overestimation of the importance of one's figure and weight (Łuszczyńska 2016). One's self-esteem is primarily influenced by one's appearance and weight. Observed weight loss has a rewarding effect and encourages a consistent, strict diet. This leads to a reinforcement of the disorder. There is no similar mechanism in substance addiction; people who are addicted to substances do not reach for them because they want to avoid them. Their

process of returning to health rarely boils down to one resolution that is never broken. Most commonly, we observe increasingly long periods of abstinence interrupted by shorter and less intensive episodes of substance use (Klingemann H., Klingemann J. 2013). In contrast, people suffering from binge eating overeat due to a strong desire to curb this behaviour (Fairburn 2013).

Therefore, it can be seen that different mechanisms underlie binge eating and substance abuse. This means that different therapeutic interventions should be applied for these disorders. In most problems associated with binge eating, therapy should focus on restraining self-control; in addiction therapy, on the other hand, the focus should be on strengthening it.

It is noteworthy that some people with binge eating disorder are not following a particularly strict diet. For them, overeating attacks may not be triggered by dieting or it may be of lesser importance. It is recognised that stress management problems are probably of greater importance in this case (Kupeli, Norton et al. 2017). This allows us to conclude that there may be some correlation between the mechanisms that trigger binge eating and those leading to alcohol dependence. The desire to gain control over one's emotional state in order to alleviate distress and provide a sense of pleasure appears to be key in addiction (Miller, Forcehimes, Zweben 2022). The presence of this aspiration in people's lives seems understandable, but some ways of pursuing it can lead to serious dangers. Ways of excessively controlling the state of one's feelings can turn into traps of addiction. A person becomes a slave to these ways as they lose the capacity to use them at will, and become used by these ways instead. These modern ways leading to the attainment of "happiness" can be divided into two categories: stimulants (alcohol, medicine, drugs or cigarettes) and certain behaviours (food, work, sex, entertainment, games or physical exercise). When the persistent search for happiness, increasingly identified with the pursuit of pleasure, begins to dominate an individual's life, pleasure reveals its other side and turns into compulsive, desperate attempts to alleviate suffering. Thus, the persistent search for pleasure leads a person to suffering which cannot be avoided except by repeating the activity that causes them suffering (Linehan 2016).

Research indicates that alcohol consumption is higher among people with binge eating disorder, but this finding is difficult to interpret because it is no different from the rate of alcohol abuse among people with other mental disorders (Karacie et al. 2011). The situation is similar with the prevalence of eating problems among substance abusers. It is recognised that there is a higher rate of eating disorders in addicts, but it could be argued that this is non-specific as such problems also occur in people with other mental disorders such as anxiety or depression (Ziauddeen, Farooqi, Fletcher 2012).

Some studies have shown the higher rates of substance abuse among family members of people experiencing eating disorders, but again, as in the aforementioned studies, the rate is no higher than for family members of people with other mental disorders (Kupeli et al. 2017). This leads us to conclude that they differ in the underlying mechanism. If they were the same, differences would be observed between these disorders and other mental disorders.

Also of interest is the timing and sequence of the disorders in question. Research suggests that eating disorders tend to occur among drug addicts first (Fairburn 2013). The result of this research is predictable, as eating problems tend to occur earlier in life than problems resulting from drug use. However, the two problems may co-occur. It may then be more difficult to treat these individuals (Fairburn 2013). Therapy for such patients requires a holistic approach and attention to whether alleviating one disorder negatively affects the co-occurring problem. Research conducted on therapy for people with eating disorders and excessive alcohol consumption has shown that those people experiencing eating disorders respond similarly to cognitive-behavioural trauma regardless of the amount of alcohol they consume. In addition, during the course of treatment, alcohol intake decreased to normal limits in the majority of alcohol abusers (Kupeli et al. 2017). In individuals whose alcohol consumption increased during eating disorder therapy, it was observed that despite improvements in eating, these individuals also functioned poorly in other areas of their lives (Kupeli et al. 2017). This indicates that a symptom substitution effect did not occur.

Treatment of binge eating and the model based on traditional addiction therapy

The principles of addiction therapy based on the 12-step programme differ from binge eating disorder therapy, which seems to be successful. Assuming that the underlying mechanisms of binge eating are different from those underlying drug addiction, different treatment principles should be applied. Those adopting the binge eating therapy model based on the traditional approach to addiction also recommend using the 12-step programme designed for Alcoholics Anonymous, changing the words "alcohol" and "alcoholic" to "food" and "compulsive eater". They believe that treatment should use the output of Alcoholics Anonymous groups. This approach differs from cognitive-behavioural therapy for binge eating, which currently has a reputation for being the most effective. The differences are related to four issues.

The 12-step programme assumes that an eating disorder is a disease that cannot be cured. Following the philosophy of Alcoholics Anonymous, it is assumed that an eating disorder is a progressive disease which continually worsens. In contrast, the cognitive-behavioural therapy model assumes that most people with complaints of binge eating can recover (Fairburn 2008).

Another assumption of the 12-step programme is that immediate abstinence is necessary. It places a strong emphasis on stopping overeating as soon as possible. Group pressure can be used to achieve this goal, in which abstainers receive praise and those who have not been able to maintain abstinence are socially sanctioned, for example, deprived of the opportunity to speak or even being asked to leave a meeting.

According to the ideas of cognitive behavioural therapy, the immediate cessation of overeating is unrealistic and unlikely to be achieved. The insistence on abstinence is inhumane and irrational. Even if some people are able to cope with the problem with good advice and support, there are others who do not succeed. They need more time. Cognitive-behavioural therapy does not require an immediate cessation of binge eating. In contrast, therapy for binge eating based on the traditional model of addiction takes total, lifelong avoidance of foods that lead to overeating as the best strategy for achieving

abstinence. According to the cognitive-behavioural approach, such a strategy encourages eating rather than promoting avoidance. The belief that certain foods encourage people to overeat is not based on any proof. Research and therapeutic practice indicate that it is the attempt to avoid a certain type of food that cause individuals to manifest a tendency to overeat (Ziauddeen, Farooqi, Fletcher 2012). That is why cognitive-behavioural therapy seeks to eliminate food avoidance instead of encouraging it. According to the assumptions of the traditional addiction model, this would lead to further overeating. Research indicates that some evidence supports restraint as a precursor to negative outcomes such as binge eating (Fairburn 2013).

It is worth noting that, until recently, it was assumed in addiction therapy that one could not have partial control over the addiction one experiences (Klingemann H., Klingemann J. 2013). It was approached in a zero-sum manner, meaning that one either has control or not at all. The concept of impaired control, initially understood solely as a difficulty with abstaining from drinking, has come a long way. The publication of the revised DSM-5 brought significant changes to the field of addiction. According to it, alcohol use disorder was wrongly considered an incurable condition. Understanding alcohol use as an escalating process has made it possible to define the severity of the disorder, the main aspect of which is impaired control. The WHO has reduced the criteria for alcohol dependence to flexible pathways. Its diagnosis requires the presence of two or three main features, one of which is impaired control of substance use. This refers to the amount of alcohol consumed and to the circumstances and timing of starting or stopping drinking. It is often accompanied by a subjective, strong need or craving for alcohol. Consequently, understanding the phenomenon and determining the severity of impaired control has become an important skill in clinical practice (Modrzyński 2019).

The belief regarding the treatment of binge eating that was in place until the DSM-4 classification generated the belief that eating is either safe or harmful. Similarly, one is either abstinent or not. Such thinking is recognised in cognitive-behavioural therapy as a cognitive distortion—a problem which needs to be addressed. The "all-or-nothing" mindset causes any failure to be seen as a relapse of the disorder rather than a "step back". As a result, when a person

succumbs to weakness, they immediately become unreasonably discouraged and prone to giving up.

It is worth noting that for those suffering from binge eating, the "all-or-nothing" approach makes everyday life difficult and affects various aspects of life. Therefore, given that the previous thinking about addiction is still ingrained in society, despite the changes introduced in the DSM-5, it seems reasonable to help people recognise this pattern of thinking in order to eliminate rather than reinforce it.

Summary

For some people, binge eating is a simple deviation from their diet or a lack of moderation. However, there are those who see it as a partial or total loss of control. Binge eating is a problem for many people, but despite this, their knowledge of it seems to be insufficient. This is a source of much ambiguity and different views of treatment. Undoubtedly, the traditional model of addiction treatment is much more complex, and encompasses many more aspects and interventions than those presented in the article. It has many strengths, such as long-term support and a sense of belonging. In addition, the transparency of its premise makes it attractive to some people. However, it is not the form of delivery that should determine which therapy is provided, but its effectiveness. The use of the traditional addiction model in the treatment of binge eating has not yet been fully evaluated, unlike other forms of therapy. Cognitive-behavioural therapy is regarded as one of the best researched treatments for binge eating. It is considered an appropriate treatment method for overeating problems because its cognitive components address the cognitive aspects of these problems—such as overestimating the importance of one's figure and weight, dietary rules and dichotomous thinking—while its behavioural components refer to the disordered way of eating.

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Therapeutic Interventions for Addicts in Prisons

ABSTRACT

Drug addiction is prevalent among prisoners. The lack of therapeutic or adequate interventions for addicts can be a risk factor for recidivism. Therefore, it is important follow methods that have been documented as effective. The purpose of this article is to present the results of an analysis of foundational data on therapeutic programmes conducted in prison wards and targeting drug addicts, including those addicted to new psychoactive substances. The results of the research focus on identifying individual elements of the programs resulting from their structure and the level of inclusion of interventions documented as effective in addiction therapy. The conclusions and recommendations from the desk research lead to recommendations for improving penitentiary practice.

KEYWORDS
new psychoactive substances, drugs, addiction, prison, therapy, interventions

Introduction

Addiction to psychoactive substances other than alcohol, including new psychoactive substances (NPSs), is observed in people who

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have been imprisoned. In addition, these individuals are at a higher risk of developing what is described as addiction. Studies indicate significantly higher levels of both risky and harmful use of psychoactive substances other than alcohol or addiction among prisoners as compared to the general population (Pape, Lobmaier, Bukten 2022; Van de Baan et al. 2021; Haviv, Hasisi 2019; Fernandes, Simon 2017; Fazel, Yoon, Hayes 2017; Bronson et al. 2017; Kouyoumdjian et al. 2014). In turn, those who use psychoactive substances, including NPSs, in a risky and harmful way or are dependent on them are more likely to commit a crime again than those who do not use such substances (Lokdam, Stavseth, Bukten 2022: 1).

The co-occurrence of criminal behaviour with drug and/or NPS addiction is diverse in nature. Addiction can lead to criminal activity and criminal activity can provoke the use of psychoactive substances. However, it is not always possible to clearly identify the direction of such co-occurrence, in which case the relationship is bidirectional or unspecified (Banks, Waughb 2019: 339).

The relationship between the use of psychoactive substances and criminal behaviour can also be seen in the context of conflicts with the law, in which case at least three relationships can be distinguished: (1) a direct link between a criminal act and the need to obtain a drug (theft, robbery, etc., as well as the illegal production or sale of drugs), (2) using a psychoactive substance to enhance motivation to commit a crime (the perpetrator uses a drug to relieve anxiety or stress or to increase aggression) and (3) using a drug in connection with a criminal act, but unplanned and unconsciously (e.g. causing a fatal accident or committing an impulsive homicide, robbery or rape) (Hołyst 2016: 471).

Since prisoners' addiction to psychoactive substances other than alcohol, including NPSs, is a strong risk factor for recidivism (Andrews, Bonta 2010; Wójcik 2013), it is important to design and implement effective therapeutic interventions directed at this population. Thus, the suggested solutions should be based on scientific evidence, in line with the trend for evidence-based practice (Barczykowska, Dzierzyńska-Breś 2013: 132–136; Muskała 2016: 93–97) and adapted to the sociocultural context in which they are implemented.

Therapeutic measures in penitentiaries in Poland

The Prison Service, as a formation subordinate to the Minister of Justice, has precisely defined tasks for counteracting addiction to drugs and new psychoactive substances. Such tasks include

> carrying out penitentiary and social rehabilitation activities with respect to persons sentenced to imprisonment, above all by organising work conducive to acquiring professional qualifications, teaching, cultural and educational activities, physical culture and sport activities and specialised therapeutic activities. (Act of 9 April 2010 on the Prison Service, Article 2, para. 2, point 1)

As can be seen above, the tasks of this formation primarily involve conducting social rehabilitation and therapeutic activities, also for people addicted to NPSs. These obligatory activities in penitentiaries have become part of the reality of the Polish prison system. The wide range of penitentiaries' activities also includes prevention, short interventions or medical treatment. In addition, the Prison Service, fulfilling its obligation to ensure order and security (Act of 9 April 2010 on the Prison Service, Article 2, para. 2, point 6) in penal institutions and detention centres, also works to counteract the penetration of psychoactive substances into penitentiaries. This endeavour is carried out through protective measures such as inspecting persons entering the premises, objects and parcels addressed to prisoners and prison cells and other places where prisoners live as well as testing for psychoactive substances in prisoners' bodies. In summary, the Prison Service reduces the demand, supply and harm done by addictions through prevention and social rehabilitation, among other things.

Among the significant achievements of the Polish penitentiary system is the extensive therapeutic system of imprisonment (Act of 6 June 1997—Executive Penal Code 1997, Article 81). Taking into account the fact that, as state institutions, prisons and detention centres function on the basis of specific legal acts, the therapeutic system has also been detailed in legal regulations (of the Minister of Justice) and in legal acts (of the Director General of the Prison Service). Thus, it is important to mention the five most relevant documents that formally regulate addiction therapy in prisons:

(1) the Act of 6 June 1997—Executive Penal Code (with further amendments)

(2) the Regulation of the Minister of Justice of 14 August 2003 on the ways of conducting penitentiary interventions in prisons and detention centres (with further amendments)

(3) the Regulation of the Minister of Justice of 21 December 2006 on detailed conditions and procedures for treatment, rehabilitation and reintegration of addicts placed in organisational units of the Prison Service

(4) Order No. 19/16 of the Director General of the Prison Service of 14 April 2016 on detailed rules for the conduct and organisation of penitentiary work and scopes of activities of officers and employees of penitentiary and therapeutic departments and penitentiary wards

(5) Order No. 85/2020 of the Director General of the Prison Service of 5 November 2020 on the qualifications for positions in penitentiary and therapeutic departments and in Mother and Child Homes.

The above-mentioned legal acts regulate the functioning of the therapeutic system in the Polish prison system, with regard to therapeutic treatment of addictions in separate therapeutic wards in prisons, specialisations of therapeutic wards (e.g. wards for people with alcohol dependence or for those with dependence on psychoactive substances other than alcohol), the required positions in the therapeutic ward, the structure of the therapeutic programme or the qualifications of the staff of therapeutic wards.

The treatment provided to people addicted to psychoactive substances other than alcohol, including NPSs, consists of a standard 6-month programme of basic addiction psychotherapy. Pursuant to Order No. 19/16 of the Director General of the Prison Service, this time may be extended or shortened by no more than 1/3 of the period (Order No. 19/16 of the Director General of the Prison Service of 14 April 2016, § 75). At the same time, it is possible to discharge a prisoner from the therapeutic ward before the therapy is completed if they do not show motivation and intensive motivational interventions have been carried out for a minimum of 30 days (Order 19/16 of the Director General of the Prison Service of 14 April 2016, § 73) and if, despite psycho-corrective interventions, they seriously disrupt the course of group activities or pose a threat to the other therapy participants (Order No. 19/16 of the Director General of the Prison Service 2016, § 74).

Prisoners who require specialised influence, such as those addicted to psychoactive substances, are directed to therapeutic wards (Act of 6 June 1997—Executive Penal Code 1997, Art. 96) in one of three ways: (1) by a decision of the penitentiary commission—with the consent of the prisoner, (2) by a decision of the penitentiary court—without the convicted person's consent (Act of 6 June 1997—Executive Penal Code 1997, Art. 117) or (3) by a therapeutic regime ordered as part of the sentence issued by the criminal court (Act of 6 June 1997—Penal Code 1997, Art. 62).

There are 17 therapeutic wards for prisoners addicted to psychoactive substances other than alcohol in Polish prisons and detention centres, with a total capacity of 688 places (Table 1).

Table 1. Location, purpose and capacity of therapeutic wards for convicts addicted to psychoactive substances other than alcohol

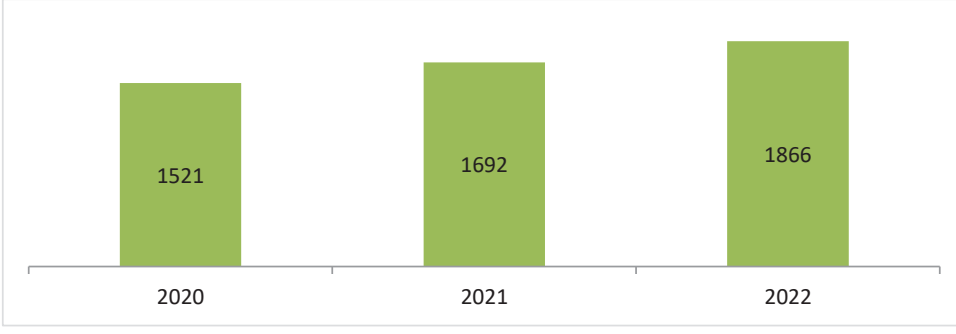
No.	Ward	Destination*	Capacity
1.	Brzeg ZK	R-1/t	56
2.	Elbląg AŚ	R-1/t	39
3.	Lubliniec OZ	P,M,R-1/t, P,M,R-2/t (women)	36
4.	Łowicz ZK	R-1/t, R-2/t	42
5.	Kielce AŚ	R-1/t, R-2/t	38
6.	Kłodzko ZK	R-1/t, R-2/t	26
7.	Krzywaniec ZK	R-1/t, R-2/t	34
8.	Nowogard ZK	R-1/t, R-2/t	47
9.	Przemyśl ZK	M-1/t, P-1/t	30
10.	Rawicz ZK	M-1/t, P-1/t	48
11.	Rzeszów ZK	R-1/t, R-2/t	41
12.	Suwałki AŚ	M-2/t, P-2/t	49
13.	Warszawa-Służewiec AŚ	P,M-1/t, P,M-2/t	36
14.	Wierzchowo ZK	M-1/t, P-1/t	40
15.	Włocławek ZK	P,M-1/t; P,M-2/t	40
16.	Wrocław ZK nr 1	M-1/t, P-1/t	50
17.	Wronki ZK	R-1/t	36
Total			**688**

*R: penitentiary recidivists; P: those imprisoned for the first time; M: juveniles (under 21 years old); 1: closed prison; 2: half-open prison; t: therapeutic system of imprisonment

Source: Own study based on data from the Central Board of the Prison Service (CBPS).

According to data from the Central Board of the Prison Service (CBPS), in 2022 the number of prisoners undergoing drug therapy, including therapy focussed on NPSs, was 1,866. Compared to previous years, this number was significantly higher and is the highest value recorded to date (CBPS data) (Figure 1). This is due to an increase in the number of places within the various wards.

Figure 1. Number of prisoners addicted to psychoactive substances other than alcohol and undergoing therapy

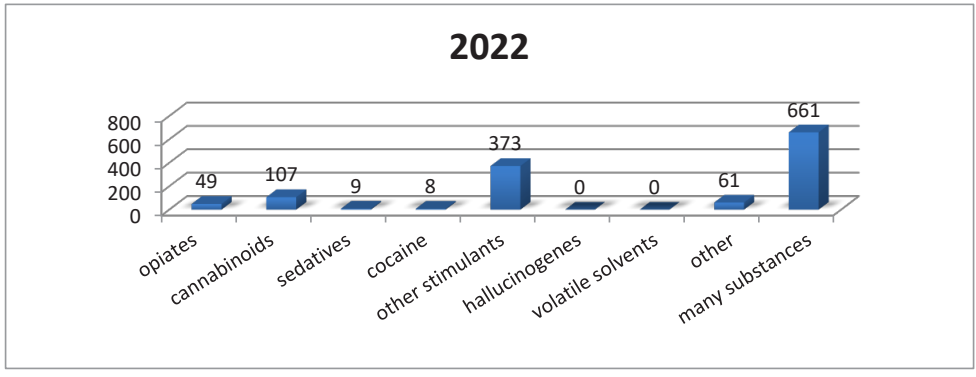


Source: Own study based on data obtained from the CBPS.

On average, in 2022 there were approximately 110 convicted persons receiving therapy per therapeutic ward. Despite the increase in the number of places in therapeutic wards in recent years, the need for therapy for prisoners addicted to psychoactive substances other than alcohol, including NPSs, is still significant. The number of convicted persons in therapeutic wards at the end of 2022 was 1,674, and the waiting time for admission is approximately 13 months (CBPS data).

A detailed analysis of the available data on substance dependence shows that the main group is comprised of convicted persons with a dependence on several psychoactive substances: 661 people in 2022. In the case of people with a dependence on a single drug, the largest group was those with a dependence on stimulants (373), followed by cannabinoids (107) and opiates (49) (Figure 2). This distribution was similar to that in the previous years.

Figure 2. Number of prisoners with an addiction, by substance in 2022



Source: Own study based on data obtained from the CBPS.

It is noteworthy that in recent years, the number of people taking drugs in the category "other," which includes NPSs, has been decreasing. In 2022, this figure fell year-on-year from 94 to 61 (CBPS data). The downward trend in NPS use is consistent with that recorded in recent years in the general population in Poland (Malczewski, Jabłoński 2020: 25).

The data on the therapy history of prisoners shows that, although the largest proportion was those who received addiction therapy for the first time, there is also a group of people with previous therapy experience among them (Figure 3). In 2022 there were 559 prisoners who had previously participated in therapy, constituting approximately 42% of all convicted people receiving therapy.

Figure 3. Number of prisoners addicted to psychoactive substances other than alcohol who had already had therapy

Source: Own study based on data obtained from the CBPS.

At the end of 2022, the staff of therapeutic wards for convicted people addicted to psychoactive substances other than alcohol comprised a total of 83 people. Within this group, 17 full-time positions were occupied by ward managers; the rest were therapists, psychologists and educators. Forty-five of them were certified as addiction psychotherapists, while another 27 were in the process of certification and two were to start training in the near future. The remaining staff members were educators who do not provide therapeutic interventions and for whom professional training in addiction therapy is optional (Figure 4).

Figure 4. Breakdown of qualifications of the staff of prison therapeutic wards for prisoners addicted to psychoactive substances other than alcohol (as of December 31, 2022)

Source: Own study based on the data obtained from the CBPS.

Analysis of data on therapeutic programmes for people addicted to psychoactive substances other than alcohol

Effective therapeutic programmes in penitentiaries will not only reduce relapses of addiction, but will also reduce the risk of recidivism. Thus, it is essential that they are constructed and implemented in accordance with contemporary evidence-based knowledge (Miller 2013).

The programmes of therapeutic wards in penitentiaries cover three dimensions that constitute a hierarchical whole: (1) macro—understood as a philosophy that refers to thinking about crime

and re-adaptation of prisoners, together with legal regulations, (2) meso—referring to a therapeutic programme that defines the subject matter of the classes and the methods and techniques used to conduct them and (3) micro—referring to the therapeutic relationship between the patient and the therapist in the penitentiary context (Głowik 2012: 322; cf. Głowik 2007). The therapeutic programmes of particular wards are created by their therapeutic teams in compliance with the legal regulations mentioned above. The programmes should be based on solutions documented as effective in the course of scientific research, which is verified at the central level, as each therapeutic programme is approved by the Director General of the Prison Service (Regulation of the Minister of Justice 2003, § 19, item 2).

The aim of the study was to identify the design framework of therapeutic programmes for people addicted to psychoactive substances other than alcohol that are conducted in penitentiaries across the country, and to determine the level of inclusion of interventions documented as effective in the treatment of addiction to psychoactive substances other than alcohol, including NPSs.

The following research questions were asked:

(1) What assumptions, objectives, methods of interventions and ways of measuring effects are indicated in the therapeutic programmes in prison wards for persons addicted to psychoactive substances other than alcohol?

(2) To what extent do the programmes include interventions that have been identified as being relevant to effective treatment of dependence on psychoactive substances other than alcohol?

A method of analysing the existing data was applied to the 17 therapeutic ward programmes. The analysis of the existing data was divided into two stages. As the first step, the programmes were analysed in terms of the following categories (in accordance with §19.1 of the Regulation of the Minister of Justice of 14 August 2003 on the ways of conducting penitentiary interventions in prisons and detention centres):

> (1) substantive and organisational assumptions and specific objectives of the programme, (2) methods and techniques of influence, (3) schedule of implementation and duration of the programme (4) definition of ways of measuring the effects and criteria for achieving the programme objectives. (Regulation of the Minister of Justice of 14 August 2003 on the ways of conducting penitentiary interventions in prisons and detention centres)

In the next step, the programmes of the therapeutic wards were analysed in terms of the indicators of the effectiveness of addiction therapy identified through research carried out in 2016–2017 within the project called "Determination, by meta-analysis, of indicators of the effectiveness of drug therapy implemented with funds from the National Bureau for Drug Prevention"[1] (Karteczka-Świętek, Opozda-Suder, Piasecka, Sztuka, Szwejka 2017: 39–40). Among these indicators, abstinence and completion of therapy were singled out as primary. Furthermore, in the course of the narrative synthesis, additional indicators of effectiveness were identified and grouped into four categories: (1) medical status—health complaints, severity of the effects of addiction and psychiatric problems, (2) mental health—level of motivation, desire/compulsion to use drugs, self-efficacy and impulsivity, (3) social functioning—social relationships, family relationships, employment and education and (4) legal situation—commission of crimes and punishment (Karteczka-Świętek, Opozda-Suder, Piasecka, Sztuka, Szwejka 2017: 39–40). This analysis focusses on two of the identified categories: mental health and social functioning.

The analysis of the therapeutic programmes in terms of their theoretical assumptions showed that most of them (16 programmes) were based on more than one theoretical approach. In their assumptions, the authors of the programmes referred to (1) solution-focussed approaches—one programme was based entirely on this approach (Berg, Miller 2000; De Jong, Berg 2007; Szczepkowski 2009, 2016; Ratner, George, Iveson 2017; Piasecka, Piątek 2023)—while the remaining programmes were based on (2) solution-focussed approaches with motivational dialogue (Miller, Rollnick 2014; Arkowitz, Miller, Rollnick 2017; Naar, Safren 2020) and the transtheoretical model of change (Prochaska, Di Clemente 1983; Del Rio Szupszynski, De Ávila 2021); four programmes referred to (3) the transtheoretical model of change and the assumptions of motivational dialogue, one programme assumed (4) an eclectic model of therapeutic work which combined different approaches, including cognitive-behavioural, psychodynamic and the transtheoretical

1 The institution is currently called the National Centre for Addiction Prevention.

model of change (Prochaska, Norcross 2006) and (5) other programmes combined traditional thinking about therapy for addicts based on the Minnesota model (Rachowska 2016), strategic-structural therapy (Mellibruda, Sobolewska-Mellibruda 2006) with cognitive-behavioural therapy (including Albert Bandura's social learning theory [Bandura 1977]), Marlatt and Gordon's cognitive concept of relapse (Marlatt, Gordon 1985) and the assumptions contained in Aaron T. Beck's cognitive therapy of addiction (Beck et al. 2007), the transtheoretical model of change or the motivational approach. The transtheoretical model of change was the most frequently used theoretical basis for the interventions, being indicated in 16 of the 17 programmes under analysis.

