

Risky behaviour in Polish adolescents

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Introduction

In recent years, *risky behaviour* has come to be understood as most undesirable behaviours among young people, such as using psychoactive substances, using violence, gambling or overusing the internet. This results from the growing knowledge of the risks that these behaviours entail. In other words, there is a growing awareness of the negative consequences of these behaviours for the health, safety and proper psychophysical development of adolescents (Dzielska and Kowalewska, 2014; Jessor, 1997). Although the term risky behaviour is used most often, it is worth adding that, depending on the field of study within which these behaviours are described and the associated linguistic tradition, undesirable conduct of adolescents is named and defined in different ways. For instance, within the framework of rehabilitation pedagogy, these are behaviours indicative of social maladjustment of adolescents (Pytka, 2001). This term is used in our country in official documents of the Ministry of Education. In psychiatry, the notion of externalizing and internalizing behaviours or problems is used (Wolańczyk, 2002), and on the ground of criminology – of antisocial behaviour (Urban, 2000). In prevention research, the terms problem behaviour and risky behaviour are used interchangeably, although in terms of meaning they are not fully identical (Ostaszewski, 2014).

Classic risky behaviours of adolescents include using drugs, drinking alcohol and getting drunk, shoplifting and other petty offenses, as well as using violence against peers. However, the types of adolescent risky behaviours are changing with the development of civilization and technology. A good example is the use of so-called e-cigarettes and cyberbullying. Both of these behaviours are classically well known as cigarette smoking and bullying. However, new technologies have changed their context and scope. E-cigarettes and other technological inventions of the tobacco industry are an attempt to recover from the crisis which hit the sector, following a radical change in social attitudes about cigarette smoking. Cyberbullying, on the other hand, is a “by-product” of the new opportunities created by digital media. The sense of anonymity, the mediation of contact and the high power of destruction make cyberbullying a dangerous way for many to bully others or express their frustrations. E-cigarette use and cyberbullying are examples of the so-called new risky behaviours (Pyżalski, 2012).

In recent years, the viewpoint of specialists on adolescent risky behaviour has also been evolving. The Fund for Solving Gambling Problems, established in 2009 and expanded to include other “non-chemical addictions” in 2011, has been instrumental in developing knowledge of so-called behavioural addictions. The focus of specialists has included problem gambling, internet addiction, shopaholicism and other behavioural addictions (Habrata, 2016). Specialists working with adolescents also emphasise self-destructive and suicidal behaviours of young people. These are risky behaviours that directly threaten the lives and safety of youth (Popek, 2017). During the COVID-19 pandemic, the prevalence of such behaviours increased significantly. Addictive and self-destructive behaviours

have ceased to be just a focus of psychiatry. They became part of a comprehensive (holistic) approach to the problem of adolescent risky behaviour.

Risk-taking is an integral part of adolescence. It raises understandable concerns among parents and educators, but at the same time it helps young people master some of the skills needed for adulthood, satisfies the need for sensation, for crossing and testing boundaries, and meets other needs of teenagers. Risky behaviour is most common during adolescence, because risk-taking is part of development at this stage. Neither earlier nor later does it occur as often and with such intensity as during adolescence. In later stages of life, risky behaviour tends to decrease in number and type. Adults who are well-adjusted, when they enter the workforce and set up families, usually give up using drugs and committing prohibited acts, and often cut back on drinking alcohol and smoking cigarettes.

Long-term trends in substance use

In the first edition of the report *Children Count* (Ostaszewski, 2017a), I presented a characterisation of psychoactive substance use as one of the manifestations of risky behaviour among schoolchildren. The current edition of the report is an opportunity to update this characterisation. To this aim, I make extensive use of the results of the cyclical HBSC¹ and ESPAD² surveys, which provide an opportunity to assess long-term trends in risk behaviours of 15- to 16-year-olds. Both research projects have been conducted every four years since the 1990s on random nationwide samples, so they have the value of research representative of schoolchildren in Poland. Both are also part of international projects and scientific networks, hence the use of their results allows international comparisons.