The general objectives of the analysed treatment programmes mainly revolved around developing knowledge, skills and attitudes related to leading a healthy lifestyle, including abstaining and complying with legal norms. In the specific objectives, the programmes also emphasised the role of strengthening motivation to not use psychoactive substances; changing irrational beliefs concerning the use of psychoactive substances; strengthening one's sense of responsibility for the recovery process; strengthening knowledge/awareness of addiction, its symptoms and the mechanisms of addiction and the compulsion/desire to use drugs; strengthening/acquiring psychosocial skills, including coping with emotions, interpersonal communication, asking for help, coping with stress and recognising one's own resources and weaknesses; constructive leisure time management; formulating and expressing assertive messages; building a support network; preventing relapses, improving interpersonal relationships, strengthening family ties and self-esteem and building a socially acceptable value system; identifying one's goals and interests; and enhancing the development of spirituality or reflection. In addition, the programmes envisage the development of individual therapy plans following a proper diagnosis. The programmes offered a similar range of methods for therapeutic interventions: individual therapy, group therapy, skills training, relapse prevention training, cooperation with families and relatives, relaxation activities, cultural and educational activities, sports activities, work for the therapeutic ward and self-help group meetings.

The duration of particular programmes was 6 months, as determined by §75 of Order No. 19/16 of the Director General of the Prison Service. At the same time, it was also indicated that this duration could be shortened or extended by no more than 1/3 of the duration of the programme, and—referring to § 73 and § 74 of the Order—that, in special cases, it is possible to discharge a convicted person from the therapeutic ward before the completion of the therapy if (1) they do not show motivation for therapy and intensive motivational interventions have been conducted for a minimum of 30 days and (2) they disrupt the course of group activities with their behaviour or pose a threat to other therapy participants.

All the programmes also included the same measurement of the outcomes and criteria for achieving programme goals, as recommended by the CBPS Penitentiary Office. The evaluation of the outcome was indicated in the pre-test scheme (before or shortly after the therapy begins) and the post-test scheme (at the end of therapy), after the prior agreement of a given prisoner to participate in the research. The method was a diagnostic survey conducted with the use of instruments that were standardised or invented by the author. In addition, in order to verify the maintenance of abstinence and to capture changes in the basic areas of functioning, it was assumed that a measurement would be conducted 24 months after the completion of the therapy. This measurement was to be conducted by correspondence using the author's instrument. In addition, one of the programmes also envisaged the implementation of a process evaluation using an evaluation questionnaire and an observation sheet prepared by the author. Moreover, all the programmes identified risk factors that, if changed, would lead to a reduction in the risk of recidivism.

The next stage of analysis of therapeutic programmes was conducted in terms of two categories of indicators for effectiveness: mental health (level of motivation, desire/compulsion to use drugs, self-efficacy and level of impulsivity) and social functioning (social and family relationships).

In terms of the mental health category, the results of the analysis indicate that all programmes are focussed on strengthening the motivation to change, with content related to teaching skills of recognising compulsions/desires to use substances and developing effective ways of coping with such temptation. In turn, another area in the

mental health category concerning the strengthening of self-efficacy was not as obviously managed. In two programmes, the importance of working on self-efficacy was emphasised explicitly, while in the others self-efficacy was indirectly developed through the reinforcement of various skills. The category on impulsivity was similar: two programmes included content on impulsivity, while the others emphasised dealing with emotions that may underlie impulsive behaviour.

In the area of social functioning, changes in the area of social relationships, including family relationships, were addressed in all programmes. This mainly takes place through analysing past relationships, the impact of substance use on social relationships and desired changes in relationships; building support networks; meeting with relatives; and developing cooperation skills and ways of resolving conflicts.

Conclusions and recommendations on therapeutic programmes in prisons for people addicted to psychoactive substances other than alcohol

The therapeutic programmes under study have a clear and coherent structure resulting from §19.1 of the Regulation of the Minister of Justice of 14 August 2003 on the ways of conducting penitentiary interventions in prisons and detention centres. In addition, all the programmes contain a list of identified risk factors which, when addressed, will lead to a reduced risk of recidivism. All of the programmes include detailed scenarios of individual activities, which is important for the methodology of implementing individual activities within the programmes. The level of correctness of their development is varied.

The programmes are based on concepts documented to be effective in addiction treatment (e.g. a cognitive-behavioural approach or motivational dialogue). The programmes offer upgraded methodological assumptions in combining the traditional perspective with current knowledge based on scientific evidence. All the programmes have main objectives and specific objectives. The intervention methods combine therapeutic methods with other interventions carried out in penitentiaries. The duration of the interventions is defined and

can be modified according to legal regulations. All the programmes have a described method of measuring the effects, using a pre-test/post-test scheme.

The content of the programmes is directly aimed at enhancing motivation to change, recognising and developing effective ways of coping with compulsions to use substances and enhancing constructive social relationships. The programmes are indirectly aimed at enhancing self-efficacy through the development of different types of skills (the two programmes which involve the issue of self-efficacy are exceptions), dealing with impulsivity through the development of skills to recognise and constructively express emotions that can cause impulsive behaviour (the two programmes which take into account the issue of impulsivity are exceptions).

Recommendations were made based on the analysis of the therapeutic programmes. Firstly, it is recommended to maintain a properly designed structure for the programmes that takes into account substantive and organisational assumptions, programme objectives, methods of intervention, duration of the programme and measurement of programme effects, among other things. Secondly, in particular programmes, it is recommended to further update the substantive assumptions using approaches documented as effective, to revise the objectives in terms of construction according to accepted standards and to improve the coherence between the programme's individual elements. Thirdly, it is advisable to conduct a process evaluation, in addition to the outcome evaluation, to determine whether any potential ineffectiveness of therapeutic interventions is the result of errors, deviations or modifications in the implementation of therapeutic programmes (Piasecka, Kusztal, Piątek 2022). Finally, it is worth considering extending the identification of factors to include those that prevent prisoners returning to criminal activity, and thus reduce the likelihood of recidivism.

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Case Reports

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Raporty z badań

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Uzależnienie od ćwiczeń fizycznych wśród studentów na podstawie adaptowanej do polskich warunków Skali EDS-R

ABSTRAKT

Celem podjętych badań była adaptacja testu ESD-R autorstwa H.A. Hausenblas i D. Symons Downs do polskich warunków oraz ocena skali występowania uzależnienia od ćwiczeń fizycznych wśród studentów. Badania przeprowadzono online. Objęły one 290 osób w wieku od 19 do 23 lat. Stosując analizę czynnikową, potwierdzono strukturę 7-czynnikową skali ESD-R i dobrą jej wewnętrzną spójność. Wszystkie podskale charakteryzowały się dobrą rzetelnością. Do oceny trafności kryterialnej skali zastosowano pomiar korelacji między skalą EDS-R a pytaniem dotyczącym tygodniowej liczby godzin wykonywania ćwiczeń fizycznych przez respondenta. Liczba godzin uprawiania ćwiczeń w tygodniu była dodatnio powiązana ze wszystkimi podskalami EDS-R. Wyniki te potwierdziły także analizy różnicowe. Na podstawie testu EDS-R uczestnicy zostali sklasyfikowani jako: (1) zagrożeni uzależnieniem od ćwiczeń fizycznych (5,5%),

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(2) nieuzależnieni (grupa objawowa) (78,3%) oraz (3) nieuzależnieni (grupa bezobjawowa) (21,7%). Prezentowany materiał może się przyczynić do dalszych badań z wykorzystaniem polskiej adaptacji skali EDS-R w różnych populacjach (np. ze względu na różne aktywności fizyczne podejmowane przez ćwiczących).

Wstęp

Jedną z podstawowych potrzeb człowieka jest potrzeba bezpieczeństwa, którą badacze opisują w różnych sferach ludzkiej aktywności (Jaworska 2019). Zwracają uwagę na bezpieczeństwo społeczne, ekonomiczne, zdrowotne i opisują te obszary w kontekście zagrożeń cywilizacyjnych i technologicznych. Według badań (Mucha B., Mucha M. 2021), okres pandemii, który wiązał się m.in. ze społeczną izolacją i pracą zdalną, spowodował stopniowy spadek aktywności fizycznej i wzrost liczby osób preferujących siedzący tryb życia. Taki stan rzeczy wywołał dyskusję na temat zasad aktywności fizycznej o charakterze prozdrowotnym oraz zagrożeń wynikających zarówno z braku aktywności, jak i uzależnienia się od niej.

Ponadto w edukacji zdrowotnej zwraca się uwagę na stwierdzenie, że aktywność fizyczna jest obowiązkiem każdego człowieka wobec własnego organizmu (Jegier i in. 2005). Podkreśla się również, że regularny wysiłek fizyczny[1], adekwatny do wieku i sprawności osoby, wzmacnia jej sprawność fizyczną, kondycję i mobilność. Badacze nie mają wątpliwości, że zrównoważony wysiłek fizyczny powoduje korzystne zmiany adaptacyjne we wszystkich układach organizmu człowieka, wpływa pozytywnie na metabolizm, zdrowie psychiczne, procesy starzenia, a także zapobiega rozwojowi chorób przewlekłych. Można zatem powiedzieć, że aktywność fizyczna jest traktowana jako zjawisko bezpośrednio związane ze zdrowiem, a zalecanie ćwiczeń

1 Zgodnie z zaleceniami Światowej Organizacji Zdrowia (WHO), poziom aktywności fizycznej dla zdrowych osób dorosłych w wieku 18–64 lat, który pozytywnie wpływa na zdrowie jednostki, powinien obejmować 150–300 minut wysiłku o umiarkowanej intensywności w ciągu tygodnia lub 75–150 minut wysiłku o dużej intensywności tygodniowo, bądź też równoważną kombinację obu poziomów. Ponadto, co najmniej dwa dni w tygodniu dorośli powinni wykonywać ćwiczenia o umiarkowanej intensywności, które wzmacniają ich mięśnie (WHO 2020).

fizycznych jest wspólnym elementem edukacji promującej zdrowie (King et al. 2012).

Raporty naukowe wskazują również, że aktywność fizyczna niektórych osób może przyjąć formę głównego elementu ich stylu życia, stając się zachowaniem nałogowym, a nawet patologicznym. Mamy wówczas do czynienia z aktywnością, która nie prowadzi do zdrowego stylu życia, a wręcz staje się szkodliwa. Taka aktywność fizyczna łączy się zwykle z nadmiernym wysiłkiem fizycznym i skrajną troską o własny wygląd, zaniedbywaniem lub wyczerpaniem organizmu, utrzymywaniem aktywności fizycznej pomimo odczuwanego bólu lub niepełnosprawności fizycznej oraz z zaniedbywaniem obowiązków związanych z pracą, edukacją i rodziną. Stan taki definiowany jest w literaturze jako nawykowe zaangażowanie w regularne ćwiczenia, nadmierne ćwiczenia, uzależnienie od ćwiczeń, kompulsywne ćwiczenia, uzależnienie od wysiłku fizycznego, obsesyjne ćwiczenia lub nadużywanie ćwiczeń (Habrat 2016).

Karolina Piątek wskazuje, że najwłaściwszym terminem opisującym to zjawisko jest „zaburzenie behawioralne", a termin „uzależnienie behawioralne" powinien być stosowany w odniesieniu do zjawiska związanego ze znacznym nasileniem objawów danego zaburzenia uznawanego za jednostkę chorobową (Piasecka et al. 2022).

Czasami obsesyjne ćwiczenia fizyczne definiuje się jako bigoreksję. Termin ten odnosi się jednak bardziej do zniekształconego postrzegania własnego ciała, które może, ale nie musi prowadzić do nadmiernego zaangażowania w ćwiczenia fizyczne. Uzależnienie od ćwiczeń fizycznych może być również wynikiem innych schorzeń (problemów), w szczególności zaburzeń odżywiania (Rowicka 2015).

Początkowo nałogowe wykonywanie ćwiczeń fizycznych było traktowane jako „pozytywne uzależnienie" (Glasser 1976). Wskazywano przy tym na korzystne efekty ćwiczeń fizycznych i pozytywny związek między liczbą ćwiczeń a zdrowiem osoby. Wiązało się to z korzyściami psychologicznymi i fizjologicznymi dla ludzkiego organizmu: silnym doznaniem przyjemności, poczuciem wzmocnienia psychicznego i przekroczenia granic własnych możliwości. Nie trzeba było jednak długo czekać, by zauważyć (na podstawie badań empirycznych), że nadmierny wysiłek fizyczny może prowadzić nie tylko do urazów ciała, ale także do zaniedbywania najważniejszych codziennych obowiązków. W skrajnych przypadkach klinicznych

nadmierny wysiłek fizyczny identyfikowany był jako nowa forma uzależnienia (Griffiths 1996). Takie uzależnienie wiązało się z kompulsywną i nałogową realizacją aktywności, neuroadaptacją (objawy odstawienia i zwiększona tolerancja) oraz z innymi niekorzystnymi konsekwencjami (ćwiczenie pomimo przeciwwskazań medycznych) (Brevers et al. 2022; Martyniak et al. 2021).

Pomimo tego, że niektóre formy określonej aktywności są przedstawiane jako działania o charakterze uzależniającym, warto zauważyć, że nie ma to bezpośredniego odzwierciedlenia w klasyfikacji ICD (ICD-11 2018) ani w klasyfikacji DSM (APA 2013). To z kolei powoduje, że kryteria uzależnienia od wysiłku fizycznego ustalane są w nawiązaniu do definicji zachowań nałogowych, lub że kryteria nałogowego zaangażowania w aktywność fizyczną tworzone są na podstawie wyżej wymienionych klasyfikacji (Manea i in. 2018). Przedstawicielem pierwszego podejścia jest m.in Mark D. Griffiths, który zdefiniował następujące czynniki uzależnienia od ćwiczeń fizycznych:

1. Ćwiczenie staje się priorytetem w odniesieniu do innych czynności, co powoduje, że myśli i zachowania danej osoby są zaabsorbowane ćwiczeniami (priorytetowość).
2. Nastrój jednostki jest modyfikowany przez ćwiczenia fizyczne (modyfikacja nastroju).
3. Istnieje konieczność zwiększenia zakresu działań w celu szybszego osiągnięcia wyników (tolerancja).
4. Występują nieprzyjemne stany emocjonalne lub doznania fizyczne w sytuacji przerwania ćwiczeń lub ich nagłego ograniczenia, takie jak: drażliwość, zły nastrój (objawy odstawienia).
5. Występują konflikty interpersonalne między ćwiczącym a otoczeniem (konflikty z innymi formami aktywności, konflikty wewnętrzne).
6. Występuje tendencja do powracania do poprzednich wzorców zachowań nawet po wielu latach wycofywania się z nich lub ich kontrolowania (nawroty) (Griffiths 1996).

Na podstawie wytycznych dotyczących uzależnień od substancji zdefiniowanych w DSM, David de Coverley Veale (1987) jako pierwszy opracował kryteria diagnostyczne nadmiernej aktywności fizycznej. W swojej klasyfikacji „uzależnienia od ćwiczeń fizycznych" wyróżnił on następujące cechy:

a. Ograniczenie repertuaru ćwiczeń do stereotypowego wzorca treningu, który odbywa się regularnie, przynajmniej raz dziennie.
b. Zaangażowanie w ćwiczenia polegające na skupieniu się na aktywności fizycznej kosztem innych działań w celu utrzymania wzorca ćwiczeń.
c. Rosnąca tolerancja – wzrost liczby wykonywanych ćwiczeń w kolejnych latach.
d. Objawy odstawienia związane z zaburzeniami nastroju w przypadku przerwania ćwiczeń lub ograniczonego dostępu do nich.
e. Opóźnienie lub uniknięcie objawów odstawienia poprzez dalsze ćwiczenia.
f. Subiektywna świadomość przymusu ćwiczeń.
g. Impulsywny powrót do poprzedniego wzorca ćwiczeń po dłuższym okresie bez ćwiczeń.

Podobne wnioski wyciągnęły Heather A. Hausenblas i Danielle Symons Downs (2002), które wykorzystały klasyfikację DSM. Zdefiniowały one kompulsywne ćwiczenia fizyczne jako wielowymiarowe zaburzenie adaptacyjne ćwiczeń fizycznych prowadzące do klinicznie istotnego upośledzenia lub cierpienia. Wskazały, że uzależnienie od negatywnego wzorca ćwiczeń pojawia się, gdy mamy do czynienia z trzema lub więcej objawami spośród siedmiu poniższych kryteriów diagnostycznych:

1. Tolerancja – identyfikowana jako potrzeba zwiększonej liczby godzin ćwiczeń fizycznych w celu osiągnięcia pożądanego efektu lub zmniejszających się osiągnięć przy zachowaniu tej samej intensywności treningu.
2. Odstawienie – charakteryzujące się takimi objawami jak: niepokój i zmęczenie przy utrzymaniu tego samego poziomu aktywności i intensywności lub braku ćwiczeń fizycznych.
3. Efekt intencji – zamierzony wynik odnosi się do czasu trwania lub oczekiwanej ilości wysiłku fizycznego (często intensywność jest wyższa niż zamierzona).
4. Brak kontroli nad użytecznością ćwiczeń lub ćwiczeniami jako całością – obejmuje nieudane próby przerwania ćwiczeń lub kontroli ćwiczeń.

5. Czas – zwiększenie ilości czasu poświęcanego na aktywność fizyczną.
6. Ograniczenie innych aktywności – przerwanie lub zmniejszenie aktywności społecznej, zawodowej lub rekreacyjnej z powodu ćwiczeń.
7. Kontynuacja – kontynuacja ćwiczeń pomimo wiedzy o stałych lub nawracających problemach spowodowanych lub nasilonych przez aktywność fizyczną.

Ocena zakresu uzależnienia od ćwiczeń fizycznych nie jest łatwym zadaniem. Wynika to z różnych kryteriów diagnostycznych stosowanych przez badaczy oraz różnorodności kulturowej tego zjawiska (Habrat 2016). Oceny nie ułatwia również fakt, że większość badań była przeprowadzana w środowisku osób regularnie ćwiczących. W rezultacie istnieje znaczny zakres uzyskanych wyników. Wskazują one, że nałogowe ćwiczenia dotyczą od 3% do 30% ćwiczących (Rowicka 2015). W całej populacji odsetek ten jest szacowany jest na 5% (Szabo, Griffiths 2007).

Obecnie najczęściej wykorzystywanymi narzędziami diagnostycznymi i ankietowymi służącymi do pomiaru stopnia zaangażowania w ćwiczenia fizyczne są: Obligatory Exercise Questionnaire (OEQ) [Kwestionariusz ćwiczeń obowiązkowych] (Thompson, Pasman 1991), Exercise Addiction Inventory (EAI) [Test uzależnienia od ćwiczeń] (Terry i in. 2004), Commitment to Exercise Scale (CES) [Skala zaangażowania w ćwiczenia] (Davis i in. 1993) oraz Exercise Dependence Scale (EDS) [Skala uzależnienia od ćwiczeń] (Hausenblas, Downs 2002). Ostatnie z tych narzędzi w zmodyfikowanej wersji EDS-R jest obecnie jedynym instrumentem uwzględniającym symptomy przedmiotu uzależnienia określone w klasyfikacji DSM. Dzięki niemu istnieje możliwość podziału badanych na trzy grupy: (1) osoby zagrożone uzależnieniem od ćwiczeń fizycznych, (2) grupa nieuzależniona – objawowa, (3) grupa nieuzależniona – bezobjawowa. EDS-R jako narzędzie o dobrych właściwościach psychometrycznych zostało przetłumaczone na różne języki i jest stosowane w wielu krajach, takich jak: Portugalia (Lindwall, Palmeira 2009), Hiszpania (Sicilia, González-Cutre 2011), Włochy (Costa i in. 2012), Węgry (Mónok i in. 2012) i Francja (Allegre i in. 2006).

Metodologia

Uczestnicy

W badaniu wzięło udział 290 osób w wieku od 19 do 23 lat (średnia wieku wyniosła M=20,71, przy odchyleniu standardowym SD=1,06). Ponad połowę respondentów, tj. 54,1% (157 osób), stanowili mężczyźni, a drugą część, tj. 45,9% (133 osoby) – kobiety. Wszyscy ankietowani byli studentami Akademii Wychowania Fizycznego im. Jerzego Kukuczki w Katowicach. Dobór próby badawczej był celowy.

Mając na uwadze test EDS-R, uczestników zakwalifikowano do następujących grup:

- zagrożeni uzależnieniem od ćwiczeń (n=16: mężczyźni=11, kobiety=5),
- nieuzależnieni (grupa objawowa) (n=211: mężczyźni=116, kobiety=95),
- nieuzależnieni (grupa bezobjawowa) (n=63: mężczyźni=30, kobiety=33).

Środki

Badanie zostało przeprowadzone metodą sondażu diagnostycznego. Podzielono je na dwa etapy.

W pierwszym etapie dokonano adaptacji Skali uzależnienia od ćwiczeń (Exercise Dependence Scale Revised – EDS-R), autorstwa Heather A. Hausenblas i Danielle Symons Downs, do Polskich warunków.

Skala EDS-R składa się z 21 stwierdzeń (Tabela 1), na temat których respondent wydaje opinie na podstawie 6-stopniowej skali od 1 (nigdy) do 6 (zawsze). Test EDS-R został przetłumaczony na język polski, a następnie przetłumaczony z powrotem na język angielski (tłumaczenie zwrotne). Tłumaczenie zostało wykonane starannie i dokładnie z elementami modyfikacji w miejscach, gdzie dosłowne tłumaczenie było niemożliwe. Wszystkie pytania skali zostały zachowane w zaadaptowanym narzędziu. Jeśli chodzi o adaptację narzędzia, zbadano adekwatność treści pytań w odniesieniu do polskiego kontekstu kulturowego oraz zrozumienie pytań przez młodych

dorosłych, tj. studentów. Narzędzie składa się z 7 podskal. Odnoszą się one do 7 kryteriów diagnostycznych uzależnienia.

Tabela 1. Statystyki opisowe dla poszczególnych pozycji Skali uzależnienia od ćwiczeń (Exercise Dependence Scale Revised) i analiza czynnikowa. Polska i angielska wersja EDS-R

Podskale EDS-R i poszczególne pozycje	M	SD	Odchylenie	Kurtoza	Obciążenie czynnika
Odstawienie (α=0.71)					
1. Ćwiczę, aby uniknąć uczucia irytacji. / I exercise to avoid feeling irritable.	3.06	1.41	.156	–.696	.809
8. Wykonuję ćwiczenia, aby uniknąć uczucia niepokoju. / I exercise to avoid feeling anxious.	2.64	1.44	.407	–1.016	.967
15. Wykonuję ćwiczenia, aby uniknąć uczucia napięcia. / I exercise to avoid feeling tense.	2.98	1.29	.206	–.679	.827
Kontynuacja (α=0.80)					
2. Ćwiczę pomimo powtarzających się problemów fizycznych. / I exercise despite recurring physical problems.	3.09	1.47	.212	–.842	.872
9. Wykonuję ćwiczenia, nawet gdy mam kontuzję. / I exercise when injured.	2.64	1.44	.407	–1.016	.967
16. Ćwiczę regularnie, nawet gdy mam poważne problemy fizyczne. / I exercise despite persistent physical problems.	2.48	1.39	.748	–.284	.780
Tolerancja (α=0.76)					
3. Ciągle zwiększam intensywność ćwiczeń, aby osiągnąć zamierzone efekty/korzyści. / I continually increase my exercise intensity to achieve the desired effects/benefits.	3.58	1.39	–.158	–.666	.796
10. Utrzymuję stałą częstotliwość ćwiczeń, aby osiągnąć pożądane efekty/korzyści. / I continually increase my exercise frequency to achieve the desired effects/benefits.	3.56	1.38	–.127	–.711	.767
17. Nieustannie zwiększam czas i intensywność ćwiczenia. /I continually increase my exercise duration to achieve the desired effects/benefits.	2.70	1.21	.373	–.568	.790
Brak kontroli (α=0.80)					
4. Nie mogę zredukować czasu ćwiczeń. / I am unable to reduce how long I exercise.	2.63	1.31	.598	–.207	.701
11. Nie potrafię zmniejszyć częstotliwości ćwiczeń. / I am unable to reduce how often I exercise.	2.67	1.42	.734	–.189	.835

Podskale EDS-R i poszczególne pozycje	M	SD	Odchylenie	Kurtoza	Obciążenie czynnika
18. Nie mogę zredukować intensywności ćwiczeń. / I am unable to reduce how intense I exercise.	2.46	1.22	.652	–.105	.825
Redukcja innych aktywności (α=0.82)					
5. Wolę ćwiczyć niż spędzać czas z rodziną/ przyjaciółmi. / I would rather exercise than spend time with family/friends.	2.56	1.31	.477	–.594	.726
12. Myślę o ćwiczeniach, kiedy powinienem/ powinnam koncentrować na szkole/pracy. / I think about exercise when I should be concentrating on school/work.	2.57	1.43	.704	–.339	.739
19. Decyduję się ćwiczyć, nawet gdy jest to kosztem czasu z rodziną. / I choose to exercise so that I can get out of spending time with family/ friends.	2.46	1.29	.405	–.887	.843
Czas (α=0.90)					
6. Spędzam dużo czasu na ćwiczeniach. / I spend a lot of time exercising.	3.12	1.31	.202	–.448	.759
13. Spędzam większość wolnego czasu ćwicząc. / I spend most of my free time exercising.	2.83	1.38	.571	–.330	.779
20. Sporo czasu spędzam ćwicząc. / A great deal of my time is spent exercising.	3.12	1.37	.220	–.710	.786
Intencja (α=0.91)					
7. Wykonuję ćwiczenia dłużej niż zamierzałem/ am. / I exercise longer than I intend.	2.87	1.25	.250	–.678	.855
14. Gdy ćwiczę, robię to dłużej niż zamierzałem/ am. / I exercise longer than I expect.	2.87	1.35	.316	–.718	.820
21. Ćwiczę dłużej niż planuję. / I exercise longer than I plan.	2.83	1.33	.240	–.906	.796

Źródło: badania własne.

Drugi etap procesu badawczego umożliwił dzięki zaadaptowanej skali EDS-R określenie stopnia uzależnienia od ćwiczeń fizycznych wśród studentów Akademii Wychowania Fizycznego w Katowicach. W badaniach, oprócz skali EDS-R, wykorzystano również kwestionariusz zawierający profil aktywności fizycznej respondentów, w którym wyróżniono między innymi liczbę godzin ćwiczeń w tygodniu oraz doświadczane skutki nadmiernej aktywności fizycznej.

Dodatkowo kwestionariusz zawierał pytania dotyczące zadowolenia z życia w następujących aspektach: edukacja, radość życia, rodzina, przyjaciele, czas wolny i życie w ogóle. Narzędzie zawierało również część statystyczną z danymi społeczno-demograficznymi respondentów, takimi jak płeć, wiek, miejsce zamieszkania oraz poziom wykształcenia rodziców.

Plan i realizacja badań

Badanie zostało przeprowadzone z wykorzystaniem kwestionariusza online umieszczonego na platformie Webankieta. Respondenci otrzymali link do kwestionariusza i za jego pomocą uzyskiwali dostęp do wersji online. Organizatorzy badania przedstawili respondentom jego cel, tj. adaptację testu EDS-R do polskich warunków oraz opis nadmiernej aktywności fizycznej wśród studentów. Dobór respondentów był celowy i obejmował studentów Akademii Wychowania Fizycznego w Katowicach[2], którzy zgodzili się wziąć udział w badaniu. Zostało ono przeprowadzone w 2020 roku.

Analiza statystyczna

Do analizy i opracowania wyników statystycznych wykorzystano następujące metody:

- do oceny rzetelności narzędzia/skali wykorzystano metodę spójności wewnętrznej testu (współczynnik α-Cronbacha),
- do oceny trafności kryterialnej skali EDS-R wykorzystano miarę korelacji między skalą a pytaniem dotyczącym liczby godzin wykonywanych ćwiczeń w tygodniu przez respondenta.

W badaniu zastosowano procedurę obliczania wyników: wynik ogólny i wynik podskal obliczono zgodnie z procedurą przedstawioną przez autorów skali EDS-R. Wykorzystanie tego algorytmu umożliwiło:

8. Obliczenie średnich wyników całkowitych i podskal dla skali EDS-R. Wysoki wynik wskazuje na więcej objawów zależnych od ćwiczeń fizycznych.

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2 Badani studenci kształcili się na Wydziale Zarządzania Sportem i Turystyką i nie uprawiali sportu zawodowo.

9. Klasyfikacja uczestników do grup: (1) zagrożonych uzależnieniem od ćwiczeń fizycznych, (2) nieuzależnionych (objawowych), (3) nieuzależnionych (bezobjawowych).

Przynależność do grupy osób zagrożonych uzależnieniem od ćwiczeń fizycznych poddana została operacjonalizacji poprzez wynik 5 lub 6. Respondenci, którzy uzyskali punkty pomiędzy 3 a 4, zostali sklasyfikowani jako nieuzależnieni (grupa symptomatyczna). Natomiast osoby z wynikiem 1 i 2 sklasyfikowane zostały jako niepodatne na uzależnienie (grupa bezobjawowa)[3].

Analiza statystyczna badania została przeprowadzona przy użyciu pakietu statystycznego SPSS, wersja 26.

Wyniki badań

Wyniki przedstawiające charakterystykę psychometryczną EDS-R można znaleźć w Tabeli 1 i Tabeli 2. Jak wynika z tych tabel, poszczególne pozycje i podskale EDS-R zachowywały dopuszczalne odchylenie (<| 2 |) i kurtozę (<| 1,5 |). Badani osiągnęli najwyższe wyniki w podskali Tolerancja (M=9,83), a najniższe w podskali: Ograniczenie innych aktywności (M=7,59). Poszczególne wyniki sumaryczne mieściły się w przedziale od 21 do 109 punktów. Korelacje pomiędzy poszczególnymi czynnikami a globalną miarą uzależnienia behawioralnego wahają się od 0,56 do 0,92 przy $p<0,01$.

Tabela 2. Statystyki opisowe i korelacje podskal Skali uzależnienia od ćwiczeń i liczba godzin ćwiczeń tygodniowo

Podskale	M	SD	Odch	Kur	1	2	3	4	5	6	7	8
1. Odstawienie	8.68	3.279	.013	–.803	–							
2. Kontynuacja	8.21	3.614	.362	–.784	.790	–						
3. Tolerancja	9.83	3.277	–.198	–.282	.633	.561	–					
4. Brak kontroli	7.76	3.343	.418	–.249	.677	.638	.561	–				

3 Tamże.

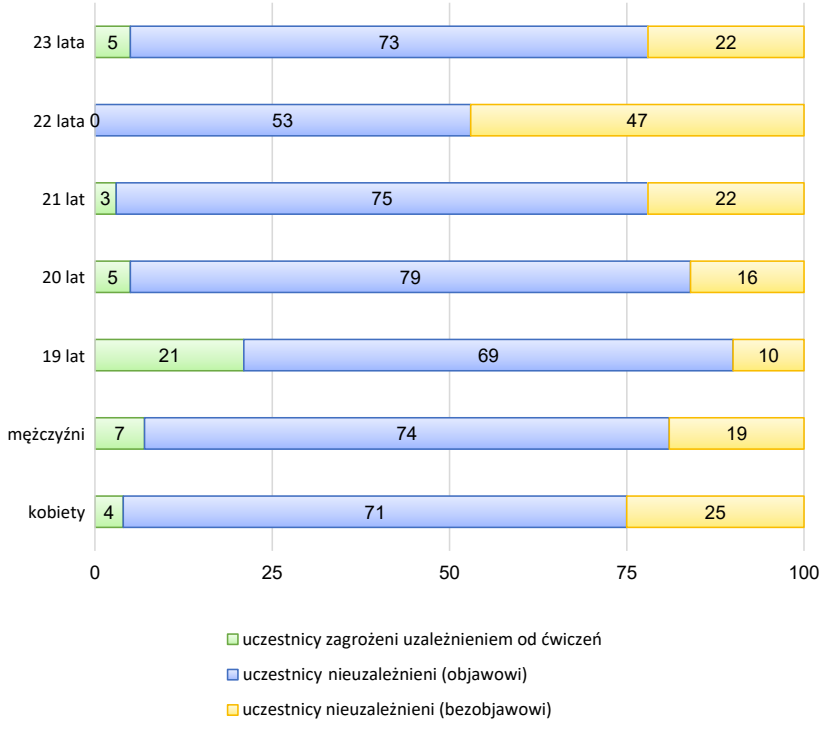
Podskale	M	SD	Odch	Kur	1	2	3	4	5	6	7	8
5. Ograniczenie innych aktywności	7.59	3.456	.486	–.443	.636	.683	.594	.672	–			
6. Czas	9.07	3.705	.326	–.239	.656	.677	.702	.619	.790	–		
7. Intencja	8.56	3.615	.235	–.752	.598	.588	.655	.605	.678	.767	–	
8. Całkowite uzależnienie	59.71	20.420	.051	–.350	.845	.841	.797	.809	.861	.890	.835	α=0.93
Ilość godzin ćwiczeń w tygodniu	3.12	1.371	.220	–.710	.603	.634	.656	.576	.747	.924	.696	.826

Źródło: badania własne.

Analizy wewnętrzne zostały przeprowadzone dla polskiej wersji EDS-R. Analiza czynnikowa potwierdziła 7-czynnikową strukturę skali i jej dobrą spójność wewnętrzną. Wszystkie podskale charakteryzowały się adekwatną rzetelnością obliczoną za pomocą współczynnika α-Cronbacha (Tabela 1). Do oceny trafności skali wykorzystano korelację między skalą EDS-R a pytaniem dotyczącym tygodniowej liczby godzin ćwiczeń przeprowadzanych przez respondenta. Liczba godzin ćwiczeń w tygodniu była korzystnie powiązana ze wszystkimi podskalami EDS-R. Wyniki te zostały też potwierdzone przez analizy różnicowe. W grupie osób zagrożonych uzależnieniem od ćwiczeń fizycznych średnia wyniosła 4,83 (SD=1,29), w grupie nieuzależnionych (objawowych) – 3,09 (SD=1,02), a w grupie prawidłowo stosujących ćwiczenia fizyczne (nieuzależnionych-bezobjawowych) średnia wyniosła 1,51 (SD=0,88). Analiza statystyczna z wykorzystaniem testu Kruskala-Wallisa wykazała istotne różnice pomiędzy grupami w zakresie częstotliwości wykonywania ćwiczeń fizycznych, chi-kwadrat (2)=35,29; p<0,001. Różnice te zostały potwierdzone testem Jonckheere-Terpstra, J-T = –7,14; p <0,001.

W ramach prezentowanych badań określono skalę uzależnienia respondentów od ćwiczeń fizycznych. Ustalono, że 5,5% respondentów jest zagrożonych uzależnieniem od ćwiczeń, 72,8% nie jest uzależnionych (objawowi), a 21,7% właściwie korzysta z ćwiczeń (nie są uzależnieni – bezobjawowi). Podział respondentów ze względu na płeć i wiek przedstawiono na rysunku 1.

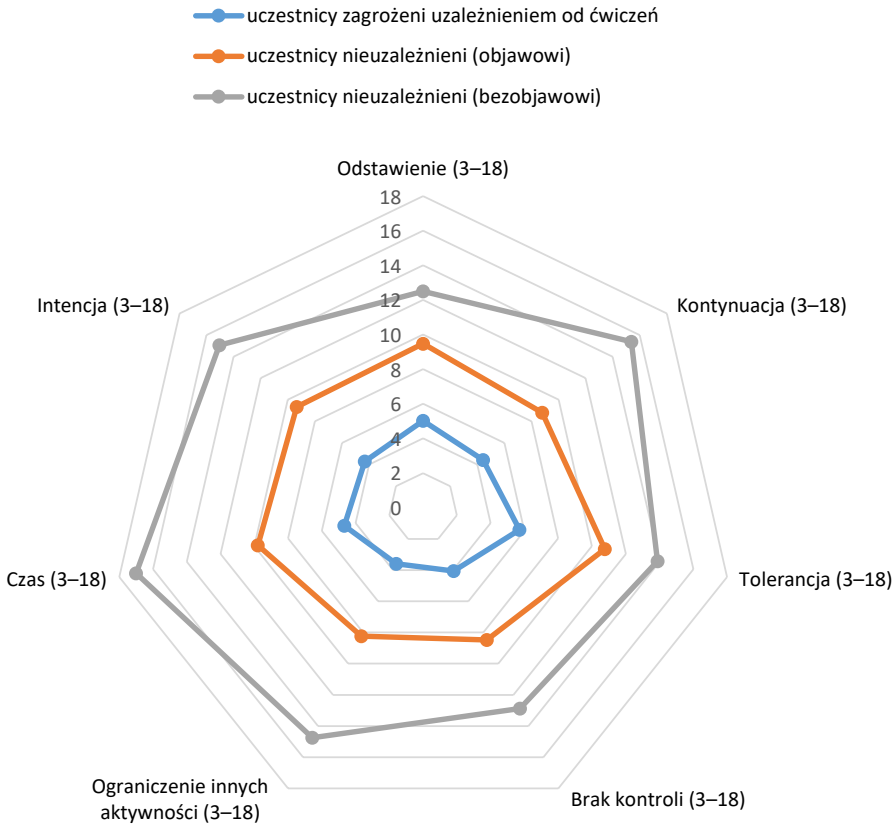
Rys. 1. Skala uzależnienia od ćwiczeń według płci i wieku



Źródło: badania własne.

Zbadano, czy płeć jest statystycznie istotnym czynnikiem różnicującym poziom uzależnienia respondentów od ćwiczeń fizycznych. Przeprowadzono test niezależności dwóch zmiennych – Chi-kwadrat. Ustalono, że płeć jest istotna statystycznie, jeśli chodzi o wpływ na poziom uzależnienia. Siła tego związku jest wysoka, a V-Cramera wynosi 0,569. Podobnie wiek jest istotny statystycznie, jeśli chodzi o zróżnicowanie poziomu uzależnienia respondentów. Jednak związek między wiekiem a poziomem uzależnienia jest bardzo słaby. Współczynnik korelacji Pearsona wynosi $r=0,17$; $p<0,05$. Następnie przeanalizowano wyniki w poszczególnych podskalach z podziałem na trzy grupy (patrz Rys. 2).

Rys. 2. Liczba punktów uzyskanych przez respondentów w podskalach EDS-R z podziałem na kategorie zaangażowania w ćwiczenia fizyczne



Źródło: badania własne.

Ustalono, że badani wykazują objawy uzależnienia w największym stopniu (bez względu na stopień zaangażowania w ćwiczenia fizyczne) w aspekcie zmiany tolerancji, co przejawia się koniecznością zwiększania czasu wykonywanych ćwiczeń w celu osiągnięcia oczekiwanego rezultatu lub zmniejszania efektów ćwiczeń przy zachowaniu tej samej intensywności. Ponadto z zebranych danych wynika, że wraz z intensyfikacją nałogowych ćwiczeń fizycznych uzależnieni poświęcają coraz więcej czasu na ten rodzaj aktywności przy jednoczesnym ograniczeniu innych form aktywności, a często aktywność fizyczna w postaci ćwiczeń jest kontynuowana pomimo

wiedzy o trwałych lub nawracających problemach wywołanych lub nasilonych przez aktywność fizyczną.

Następnie, biorąc pod uwagę wyniki testu EDS-R, badanych podzielono na dwie grupy ćwiczących: funkcjonującą i dysfunkcyjną. Grupa dysfunkcyjna składała się z dwóch kategorii respondentów: zagrożonych uzależnieniem od ćwiczeń oraz bez objawów uzależnienia.

Autorzy testu EDS-R wyodrębnili 7 podskal dotyczących różnych aspektów nadużywania wysiłku fizycznego. Średnie wyniki podskal omawianej skali dla osób ćwiczących w sposób prawidłowy i dysfunkcyjny przedstawiono w Tabeli 3.

Tabela 3. Średnie wyniki podskal ESD-R wśród respondentów funkcjonujących prawidłowo i dysfunkcyjnych

Podskale ESD-R	Osoby ćwiczące w sposób prawidłowy			Osoby dysfunkcyjne		
	średnia	SE	znaczenie w ogólnym wyniku testu	średnia	SE	znaczenie w ogólnym wyniku testu
Odstawienie (3–18)	5.02	.227	16%	9.70	.189	14%
Kontynuacja (3–18)	4.43	.160	14%	9.26	.222	14%
Tolerancja (3–18)	5.71	.294	18%	10.98	.165	16%
Brak kontroli (3–18)	4.06	.171	13%	8.79	.198	13%
Ograniczenie innych aktywności (3–18)	3.59	.117	11%	8.70	.203	13%
Czas (3–18)	4.67	.218	15%	10.30	.208	15%
Intencja (3–18)	4.30	.167	13%	9.74	.207	15%
Całkowite uzależnienie (21–126)	31.78	1.036	100%	67.46	1.022	100%

Źródło: badania własne.

Przy analizie wyników szczególnie istotny jest procentowy udział poszczególnych podskal w ogólnym wyniku testu. Największa różnica dotyczy podskali Intencja (wzrost istotności w ogólnym wyniku testu z 13% dla grupy funkcjonującej do 15% dla grupy dysfunkcyjnej) oraz Ograniczenie innych aktywności (wzrost znaczenia w ogólnym wyniku testu z 11% do 13% dla grupy dysfunkcyjnej). Na tej podstawie można wnioskować, że grupa dysfunkcyjna zwraca uwagę na

osiągnięcie oczekiwanego rezultatu ćwiczeń kosztem innych aktywności tylko dlatego, że zwiększa ilość czasu poświęconego na ćwiczenia lub intensywność wysiłku fizycznego.

Zadano również pytanie o samoocenę respondentów, które dotyczyło skutków nadmiernego wysiłku fizycznego. W grupie dysfunkcyjnej (N=227), 2/3 grupy (152 osoby) dostrzega pogorszenie w zakresie jakości przyjaźni, życia społecznego i zawodowego, co oznacza, że jednostka wycofuje się z innych aktywności, przedkłada ćwiczenia nad spotkania z przyjaciółmi i w konsekwencji relacje przyjacielskie ulegają pogorszeniu. Prawie połowa z nich (108 osób) wskazuje na uszczerbek na zdrowiu wynikający z ćwiczeń pomimo urazu lub złego stanu zdrowia. Tyle samo osób opisuje ciągłe myślenie o ćwiczeniach i brak umiejętności ograniczenia lub kontrolowania tego typu zachowań.

Aby zbadać, czy istnieje związek między dysfunkcyjnymi ćwiczeniami fizycznymi a satysfakcją z życia, zapytano respondentów o zadowolenie z niektórych dziedzin życia (np. osiągnięcia w nauce, radość życia, rodzina, przyjaciele, czas wolny i życie w ogóle). Klasyfikacja odpowiedzi w tym pytaniu była następująca: 5 – bardzo zadowolony, 4 – zadowolony, 3 – neutralny, 2 – niezadowolony, 1 – bardzo niezadowolony). Istniała możliwość uzyskania maksymalnie 5 punktów za każdą odpowiedź w każdym obszarze. W grupie dysfunkcyjnej średnie wyniki poszczególnych aspektów życia były istotnie niższe ($p<0,01$) w porównaniu do średnich wyników uzyskanych przez grupę z prawidłowym podejściem do ćwiczeń fizycznych. Ponadto żadna ze średnich nie osiągnęła wartości 4 (zadowolony), a najgorsze wyniki uzyskano w obszarze związanym z osiągnięciami w nauce (M=3,11; SD=1,05) oraz w zadowoleniu z radości życia (M=3,5; SD=1,17).

Omówienie wyników

Celem badania było rozpoczęcie procesu walidacji EDS-R w warunkach polskich oraz zdefiniowanie skali zjawiska (nadużywanie ćwiczeń fizycznych) wśród studentów Akademii Wychowania Fizycznego w Katowicach. Ustalono, że polska adaptacja EDS-R charakteryzuje się dobrymi właściwościami psychometrycznymi i może być stosowana jako narzędzie do przesiewowego badania występowania objawów uzależnienia od ćwiczeń fizycznych.

Na podstawie testu EDS-R badanych sklasyfikowano jako: zagrożonych uzależnieniem od wysiłku fizycznego (5,5%), nieuzależnionych (grupa objawowa) (72,8%) oraz niepodatnych na uzależnienie (grupa bezobjawowa) (21,7%). Przedstawiony materiał może stanowić przyczynek do dalszych badań z wykorzystaniem polskiej adaptacji skali EDS-R w różnych populacjach (np. ze względu na odmienną aktywność fizyczną podejmowaną przez ćwiczących).

Uzyskane wyniki potwierdzają wcześniejsze badania i są podobne do tych uzyskanych za pomocą oryginalnej angielskiej wersji EDS-R. Częstość występowania osób zagrożonych uzależnieniem od ćwiczeń fizycznych (5,5% w niniejszym badaniu) jest porównywalna z wynikami badań z innych krajów. Na przykład w próbie amerykańskiej odsetek respondentów zagrożonych uzależnieniem od ćwiczeń fizycznych wahał się od 3,6 do 5% (Symons Downs i in. 2004). Podobnie Magnus Lindwall i Antonio Palmeira (2011) stwierdzili, że częstotliwość występowania uzależnienia od ćwiczeń wynosiła 9,2% w próbie szwedzkiej i 5,2% w próbie portugalskiej.

Przedstawiony materiał pokazuje, że aktywność fizyczna podejmowana przez ludzi niezgodnie z przyjętymi standardami (standardy WHO) może stanowić zagrożenie dla ich bezpieczeństwa zdrowotnego i powodować długotrwałe negatywne skutki fizyczne, psychiczne i społeczne.

Ograniczenia

Przeprowadzone testy nie rozwiązują problemu określenia symptomów opisywanego zaburzenia. Pierwszym krokiem w tym kierunku (według Attili Szabo) może być opisanie zaburzeń behawioralnych w części „Addictive Disorders" w DSM-5, która jest potencjalnie przydatna jako model do badania uzależnienia od ćwiczeń fizycznych, przy jednoczesnym uwzględnieniu typowych objawów uzależnień (Szabo i in. 2015).

Przyszłe badania powinny się opierać na pogłębionych wywiadach z osobami zagrożonymi uzależnieniem od ćwiczeń fizycznych i koncentrować się nie tylko na objawach zaburzenia, ale także na jego przyczynach. Zaadaptowane narzędzie EDS-R może pozwolić na odpowiedni dobór osób do tego rodzaju badań.

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Internet Gaming Disorder Among Polish Adolescents: A Latent Profile Analysis of Disorder Symptoms

ABSTRACT

Gaming is an activity enjoyed by adolescents, but it is associated with the risk of developing internet gaming disorder (IGD). The aim of the study was to distinguish various profiles among adolescents from two Polish voivodeships based on the presence of the nine IGD symptoms. The study included 623 students (57.9% boys) from elementary schools (Years 5–7) and junior high schools (Years 2 and 3) who declared that they played video games. The Internet Gaming Disorder Scale 9—Short Form was used to measure IGD; the other variables were studied using a self-administered questionnaire. A latent profile analysis of all IGD symptoms distinguished four profiles: Problem-Free Players, Experiencing Withdrawal Symptoms and Escaping, Experiencing Negative Consequences and Escaping, and Preoccupied and Escaping. A symptom of escaping from negative emotions was revealed in each group. Significant differences between the profiles were observed for gender and parental control over gaming time, but not for developmental stage. The time spent gaming primarily differentiated the profile of Problem-Free Players from the other groups. Further analysis of the prevalence of IGD symptoms among young players is necessary to better understand the phenomenon in this population.

KEYWORDS
internet gaming disorder, games, adolescents, latent profile analysis, symptoms

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Case Reports

Introduction

Gaming activity, both offline and online, is an important functioning space for people of different age groups. Revenues of the video game market in 2022 amounted to about $320 billion, with online games for mobile devices generating the largest share (Statista 2022b). Information on the global number of gamers indicates that there are already more than 3 billion of players (Statista 2022a). Data from 2022 on Polish internet users between the ages of 15 and 65 shows that 67% of them describe themselves as gamers (*Polish Gamers 2022* 2022). A similar report was prepared for children and teenagers between the ages of 9 and 15 (*Polish Gamers KIDS 2022* 2022). Among them, 85% reported playing games, and the percentage who declared playing and/or watching games was 88%. In the 9–12 age group, playing and/or watching was undertaken by 87% of girls and 91% of boys, while in the 13–15 age group it was 80% of girls and 93% of boys. Among leisure activities in the aforementioned age groups, playing on a phone/smartphone ranked first and using a computer/console was in third place (*Polish Gamers KIDS 2022* 2022).

Gaming as a disorder

Gaming has become a subject of interest for researchers and clinicians because it can take the form of problematic use or addiction. The American Psychiatric Association's DSM-5 classification of mental disorders, in Section III, reports a disorder referred to as internet gaming disorder (IGD) and related to playing online games as an issue that requires further research (American Psychiatric Association 2013). Two disorders directly related to gaming appear in the latest ICD-11 classification: gaming disorder (GD) (World Health Organization 2019a) and hazardous gaming (World Health Organization 2019b).

IGD is described in the DSM-5 as "persistent and recurrent use of the internet to engage in games, often with other players, leading to clinically significant impairment or distress" (American Psychiatric Association 2013, quoted in Izdebski 2019: 149). The DSM-5 includes nine criteria that can be used to identify IGD. These can be described with keywords such as preoccupation with gaming,

withdrawal symptoms, increased tolerance, loss of control, loss of interest due to gaming, continuing despite problems, deceiving family or others about time spent gaming, escape from negative mood, and risk of exposure to loss or loss of a job or relationships due to gaming. A disorder can be diagnosed if five of the nine criteria occur over the past 12 months (American Psychiatric Association 2013).

Prevalence of internet gaming disorder among adolescents and related family factors

Studies conducted on IGD among adolescents report varying data on the prevalence of the disorder, which may be due to the type of research (general population vs. gamers only) or the tool used to measure the disorder. Among Iranian adolescents, 2.4% were identified as gaming addicts (Lin et al. 2019). Similar values were found among Slovenian elementary school students (Pontes, Macur, and Griffiths 2016). A higher percentage (3.1%) was recorded among Taiwanese adolescents playing games (Chiu, Pan, Lin 2018). Rates oscillating around 9% and higher have been reported in Korean (Kim et al. 2018), Dutch (van den Eijnden et al. 2018) and Swedish (Vadlin et al. 2015) studies. Polish data on the prevalence of IGD among school-aged children (Michalak et al. 2019) shows that less than 1% of students meet the criteria for the disorder. A meta-analysis of IGD studies conducted by an Australian research team (Stevens et al. 2021) found that the disorder is more common in boys than in girls, at a ratio of 2.5:1.

Among the variables that are considered risk factors or, on the contrary, the factors that protect young people against the disorder, are those related to the family environment. A study by Céline Bonnaire and Olivier Phan (2017) found that significant predictors of IGD (negative relationships), related to family functioning and parents' actions toward their child's gaming include prohibition of gaming, setting rules about gaming, gaming at night (as a manifestation of parents' lack of control), and the strength of the relationships in the family. The qualitative research by Irene Wong and Millicent Lam (2016) identifies the following family-related risk factors that may result in the development of the disorder: parents' approval of

their child's gaming, parents' lack of control over their child's gaming, and poor family relationships.

Using a person-centered approach in research on internet gaming disorder

The research on IGD or GD mainly focuses on determining the prevalence of the phenomenon in different social groups, as well as its significant correlates. Researchers also undertake analyses that focus on the individual instead of the variables. One example is the use of latent profile analysis (LPA) and latent class analysis (LCA), in which classification is based on a model (Bergman, Wångby 2014). Through their use, it is possible to group people, for example, by their mutual similarity in terms of a set of specific quantitative variables, as in LPA, or by qualitative variables, as in LCA.

In the studies that use a person-centered approach, IGD is treated as an element for profiling along with other variables among adults (e.g., Kovacs et al. 2022) and adolescents (e.g., Cerniglia et al. 2019). The possibility of identifying profiles or classes based on symptoms of the disorder is also being tested (e.g., Siste et al. 2019; Chang et al. 2022). The number of identified profiles/classes varies, typically either three (e.g., Pápay et al. 2014; Siste et al. 2019), four (e.g., Chang et al. 2022), or five (e.g., Myrseth, Notalears 2018). The solutions are described in terms of the intensity of symptoms or the likelihood of their occurrence in a given group, and then compared to each other due to other variables. This allows for a better understanding of the specific features of the extracted profiles/classes and the people who constitute them, which is not possible when using only variable-focused analyses.

Method

Research objective

The purpose of the analysis was to determine what profiles can be distinguished among adolescents from two Polish provinces based on the presence of IGD symptoms. This goal was inspired by research reports indicating that the symptoms occur with varying frequency

and severity and have different predictive power for diagnosing the disorder, among both adults (Király et al. 2017; Schivinski et al. 2018; Pontes et al. 2019) and adolescents (Macur, Pontes 2021). Due to the exploratory nature of the analysis, an attempt was made to determine whether there were differences in parental control among the profiles in terms of the child's playing time or sociodemographic characteristics, including the developmental stage and time spent playing on weekdays and weekends.

Participants and procedure

The respondents consisted of elementary and junior high school students aged 10–18 (at the time of the survey, the Polish educational system still included junior high schools). The information presented herein is part of the project called "Internet Gaming Disorder: Characteristics and Prevalence of the Phenomenon and its Psychological Correlates Among Elementary and Junior High School Students in the Kuyavian-Pomeranian and Warmian-Mazurian Voivodeships."[1] The survey was conducted in the first half of 2018 in two voivodeships: Kuyavian-Pomeranian and Warmian-Mazurian. The sampling of the survey was random. In the first step, four counties (eight counties in total) were randomly selected in each of the two voivodeships, within which two institutions were randomly chosen from the list of all schools: one elementary school and one junior high school (in each of the counties). In total, activities were carried out in 16 different institutions (eight elementary schools and eight junior high schools).

Students from Years 5, 6, and 7 of the elementary school and Years 2 and 3 of the junior high school took part in the research. The researchers visited the selected schools after obtaining the principals' consent. At the beginning of each meeting with the students, the researchers informed them about the purpose of the survey, its anonymity, and the fact that the questionnaires were not connected

1 Public projects financed from the Fund for Solving Gambling Problems under the supervision of the Minister of Health and from the funds of the Kazimierz Wielki University in Bydgoszcz (Agreement No. 165/HBK/2018).

with their grades. It was pointed out to the students that participating in the survey was voluntary and they could withdraw at any time without consequences. Questionnaires were filled out in the presence of the researchers only, who answered the students' questions and clarified their doubts, as necessary.

While the project used two different research toolkits, this study analyzed information only from students who completed the Internet Gaming Disorder Scale 9: Short Form (Pontes, Griffiths 2015) and selected the answer "Yes" to the question "Do you play video games?" There were initially 635 students, but after verifying the questionnaires, 12 participants were excluded from the analysis. Finally, 623 students were included, whose average age was 13.5±1.16 years. There were significantly more boys in the sample than girls. In terms of numbers, elementary school students predominated, but the number of students surveyed at different grade levels was similar. The largest number of participants were in early adolescence, while the smallest group was in middle school. More than 58% of those surveyed indicated that their parents/guardians are interested in what games they play and more than 65% responded that their parents/guardians control the amount of time they can spend playing (Table 1).

Table 1. Sociodemographic variables and variables related to gaming in the sample (*N*=623)

Variables	Categories	n (%)	χ^2	*p*
Sex	Boys	361 (57,9)	15,73	<0,001
	Girls	262 (42,1)		
Type of school	Elementary school (ES)	385 (61,8)	34,69	<0,001
	Junior high school (JHS)	238 (38,2)		
Grade	5 ES	127 (20,4)		
	6 ES	131 (21,0)		
	7 ES	126 (20,2)	6,3	0,178
	2 JHS	138 (22,2)		
	3 JHS	101 (16,2)		
Phase of development	Middle school age	62 (10,0)		
	Early adolescence	369 (59,2)	228,7	<0,001
	Late adolescence	192 (30,8)		

Variables	Categories	n (%)	χ^2	*p*
Parents' interest in the games the child plays*	Yes	363 (58,4)	17,39	<0,001
	No	259 (41,6)		
Parents' control of how much time their child spends playing video games	Yes	410 (65,8)	62,24	<0,001
	No	213 (34,2)		

Source: Own study.
*One person did not answer this question, so the total sample size for this question was *N*=622.

Research tools

The basic variable analyzed in this study was internet gaming disorder, measured using the Polish version of the Internet Gaming Disorder Scale 9: Short Form (IGDS9-SF) (Pontes, Griffiths 2015) developed by Paweł Izdebski, Mateusz Baranowicz, Martyna Kotyśko, and Maciej Michalak (Izdebski 2019). Among the variables included in the analysis were two aspects related to parents' actions toward their child's gaming: interest in the games the child plays and control over the time the child spends playing. The sociodemographic variables included in the comparisons were gender and stage of development. Time spent playing by adolescents was also included in the analysis.

The Internet Gaming Disorder Scale 9: Short Form (Pontes, Griffiths 2015) is used to assess internet gaming disorder. It takes into account nine criteria from which a potential diagnosis of the problem can be made. The scale was constructed with individual questions relating to a specific criterion. Tthe participant answers nine questions about their gaming behavior and experiences over the past 12 months. The answers are given on a Likert scale (1=never, 2=rarely, 3=sometimes, 4=often, and 5=very often). The scores range from 9 to 45; the higher the score, the greater the problem. The value of Cronbach's alpha for the instrument was α=0,74.

As part of the data collected in the study, two questions were selected for analysis regarding the perceived activities of parents/guardians in relation to their child's gaming. The first question asked respondents to state whether parents/guardians were interested in what games their children played (the coded responses were 0=No

and 1=Yes). The second question asked respondents about adult (parent/guardian) control of the time the child spends playing (0=No and 1=Yes). The sociodemographic variables selected for the analysis within this study due to their association with gaming activity were gender (0=boys and 1=girls) and developmental stage. The sample was divided into developmental phases according to the book *Niezbędnik dobrego nauczyciela* [The Essentials of a Good Teacher], edited by Professor Anna Izabela Brzezińska, PhD. Students aged 10 and 11 were described as middle school aged (8/9–11/12 years) (Rękosiewicz, Jankowski 2014). Another group was for early adolescence (11/12–14/15 years) (Piotrowski, Ziółkowska, Wojciechowska 2014), comprised of the respondents aged 12–14 years. The last group represented the late stage of adolescence: 14/15–19/20 (Piotrowski, Wojciechowska, Ziółkowska 2014), which included students aged 15–17 years. The participants in the study were also asked to identify how much time (in hours) on average they spend per day playing, distinguishing between school days and weekends.

Data analysis

The primary analysis performed on the data was latent profile analysis (LPA) for the nine items of the IGDS9-SF scale. LPA enables profiles to be extracted from groups of participants by the similarity of their responses to questions/indicators. The analysis was conducted in R (v. 4.2.0; R Core Team 2022) using the tidyLPA package (Rosenberg et al. 2018). Models with different numbers of profiles were compared with each other and the following indicators (Nylund, Asparouhov, Muthén 2007) were used to select the best model: the Akaike Information Criterion (AIC), the Schwartz Bayesian Information Criterion (BIC), and the Sample Size Adjusted Bayesian Information Criterion (SABIC). The better the fit of a model with a specific number of profiles, the lower the value of these indicators should be compared to other solutions. The *p*-value for the Bootstrap Likelihood Ratio Test (BLRT) supports the selection of a solution with a specific number of profiles. In this case, a *p*-value higher than 0.05 suggests the selection of a solution with fewer profiles than that which was chosen. The tidyLPA package provides the minimum number of observations (individuals) in the

extracted profiles: this information is labeled "N_Min" (Rosenberg et al. 2018). The selected solution should include observations in each profile, so a value of 0 for this indicator is undesirable. The last parameter that supports the process of selecting the number of profiles is entropy. The higher its value, the better; it should be higher than 0.8 (Muthén L.K., Muthén B.O. 2007). The software program IBM SPSS Statistics (version 28) was used to calculate the value of Cronbach's alpha for the IGDS9-SF scale and to compare the counts within the sample description of the subjects (chi-square test). The same test was also used to compare profiles by sociodemographic variables and those related to parental interest in what their child plays and control over their child's playing time. Cramér's V was used to determine the effect size of the identified relationship. The average time spent playing within the profiles was compared using Kruskal–Wallis ANOVA (due to the lack of a normal distribution).

Results

Latent profile analysis

The LPA assessed the nine IGDS9-SF scale items as variables. Models assuming equality of the variance within profiles and no covariance between profiles were tested (Rosenberg et al. 2018). The comparisons included solutions with one to eight profiles extracted (Table 2). The model with four profiles obtained the best metrics: the lowest AIC, BIC, and SABIC values and the highest entropy value. The *p*-value for the BLRT with a five-profile solution was statistically insignificant, thus recommending a solution with fewer profiles. Due to these results, the model with four profiles was selected as the target model.

Table 2. Model fit indices for solutions considering between one and eight profiles in the latent profile analysis

Model	AIC	BIC	SABIC	Entropy	N_Min	BLRT_p
One profile	14788,25	14868,07	14810,92	1,00	1,00	-
Two profiles	13962,01	14086,18	13997,28	0,88	0,24	<0,01
Three profiles	13425,41	13593,92	13473,27	0,92	0,06	<0,01

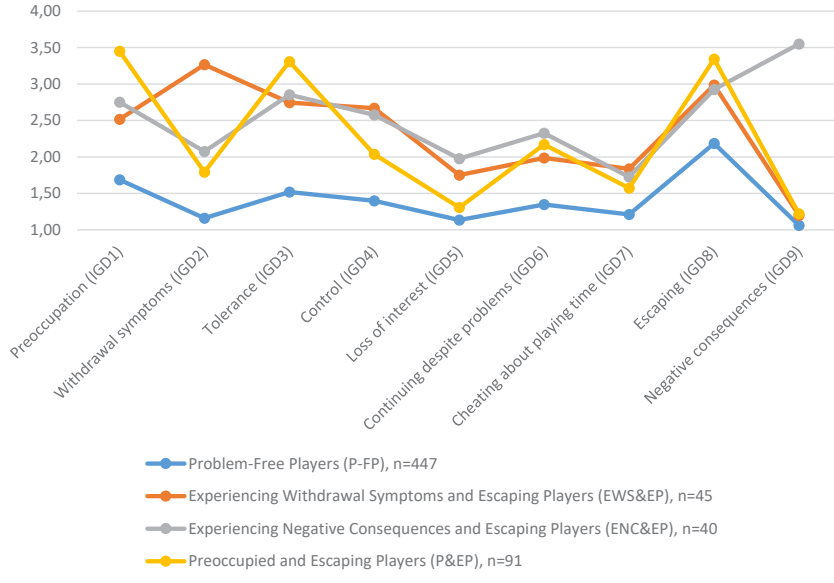
Model	AIC	BIC	SABIC	Entropy	N_Min	BLRT_p
Four profiles*	13287,21	13500,06	13347,67	0,92	0,06	<0,01
Five profiles	13307,22	13564,42	13380,28	0,63	0,00	1,0
Six profiles	13327,12	13628,67	13412,78	0,55	0,00	<0,01
Seven profiles	13196,29	13542,19	13294,55	0,59	0,00	<0,01
Eight profiles	13216,26	13606,50	13327,11	0,51	0,00	0,2

Source: Own study.
AIC: Akaike Information Criterion; BIC: Bayes Information Criterion; SABIC: Size Adjusted Bayesian Information Criterion; N_Min: smallest number of observations within the profile; BLRT_p: *p*-value for the bootstrap reliability quotient test.
* Model selected as the best.

Characteristics of the extracted profiles

Figure 1 graphically shows the profiles that emerged from the LPA, as well as the exact mean values recorded within the profiles for all nine items of the IGDS9-SF scale. The tool used in the study assumes a response scale from 1 to 5. It should be noted that the mean scores for all items did not exceed a value of 4.

Figure 1. The four-profile model that emerged after latent profile analysis, taking into account the averages for the nine items of the IGDS9-SF scale



Source: Own study.

Profile 1 includes the largest number of respondents (71.7%; *n*=447) and can be described as "Problem-Free Players" (P-FP). Their average scores on individual symptoms were the lowest among the profiles. However, it should be pointed out that while the symptom concerning escaping from problems and freeing oneself from negative emotions (IGD8 on the IGDS9-SF scale) was dominant in this profile, it was still lower than in the other profiles. Even if the P-FP group does not experience strong symptoms of online gaming disorder, the regulation of mood through games to free the individual from negative emotions is something that young gamers identify in themselves, albeit only slightly.

Profile 2 comprises 4.2% of the sample (*n*=45). It scored highest for item IGD2, which refers to experiencing withdrawal symptoms when either stopping or trying to reduce gaming activity. The second highest score in this profile is related to freeing oneself from negative emotions (IGD8). The name of this profile comes from the characteristic "Experiencing Withdrawal Symptoms and Escaping" (EWS&EP).

Profile 3 is the least numerous (6.4%, n=0) and it is distinguished by the mean for IGD9. This item refers to the symptom associated with experiencing negative consequences as a result of engaging in games. Also in this profile, escape or release from negative emotions is the second most intense symptom, although at a similar level to tolerance (IGD3) and preoccupation (IGD1). Students forming this profile are therefore referred to as "Experiencing Negative Consequences and Escaping" (ENC&EP).

The last one, Profile 4, is characterized by a pattern of scores for three symptoms: preoccupation (IGD1), tolerance (IGD3), and escape or release from negative emotions (IGD8) with low values for the other symptoms. This profile includes 91 individuals (14.6%) and will be described as "Preoccupied and Escaping" (P&EP).

When looking at the symptoms of internet gaming disorder as a whole, it can be seen that the symptom related to negative consequences resulting from gaming (IGD9) was only present in the profile ENC&EP (it was virtually absent in the other profiles). A similar situation occurred with regard to withdrawal symptoms (IGD2) manifesting exclusively in EWS&EP. Unsuccessful attempts at controlling play (IGD4) were revealed, although not as frequent,

in ENC&EP and P&EP. IGD5 (loss of interest), IGD6 (continuing despite problems), and IGD7 (hiding/lying about playing time) symptoms had a very similar pattern in each profile.

Comparison of the profiles

The profiles that emerged were compared with each other (Table 3) for two variables related to parents' actions toward playing games: interest in the games the child plays and control over their playing time. There were no significant differences for the variable related to parental interest in the games the child plays (p>0.05). In contrast, there were differences between the profiles for the variable related to perceived parental control over the time children spend playing. In the profile NKU, more students indicated that their parents do not control the time they spend on games than in P-FP and EWS&EP. The effect size for this regularity, as measured by Cramér's V, was low.

Differences between the profiles were also identified in terms of gender (Table 3). The Preoccupied and Escaping Players (P&EP) were predominantly boys and there were significantly more boys in this profile than in P-FP and EWS&EP, but a similar number as in ENC&EP. The effect size for this relationship was average. There were no significant differences in the proportions of different developmental phases by profile affiliation. Students in early adolescence were the most represented in each profile. The results of the Kruskal–Wallis ANOVA for average time spent playing indicate differences between the profiles (see Table 3 for details). These mainly concern P-FP, which had lower average scores than ENC&EP and P&EP.

Table 3. Comparison of profiles by parents' actions toward their child's gaming, sociodemographic variables and time spent playing games

Variables	P-FP, *n* (%)	EWS&EP, *n* (%)	ENC&EP, *n* (%)	P&EP, *n* (%)	χ^2	*H*
Parents' actions: interest in games						
Yes	259[a] (58,1)	28[a] (62,2)	19[a] (47,5)	57[a] (62,6)	2,92[n.i.]	–
No	187[a] (41,9)	17[a] (37,8)	21[a] (52,5)	34[a] (37,4)		
Parents' actions: control over the time spent gaming						
Yes	304[b] (68,0)	34[b] (75,6)	18[a] (45,0)	54[a,b] (59,3)	12,25**	–
No	143[b] (32,0)	11[b] (24,4)	22[a] (55,0)	37[a,b] (40,7)		
Sex						
Men	234[a] (52,3)	26[a] (57,8)	26[a,b] (65,0)	75[b] (82,4)	28,93***	–
Women	213[a] (47,7)	19[a] (42,2)	14[a,b] (35,0)	16[b] (17,6)		
Development phase						
Middle school age	45[a] (10,1)	7[a] (15,6)	6[a] (15,0)	4[a] (4,4)	12,26[n.i.]	–
Early adolescence	262[a] (58,6)	31[a] (68,9)	18[a] (45,0)	58[a] (63,7)		
Late adolescence	140[a] (31,3)	7[a] (15,6)	16[a] (40,0)	29[a] (31,9)		
Time spent on games; average rank (mean)						
On schooldays (*n*=532)	244,22[b] (2,12)	287,14[a,b] (2,62)	319,42[a] (3,03)	334,84[a] (3,11)	–	30,09***
On weekends (*n*=604)	270,77[b] (3,53)	339,43[a,b] (4,41)	392,38[a] (5,64)	407,15[a] (5,56)	–	58,04***

Source: own study.
P-FP: Problem-Free Players; EWS&EP: Experiencing Withdrawal Symptoms and Escaping; ENC&EP: Experiencing Negative Consequences and Escaping; P&EP=Preoccupied and Escaping; H: Kruskal–Wallis test statistic.
* $p<0.05$; ** $p<0.01$; *** $p<0.001$; n.i.: statistically insignificant result.
Values in rows marked with different letters are significantly different from each other at $p<0.05$.

Discussion

Four profiles were extracted based on the expression of nine IGD symptoms. The variables that could be considered to differentiate the profiles were preoccupation with gaming, withdrawal symptoms, tolerance, escape from negative emotions, and experiencing negative consequences of gaming. The symptoms of loss of control, loss of previous interests, continuing in spite of problems, and hiding/lying about the time spent gaming did not differentiate the profiles.

Relating the data to other studies analyzing IGD symptoms with a person-centered approach, one can see a similarity in the number of profiles/classes identified. Four classes were also identified by Orsolya Király and colleagues (2017) in a study among adult gamers. In their study, a group emerged in which no IGD symptoms were present (approximately 75% of the sample). This can be compared to the group of Problem-Free Players (P-FP) from the current study, which was also the largest of all the groups. In a study by Királyi et al. (2017) there was a group (11.2%) that was characterized by preoccupation, continuing despite harm, and escaping from negative emotions. The group Preoccupied and Escaping (P&EP) in our study is similar in terms of the arrangement of variables, with the difference being that P&EP demonstrates the symptom "tolerance" more, while in the study by Király et al. (2017) "continuing despite harm" was higher.

A solution with four classes was also obtained in a study by Chi Ian Chang and colleagues (2022), conducted among Chinese adolescents during the COVID-19 pandemic. Among the classes identified by these researchers, a similarity can be seen between normative players, among whom IGD symptoms are practically absent, and the P-FP profile from our own analysis. The other profiles identified in this study (Occasional Players, Problem Players, and Addicted Players) are not similar to those identified in the analysis of Polish data. This may be due to differences in the period under study: in 2020 during the COVID-19 pandemic in China versus in 2018 in Poland. It is also significant that IGD is more prevalent in East Asian countries (Paulus et al. 2018). Additionally, the differences may be due to Chang et al. (2022) using LCA and a different survey tool being used to measure IGD, one which only takes into account yes/no responses.

The symptoms that received the lowest probability of occurring in this study, in all classes apart from the addicted group, were loss of interest, lying to others, and negative consequences such as the loss of an important relationship. In the case of our analysis, these symptoms, with the exception of negative consequences—which was dominant in the ENC&EP profile—were also the least severe.

The four profiles that emerged from the study were compared against each other in terms of five variables: (1) parental interest in what the child plays (yes vs. no), (2) control over playing time (yes vs. no), (3) gender (boys vs. girls), (4) developmental stage (middle school age vs. early adolescence vs. late adolescence), and (5) time spent playing games (quantitative variable). The students' subjective belief about their parents' or guardians' interest in the games they play did not appear to differentiate between the groups. With the exception of ENC&EP, "Experiencing Negative Consequences and Escaping," more than half of the students indicated that their parents are interested in the games they play. It is puzzling that in the P-FP group, about 40% of the survey participants indicated that there was no such interest on the part of their parents. This may result from incidental gaming which takes place, for example, outside the home or on devices that are not owned by the child.

Significant differences were noted among the profiles in relation to the subjective feeling of control over the time spent playing. ENC&EP differed significantly from the other profiles in that it overwhelmingly indicated that parents do not control their child's playing time. The aspect of control over playing time and rules related to playing in other studies (Bonnaire, Phan 2017) was a significant predictor of IGD. The profile ENC&EP may therefore require special attention due to the fact that it is dominated by the symptom of negative consequences resulting from gaming, such as experiencing problems at school.

The research on IGD indicates a higher proportion of males among those who can be described as experiencing the disorder (Stevens et al. 2021). In our study, each profile had a higher proportion of boys than girls. This was due to the larger number of boys participating in the study. However, within the profile comparisons, the dominant profile in terms of the proportion of boys was "Preoccupied and escaping" (P&EP) (82.4 vs. 17.6%). In this profile, in

addition to the symptoms of preoccupation with games and escaping from negative emotional states, there was an increase in tolerance: the need to spend more time playing in order to get pleasure from the game. However, comparisons that take into account the average time spent playing, on both weekdays and weekends, showed no differences between P&EP and EWS&EP or ENC&EP. Additionally, in a study by Király et al. (2017), the discriminatory power for the IGD criteria of preoccupation and escape was lower than for the others. The symptom of escaping from negative emotions also had a lower discriminatory power in a study by Bruno Schivinski et al. (2018).

Time spent gaming is a variable considered in IGD research where the individuals identified as addicted or at risk (e.g., Pápay et al. 2013; Pontes et al. 2014; Siste et al. 2022) spend more time gaming than those classified as non-problematic or occasional gamers. In the current study, the profile P-FP differed significantly from ENC&EP and P&EP in playing time on both school days and weekends. ENC&EP, P&EP, and EWS&EP did not differ from each other. The lack of similarity of these three profiles with respect to the groups identified in other studies and the gaming time patterns present in them may require additional research to better understand the relationship between gaming time and the presence of IGD symptoms among adolescents.

Limitations of the study and practical implications and indications for further research

The study presented herein is not without limitations. One of these is using a questionnaire to collect data on IGD, which does not fully allow for an accurate understanding of the respondents' situation. This is additionally important with group surveys, in which students may be reluctant to reveal some of their experiences, knowing that someone may see the answer they have chosen. For younger respondents to answer questions on the presence of IGD symptoms, they need to have a high degree of awareness of their actions and emotions, as well as a perspective spanning the last 12 months. Another limitation may be considering symptoms without determining whether a criterion for IGD is met, given that other studies using person-centered approaches, such as profile or latent class analysis,

have considered such measures. Having only one source of information, the students themselves, should also be identified as a limitation. Including an external source of information in the form of parents'/guardians' responses could have provided an important addition to the data not only on IGD, but also on parents' actions toward their child's gaming. Moreover, it would be necessary to distinguish between each parent/guardian, instead of treating them as one entity, which could reveal inconsistencies, for example, in terms of parental control over gaming time. The COVID-19 pandemic and its impact on children's and adolescents' online activities, including the use of online games, should be mentioned as a final limitation. Our own analysis was conducted on data collected in 2018 and therefore does not take into account the pandemic period, which negatively affected the functioning of the youngest members of society. For this reason, it is advisable to repeat the study, in particular on a representative sample, in order to assess the presence of IGD symptoms among Polish adolescents and to create a basis for identifying current gamer profiles.

The profiles of students defined in the analysis can help to better understand the phenomenon of online gaming disorder. A symptom that emerged in each profile was escaping from negative emotions. Games may therefore provide a kind of space for emotion regulation among younger gamers, which may require adult support. As shown in a study by Soyeon Lee and colleagues (2022), mothers' perception of games as a positive activity was a protective factor against the development of IGD, while the opposite stance was a significant risk factor. Making parents aware of the importance of their attitudes toward their child's gaming can form a bridge of mutual understanding about gaming, as well as raise awareness that their regulation of this activity can protect children from developing a possible disorder.

Although the IGD criteria themselves have been analyzed in terms of their suitability for use in diagnosis (Király et al. 2017; Schivinski et al. 2018; Pontes et al. 2019), such analysis among the youngest players is lacking. Further research in this area could determine whether applying uniform criteria to adults and adolescents yields similar solutions. This seems particularly relevant given the development of technology and the fact that the percentage of young people who are gamers is over 85% (*Polish Gamers KIDS 2022* 2022).

Summary

The study identified profiles that were differentiated by IGD criteria. The largest group was Problem-Free Players (P-FP; 71.7%), while the smallest was Experiencing Withdrawal Symptoms and Escaping (EWS&EP; 4.2%). In each profile, manifestations of a symptom related to escaping or releasing negative emotions was discernible. There was a difference between the profiles for only one of the two variables related to parents'/guardians' attitudes toward their child's playing: control over playing time. There were no differences regarding their interest in what games the child plays. Gender also significantly differentiated the profiles, particularly the profile of Preoccupied and Escaping (P&EP), which had the highest number of boys. The proportion of respondents at each developmental stage did not differ between the profiles. The time spent playing was significantly lower among Problem-Free Players compared to students in the groups Preoccupied and Escaping and Experiencing Negative Consequences and Escaping.

* * *

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Knowledge of Underage Addiction Among the Teaching Staff of Youth Education Centers

ABSTRACT

The main objective of the study was to determine the knowledge among the teaching staff of youth education centers (YECs) about substance and behavioral addictions, as well as their responses to the manifestations of addiction. The research followed a qualitative strategy. The data was collected through in-depth interviews with 17 employees from three randomly selected YECs (one for girls and two for boys).

The data indicate that the teaching staff of YECs has insufficient knowledge to work with minors suffering from addiction. Despite their capabilities, these educators do not diagnose addictions and do not organize activities to support young people in coping with their problems. This is related to a lack of competences, the belief that such tasks are not their responsibility, and the perception of these activities as ineffective and insufficient.

Therefore, it is recommended that the teaching staff of YECs develop their knowledge and skills by participating in certification courses, training programs, and workshops on addictions (substance and behavioral); using basic diagnostic techniques, the principles of assisting in crisis intervention, and the methods of motivational dialogue; and studying the scholarly literature and consulting and supervising cases with specialists.

KEYWORDS
educator, addictions to psychoactive substances, behavioral addictions, rehabilitation, minors

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Dependency among minors in youth education centers

The use of psychoactive substances is one of the most frequently displayed risk behaviors among the inhabitants of youth education centers (YEC) and youth sociotherapy centers (YSC). Surveys show that the majority of the young people living in such centers not only admit to occasional alcohol consumption, but more than 70% of them use alcohol regularly while outside the facility. Nearly 60% of the younger (12–15 years) and 70% of the older (16–19 years) people smoked cigarettes daily in the last year, and as many as 63.5% of the younger and 75% of the older teenagers were drug users. The most commonly used substances were cannabis derivatives, amphetamine, MDMA, and new psychoactive substances (NPSs; so-called "legal highs"). The findings of the study indicate that teenagers in YECs use stimulants much more often than their peers from YSCs and public schools. Moreover, girls from the younger age group use substances such as alcohol, stimulants, NPSs, codeine, or psychotropic drugs more often than boys (Pisarska, Bobrowski, Greń, Ostaszewski 2019: 302; Ostaszewski, Bobrowski, Greń, Pisarska 2019: 339–340; Greń, Bobrowski, Ostaszewski, Pisarska 2019: 274, 276, 278).

The prevalence of alcohol use among minors in social rehabilitation institutions has also been confirmed by other studies (Greń, Bobrowski, Ostaszewski, Pisarska 2019: 29). They show that 90.6% of minors had drunk alcohol in the past 12 months, 81.3% had engaged in binge drinking, and 51% admitted that they had engaged in other risky behaviors while under the influence of alcohol. The use of psychoactive substances by YEC residents has also been confirmed by Michał Kranc's (2018: 40) research on a group of 115 teenagers in three institutions in the Lesser Poland Voivodeship, which shows that 70% of them used alcohol, 84% used cigarettes, and 50% used drugs.

All 60 YEC residents surveyed by Arkadiusz Kamiński (2018: 43) had experimented with various types of psychoactive substances; 95% of the wards smoked cigarettes—most of them compulsively, 88% consumed alcohol, and 83% admitted to smoking cannabis. Amphetamines and NPSs were used by 53% of the teenagers. A 2015 study carried out by the same author on a group of 120 wards of three social rehabilitation institutions (YECs) showed that 40% of them were minors who "harmfully" used psychoactive substances.

These are wards with diagnoses of mixed disorders caused by psychoactive substance use who have a referral for outpatient addiction therapy (Kamiński 2018: 44).

Karina Szafrańska's (2018) qualitative research shows that the vast majority of YEC wards declared addiction to at least one psychoactive substance. Addictions to alcohol, nicotine, cannabis, and drugs (93.5%) predominated, while 80% of the respondents declared an addiction to NPSs. As many as 54% of the respondents saw no danger in occasional drug use (Szpringer, Wojciechowska, Orczykowski 2015: 375). There is no doubt, therefore, that socially maladjusted adolescents residing in YECs, if not yet addicted, belong to the high-risk group.

Despite the dissemination of knowledge on the dangers of addictive use of smartphones, the internet, social media, and computer games (e.g., Jarczyńska, Orzechowska 2014; Celebucka, Jarczyńska 2014; Grzegorzewska, Cierpiałkowska 2018; Griiffths 2004; Guerreschi 2006; Woronowicz 2021; Piasecka, Kusztal, Piątek 2022), there is still insufficient empirical research on the behavioral addictions of minors in YECs, which means that there is a need for such analysis.

Based on the classification of behavioral addictions by Irena Grzegorzewska and Lidia Cierpiałkowska (2018) (gambling addiction, addiction to new technologies and the "virtual world," harmful behaviors related to body shaping, harmful consumption of high-calorie meals, harmful behaviors related to addiction to shopping, sex, and pornography, and harmful and compulsive working), research from recent years carried out among adolescents was reviewed.

Małgorzata Styśko-Kunkowska and Grażyna Wąsowicz's study on e-addiction (2013–2014) shows that the proportion of adolescents (13–19 years; N=1000) at high risk of internet addiction was the highest, with 24% of the population using this medium to reduce tension. In turn, 29% were reported to be at risk of e-gaming addiction. Just over 14% of adolescents reported playing games for money or tokens, and about 15% reported betting (e.g., on sports). Also, 70% of the teenagers used online shops and, in this group, the vast majority (82.6%) were found to have a medium or high risk of addiction. The use of Facebook and other social networking sites was declared by more than 930 people, and 95% of them were found to have at least a medium level of risk of addiction.

A study by Katarzyna Warzecha (2015–2016) conducted on a group of Silesian adolescents (N=2669; 13–20 years old) shows that young people are very well equipped with modern means of communication (phones, smartphones, tablets, consoles, and internet access). However, they use these devices in an inappropriate and problematic manner: 11.73% of junior high school students were at risk of problematic internet use, while 5.72% of junior high school students and 6.48% of secondary school students gambled in a way that makes them problematic or at risk players. Moreover, 8.10% of junior high school students and 9.27% of secondary school students engage in problematic gaming behavior or show symptoms of gaming abuse. The largest proportion, 40.4% of the secondary school study group were addicted or at risk of becoming addicted to mobile phones. A nationwide study on a group of 22,000 students by *Fundacja Dbam o Mój Zasięg* [the I Care About My Range Foundation] indicates that around 3% of teenagers in Poland have symptoms of full-blown phonoholism (Dębski 2016). In turn, a study from Krakow (Frost, Solecki 2017) using an abbreviated version of the Kimberly Young test indicates that 9.8% of the 680 respondents were at risk of problematic internet use. A much smaller (2.2%) proportion of respondents had full symptoms of internet addiction.

A nationwide Polish study within the EU Kids Online 2018 research network (N=1249; ages 9–17) revealed that 20% of young people had skipped meals or sleep in favor of going online. Around 13% admitted that the reason for going online at least once a day is boredom and around 8% of respondents avoided meeting relatives and family or neglected their school work in order to have more time to go online. Also, nearly 19% of young people declared using the internet for more than 6 hours a day on weekends (Pyżalski, Zdrodowska, Tomczyk, Abramczuk 2019: 22). It is worth mentioning that a study published in 2019 (NASK Teenagers 3.0; Bochenek, Lange 2019: 6) indicates that teenagers use the internet independently since the age of 7. The cited results clearly indicate a real threat of new addictions developing in the generation of adolescents growing up today.

The importance of skills among social rehabilitation educators for working with addicts

Juveniles in social rehabilitation centers mostly use psychoactive substances and are at risk of behavioral addictions which have not yet been observed within this group. In light of this knowledge, it should be assumed that the social rehabilitation interventions undertaken in YECs will not be effective if they do not take into account the particular functioning of addicted wards. Research among former YEC residents (Sikora, Szczepanik 2015: 100; Cieślikowska-Ryczko, Dobińska 2019: 119) confirms that the staff of YECs do not take specialized measures to deal with this problem. Using psychoactive substances or engaging in compulsive activities are the most common barriers to successful social readaptation. They often make it impossible to further one's education, to perform one's duties in the workplace, or to deal with matters in offices or treatment facilities. As a consequence, they lead to social exclusion, unemployment, homelessness (Czapnik-Jurak 2019: 3, 59), and even criminal activity (Kilińska-Pękacz 2020: 232–245). Therefore, it is important that the teaching staff of YECs have the following skills and knowledge:

1. diagnosing addiction (diagnostic criteria, risky/harmful/compulsive use, recognizing symptoms of behavioral addiction). The use of basic diagnostic tests (AUDIT, MAST, and CAGE; see Fudała 2009: 45–47), breathalyzers, cluster tests to detect drugs in urine, and diagnostic tests to recognize the first symptoms of behavioral addictions (Bandurska 2019)
2. designing preventive interventions (e.g., "new addictions," risks of substitution use of other substances, risky behavior, and using legal drugs for intoxication)
3. planning social rehabilitation work with addicts (e.g., mechanisms of addiction, relapses, coping with abstinence symptoms, formulating detailed recommendations for psycho-correctional work, designing interventions on self-esteem, coping with aggression, social skills training, developing a sense of agency, relaxation training, and conflict resolution)
4. conducting individual supportive conversations, motivating to change and undergo treatment and sustaining participation in therapy (e.g., motivational dialogue)

Without in-depth knowledge of addiction, teaching staff become helpless in the face of problems related to the addictions of their students. The research conducted to date shows that public school teachers are insufficiently prepared to carry out preventive interventions regarding risky behavior in young people (Kusztal, Piasecka, Nastazjak, Piec 2021).

In YECs, the situation is further complicated by the fact that these institutions are not obliged to employ therapists and that usually the topic of addiction is only touched on briefly in the training of psychologists. According to the Supreme Audit Office (Raport NIK 2021), in the face of such a widespread problem of psychoactive substance use, the psychological and pedagogical assistance offered in social rehabilitation institutions is insufficient (on March 31, 2021, there were between 1 and 53 wards per psychologist and between 16 and 44 wards per pedagogue in YECs).

As recommended by the Supreme Chamber of Control (Raport NIK 2021), the establishment of specialized therapy and education centers for those in need of addiction treatment could provide support in diagnosing and working with addicted wards. However, such centers have still not been created, and the staff of YECs can only count on the support of non-governmental organizations or therapy institutions, such as addiction counselling centers, outpatient departments, or MONAR centers (NGO addiction rehabilitation centers in Poland). Obtaining help there unfortunately involves long waiting times and requires appropriate procedures, which additionally postpones the start of therapy for minors (application to court, diagnosis of addiction, consent of legal guardian, negative drug test result, and travel to the centers).

Thus, the logic of the argument so far indicates that rehabilitation educators should have competences for working with addicts in order to significantly speed up the recognition of addictions and specialized therapy for addicts. In turn, these skills can help in tailoring social rehabilitation interventions and designing forms of assistance appropriate for the needs and functioning of addicts.

Methodology and course of the study

The aim of the study was to assess the knowledge of the pedagogical staff about working with addicted teenagers in YECs. The main research question was formulated as follows: What is the knowledge of the pedagogical staff about working with addicted children in YECs? A number of specific research problems were also formulated:

1. How do the teaching staff of YECs understand the phenomenon of addiction?
2. What manifestations of juvenile addiction do they pay attention to?
3. What are the minors in YECs addicted to?
4. What are the reasons for minors becoming addicted?
5. How can addicted minors be effectively helped?
6. What sources of knowledge about addictions do the pedagogical staff of YECs use?
7. What is the importance of knowledge about addictions in minors for the pedagogical staff of YECs?

The research was qualitative and the data was collected through in-depth, structured interviews (Konecki 2011). The study group consisted of 10 educators, three directors, two pedagogues, and two psychologists from three randomly selected YECs (one for girls and two for boys). The research was conducted in January 2023. Thirteen women and four men, aged between 25 and 66 years, took part in it. Interviews with the staff took place face-to-face, in conditions that ensured comfort and confidentiality within the YEC. The interviewees' statements, with their consent, were meticulously recorded during the interviews.

Research results

Members of staff in youth education centers understand addiction as a restriction of one's freedom and as focusing one's life on the use of drugs or persistent repetitive activities (e.g., using a smartphone), despite the consequences. It is also a way of coping with difficult emotions.

> My understanding of addiction is that in a difficult situation, if the child cannot cope, they will resort to some form of support. Then they are better able to cope with the difficult situation, which doesn't mean that they do solve it. (Educator_1)

It was difficult for educators to precisely define what addiction meant to them, and they then avoided answering the question by talking about their private experiences with addicts. It also happened that, instead of defining the phenomenon, they listed its causes, effects, types of known addictive substances, and selected elements of the addiction process. Moreover, they treated addiction to psychoactive substances as "normal," and addiction to activities as "tangible, behavioral, different, and rather harmless." What was also surprising was comparing addiction to "possession, imprisonment, or pleasure." The last term, as it turned out later in the interview, stemmed from the interviewee's own experiences with alcohol and phone addiction. "Addiction leads to the situation in which it is number one in life, with all other activities in the background and subordinated to it" (Educator_4). "Addiction is a lack of freedom of choice, a possession, something that limits us; I associate it with prison" (Educator_3).

According to the educational staff, minors become addicted by the pleasure they feel from taking a drug or doing an activity. For the interviewees, addiction is also synonymous with a compulsion to take substances continuously. "It's very simple. One feels pleasure after hearing, after seeing, after feeling. It's a feeling so pleasant that we repeat it" (Educator_3). "If he was an addict, he would now have to take the drug all the time in the center" (Educator_6).

The staff found it difficult to explain the nature and criteria of addiction. Their statements indicate a lack of factual knowledge which would allow them to distinguish between the different phases of the development of this phenomenon (experimentation, occasional use, regular use, and addiction). It seems that the educators' descriptions are closest to the last phase of addiction, which would indicate that the first alarming signals in the behavior of minors are most often completely ignored. Only one interviewee pointed out the association between substance use or repetitive activities and experiencing difficult emotional states. Behavioral addictions, which seem less dangerous to the educators than the use of psychoactive substances, were also downplayed.

Diagnosis of addiction by educators at YECs

For the pedagogical staff of YECs, the basis for diagnosing addiction is observing in the juvenile's behavior excessive excitation, sluggishness, excessive appetite or lack thereof, sadness or joy (laughter), nervous tics, rapid swallowing of saliva, the need to be in constant motion, aggression, lack of control over their behavior, babbling speech, and talking about experiences of drug use. When looking for indicators of addiction, educators focus on the teenagers' faces, particularly on the eyes, checking whether they have dilated or constricted pupils or possibly a "wild look" in their eyes. They watch out for withdrawal symptoms, such as shaky hands, irritability, excitement, or difficulty communicating. Sometimes they look for these symptoms in the content posted by minors on social media (photos and their descriptions). Ultimately, however, the educators agree that a comprehensive knowledge of the wards resulting from interviews, observations, and documentation is a prerequisite for a good diagnosis. Quite often, however, there were statements indicating that educational staff do not have the tools or knowledge to diagnose addiction and that only specialists (i.e., addiction therapists) can diagnose young people properly (although this option was also called into question). "I don't know if it's possible to recognize if someone is an addict. They are very secretive about it: he doesn't drink a lot, he's not an addict, he doesn't need help" (Educator_6).

The situation in one center, where no specialized treatment was provided for a minor despite the fact that their addiction was known, should be regarded as shocking. Equally surprising was the fact that minors' use of psychoactive substances while on a pass or a justified suspicion of drug use on the premises was ignored. There was no systematic monitoring for psychoactive substances in any center, either during the children's stay or upon their return to the facility. "He takes drugs during passes. There are often breaks and then they get some relief on the passes" (Educator_6). "After holidays, we can see how thin, how knackered they are. I think, if we could check it, actually in most cases something would be revealed" (Psychologist_1). "He's addicted to the computer, and when he goes home he notoriously plays there" (Educator_10). "I'd rather the boy take a cigarette and go smoke in the bathroom quietly, secretly, than officially have

to go out with him for a smoke" (Educator_10). "Sometimes I know there are drugs on the premises of the center. I don't know how to prevent this" (Educator_1).

Legislation that came into force in September 2022 allows drug tests to be carried out among students. Barriers to pedagogical staff implementing them are financial (institutions cannot afford to purchase a large number of multitests, as one test costs approx. PLN 30–40), procedural, bureaucratic, and related to stress over reading the test result correctly.

> I did the test, admittedly for the first time, but following the instructions. I read the result and it was inconclusive, but I considered it positive. I consulted with others and we decided that we should follow the procedures. Later X came and said the result was negative and we had decided too soon to inform the court and the parents. We ended up with a terrible conflict. (Educator _9)

> Currently, they aren't done because we, educators, are lazy (Educator_2).

The testing of young people for the presence of drugs should be carried out in a way that respects their dignity and privacy. However, the fear of being manipulated by the teenagers leads to the violation of their rights.

> I've done drug tests before, I know how it's done, but on my watch there's no way a young man is locking himself in the toilet. He has to pee in front of me. I know they can do all sorts of tricks, I've had enough experience to know. (Pedagogue_2)

Types of addiction among minors

In the opinion of the staff, minors can become addicted to anything, but the most common types of addiction are alcohol, cigarettes, drugs, smartphones, and the internet. Less frequently, in the teachers' opinion, children become addicted to gambling, computer games, or sex. The interviewees also pointed out that minors are addicted to energy drinks and inhalants (deodorant or aerosols). Moreover, the educators' accounts showed that girls, unlike boys, are addicted to painkillers and show emotional dependence on partners and social media approval. Addiction among female wards of YECs was explained by the educators as the importance of using the telephone,

the internet, and social media in shaping the girls' social and personal identity and satisfying their need for acceptance.

> They even become addicted to people's praise, to the odd "likes," because, at the moment, young people have a strong need for acceptance. But this has reached some kind of absurdity—someone didn't leave hearts under my post or something, so I'm going to go kill myself. (Educator_3)

Teachers in YECs are also aware that (because most addicted young people lack access to intoxicants, they turn to dangerous experiments using nutmeg, lighter gas, dust, and psychotropic medications. Methods of putting one's body into a state of fainting, known as "choking," are also used. This involves exhaling air from the lungs while lying down, with simultaneous pressure on the abdomen and chest.

Causes of minors' addiction in the opinion of the pedagogical staff of YECs

The use of psychoactive substances by wards, according to the educational staff, is due to their family problems and traumatic experiences. Among the external conditions, they also point to maintaining social relations with drug users (peers) who respond to their needs for acceptance, belonging, and a sense of security. In addition, educators see the causes of addiction in the personality traits of minors (low self-esteem, lack of reflection on the consequences of one's actions, curiosity, the need to reduce tension, and the lack of skills to safely deal with difficult emotions).

In their statements, the teaching staff also highlighted the minors' avoidance of solving the problems they experience in their families and relationships with their peers.

> Because it's the easiest way to escape from the problem that life puts in front of them. Because it's the easiest way to vent all the frustrations that accumulate in a kid. This is the basic point. Why struggle? Well, problem-solving isn't that easy… (Educator_1)

Forms of assistance offered to addicts

The research shows that, in exceptional situations, specialist assistance is offered to strongly addicted minors, both for diagnosis and to start therapy. The educators claim that the students are then referred to institutions that deal with the prevention and therapy of addiction, as the centers lack staff with the necessary qualifications. However, this applies only to a few of them because, in the educators' opinion, it is hampered by barriers such as the students' access to an addiction treatment center, organizational solutions in YECs (lack of time due to other activities, lack of employees who could go to therapeutic meetings with the children, lack of transport, interruption of therapy when the young people visit their family for holidays, and a lack of faith in the effectiveness of the interventions at the treatment center. "There are cases where, if a girl doesn't want to be treated, we petition the court for compulsory treatment. However, in most cases girls agree to go to therapy" (Pedagogue_01). "My impression is that this organization doesn't work. Nothing permanent is created there; the system of twelve sessions is not effective" (Educator_7).

There are also situations in which there is no prevention or treatment of addiction due to the lack of support from treatment institutions, the perception of centers (e.g., MONAR) as dangerous places for young people, and the belief that pharmacology must be used to treat addicted teenagers. "I don't get help from anywhere. … I wouldn't send a child to MONAR, because it's sex, drugs, and rock and roll" (Director_3).

In the opinion of the educational staff members, they can support their wards in recovering from addiction by controlling them, having individual conversations (motivating them to start therapy or work on themselves), organizing activities/workshops (to broaden knowledge, increase self-esteem, and develop skills), providing care, understanding, and warmth, and using methods such as wagering or appealing to their fear of death. There are situations in which the juveniles themselves report the need for addiction therapy, in which case the educator's help in persevering with the decision is essential.

However, sometimes there is no time, atmosphere, knowledge, or sometimes even motivation to organize the above-mentioned activities. "Most sweep this problem under the carpet" (Director_3).

"I don't know if addicted people can be helped effectively. No drug addict I have known has walked away from drugs" (Educator_4). "I don't know any methods. I'm not an addiction therapist" (Educator_5). "There is no time for therapeutic work. We balance between organizing daily life, controlling how everything goes, and ensuring safety" (Educator_1).

In the opinion of the teaching staff, one adequate solution to the problem of addiction in YEC wards would be to employ an addiction therapist in the facility or to create special facilities for socially maladjusted and addicted young people.

> There should be one educator/therapist for each group. Because in order to help a child, in order to do therapeutic work, you sometimes have to go into a very in-depth therapy with the kid. For this you need time and calmness. While working in a group, you can't do that. (Educator_1)

According to the respondents, whether addiction prevention is effective mostly depends on the cooperation between the entire teaching staff of YECs and specialists. "Psychologist, psychiatrist, and addiction unit. Because it's not about a therapist just sitting and talking. You need a whole team of people to work with you" (Director_2).

Sources of knowledge about addictions

The staff of the YECs learn about addictions mainly from the internet, television, their own experience, and conversations with and observations of the wards. Information is acquired in a haphazard manner, so its reliability may also be questionable. "Let's be realistic, either I accidently see something on the internet or I read up on it, if I need to learn about something" (Educator_3). "Books? I'm already at the stage where I don't read books. Maybe a film, but not really either; I rather learn from real-life cases: friends, an acquaintance, also from work and from my family" (Educator_8).

Some statements from respondents indicated the use of the literature on the subject, training courses, webinars, and postgraduate studies. When deciding to participate in this type of training, the content of the course and the qualifications and experience of the trainer are of great importance to the educators. "A friend sent me an article which opened my eyes, or perhaps reaffirmed my belief

that children going on passes take drugs with their addicted friends" (Educator_4). However, it is clear from the statements of the directors of the institutions that the teaching staff shows little interest in training related to addictions.

The importance of specialist competences on addictions according to the staff of YECs

According to the declarations of the educational staff of YECs, having specialist competences on addictions helps to tailor social rehabilitation interventions to the situation and needs of the minors. This makes it easier to remain calm in crisis situations and to ensure a sense of security. "For me, it's important to know how I can help my student effectively. Knowing that I know how to behave, what action to take in the most difficult situations I can imagine, makes me feel better and calmer" (Pedagogue_2). "My sense of security is important to me. I decided to take care of myself" (Educator_1).

Conclusions and interpretation of the research

Pedagogical staff describe the problem of addiction imprecisely. From the statements collected in this study, it appears that educators identify this phenomenon mainly with psychoactive substances and their visible effects at the last stage of addiction development. This indicates insufficient knowledge of addiction, as the first symptoms of its development are ignored; while downplaying behavioral addictions suggests a lack of knowledge of the risks associated with compulsive use of the telephone, internet, or computer games.

The surveyed YEC employees primarily use observation to diagnose juvenile addiction. During the diagnosis, they pay attention to the appearance and behavior of the ward, emphasizing that their knowledge of the individual (e.g., their family situation, difficulties, character traits, or deficits) is one of the most important tools they have.

On the one hand, the educators are of the opinion that they have the tools and sufficient knowledge to carry out a professional diagnosis; on the other hand, despite the possibility of testing for psychoactive substances, they rarely use these tests or do so in a way that violates

the rights of minors. This is most often explained by a lack of funds to purchase the tests, low motivation to carry out the whole procedure, which involves additional paperwork and stress, or a lack of the knowledge and skills necessary to carry out the test correctly. Based on the data, it appears that the educators are aware of minors' substance abuse or compulsive activities (e.g., use of the internet, smartphones, and computer games), which take place both in YECs and during passes. However, activities geared toward helping young people cope with these difficulties are reserved for exceptional situations only.

According to the pedagogical staff, young people in social rehabilitation facilities can become addicted to anything. However, alcohol, cigarettes, drugs, phones, and the internet were the most frequently mentioned. The respondents also noted that teenagers often use drugs, energy drinks, inhalants (deodorant and aerosols), and social media and are strongly attached to their partners. It is worth adding that, in the minds of the respondents, when psychoactive drugs are unavailable, minors seek other, dangerous forms of intoxication.

It is puzzling that the respondents complained about the lack of tools and knowledge needed to diagnose addictions while easily listing substances/activities to which young people are or may become addicted. Using only the observation method, teachers do not pursue more reliable diagnostic methods, such as simple screening tests found in methodology books (e.g., Bandurska 2019) or online, like breathalyzers, or drug tests. This may be due to their belief that diagnosing an addiction problem is not their responsibility. Meanwhile, the educators employed in the centers are very often the only people in the lives of the wards who could discover an addiction problem. Educators are on duty with minors for several hours at a time and their attentiveness to any worrying behavior and their willingness to cooperate with specialists can help prevent the development of addiction. We should also add that underestimating this problem can lead to other risky behaviors.

According to the respondents, adolescents in social rehabilitation institutions become addicted after experiencing trauma, having family problems, or interacting with people who use substances. Young people's personality traits, such as low self-esteem, high levels of anxiety, a lack of reflection on their actions, curiosity, and the inability to safely deal with difficult emotions, play a major role in this process.

According to the respondents, cooperation with specialists (therapists and psychologists) is necessary to help addicted adolescents. This is because these experts can both make a professional diagnosis and refer a minor for therapy. However, an obstacle to using this kind of support is the belief that therapy in treatment centers is ineffective and that pharmacological treatment must be part of effective help for addicts.

Educators mainly counter juvenile addiction by scaring them with the unpleasant consequences, talking to them individually, organizing workshops/training, and providing emotional support. However, these activities are associated with constraints such as a lack of time, atmosphere, knowledge, and motivation to engage in activities that, in the opinion of the educational staff, are not very effective. According to the respondents, the best solution for dealing with the addictions of minors would be to employ addiction therapists in YECs or to create specialized institutions for socially maladjusted and addicted persons.

The staff members of youth social rehabilitation centers listed the causes of their students' addictions in line with the literature on the subject (e.g., Pająk 2020: 27; Jędrzejko, Jabłoński 2012: 42–49; Szymaniak 2019: 229–230; Bobrowski, Greń, Ostaszewski, Pisarska 2019: 329–330). They also correctly estimated the number of addicts and those showing vulnerability to addiction. They also emphasized the need to provide minors with professional therapeutic assistance. On the other hand, it is surprising that the teaching staff, despite their knowledge of the subject, rarely use such assistance and do not take steps to strengthen the effects of therapy or to integrate them with the changes taking place in the wards in the process of social rehabilitation. On the one hand, this may be due to the belief, revealed in the research, that addiction is incurable and that any measures taken in this respect are ineffective. On the other hand, it may be related to the strong tendency to stigmatize the teenagers and blame them for becoming entangled in an addiction (Granosik, Gulczyńska, Szczepanik 2014).

The educators and youth workers broaden their knowledge of addiction and related skills thanks to information from television, the internet, their own experience, and observations of youth behavior. They are reluctant to turn to more reliable sources of knowledge:

the scientific literature, professional training, or postgraduate studies. They believe that it is important to develop these skills, but are driven more by the need to feel safe in case a related crisis arises than by concern for the minors' health or a desire to help them.

Recommendations and suggestions

Further research should focus on diagnosing the extent and determinants of behavioral addictions among minors in juvenile correctional centers and should explore the possibilities of limiting the development of addictions. In doing so, attention should be paid to identifying the factors that determine the effectiveness of the interventions: their conditions and methods of evaluating them.

It is recommended that YEC teaching staff develop their skills by attending certification courses, training sessions, and workshops on addictions (chemical and behavioral). Such training programs should include knowledge of diagnostic techniques, the principles and methods of crisis intervention, and motivational dialogue. It would be helpful in improving the quality of addiction prevention in YECs if educators discussed their work with addicted minors in supervision sessions with addiction therapy specialists.

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Red Fly Agaric (*amanita muscaria*) Consumption Among Members of Internet Discussion Groups

ABSTRACT

Red fly agaric is one of the most recognizable species of mushrooms. Although its toxicity is widely known in Polish society, a rise in its recreational use has been observed in recent years. The aim of the study is to describe the phenomenon of red fly agaric consumption and to characterize those who use it in the context of individual and social conditions. The study was conducted using a proprietary questionnaire with questions about red fly agaric usage, issues related to mental health, and sociodemographic data. A total of 95 respondents were qualified for the research sample: 32 women, 60 men, and three people who declared a gender other than binary. They were divided into two groups: experimenters (OE) and regular users (OU). The frequency, form, dosage, and place of fly agaric consumption among the respondents was determined, as well as the circumstances of and sources for acquiring the substance. The subjects noted the effects—immediate and long-term—of taking fly agaric. The findings

KEYWORDS
red fly agaric, mushrooms, psychoactive substances, narcotics, intoxication, hallucinogens

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show that the use of psychoactive substances is constantly growing and that the changing trends make it necessary to reflect on the support system for people with addiction problems.

Introduction

Red fly agaric (*amanita muscaria*), thanks to its characteristic appearance, is one of the most recognizable mushroom species and it is widely known to be toxic in our society. It is therefore surprising to see reports on the "trend of eating fly agaric" emerging as a reaction to social media posts by so-called influencers (Marcinek 2022). The harmful consequences of promoting its consumption are evidenced by the fact that the first publications about the new trend were soon followed by reports of fly agaric poisoning and hospitalization in intensive care units (Trela 2022).

Red fly agaric consumption is not just a contemporary trend or a new phenomenon. Shamans and ancient priests used to ingest plants and mushrooms known as entheogens (in Greek, *en* means "in" and *theós* "god") in order to put themselves into a trance (Crocq 2007). *Amanita muscaria* was used as early as 4,000 years ago in Central Asia during religious rituals. Also, in ancient India, it played an important role as an ingredient in Soma, a sacred drink consumed during religious rituals. The mushroom was known to inhabitants of Siberia, as well (Chwaluk, Przybysz 2015). Depending on the region, its use was either purely medically and religiously motivated or was widespread. The red fly agaric, when properly prepared, was also used in 19th-century Poland. It was mainly used as a fly poison (as reflected in the etymology of its Polish name) and in folk medicine to treat rheumatism and dysentery (Trojanowska 2001).

Red fly agaric contains numerous chemical compounds, but the substances responsible for its psychoactive effects are mainly muscimol and ibotenic acid. Due to their structure, they mimic key neurotransmitters—substances responsible for transmitting signals between nerve cells at synapses. Muscimol mimics the inhibitory γ-aminobutyric acid (GABA) and it is a GABA-A and partly GABA-C receptor agonist (Johnston 2014). Ingestion of the substance causes stupor and drowsiness (Beuhler 2016: 2116). In contrast, ibotenic acid mimics the excitatory glutamate by binding to

the NMDA receptor, inducing changes in perception (Johnston et al. 2009). It is decarboxylated spontaneously in the acidic environment of the stomach, liver, and brain (Nielsen et al. 1985) or is dried to become muscimol (Chwaluk, Przybysz 2015). The latter does not produce such dangerous effects as its precursor in the form of epileptic seizures or brain changes resembling those in Alzheimer's disease (Stebelska 2013).

The statistics on the prevalence of psychoactive substances do not distinguish red fly agaric in a separate category; it is included in another group of substances: hallucinogens. The European School Survey Project on Alcohol and Other Drugs (ESPAD; The European Monitoring Centre for Drugs and Drug Addiction 2022) used a general category for hallucinogenic mushrooms, which were used by up to 1% of young adults (15–34 years) in European countries. It is worth noting, however, that red fly agaric has a different effect on the human central nervous system than mushrooms containing psilocybin, so it seems appropriate to separate categories for toadstools and other mushrooms. The results of nationwide studies on the general population aged 15–64, presented in the Report on the State of Drug Addiction in Poland (Krajowe Biuro ds. Przeciwdziałania Narkomanii 2020), also indicate a relatively low rate of consumption of hallucinogenic substances (other than LSD): 0.9% of respondents admitted using them at least once in their lives and only 0.1% in the year preceding the survey.

In Poland, although recreational use of red fly agaric is observed, cases of intoxication with it do not appear frequently in medical practice and account for a small percentage of mushroom poisonings in general (Chwaluk, Przybysz 2015: 95). Severe red fly agaric poisoning is rare; fatalities represent a small percentage of all cases and depend on the amount of toxin absorbed. Usually, the duration of clinical symptoms after poisoning is between 8 and 24 hours, but sometimes they persist for up to 5 days. The first symptoms may occur as early as 15 minutes after toadstool ingestion, in the form of gastrointestinal distress, including vomiting, diarrhea, and abdominal pain. From 30 minutes to 2 hours after toadstool ingestion, general weakness, confusion, dizziness, disorientation, dry mouth, pupil dilation, tinnitus, and visual and auditory hallucinations occur (Marciniak et al. 2010: 590–591; Mikaszewska-Sokolewicz et al. 2016:

182). After about two hours, fatigue and drowsiness follow, progressing to deep sleep, which is usually the last stage of poisoning. In more severe cases, symptoms additionally include increasing psychomotor agitation, muscle tension, convulsions, hot flashes, and body temperature elevated up to 40 °C. *In these extremely severe cases, intoxication may end in coma or respiratory failure*, leading to death (Michelot, Melendez-Howell 2003: 132; Mikaszewska-Sokolewicz et al. 2016: 182).

Although red fly agaric has been taken by people for centuries, access to the internet has popularized the phenomenon. People without access to "traditional drugs" who are looking for ways to get intoxicated can obtain a range of information from online forums dedicated to the subject, including instructions on using the substance. Significantly, the information available online regarding its alleged medicinal properties red fly agaric is often not empirically confirmed or verified in any way. It is also disturbing that products containing red fly agaric and advertised as homeopathic remedies for a number of conditions can be purchased on one of the largest e-commerce platforms in Poland: if you type in the phrase *amanita muscaria*, you will easily find more than 100 such offers.

Methodology of the research

The purpose of this study was to describe the phenomenon of red fly agaric use and to characterize its users among members of online discussion groups in terms of their individual and social circumstances. This will make it possible to specify directions for future research in order to understand this phenomenon in more detail.

The following research questions were posed:

1. What is the frequency of red fly agaric use among the respondents?
2. In what forms and doses do the respondents take red fly agaric?
3. In what places and circumstances do they obtain and use red fly agaric?
4. What is the age at which the respondents start using red fly agaric, and what are the reasons for this?
5. What are the reasons for taking red fly agaric?

6. What immediate and long-term effects do the respondents experience after taking red fly agaric?
7. What are the respondents' sources of knowledge about red fly agaric, its preparation, and dosages?
8. What is the frequency of using other psychoactive substances among red fly agaric users?

Procedure, method, and research tools

The survey was quantitative in nature. It was conducted among participants in Polish social media discussion groups and online forums with between 400 and 43,000 members. The groups were randomly selected for the topics they dealt with: use of red fly agaric and other psychoactive substances, alternative medicine and herbs. Information about the research was published on the forums after permission was obtained from the administrators.

The study was carried out using a diagnostic survey method. It used a questionnaire prepared for the survey, via the MS Forms platform. This platform allows forms to be sent only when the closed questions are fully completed; missing or incomplete data in the responses was only allowed in the case of open-ended questions.

The questionnaire consisted of three parts. The first referred to sociodemographic data: gender, age, place of residence, education, relationship status, professional activity, and number of children. The second part of the survey addressed the phenomenon of red fly agaric use through both single-choice, multiple-choice, and open-ended questions. The respondents were asked about the frequency of red fly agaric use, the dosage and forms of taking it, poisoning, sources, money spent on red fly agaric, reasons for taking red fly agaric, age and reasons for first using red fly agaric, the immediate and long-term effects red fly agaric, and sources of knowledge about red fly agaric, dosages, and preparation. In the third part of the questionnaire, the respondents were asked about mental health issues, primarily diagnosed mental disorders and coping with them, the use of psychoactive substances, and treatment for substance abuse. Single-choice and open-ended questions were used for this purpose.

Before starting the survey, each person was informed of the purpose and procedure of the study. Informed consent to participate in the study was obtained each time. Participation was voluntary.

The software program SPSS was used for statistical analysis. For this purpose, the answers to the open-ended questions were coded into categories. Basic descriptive statistics were used in the study. The Mann–Whitney U test was used to compare the level of quantitative variables in the study groups and the χ^2 test was used to detect significant differences in qualitative variables. When the expected number was less than 5, the χ^2 test with Yates' correction for continuity was used. Cramér's V was used to determine the strength of the relationship between the frequency of use and the characteristics in question. The study adopted a significance level for Cronbach's α of 0.05 and the tests were two-sided.

Characteristics of the research sample

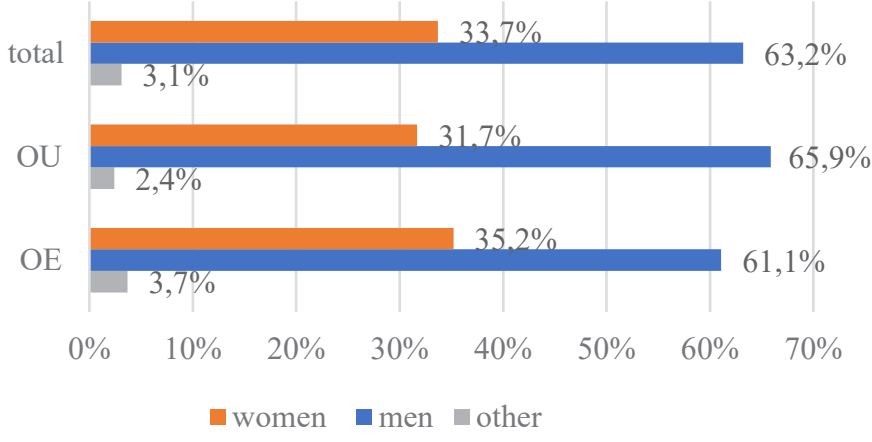
The sampling was non-probabilistic and voluntary. A total of 125 people took part in the study. Of the questionnaires collected, 30 (37.5%) were rejected because they did not meet the conditions of having taken red fly agaric at least once in the past 12 months or of being an adult.

Ninety-five people were included in the study sample: 32 women, 60 men, and three people who declared a gender other than female or male. The subjects were allocated to two groups: experimenters, who use red fly agaric occasionally (OE), and regular users (OU). The inclusion criterion for a specific group was the respondents' declaration on the frequency of red fly agaric use. The OE group consisted of those who use red fly agaric once or several times a year, while the OU group consisted of those who use red fly agaric at least several times a month.

The OE group included 54 individuals: 19 women, 33 men, and two people who identified another gender. The OU group included 41 people: 13 women, 27 men, and one person who declared another gender. The majority of respondents in the overall sample and among the experimental users red fly agaric were men (Figure 1). This gender distribution in the study group and its subgroups follows the European trends and corresponds to the results presented in

the European Drug Report (The European Monitoring Centre for Drugs and Drug Addiction 2022).

Figure 1. Study group, by sex

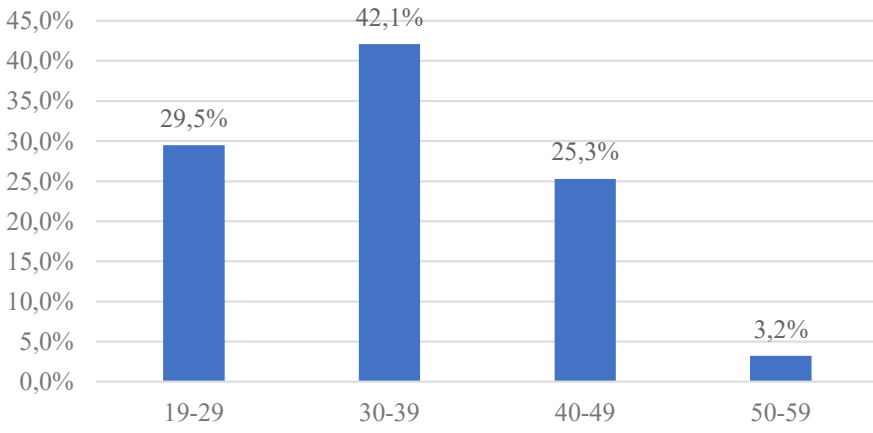


Source: Own study.

The age of the respondents in the entire study group ranged from 19 to 55 years. The largest group was comprised of 30–39 year olds. The youngest woman among the respondents was 23 years old, while the oldest was 49. The age of the male respondents ranged from 20 to 55. Among those who declared a gender other than female or male, the youngest was 19 years old and the oldest 37. The age of the respondents is shown in Figure 2.

The mean age of the people in the experimenters group of occasional red fly agaric (OE) users was 32.22 years (SD=8.25) and ranged from 19 to 55. In the group of regular toadstool users (OU), the mean age was 37.44 years (SD=6.85) and ranged from 23 to 55. The OE and OU groups were statistically significantly different in terms of age (Z=8.78; p<0.01).

Figure 2. Study group, by age



Source: Own study.

The respondents mostly live in large cities with more than 150,000 residents. One in three respondents lives in a city with up to 150,000 inhabitants. Approximately one fifth of them live in rural areas. The vast majority of the people surveyed (about 90%) are employed. About 17% of the respondents are university students, some of whom work at the same time. Unemployed people and pensioners made up the smallest percentage of the respondents. More than half of the respondents have a university degree. A slightly smaller percentage (about 40%) represented people with a secondary-school education. Those with a vocational-school education made up about 6%, while the fewest respondents had an elementary-school education (2.5%). This finding is most likely due to the fact that only adults took part in the survey.

The largest proportion of the respondents were people in informal relationships (about 37%). Almost one in three respondents is married, while about 30% declared that they are not in a relationship. Experimenters (OE) differed from regular users (OU) in terms of being involved in romantic relationships ($\chi^2(2)=10.11$; $p<0.01$). OE users were more likely to be in a romantic relationship (50%), while OU users were more likely to report not having a partner (39%). The strength of this relationship should be interpreted as moderate

(V=0.33). The majority (about 58%) of the respondents are childless. One in five respondents has two children and about 15% are parents of an only child. The smallest percentage (less than 6%) represented those with three or more children (Table 1).

Table 1. Sociodemographic characteristics of the study participants

Variable	Statistics	Number of respondents					
		OE		OU		Total	
		n	%	*n*	%	*n*	%
Place of residence	village	12	22,2	8	19,5	25	20,7
	city with up to 150,000 residents	16	29,6	16	39	38	31,4
	city with over 150,000 residents	26	48,1	17	41,5	58	47,9
Profession	unemployed	5	9,3	2	4,9	11	9,1
	student	8	14,8	6	14,6	21	17,4
	employed	48	88,9	38	92,7	105	86,8
	pensioner	2	3,7	0	0	2	1,7
Education	elementary	3	5,6	0	0	3	2,5
	vocational	3	5,6	4	9,8	8	6,6
	secondary	22	40,7	12	29,3	47	38,8
	university	26	48,1	25	61	63	52,1
Relationship status	no partner	10	18,5	16	39	36	29,8
	partner	27	50	8	19,5	45	37,2
	married	17	31,5	17	41,5	40	33,1
Number of children	none	35	64,8	17	41,5	70	57,9
	1	8	14,8	7	17,1	19	15,7
	2	7	13,0	14	34,1	25	20,7
	3 and more	4	7,4	3	7,3	7	5,8

Source: Own study.

Across the entire sample of red fly agaric users, around 18% of people had been diagnosed with a mental disorder. One in five regular users stated that they had received such a diagnosis, with a similar percentage of 17% in the experimental group. One in ten respondents had been diagnosed with an anxiety disorder and around 8%

with depression. The most common diagnoses in the entire sample and in both subgroups are shown in Table 2.

Table 2. Diagnoses of mental disorders

Disorder/mental illness	OE	OU	Total
Anxiety disorders	11,1%	7,3%	9,5%
Depression	9,3%	7,3%	8,4%
Borderline personality disorders	3,7%	2,4%	3,2%
Bipolar disorder	1,9%	0%	1,1%
Eating disorders	0%	2,4%	1,1%
Adaptation disorders	1,9%	0%	1,1%
Schizophrenia	1,9%	0%	1,1%

Source: Own study.

The respondents with a mental disorder most often use pharmacotherapy and psychotherapy. About 35% try to cope with their disorders through self-medication. Lower percentages of respondents indicated meditation (23.5%), healthy eating (about 18%), or contact with nature (about 6%), that is, adaptive, constructive forms of coping with mental disorders. The respondents also choose non-adaptive ways of coping with their mental disorder: about 30% take fly agaric and about 18% take psychedelics (Table 3).

Table 3. Ways of coping with disorders

Ways of dealing	OE	OU	Total
Pharmacotherapy	55,6%	50%	52,9%
Psychotherapy	44,4%	37,5%	41,2%
Self-therapy	44,4%	25%	35,3%
Using red fly agaric	22,2%	37,5%	29,4%
Meditation	22,2%	25%	23,5%
Healthy diet	33,3%	0%	17,6%
Psychedelics	22,2%	12,5%	17,6%
Contact with nature	11,1%	0%	5,9%

Source: Own study.

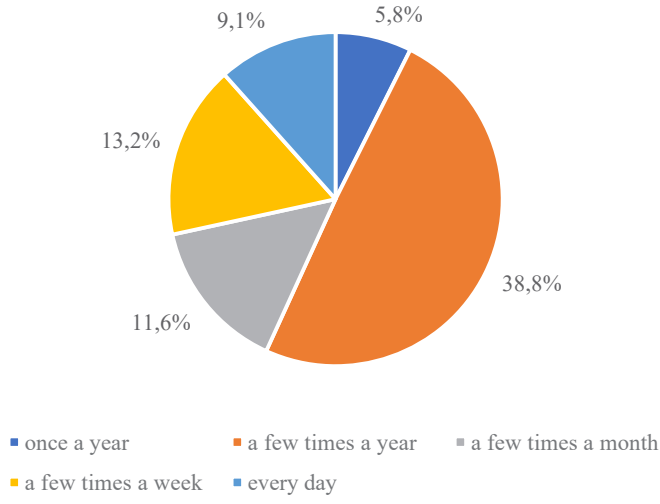
Presentation of the results

The analysis of the research material consisted in describing selected characteristics of red fly agaric consumption in the study group and in the subgroups: experimenters and red fly agaric(OE) regular red fly agaric users (OU). The statistical analysis did not show a relationship between the frequency of red fly agaric consumption and most of the selected characteristics; therefore, those results which were not significantly statistically different are not presented here.

Frequency of red fly agaric use

The majority of the respondents are red fly agaric users who take the mushroom several times a year. Those who use it several times a month or several times a week were similar in number. In contrast, almost one in ten respondents use red fly agaric on a daily basis. The smallest percentage in the study group represented those who use red fly agaric once a year. The results are shown in Figure 3.

Figure 3. Frequency of red fly agaric use

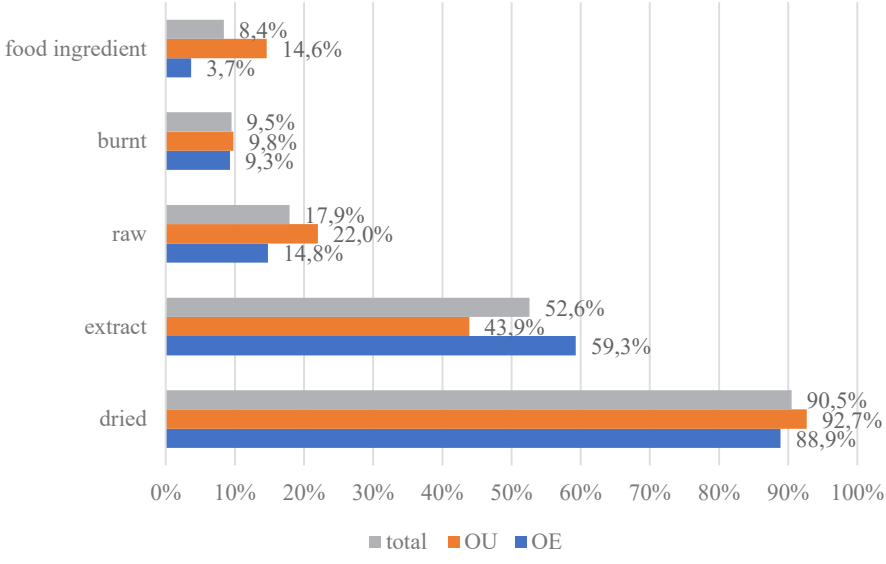


Source: Own study.

Forms of consumption and dosage of red fly agaric

Most respondents consume red fly agaric in a dried form. Raw mushrooms are consumed by about 18%. Just over a half of the respondents drink a specially prepared extract. The least popular forms of consumption were smoking and adding mushrooms to food.

Figure 4. Forms of red fly agaric consumption



Source: Own study.

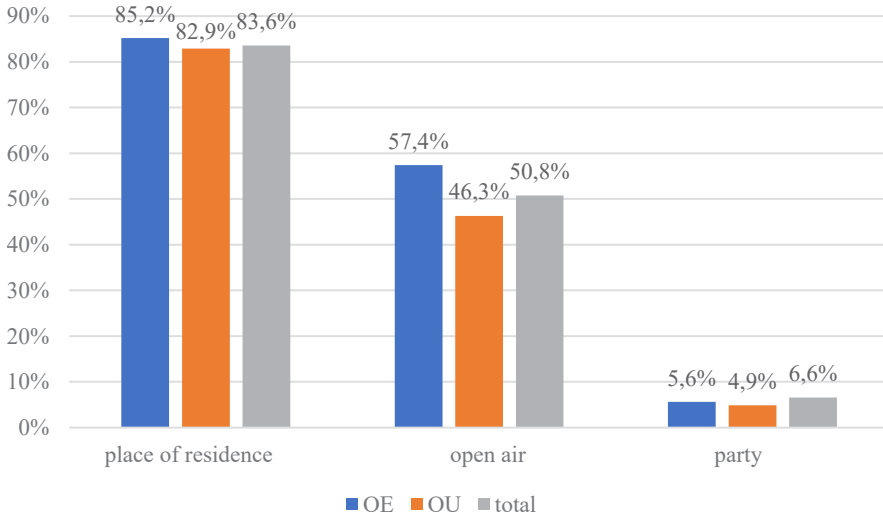
An attempt was also made to determine the minimum, average, and maximum doses of red fly agaric taken by the respondents. As more than half of them found it difficult to determine the dosage and the others used different units, no statistical analysis was carried out. In addition to doses given in grams, the respondents used units such as caps ("4 medium caps"), teaspoons ("a heaping teaspoon"), drops ("5 drops"), or intuitively ("always more or less").

Places and circumstances of obtaining and using red fly agaric

The most common place in which the respondents consume red fly agaric is at their place of residence. Just over a half of the

respondents declared that they consume mushrooms outdoors. The least frequently indicated place was entertainment venues: clubs, pubs, or bars (Figure 5).

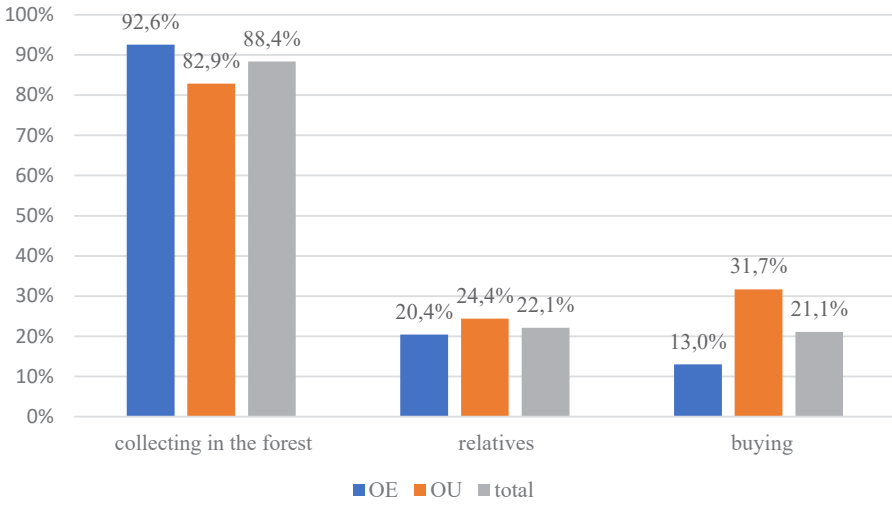
Figure 5. Place of using fly agaric



Source: Own study.

The majority of the respondents declared that they collect red fly agaric by themselves in the forest. About 22% of the respondents receive it from family, friends, or acquaintances. One in five users purchase it and occasional users differ significantly from experimenters in this respect ($\chi^2(2)=4.93$; $p<0.05$). One in three people in the OU group declared buying mushrooms, while one in eight in the OE group does the same. The strength of this relationship was weak ($V=0.23$). Detailed data is shown in Figure 6.

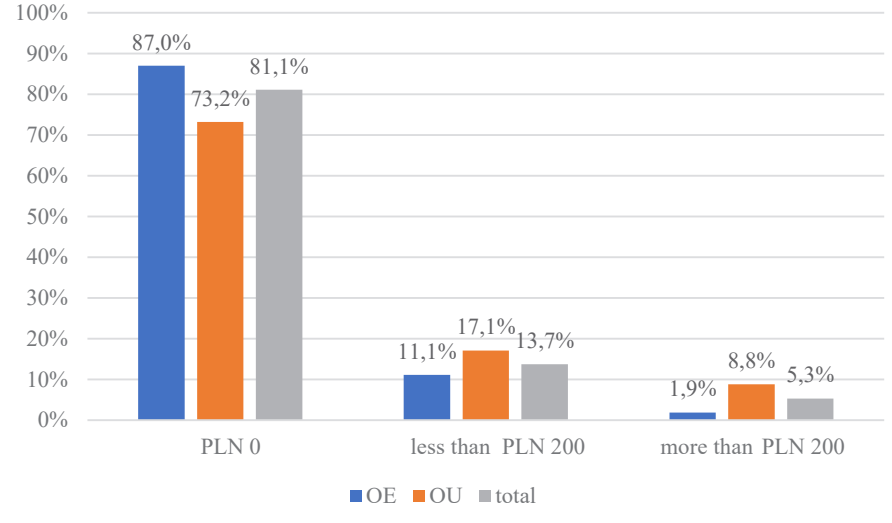
Figure 6. Sources of red fly agaric



Source: Own study.

The majority of the respondents do not spend money on red fly agaric because they source it themselves. If they do purchase it, they are more likely to spend up to PLN 200 per year than more than PLN 200 per year (5.3%).

Figure 7. Annual expenditure on *amanita muscaria* purchases



Source: Own study.

Age of initiation with red fly agaric use and reasons

Another analyzed aspect was the age of initiation of red fly agaric use. More than half of the respondents (approximately 61%) was below the average age. Among occasional users, more than a half of the respondents (about 56%) were below the mean age, while among regular users about 48% were below the mean age. Statistically significant intergroup differences were found for the average age of first red fly agaric consumption (Table 4).

Table 4. Age of initiation with red fly agaric use

Group	*M*	*SD*	*min*	*max*	*Z*	*p*
OE	28,56	8,28	14	49	14,1	<0,001
OU	35,48	7,31	13	50		
Total	31,5	8,56	13	50		

Source: Own study.

Half of those surveyed tried red fly agaric for the first time out of curiosity. One in four were motivated by the expected potential medicinal effects attributed to red fly agaric supplementation; one in five wanted to meet their spiritual needs; and one in ten wanted to increase their mental function (Table 5).

Table 5. Reasons for first using red fly agaric

Reasons for initiation	OE	OU	Total
Curiosity	50%	51,2%	50,5%
Healing effects	25,9%	19,5%	23,2%
Spiritual needs	18,5%	26,8%	22,1%
Increasing the capacity of the mind	9,3%	12,2%	10,5%
Pleasure	9,3%	0%	5,3%
Peer pressure	7%	0%	4,2%
Personal problems	1,9%	2,4%	2,1%

Source: Own study.

Reasons for taking red fly agaric

The most common reasons for taking red fly agaric indicated by the respondents in the entire sample were the expected medicinal effects, spiritual needs, and increased mental performance. Half of the respondents indicated curiosity among their reasons for taking it, and around 33% indicated relaxation. Pleasure-seeking was the reason declared by one in four respondents. Personal problems led 16% of the respondents to take fly agaric. The fewest (only 3% of respondents) attributed their use to peer pressure (Table 6).

Table 6. Reasons for using red fly agaric

Reasons	OE	OU	Total
healing effects	70,4%	87,8%	77,9%
spiritual needs	75,9%	73,2%	74,7%
increasing the capacity of the mind	72,2%	75,6%	73,7%
curiosity	53,7%	43,9%	49,5%
relax	24,1%	43,9%	32,6%
pleasure	31,5%	19,5%	26,3%
problems in personal life	9,3%	24,4%	15,8%
pressure of the environment	3,7%	2,4%	3,2%

Source: Own study.

Experimenters differed in a statistically significant manner from regular users in terms of the reasons for taking red fly agaric. About 88% of the OU respondents consume it for its healing effects, while in the OE group the percentage was about 70% ($\chi^2(7)=4.11$; $p<0.05$). Significant intergroup differences were also observed for relaxation ($\chi^2(7)=4.17$; $p<0.05$), with around 44% of the OU group declaring this motive and one in four respondents in the OE group doing so. Problems in one's personal life also proved to be a reason with statistically significantly differences ($\chi^2(7)=4.01$; $p<0.05$): in the OU group, it was one in four respondents, while in the OE group it was one in ten users. The effect size for these relationships was $V=0.21$, indicating that the strength was weak.

Immediate and long-term effects after taking red fly agaric

The effects observed both up to a few hours after taking red fly agaric (Table 7) and long-term (Table 8) were more often positive effects, according to the respondents. With regard to immediate effects, they most often declared increased insight, relaxation, and mental performance. One in four respondents indicated improved mood, one in six to improved energy and motivation, and one in seven to somatic effects. When it comes to positive long-term effects, the respondents most frequently observed improved mental health. One in three users indicated higher mental function, while slightly fewer indicated spiritual development. One in five respondents noted peace of mind and slightly fewer noted improved somatic health.

Most of the respondents do not perceive negative immediate or long-term effects from consuming red fly agaric. A half of them did not mention negative consequences immediately after taking red fly agaric. One in four users declared gastrointestinal problems; about 13% reported somatic symptoms other than gastrointestinal problems. One in ten people experience drowsiness and slightly fewer respondents experience anxiety. The least frequently observed effects were cognitive impairment and the *bad trip* phenomenon: a mental state after using psychedelic substances defined as a negative experience manifested in unpleasant hallucinations accompanied by severe anxiety and panic, among other symptoms (Motyka, Marcinkowski 2014: 508). The vast majority of the respondents (around 90%) did not report negative long-term effects from red fly agaric use. Approximately 4% experience psychological discomfort. A bad taste in the mouth and cognitive impairment were declared by about 2% of respondents (Table 7).

Table 7. Direct effects of red fly agaric ingestion

Direct effects							
Positive				**Negative**			
	OE	**OU**	**Total**		**OE**	**OU**	**Total**
Better insight into oneself	40,7%	48,8%	44,2%	None	48,1%	51,2%	49,5%
Relaxation	44,4%	41,5%	43,2%	Gastric problems	33,3%	14,6%	25,3%

Direct effects							
Positive				Negative			
	OE	OU	Total		OE	OU	Total
Increased mental function	48,1%	34,1%	42,1%	Other somatic symptoms	13%	12,2%	12,6%
Change in mood	27,8%	24,4%	26,3%	Sleepiness	9,3%	9,8%	9,5%
Energy and motivation	16,7%	17,1%	16,8%	Anxiety	7,4%	9,8%	8,4%
Somatic effects	14,8%	14,6%	14,7%	Weaker cognitive functions	3,7%	2,4%	3,2%
Changes in perception	9,3%	12,2%	10,5%	*Bad trip*	0%	4,9%	2,1%

Source: Own study.

One significant difference was found between experimenters and regular users in terms of the negative effects observed immediately after taking red fly agaric. It concerns gastrointestinal problems ($\chi^2(6)=4.32$; $p<0.05$), with one out of three people in the OE group and one out of seven in the OU group indicating this effect. The strength of this relationship should be interpreted as weak ($V=0.21$).

Table 8. Long-term effects of red fly agaric use

Long-term effects							
Positive				Negative			
	OE	OU	Total		OE	OU	Total
Mental health improvement	38,9%	43,9%	41,1%	None	96,3%	80,5%	89,5%
Increased mental function	24,1%	46,3%	33,7%	Mental discomfort	0%	9,8%	4,2%
Spiritual development	31,5%	31,7%	31,6%	Bad taste in the mouth	0%	4,9%	2,1%
Calmness	22,2%	14,6%	18,9%	Weaker cognitive function	1,9%	2,4%	2,1%
Somatic health improvement	16,7%	19,5%	17,9%	Gastric problems	0%	2,4%	1,1%
Energy and motivation	11,1%	7,3%	9,5%	Sleepiness	0%	2,4%	1,1%

Source: Own study.

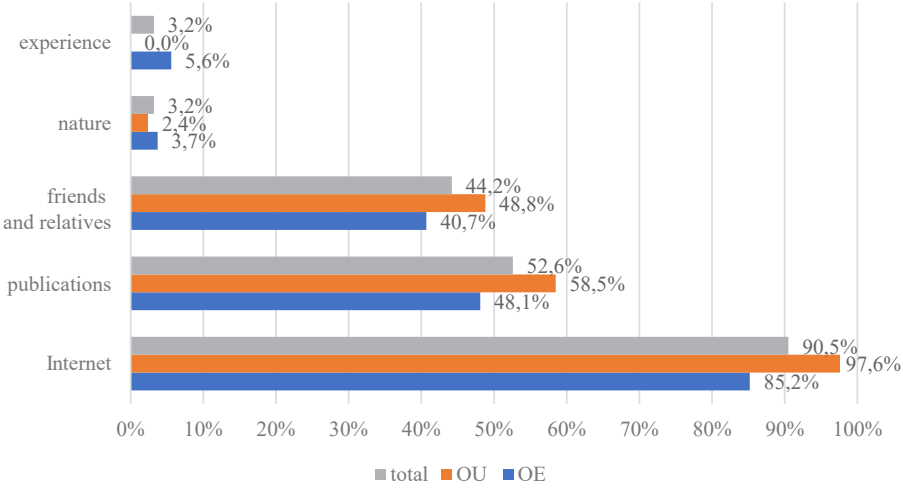
For long-term effects, the groups differed when it comes to indicating an increase in mental performance ($\chi^2(5)=5.17$; $p<0.05$) and the absence of consequences of red fly agaric use ($\chi^2(5)$, with Yates correction=4.62; $p<0.05$). For the former, about half of the regular users and one in four experimenters declare higher mental performance. The absence of long-term negative consequences was declared by the majority of the respondents in both groups: about 96% of those in the OE group and about 81% of those in the OU group. The effect sizes were $V=0.23$ and $V=0.26$, respectively, indicating that the relationships were weak.

In the context of the consequences of red fly agaric use, the respondents were also asked whether they subjectively felt a loss of control over the use of the substance. This was felt by about 23% of the respondents. Red fly agaric poisoning should also be mentioned at this point. One in ten respondents stated that they had experienced red fly agaric poisoning (9%). The relatively low percentage of poisonings may be due to the relatively low toxicity of red fly agaric or to the respondents' knowledge of an appropriate dosage to avoid severe poisoning and the decarboxylation of ibotenic acid in muscimol as a result of drying (Chwaluk, Przybysz 2015: 95).

Sources of the respondents' knowledge of red fly agaric, its preparation, and dosages

The vast majority of the respondents get their information about red fly agaric from the internet. The second most common source was scientific publications, which are used by about half of the respondents. Friends, family, and acquaintances are the source of knowledge about the mushroom for about 44%. The respondents were least likely to indicate "nature" and experience (Figure 8).

Figure 8: Sources of knowledge about red fly agaric



Source: Own study.

When it comes to knowledge of red fly agaric dosage, the respondents also get their knowledge mainly from the internet; one in three respondents learn from friends and family and around 28% learn from scientific publications. One in five respondents indicated their own experience as the source of knowledge. Also, when it comes to preparing red fly agaric, the internet was the most common source. Approximately 39% respondents use scientific publications in this regard and 37% rely on the knowledge of people who are close to them.

Frequency of use of other psychoactive substances among red fly agaric users

The most popular psychoactive substance among red fly agaric users was cannabis, which is used by around 85% of the respondents, with one in seven using it every day. The results here are similar to the use of alcohol and caffeine, which are used by around 84% of the respondents. Red fly agaric users are more likely to use psychedelics than stimulants. They hardly ever take depressants such as GHB (4%) and benzodiazepines (9%).

The vast majority (92%) of experimental red fly agaric users take cannabis, while alcohol is consumed by around 84% of the respondents. In contrast, for regular users, the most common substances of choice are caffeine, which is used by all respondents, alcohol (the percentage of those consuming it is the same as in the OE group), and cannabis, which is used by 78% of the respondents.

Table 9. Frequency of taking selected psychoactive substances

Substance	Never	Once a year or less	A few times a year	A few times a month	A few times a week	Every day
Marijuana	14,7%	22,1%	14,7%	17,9%	15,8%	14,7%
Alcohol	15,8%	8,4%	33,7%	29,5%	10,5%	2,1%
Caffeine	15,8%	2,1%	9,5%	18,9%	21,1%	32,6%
Psylocybin	27,4%	32,6%	36,8%	2,1%	0%	1,1%
Nicotine	36,8%	10,5%	10,5%	3,2%	9,5%	29,5%
LSD	42,1%	42,1%	14,7%	1,1%	0%	0%
MDMA	50,5%	33,7%	15,8%	0%	0%	0%
DMT	58,9%	33,7%	7,4%	0%	0%	0%
Cocaine	66,3%	26,3%	7,4%	0%	0%	0%
Amphetamine	72,6%	15,8%	8,4%	2,1%	1,1%	0%
Mephedrone	81,1%	15,8%	1,1%	2,1%	0%	0%
Mescaline	83,2%	16,8%	0%	0%	0%	0%
Ketamine	87,4%	6,3%	4,2%	2,1%	0%	0%
Opiates	89,5%	6,3%	1,1%	2,1%	0%	1,1%
Benzodiazepines	90,5%	8,4%	0%	1,1%	0%	0%
Benzydamine	92,6%	7,4%	0%	0%	0%	0%
GHB	95,8%	3,2%	1,1%	0%	0%	0%

Source: Own study.

The respondents were also asked about past or current substance abuse treatment/therapy in inpatient or outpatient health centers. For the entire sample, the proportion of users in substance abuse

treatment and therapy programs was 7.4%. One in ten of the regular users is in such a program and around 6% of the experimenters.

Conclusions and practical implications

Over the past several years, the phenomenon of recreational red fly agaric use has been observed in Poland, although its scale is admittedly relatively small (The European Monitoring Centre for Drugs and Drug Addiction 2022). At the same time, studies are emerging that point to an alarming trend among users of psychoactive substances as one of the undesirable consequences of national drug policies. This involves the search for new, legal, and inexpensive drugs (Dyer et al. 2014: 77). The fly agaric, as a natural, accessible, free, and legal source of psychoactive substances, seems to fit into this trend.

The results of the study indicate that the majority of those who use red fly agaric occasionally and regularly are men aged 19–49 years. They are residents of small and large cities. They have a secondary-school or higher education. The vast majority of them work; some additionally study. They are married or in informal relationships, most of them without children. Almost one in five of them has a diagnosed mental disorder— the most common being an anxiety disorder or depression, which they cope with using pharmacotherapy and psychotherapy, self-medication, or red fly agaric.

Red fly agaric users mostly use it several times a year. Their patterns of use of toadstool as a psychoactive substance can be described as recreational and supportive of functioning in various life roles: work, family, and social (Czabała 2008: 4–5). Most often, they consume it at home, either in a dried form or as a specially prepared extract. They generally obtain it themselves, so they do not have to pay for it. They learn about its effects and proper dosage and preparation from the internet, friends and family, or scientific publications. Most of them tried red fly agaric for the first time out of curiosity or for the expected medicinal effects, which are, along with spiritual needs and increased mental capacity, the main motives for continuing to use the substance. They focus mainly on the positive effects it produces, while overlooking the negative aspects. This may be due to the positive expectations they attribute to the effects of red fly agaric. It is also worth noting here that, among those surveyed, almost one in

five declared having being diagnosed with a mental disorder, which may be the reason for the use of psychoactive substances. In this context, the psychoactive substance is used by the person as a more or less conscious attempt to self-medicate, to alleviate the symptoms of the disorder, or, for those on medications, to reduce the undesired side effects (Błachut et al. 2013: 336; Just, Ogłodek 2013: 299). Only one in five feel that they have lost control of their use, and one in ten have been poisoned by it. It should be stressed, however, that the analysis presented herein relates only to respondents from selected online discussion groups and therefore cannot be extrapolated to the entire population of toadstool users in Poland.

Psychoactive substance use is a phenomenon that is developing extremely quickly. Constantly changing trends make it necessary to integrate the existing support system and to search for new forms of support and changes in the approach to the problem itself. Drug use affects not only children and adolescents or people from groups at risk of social exclusion, but also educated and working adults. In this context, it is important to regularly amend the law to follow contemporary trends and to evaluate the prevention strategies used so far. In addition to the state's ongoing efforts to improve the healthcare system, the context of current lifestyles and the determinants of people's engagement in various risk behaviors that can affect their health is important.

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Feelings of Loneliness and Reduced Self-Esteem in the Context of Risk of Internet Addiction Among Hearing and Hearing-Impaired Adolescents

ABSTRACT

The article presents the results of a study on two groups of adolescents aged 15–18 based on an assessment of risky behaviors during internet use. The purpose of the research was to investigate the correlation between feelings of loneliness among both hearing and hearing-impaired adolescents and risky internet use, which increases the risk of internet addiction. Three tools were used to gather the data: the Questionnaire of Intrapersonal, Interpersonal and Attitudes Towards the World by Bartłomiej Golek and Ewa Wysocka (2011), the Polish adaptation of the Loneliness Scale by Jenny de Jong Gierveld and Theo van Tilburg (Grygiel et al. 2011), and the Polish adaptation of the Questionnaire of Problematic Internet Use by Kimberly Young (Poprawa 2012). The findings clearly indicate a correlation between higher levels of loneliness, lower levels of self-esteem, and the tendency to engage in risky online behavior among hearing-impaired adolescents.

KEYWORDS
adolescents, internet, addiction, risk, loneliness, self-esteem

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Loneliness in the 21st century

In recent years, society's understanding of loneliness has undergone an evolution. It seems that loneliness in the 21st century may have a slightly different face than in the past: what was considered until recently a typical experience of elderly, ailing, and isolated people today also seems to be the experience of much younger people (Fabiś 2017: 279–297; Kramkowska 2016: 41–42; Dołęga 2003; Wasilewska 2010; Wrótniak 2018). The social transformations and changes we are experiencing seem to bring not only benefits, but also numerous difficulties. According to Stanisław Kawula (Kawula 1999), contemporary society faces numerous problems and challenges. An unstable labor market, the risk of losing a job, or the increasing need for separation due to economic reasons are only a small part of the changes experienced in the past several years (Zamorska 2014).

But what is loneliness and how should it be understood in a social context? There are many definitions and attempts to grasp how this phenomenon should be considered. For the purposes of this study, the approach of researchers who equate loneliness with solitude (Rembowski 1991; Gajda 1987; Łopatkowa 1983) was used.

Loneliness can therefore be considered a psychological state in which an individual feels a lack of satisfaction from social relationships and may therefore develop a subjective sense of isolation, exclusion from the group, and loneliness (Śliwak, Reizer, Partyka 2015). Interestingly, this subjective feeling can accompany both people who are actually deprived of social contact and those who surround themselves with their closest family or circle of friends in their daily life (Wrótniak 2020). The condition can vary in intensity and it can affect various aspects of daily functioning, from social relationships and occupational functioning to a person's overall health (Weiss 1973). Feeling lonely can result in a number of consequences, the main ones being related to emotional health. States of depression, anxiety, sadness, or helplessness significantly contribute to higher stress levels, which, in turn, have a negative impact on general health. Moreover, general difficulties in establishing and maintaining satisfactory social relationships are much more common among people experiencing loneliness. This may, in turn, result in reduced productivity and poorer professional functioning, as the aforementioned difficulties

may be followed by problems with concentration, making decisions, and maintaining an adequate level of motivation and engagement in activities (Qualter et al. 2010). Finally, loneliness can result in an untrue self-image. This is because full self-cognition often only takes place when interacting with other people and when part of society. Misconceptions about oneself may be contained in both an inflated sense of self-esteem and in questioning one's own value as an individual (Wałejko 2007). It also seems interesting to consider the correlation between loneliness and gender. According to researchers, the quality of friendships is higher among girls than among boys, while having a friend of the opposite sex increases loneliness in boys—as opposed to female respondents (Humenny, Grygiel, Dolata 2018). Thus, loneliness ceases to be only a personal situation of a particular individual and becomes a social issue.

Social functioning of deaf adolescents

The definition of hearing-impaired people has been the subject of much debate among researchers for many years. This is because there are different perceptions of the phenomenon in medical, linguistic, and pedagogical terms. This study adopts the concept found in deaf education, which emphasizes its correlations with the socioemotional functioning, level of self-esteem, overall quality of life, and identity of a deaf or hearing-impaired person (Kobosko 2014).

Social development is the continuation of a series of changes occurring in a child's motor, physical, emotional, and intellectual development. During the first stages of development, it is the child's closest social environment, mainly the family, that has the greatest influence on the formation of their social identity. Through interactions and bonds with those closest to the child, they learn to build relationships with others and acquire basic interpersonal skills. According to Christopher Murray and Mark T. Greenberg (2001), what builds emotional and social competence is an appropriate level of communication competence, an adequate level of motivation, an understanding of feelings and needs (both one's own and others'), the ability to exercise self-control, flexibility to adapt one's behavior to different situations, and the ability to use help and to offer support to other people. Thanks to the nucleus of communication and

motor skills, the first attempts to initiate contact with one's environment take place in infancy. This is when the first face-to-face interactions and attempts to imitate parents' facial expressions or to make simple gestures to get the parents' attention take place. Over time, rapid motor and language development allows the child to initiate contact on an increasingly large scale—not only with parents, but also with peers or siblings. The key stage for the development of the above-mentioned skills is the preschool period. If difficulties arise at this stage in communicating one's needs, establishing relationships, and understanding emotions, these difficulties are likely to grow in the following years and to affect the child's further functioning in almost every area of life. This is because relationships with peers are a natural opportunity to develop the social competences necessary for adult life.

From the perspective of meeting the needs of a child and providing the right conditions for their development in all aspects of life, it is important that the child has the chance to grow up in a diverse environment, in the company of many different people, so that they can undertake a wide range of activities and establish a range of contacts with both peers and adults. A proper emotional bond with adults and a sense of security and stability is essential. It is adults who convey knowledge to the child about how to function in the world around them (not always exclusively through verbal means) and teach them to interpret and categorize their experiences. Only over time does a child learn self-control and self-evaluation, which will give them the basis for correctly interpretating the events they experience. In other words, the first experiences from the surrounding world reach the child, as it were, through the filter of an adult, most often a parent (Schaffer 2005).

Numerous studies on the specific functioning of deaf children indicate the difficulty they have in understanding the other person's point of view and drawing conclusions from it. This phenomenon is explained by the well-known *theory of mind*. It focuses on a person's ability to behave appropriately in a situation that is new to them and to flexibly adapt their behavior to the needs of the current situation. In essence, the theory of mind is based on the ability to look beyond one's own, familiar point of view and to guess what another person is feeling or thinking. Deficits in this area will result in a significant

deterioration of the child's social functioning because this entails the risk that they will close themselves off within safe and predictable patterns in order to avoid anxiety, discomfort, and emotional tension in interpersonal interactions. Any difficulties that arise in this area may therefore cause problems in understanding the rules of alternation that apply in interaction, being attentive to non-verbal messages from an interlocutor, using metaphors, understanding the emotional tone of statements, or understanding verbal manipulation techniques (Wiśniewska 2018). Research has shown that, depending on which families and environments deaf children grow up in, clear differences in emotional and social functioning can be discerned. Deaf children and adolescents who grew up in hearing families tend to display poorer adjustment than deaf children growing up in deaf families. In addition, the former are prone to a number of psychological problems, which can manifest as difficulties controlling emotions, low self-esteem and self-image, or social competences (Calderon, Greenberg 2003).

Emotional regulation in children with hearing impairment is characterized by clear impulsivity and difficulties controlling it, sometimes also by impulsive aggression. Despite the efforts to teach deaf children to recognize their emotions and respond to them appropriately, positive results of such interventions usually focus on vocabulary and concepts related to emotions rather than on the actual ability to recognize them. Thus, there is a tendency in most deaf children to be dominated by negative emotions, which results in lower levels of self-esteem. These factors inhibit children's ability to verbalize the emotions they experience, which is essential for the proper regulation of those emotions (Dyck, Denver 2003).

For the majority of children and young people with hearing impairment, their self-image and the resulting self-esteem are negative and most often inadequate. Often, this is amplified by feelings of loneliness, alienation, and isolation. Sometimes, however, their level of self-acceptance and self-image can be too high. This, in turn, is relatively often associated with narcissistic disorders, which are more common in deaf adolescents than in their hearing peers. It is in this group that we are more likely to observe behavior disorders: tendencies to engage in risky behavior, the need to seek strong stimuli, aggression toward people and animals, stealing, cheating,

destruction of property, and, more seriously, oppositional-defiant disorder. According to research, children and young people with hearing impairment are more likely to be rejected by their peers and face unpleasant situations involving ridicule or stigmatization of their deafness. Long-term behavior of this nature can lead to secondary emotional disorders, social phobias, neuroses, or other mental disorders (Kobosko, Glanc 2021). At the same time, it is worth pointing out that current knowledge about people with hearing impairment emphasizes the growing heterogeneity of this group. The specific features of their functioning differ depending on the severity of the hearing impairment, its causes, on when it was discovered, and any therapeutic interventions implemented. Taking these variables into account, the total population of people with hearing impairment can be divided into more than 100 smaller groups, which, in fact, highlights its heterogeneity (Domagała-Zyśk 2014).

The sense of loneliness and the risk of addiction

As mentioned above, adolescence is a very important time in the life of a young person. On the one hand, teenagers face many social expectations, new challenges, and responsibilities, as they are taking on new social roles; on the other hand, they continue to be dependent on their immediate family and do not enjoy complete independence. When we juxtapose this period in life with the dynamics of many social changes, we find that it hardly surprising that escapist behaviors and tendencies appear in many young people who cannot cope with the pressure of their social environment. These may include directly self-destructive behaviors (e.g., self-aggression, directed against one's own health or life) or directly self-destructive behaviors (e.g., risky, impulsive behaviors, neglecting one's own needs and health, or a vulnerability to addictions) (Wasilewska-Ostrowska 2018).

The leading concepts of addiction risk oscillate around two of the most popular positions: the bio-psycho-social model of addiction and the concept of protective factors and risk factors. The former involves the theory according to which addiction is made up of biological factors (e.g., genetic predisposition or neurobiological mechanisms), psychological factors (emotional, cognitive, and behavioral elements), and social factors (e.g., specific features of the family,

peers, and wider society). When it comes to neuroscience, it is important to point out the role of serotonin and dopamine, which stimulate the reward center of the brain when we perform activities that give us a sense of satisfaction and fulfilment. These activities can have a regulating influence on negative emotions and, although they may prove unfavorable or even harmful in general, they are perceived by the brain as desirable and thus there is an urge to repeat them regularly. The psychological factors include an individual's character traits, temperament, or susceptibility to stress. The latter plays a significant role in the need for various sensations—and it is sensations, in the broadest sense, that accompany the perpetuation of certain habitual behaviors. Among the social factors, on the other hand, we find patterns of socialization created over the years by parents, close family, friends, acquaintances, or other significant people in our lives. If these patterns include certain deficits—for example, inappropriate coping strategies, a lack of understanding of one's own and others' emotions, or difficulties establishing and maintaining relationships—they will be fertile ground for the emergence and perpetuation of habitual behavior (Soo-Hyun et al. 2017).

The concept of protective factors and risk factors, on the other hand, identifies the following areas:

- family environment (especially relationships and connections with close people),
- non-family environment (including peers),
- school environment, related to the place of residence, and
- individual resources, qualities, skills, and abilities.

Any abnormalities resulting from disturbed relationships in particular areas may push a young person closer to addictive behavior (Jessor 1991). Based on the knowledge we have gained so far about the specific social development of people with hearing impairment and the communication difficulties that accompany it, it seems justified to look at risky behaviors in this group of adolescents, which can lead to the mechanism of addiction.

Analysis of research results

In the study on differences in risky behavior during internet use among hearing and deaf adolescents, quantitative data collection

tools (testing methods and questionnaires) were used: the Test of Problematic Internet Use (PIU) (2012), which is Ryszard Poprawa's adaptation of Kimberly Young's Internet Addiction Test; the Questionnaire of Intrapersonal, Interpersonal Attitudes and Attitudes Towards the World by Bartłomiej Gołek and Ewa Wysocka; the De Jong Gierveld Loneliness Scale by Jenny de Jong Gierveld and Theo van Tilburg (Polish adaptation by Paweł Grygiel, Grzegorz Humenny, Slawomir Rębisz, Piotr Świtaj, and Justyna Sikorska), and a questionnaire on perceived support from the social environment.

The PIU test consists of 37 items related to seeking sensations in the internet, escaping from real-life problems, seeking to satisfy frustrated needs, strengthening the Self, and compensating for one's weaknesses through excessive internet activity. The respondents rated how true each statement in the questionnaire was about their behavior on a 5-point scale. The main symptoms related to problematic internet use revolve around increasing difficulty in regulating one's internet activity, compulsion to use the internet, experiencing mood changes when internet activity is reduced, neglecting important duties in favor of spending time in the virtual world, or failing to perceive the long-term consequences of the time spent online.

In the second questionnaire (the Questionnaire of Intrapersonal, Interpersonal Attitudes and Attitudes Towards the World), the statements were categorized into several areas:

1. social support vs. indifference from other people (additionally, whether or not one feels appreciated),
2. feeling safe vs. feeling threatened by others,
3. doing things for others and sociability vs. egocentrism and the need to isolate oneself,
4. aggressiveness vs. lack of aggression,
5. image of the world—beliefs about the meaning of life in this world and being kind to people, and
6. life image—beliefs about the effectiveness of one's actions and the ability to control the course of one's life (Michalczyk 2022).

The first area focuses on the respondents' behavior in specific social networks, for example, experiencing emotional support (which can be messages of approval, acceptance, liking, or respect), experiencing support in terms of value (assurances of the importance of

the individual against the whole group, e.g., "Thanks to you, we did well"), experiencing instrumental support (material and/or financial help), and experiencing information support (e.g., advice when facing a problem) (Kmiecik-Baran 2000). The feeling of being appreciated or unappreciated by others is also included in this category.

According to Christopher A. Murray, the second area, the need for security, has three components: social, physical, and psychological. The need for security is one of the most important and basic developmental needs; whether it is fulfilled will determine further relationships and contact with other people throughout one's life (Gołek, Wysocka 2011).

In the third area, the respondent addresses the need to experience altruism or support in the material or spiritual sphere, to share with others, to engage socially, or to focus on the common good. A common feature of pro-social behavior is its selflessness and idealistic dedication to other individuals, groups, or communities.

The fourth area defines behavior characterized by negative emotions and directed at a specific person or group of people (in which case it is referred to as interpersonal aggression) or inanimate objects. This can take the form of a verbal and/or physical attack that allows one to vent the frustration about events in which one is involved.

Area five is related to the belief that the world is meaningful, friendly, properly organized, and, in the vast majority of cases, friendly toward the people living in it. These are beliefs that build an individual's private worldview and attitude toward life.

In the sixth area, on the other hand, the main assumption is that human beings, and not something else, are the driving force behind all events, which entails the need for control. Satisfying this need is extremely important for achieving mental balance and skillfully dealing with emotionally difficult situations.

The scale for measuring feelings of loneliness contained 11 positive and negative statements. The respondents were asked to rate how accurately these statements described their well-being in terms of subjective feelings of loneliness and isolation.

The study group consisted of 75 hearing and 75 deaf adolescents aged 15–18 years attending boarding schools in the Lesser Poland, Greater Poland, and Subcarpathian voivodeships. The degree of hearing impairment in the group of deaf adolescents ranged from mild to profound hearing loss.

Table 1. Analysis of differences between girls and boys among hearing respondents

Dependent variable	Means		Statistical deflection		*t*	*p*
	K	M	K	M		
QIIA&ATW C-IS	15,61	16,10	1,89	1,87	,37	,546
QIIA&ATW PS	16,17	17,49	1,78	1,89	,01	,917
QIIA&ATW S-MS	14,58	15,51	1,75	1,79	,03	,862
QIIA&ATW PS	14,69	15,21	1,83	1,73	,04	,846
QIIA&ATW SO	17,00	17,72	2,39	1,81	3,29	,074
QIIA&ATW LST	16,03	16,69	2,44	1,42	11,89	,001
QIIA&ATW P-S	15,17	16,46	2,65	1,67	5,79	,019
QIIA&ATW LA	12,25	12,72	1,61	2,49	8,58	,005
QIIA&ATW MS&OW	13,47	12,10	1,44	1,82	,44	,508
QIIA&ATW FW	13,31	12,46	1,82	2,35	2,29	,134
QIIA&ATW SE	15,64	15,77	1,84	1,84	,11	,740
QIIA&ATW NFH	14,42	15,44	2,71	2,09	2,66	,107
QIIA&ATW GS-ES	61,06	64,31	5,25	4,54	,05	,827
QIIA&ATW IF	60,44	63,59	7,16	4,16	9,87	,002
QIIA&ATW OTM	33,03	34,41	4,37	2,36	14,18	<,001
QIIA&ATW MTO	27,42	29,18	3,40	3,09	,51	,479
QIIA&ATW WI	26,78	24,56	2,21	2,85	4,87	,031
QIIA&ATW LI	30,06	31,21	4,02	3,11	2,48	,119
GAL Neg. em.	10,86	11,56	1,15	1,96	7,64	,007
GAL Social pos.	19,78	19,21	,90	1,96	4,41	,039
GAL general	14,81	16,62	1,97	4,26	3,70	,058
PIU	29,00	27,28	11,60	18,79	10,89	,001

Note. Abbreviations used in the table stand for the following thematic areas of the tools that were used: QIIA&ATW: Questionnaire of Intrapersonal, Interpersonal Attitudes and Attitudes Towards the World; C-IS: cognitive-intellectual sphere; PS: physical sphere; S-MS: socio-moral sphere; PS: personality sphere; SO: support from others; LST: lack of a sense of threat; P-S: pro-sociality; LA: lack of aggressiveness; MS&OW: making sense of and organizing the world; FW: friendliness of the world; SE: sense of efficacy; NFH: no feeling of helplessness; GS-ES: global self-esteem sphere; IF: interpersonal functioning; OTM: others toward me; MTO: me toward others; WI: world image; LI: life image; GAL: general area of loneliness; GAL Neg. em.: negative emotions; GAL Social pos.: social position; GAL general: general level of loneliness; PIU: problematic internet use.

Source: Michalczyk 2022: 100–101.

The data in Table 1 show that girls scored statistically significantly higher than boys in world image (QIIA&ATW WI) (26.78 vs. 24.56 points), social position (GAL Social pos.) (19.78 vs. 19.21 points), and problematic use of the internet (PIU) (29.00 vs. 27.28 points). Boys, on the other hand, scored significantly higher than girls in the lack of a sense of threat (QIIA&ATW LST) (16.69 vs. 16.03 points), pro-sociality (QIIA&ATW P-S) (16.46 vs. 15.17 points), non-aggressiveness (QIIA&ATW LA) (12.72 vs. 12.25 points), interpersonal functioning (QIIA&ATW IF) (63.59 vs. 60.44 points), the area of "others toward me" (QIIA&ATW OTM) (34.41 vs. 33.03 points), and negative emotions (GAL Neg. em.) (11.56 vs. 10.86 points). In the overall result, it is characteristic that both gender groups scored high in the sphere of general self-esteem and self-esteem in the physical sphere. This means that both groups perceive themselves as attractive and have a fairly high overall self-esteem. The analysis also shows that there are no large discrepancies in scores between the male and female groups, indicating that there are no particularly large differences in terms of how both genders function in the areas captured by the tool.

Table 2. Analysis of differences between girls and boys in the group of respondents with hearing impairment

Dependent variable	Means		Statistical deflection		*t*	*p*
	K	M	K	M		
QIIA&ATW C-IS	11,78	10,89	2,23	1,74	1,93	,057
QIIA&ATW PS	13,08	13,13	2,07	2,30	–,10	,921
QIIA&ATW S-MS	12,57	11,87	1,85	2,33	1,44	,155
QIIA&ATW PS	13,16	13,18	2,41	2,10	–,04	,966
QIIA&ATW SO	10,32	10,11	1,68	2,33	,47	,643
QIIA&ATW LST	10,84	10,74	1,89	2,48	,20	,844
QIIA&ATW P-S	13,81	15,47	2,07	2,81	–2,92	,005
QIIA&ATW LA	8,43	8,68	1,44	1,79	–,67	,505
QIIA&ATW MS&OW	9,59	9,87	1,88	2,12	–,59	,556
QIIA&ATW FW	9,65	8,50	1,87	2,41	2,30	,024
QIIA&ATW SE	12,76	13,95	1,80	2,01	–2,70	,009
QIIA&ATW NFH	10,32	11,47	2,07	2,04	–2,42	,018
QIIA&ATW GS-ES	50,59	49,08	5,21	4,38	1,36	,177

Dependent variable	Means		Statistical deflection		*t*	*p*
	K	M	K	M		
QIIA&ATW IF	43,41	45,00	3,01	5,27	–1,60	,113
QIIA&ATW OTM	21,16	20,84	2,56	4,00	,41	,682
QIIA&ATW MTO	22,24	24,16	2,23	3,24	–2,97	,004
QIIA&ATW WI	19,24	18,37	2,88	3,57	1,17	,247
QIIA&ATW LI	23,08	25,42	2,82	3,26	–3,32	,001
GAL Neg. em.	19,22	19,24	2,33	1,92	–,04	,967
GAL Social pos.	12,35	12,74	2,15	2,06	–,79	,431
GAL general	40,49	40,08	4,32	5,05	,38	,709
PIU	84,57	72,21	6,58	11,70	5,62	< ,001

Source: Michalczyk 2022: 102.

When analyzing the results, it can be seen that the girls with hearing impairment scored statistically significantly higher in the sphere of world friendliness (QIIA&ATW FW) (9.65 vs. 8.50 points) and on the PIU questionnaire (84.57 vs. 72.21 points). In contrast, the boys scored higher in pro-sociality (QIIA&ATW P-S) (15.47 vs. 13.81 points), sense of efficacy (QIIA&ATW SE) (13.95 vs. 12.76 points), lack of sense of helplessness (QIIA&ATW NFH) (11.47 vs. 10.32 points), sphere of "me toward others" (QIIA&ATW MTO) (24.16 vs. 22.24 points), and life image (QIIA&ATW LI) (25.42 vs. 23.08 points).

Differences in the criterion of hearing or hearing impairment among respondents of the same sex are shown in Table 3.

Table 3. Analysis of differences between the group of female respondents with hearing impairment and the group of female hearing respondents

Dependent variable	Means		Statistical deflection		*t*	*p*
	S	NS	S	NS		
QIIA&ATW C-IS	15,61	11,78	1,89	2,23	7,92	< ,001
QIIA&ATW PS	16,17	13,08	1,78	2,07	6,81	< ,001
QIIA&ATW S-MS	14,58	12,57	1,75	1,85	4,79	< ,001
QIIA&ATW PS	14,69	13,16	1,83	2,41	3,05	,003
QIIA&ATW SO	17,00	10,32	2,39	1,68	13,82	< ,001
QIIA&ATW LST	16,03	10,84	2,44	1,89	10,16	< ,001

Dependent variable	Means		Statistical deflection		*t*	*p*
	S	NS	S	NS		
QIIA&ATW P-S	15,17	13,81	2,65	2,07	2,44	,017
QIIA&ATW LA	12,25	8,43	1,61	1,44	10,67	< ,001
QIIA&ATW MS&OW	13,47	9,59	1,44	1,88	9,87	< ,001
QIIA&ATW FW	13,31	9,65	1,82	1,87	8,46	< ,001
QIIA&ATW SE	15,64	12,76	1,84	1,80	6,77	< ,001
QIIA&ATW NFH	14,42	10,32	2,71	2,07	7,27	< ,001
QIIA&ATW GS-ES	61,06	50,59	5,25	5,21	8,54	< ,001
QIIA&ATW IF	60,44	43,41	7,16	3,01	13,32	< ,001
QIIA&ATW OTM	33,03	21,16	4,37	2,56	14,20	< ,001
QIIA&ATW MTO	27,42	22,24	3,40	2,23	7,71	< ,001
QIIA&ATW WI	26,78	19,24	2,21	2,88	12,52	< ,001
QIIA&ATW LI	30,06	23,08	4,02	2,82	8,60	< ,001
GAL Neg. em.	10,86	19,22	1,15	2,33	–19,31	< ,001
GAL Social pos.	19,78	12,35	,90	2,15	19,16	< ,001
GAL general	14,81	40,49	1,97	4,32	–32,50	< ,001
PIU	29,00	84,57	11,60	6,58	–25,26	< ,001

S: hearing, NS: deaf
Source: Michalczyk 2022: 103–104.

After analyzing the data in Table 3, the conclusion is that all the differences between hearing and deaf respondents were highly statistically significant. The group of hearing-impaired girls obtained lower values in almost every area of the questionnaires.

The largest differences between hearing-impaired and hearing group scores, respectively, were in the following areas: interpersonal functioning (QIIA&ATW IF) (43.41 vs. 60.44 points), global self-esteem (QIIA&ATW GS-ES) (50.59 vs. 61.06 points), and perceived support from others (QIIA&ATW WI) (17.00 vs. 10.32 points). Only for three areas—the general area of risky online behavior (PIU), the general area of loneliness (GAL), and the area of experiencing negative emotions (GAL Neg. em.)—were the scores of the hearing-impaired girls significantly higher.

Table 4. Analysis of differences between the hearing-impaired respondents and the hearing respondents (boys

Dependent variable	Means		Statistical deflection		*t*	*p*
	S	NS	S	NS		
QIIA&ATW C-IS	16,10	10,89	1,87	1,74	12,64	< ,001
QIIA&ATW PS	17,49	13,13	1,89	2,30	9,08	< ,001
QIIA&ATW S-MS	15,51	11,87	1,79	2,33	7,72	< ,001
QIIA&ATW PS	15,21	13,18	1,73	2,10	4,60	< ,001
QIIA&ATW SO	17,72	10,11	1,81	2,33	16,03	< ,001
QIIA&ATW LST	16,69	10,74	1,42	2,48	12,98	< ,001
QIIA&ATW P-S	16,46	15,47	1,67	2,81	1,88	,064
QIIA&ATW LA	12,72	8,68	2,49	1,79	8,14	< ,001
QIIA&ATW MS&OW	12,10	9,87	1,82	2,12	4,97	< ,001
QIIA&ATW FW	12,46	8,50	2,35	2,41	7,30	< ,001
QIIA&ATW SE	15,77	13,95	1,84	2,01	4,15	< ,001
QIIA&ATW NFH	15,44	11,47	2,09	2,04	8,43	< ,001
QIIA&ATW GS-ES	64,31	49,08	4,54	4,38	14,98	< ,001
QIIA&ATW IF	63,59	45,00	4,16	5,27	17,20	< ,001
QIIA&ATW OTM	34,41	20,84	2,36	4,00	18,17	< ,001
QIIA&ATW MTO	29,18	24,16	3,09	3,24	6,96	< ,001
QIIA&ATW WI	24,56	18,37	2,85	3,57	8,44	< ,001
QIIA&ATW LI	31,21	25,42	3,11	3,26	7,97	< ,001
GAL Neg. em.	11,56	19,24	1,96	1,92	–17,35	< ,001
GAL Social pos.	19,21	12,74	1,96	2,06	14,10	< ,001
GAL general	16,62	40,08	4,26	5,05	–22,07	< ,001
PIU	27,28	72,21	18,79	11,70	–12,55	< ,001

S: hearing, NS: deaf
Source: Michalczyk 2022: 104–105.

The data in Table 4 shows that, as with the comparison of the results of the two groups of girls, the male hearing respondents scored higher in almost all areas of the questionnaires used. This is particularly evident for the sphere of global self-esteem (QIIA&ATW GS-ES) (64.31 vs. 49.08 points) and interpersonal functioning (QIIA&ATW IF) (63.59 vs. 45.00 points). In contrast, the proportions were completely reversed for three other areas: problematic

internet use (PIU) (72.21 points for the hearing-impaired respondents vs. 27.28 for the hearing group), general feelings of loneliness (GAL general) (40.08 vs. 16.62 points, respectively), and negative emotions (GAL Neg. em.) (19.24 vs. 11.56 points).

Table 5. Analysis of differences between the hearing-impaired and hearing respondents in terms of perceived support

How often, during the last year, did you have the feeling of understanding and support from:	Hearing						Deaf					
	rarely		often		always or almost always		rarely		often		always or almost always	
	N	%	N	%	N	%	N	%	N	%	N	%
Your parents	23	31	40	53	12	16	56	75	11	15	8	10
Siblings or other family members	19	24	36	48	21	28	47	62	14	19	14	19
Friends and other people you know	17	23	12	16	46	61	13	17	29	39	33	44
Teachers and educators	33	44	30	40	12	16	43	57	20	27	12	16

Source: own study.

The analysis of the data shows that for hearing-impaired respondents, the subjective feeling of support was significantly lower than for their hearing peers. This difference is particularly marked in the context of parents, other family members, and teachers and educators.

The differences between hearing and hearing-impaired girls proved to be highly statistically significant. The largest disparity, however, was in problematic internet use and general feelings of loneliness: the hearing impaired girls had an advantage in these indicators. However, when comparing the differences between the two groups of boys, most findings were similar: the greatest disproportion again related to problematic internet use and general sense of loneliness "in favor" of the hearing-impaired group.

While analyzing the correlations between age and questionnaire variables in the group of hearing adolescents, the following statistically significant relationships were observed:

1. As age increases, so does the lack of aggressiveness (.56** on the Pearson scale).
2. The higher the age, the lower the degree of making sense of and organizing the world (–.27* on the Pearson scale).

3. The higher the age of the respondents, the higher the level of "me toward others" (.33* on the Pearson scale).
4. The higher the age, the lower the level of world image (–.33** on the Pearson scale).

In contrast, for the group of hearing-impaired respondents, the relationships were somewhat different:

1. The higher the age, the lower the level of self-assessment in the physical sphere (–.35** on the Pearson scale).
2. The higher the age, the lower the level of character self-assessment (–.37** on the Pearson scale).
3. The higher the age, the lower the level of pro-sociality (–.26* on the Pearson scale).
4. The higher the age, the lower the level of global self-esteem (–.40** on the Pearson scale).
5. The higher the age, the lower the level of "me toward others" (–.32** on the Pearson scale).
6. The higher the age, the lower the level of problematic internet use (–.23* on the Pearson scale).

Among the respondents with hearing impairment, the correlation between the questionnaire variables and the degree of hearing impairment was also analyzed. One correlation proved statistically significant: the higher the degree of hearing impairment, the lower the feeling of loneliness (–.26* on the Pearson scale).

Conclusions and recommendations

The results clearly indicated a significant risk of internet addiction among young people. This phenomenon is more and more often discussed in the media, at schools, and in parent and teacher guides, but, to a large extent, the warnings contained therein concern hearing adolescents. However, as the results of the research show, it is young people with hearing impairment who are at much higher risk of problematic internet use, which, over time, may develop into real internet addiction. There may be many more reasons for this, but the phenomenon of loneliness among young people with hearing impairment is particularly strong as the research findings presented here show. Educators and teachers working with hearing-impaired young people should pay particular attention to instilling a sense of

security and trust in their students. It is often the boarding school tutor or teacher in charge who, for obvious reasons, spends most of their time with the student. Therefore, it is very important to be attentive to any changes in behavior or moods and to be sensitive to possible symptoms of increasing loneliness and isolation. For parents, one of the key issues is the ability to establish a real dialogue with their child. It is vital for the family home to be synonymous with safety for the adolescent, where they can always count on the necessary support, help, and understanding, regardless of the situation. Spending time together while doing interesting things adapted to the teenager's age and interests may prove helpful. Activities that seem too childish may lead to discouragement and alienation, which is particularly undesirable in the context of feelings of loneliness. When teenagers are offered activities that they find childish, they may feel that they are being treated like a child and that those around them do not understand the problems they are experiencing. Another, equally important tip, which can be particularly helpful nowadays, is that parents and teachers need to be introduced to the world of modern technology. It is very common for parents to completely misunderstand and cut themselves off from the virtual world in which their child operates, and to treat the internet as the greatest danger, to be approached with caution and reluctance. However, in order to strengthen the bond and prevent the sense of loneliness in young people, it would be a good idea to maintain contact with loved ones via the internet, which could be particularly useful for students attending boarding schools.

In the context of the conclusions discussed above, one more issue should be particularly clear. It is an oversimplification to see the internet as the cause of addiction and as merely a negative influence. Addiction to the internet, shopping, gambling, food, or extreme sports is only a symptom of a much deeper problem, the root of which may be issues related to loneliness, although this is not the only possible explanation. It is up to adults, especially parents, to discern the causes and mechanisms of such behavior and, if necessary, to respond appropriately by addressing the real nature of the problem.

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Reviews

Recenzje

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Bridging the Gaps in the Discourse on Stuttering

Dialog bez barier – kompleksowa interwencja logopedyczna w jąkaniu [Dialogue Without Barriers: Comprehensive Speech Therapy Intervention in Stuttering], Polish extended edition, eds. K. Węsierska, H. Sønsterud, Agere Aude, Chorzów 2021, pp. 672

The Polish publishing market has been systematically replenished over the years with various types of publications on stuttering. It is enough to mention the following books from the last 15 years: Maria Faściszewska, *Jąkanie. Wypowiedzi dialogowe i monologowe osób jąkających się* [Stuttering: Dialogue and Monologue Statements of People Who Stutter] (2020); Agata Sakwerda, *Spokojnie, to tylko jąkanie* [Relax, It's Just Stuttering] (2020); Zbigniew Tarkowski and Agnieszka Okrasińska, *Jąkanie w wieku szkolnym* [Stuttering at School Age] (2020); Carl W. Dell Jr., *Terapia jąkania u dzieci w młodszym wieku szkolnym* [Therapy of Stuttering in Children of Younger School Age], translated by Lucyna Jankowska-Szafarska (2019); *Zaburzenia płynności mowy – teoria i praktyka* [Speech Fluency Disorders: Theory and Practice], edited by Katarzyna Węsierska and Mikołaj Witkowski (vol. 2, 2019); *Zaburzenia płynności mowy* [Speech Fluency Disorders],

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edited by Katarzyna Węsierska and Katarzyna Gaweł (2018); Życie z zacięciem. Integralny przewodnik po jąkaniu [Living with Stuttering: An Integral Guide to Stuttering], edited by Kamil Kupiec, Lucyna Jankowska-Szafarska, Beata Suligowska, and Roman Kara (2017); Jolanta Góral-Półrola, *Jąkanie. Analiza procesu komunikacji słownej* [Stuttering: Analysis of the Verbal Communication Process] (2016); *Zaburzenia płynności mowy – teoria i praktyka* [Speech Fluency Disorders: Theory and Practice], edited by Katarzyna Węsierska (vol. 1, 2015); Barry Guitar and Theodore J. Peters, *Dobór metod terapii jąkania. Przewodnik dla logopedów* [Selecting Methods for Stuttering Therapy: A Guide for Speech Therapists], translated by Katarzyna Gaweł (2014); Peter Schneider, *Kto-kto-kto robi hu-hu-hu?* [Who-Who-Who Does Hoo-Hoo-Hoo?], translated by Małgorzata Kądzioła (2014); Elaine Kelman and Alison Nicholas, *Praktyczna interwencja w jąkaniu wczesnodziecięcym* [Practical Intervention in Early Childhood Stuttering], translated by Małgorzata Kądzioła (2013); Eelcode Geus, *Czasami po prostu się jąkam. Książka dla dzieci w wieku od 7 do 12 lat* [Sometimes I Just Stutter: A Book for Children Aged 7 to 12 Years], translated by Marta Węsierska (2013); Zbigniew Tarkowski, *Psychosomatyka jąkania* [Psychosomatics of Stuttering] (2007); and Mieczysław Chęciek, *Jąkanie – diagnoza, terapia, program* [Stuttering: Diagnosis, Therapy, Program] (2007). These scientific and popular science publications, in addition to numerous scientific articles, constitute a rich source of knowledge about stuttering for speech therapists, doctors, psychologists, educators, teachers, parents, people experiencing stuttering themselves, and students preparing to work with clients/patients/students who stutter.

The textbook *Dialogue Without Barriers*, which Polish readers have been able to consult since the end of 2021, is another interesting book on this speech fluency disorder. In its introduction, it is stated twice that the Polish-Norwegian cooperation and the invitation of an international group of excellent specialists (from Australia, Belgium, Greece, Canada, Lebanon, Malta, Germany, Poland, the USA, and the UK) is a recipe for an "exceptional" textbook (p. 9 and 10). A verification of this thesis can ultimately lead to only one conclusion: Yes, this is an extraordinary book! Why?

The foreword by editors Katarzyna Węsierska and Hilda Sønsterud is a kind of invitation to talk about stuttering, and the

inclusion of profiles of the 35 authors (11 Polish and 24 foreign) at the beginning of the book follows the good tradition of presenting all interlocutors before the discussion even starts. Thanks to this, an actual "dialogue without barriers" is also initiated between the reader and the authors, or the reader and the editors. In order to make the reader feel like a full-fledged, active participant of the deliberations, a "Space for Notes" is left at the end of the book (p. 19). The notes, which are to be made by a reflective reader, can add new remarks to the book's content or further questions on stuttering that differ from those placed under each chapter of the handbook.

An electronic version of the book, available free of charge (sic!) on the LOGOLab website (https://www.logolab.edu.pl/), has already impressed the public; a traditional paper book is now also available on the market. Information about further chapters of the handbook, the editorial team, and the translators have been available since January 2022 on the Facebook page "LOGOLab. Good Communication" (https://www.facebook.com/groups/logolab). This also serves as an overview of the content and reveals some secrets from the editing and publishing work, confirming the extremely hard work of all those involved in this two-volume publication (in Polish and English) and the project implemented by the University of Silesia in Katowice, the Norwegian Arctic University in Tromsø, and the Agere Aude Foundation for Knowledge and Social Dialogue. Participants of the International Logopaedic Conference "Speech Fluency Disorders. Theory and Practice. Edition IV" (2021).

The first chapters of the handbook refer to the main lines of reflection undertaken in recent books on stuttering, but also in the pedagogical, psychological, or medical literature (e.g., Kaźmierczak 2018; Węsierska, Krawczyk 2017; Moćko, Węsierska 2015; Błachnio, Przepiórka 2013; Humeniuk 2012; Stecko 2012; Sommer et al. 2002): theory versus speech therapy practice, the multifaceted nature of stuttering, becoming an effective therapist, counselling clients and their loved ones, social attitudes towards stuttering, acceptance of stuttering, and quality of life with stuttering.

The reading of more than 650 pages opens with two complementary chapters: "Between Research and Speech Therapy Practice: Towards Integrated Speech and Language Therapy," written by Norwegian researchers Kirsten Costain and Hilda Sønsterud, and "How

Do I Become an Effective Speech Therapist Specialising in Fluency Disorders?" by Kurt Eggers, coordinator of the European Clinical Specialization in Fluency Disorders (www.ecsf.eu). The subjective perspective emphasized in both texts, which takes into account the needs and resources of stutterers, is justified especially in light of contemporary considerations of evidence-based practice, the assumptions of which were one of the guideposts for the entire publication (p. 9): the practice of an effective speech therapist is based on evidence from research, and the goals of therapy are set jointly by the clinician and the client, who enter into a therapeutic alliance.

The questions of how to help and support the client and their social environment and how to organize speech therapy counselling are answered in Chapter 3. The interdisciplinary (speech therapy, psychological, and linguistic) team of Ewa Ficek, Barbara Jeziorczak, and Katarzyna Węsierska developed unified guidelines for the attitudes and communication skills of the actors of the therapeutic alliance: speech therapists, people close to the stutterers, and the clients themselves (of various ages). The following chapter by Mary Weidner and Kenneth O. St. Louis partly extends and completes the issues discussed earlier, but also initiates a discussion on improving the quality of life of people who stutter in social situations. The seven steps of an intervention plan for modifying attitudes towards stuttering characterized within are a kind of primer for any advocate of change. A detailed assessment of the ABCs—the affective, behavioral, and cognitive aspects—of stuttering in speech therapy diagnosis was made by American researcher Martine Vanryckeghem in Chapter 6.

The Polish-language handbook presents both the Polish perspective on research and development of speaking fluency, as well as action proposals developed in other countries, which is extremely valuable. As a result of such a "dialogue without borders" and the mutual exchange of experiences, the reader will find a wide range of practical suggestions for programs, methods, techniques, and tools for assessing these stuttering ABCs: *The Behavior Assessment Battery* (BAB), *The Communication Attitude Test for Adults Who Stutter* (BigCAT), *The Communication Attitude Test for School-Age Children Who Stutter* (CAT), *The Communication Attitude Test for Preschool and Kindergarten Children Who Stutter* (KiddyCAT), *The Wright and Ayre*

Stuttering Self-Rating Scale (WASSP), *The Overall Assessment of the Speaker's Experience of Stuttering* (OASES), *The Fear of Negative Evaluation Scale* (FNES), *Erickson S24*; *Unhelpful Thoughts and Beliefs about Stuttering* (UTBAS/UTBAS6), *The Self-Efficacy Scale for Adult Stutterers* (SESAS), and *The Self-Efficacy Scale for Adolescents* (SEA). There are also some therapy tips: *Camperdown*, *KIDS*, *Lexipontix*, *Multi-Dimensional Individualized Stuttering Therapy* (MIST), *Modification of Stuttering (more fluent stuttering)*, and *Acceptance and Commitment Therapy* (ACT). In addition to the impressive list of programs, methods, techniques, tools, and strategies referred to in the handbook, the entire book included numerous examples and tips for both researchers and practitioners, which encourages anyone wishing to supplement their knowledge and improve their professional skills to read it. The extensive bibliographic listings, including recommended literature after each chapter, are another valuable element of the handbook.

As we have noted, the authors of the chapters do not focus only on the subject matter—the speech fluency disorder of stuttering and methods, techniques, strategies, or possible forms of speech therapy treatment—although this is very valuable information. The book's narrative seems to be dominated by the motto, "Person first!" It is this thought that informs contemporary speech therapy intervention in stuttering. The authors of the handbook reflect extensively on interpersonal relationships, building a therapeutic alliance, and enhancing the quality of life of a person who stutters.

The question of whether laughter and humor can become essential components of stuttering therapy is answered by Erik X. Raj (Chapter 19) and Joseph Agius (Ch. 20). Identification, de-sensitization, open and conscious stuttering, and reducing avoidance strategies are discussed by Hilda Sønsterud (Ch. 16) and therapists with personal experience of stuttering, Carolyn Cheasman and Rachel Everard (Ch. 5). When juxtaposed with the chapter entitled *Bullying Experienced by Children Who Stutter: Ways of Coping and Prevention* by Marta Węsierska, Marilyn Langevin, and Katarzyna Węsierska, the tones of acceptance and tolerance resonate even more clearly. Moreover, the specific suggestions indicated here, such as the popular LOGOLab workshops in Poland or the *InterACT* program, broaden the range of possibilities in the context of speech therapy

and pedagogical prevention. Together with guidelines for diagnosis and various forms of therapy—individual, group, self-help, or self-therapy—they actually create a picture of a comprehensive speech therapy intervention for stuttering (as indicated in the subtitle of the publication): an intervention based on the latest scientific research and indications developed in multi-specialist and international teams, taking into account mono- or bilingualism (see Chapter 17) of patients with a stuttering experience.

The handbook *Dialogue Without Barriers* presents the pillars on which bridges are being built over gaps in the discourse on stuttering: between clients and therapists, between clients and their parents, between parents and therapists, between practitioners and researchers, between editors and chapter authors, and, finally, between authors and editors and readers. The multidisciplinary approach, multifaceted nature, commitment, reliability, essentiality, modernity, and topicality of knowledge, as well as the criticality, reflexivity, openness, and respect for the subjectivity of each participant in the reading dialogue and the preventive/diagnostic/therapeutic process in stuttering are certainly solid foundations here. There should definitely be more such great handbooks. Unfortunately, the English-language version, which should be published soon, will not include chapters written only by Polish authors, as they are certainly worthy of international distribution.

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