- 1 An international study of the health behaviour of schoolchildren conducted under the auspices of the World Health Organization – Health Behaviour in School-Aged Children. A WHO Cross-National Study (HBSC).
- 2 The European School Survey Project on Alcohol and Other Drugs (ESPAD), coordinated by the Swedish Council for Information on Alcohol and other Drugs and the Pompidou Group.

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In the past I used cannabis only occasionally, now I do it almost every day. I don't know how else to cope with a bad mood. There are times when I am under its influence at school. I feel very overwhelmed by problems.

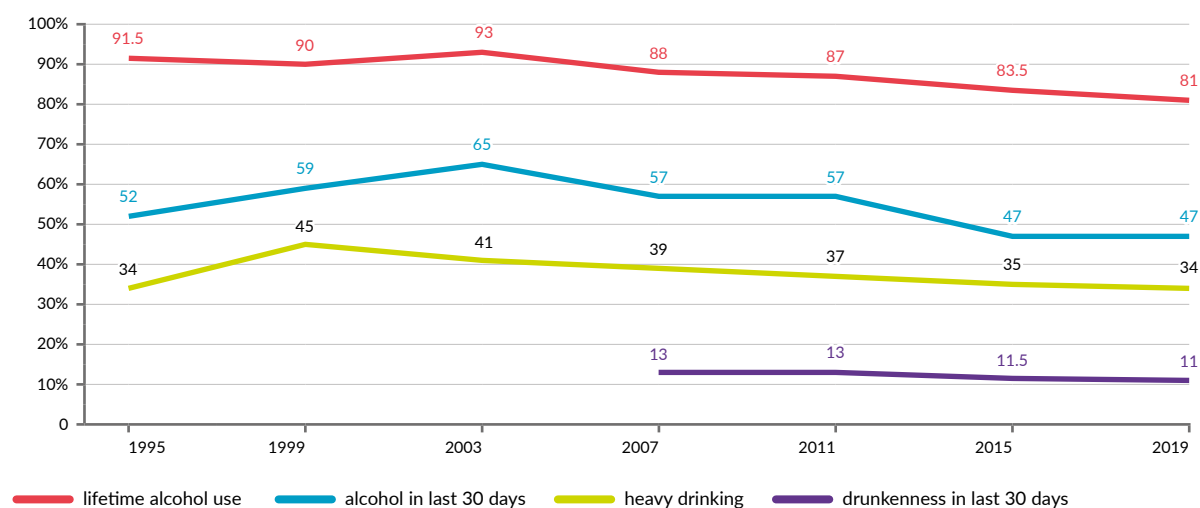
15-year-old boy

A quote from phone calls and emails to 116 111 Helpline for Children and Young People

Alcohol

Figure 1 provides a graphic illustration of trends in alcohol drinking among 15–16-year-old adolescents in Poland. In the second half of the 1990s, an increase in some drinking rates was observed – it is well illustrated by the rates of frequent drinking (drinking in the last 30 days), which increased markedly from 1995 to 2003. Since 2003, there has been a gradual decline in the prevalence of drinking among schoolchildren. The decrease in alcohol consumption can be seen in all the indicators shown in Table 1, namely “lifetime alcohol use”, “alcohol in the last 30 days”, “heavy drinking” (having five drinks on one occasion) and “drunkenness”. These results clearly indicate a lower prevalence of this particular risk behaviour in adolescents. This trend among young people in Poland is consistent with observations for other countries in Europe. ESPAD surveys of schoolchildren from 30 European countries also document a downward trend in drinking alcoholic beverages (Figure 2). This convergence of results suggests the global nature of this change. It is likely linked to the changing lifestyles of modern teenagers and the increasing “digitisation” of their peer contacts. The decrease in drinking rates is also influenced by policies to limit the availability of alcohol to minors, which have been sealed in many European countries in recent years.

Figure 1. Alcohol drinking rates among 15–16-year-old adolescents in Poland in 1995–2019 (%)



Source: Own analysis based on the results of the ESPAD survey (ESPAD Group, 2020).

Table 1. Psychoactive substance use before and during the COVID-19 pandemic. Data from the last two rounds of the Mokotów survey conducted in Warsaw among 15-year-old students (percentages)

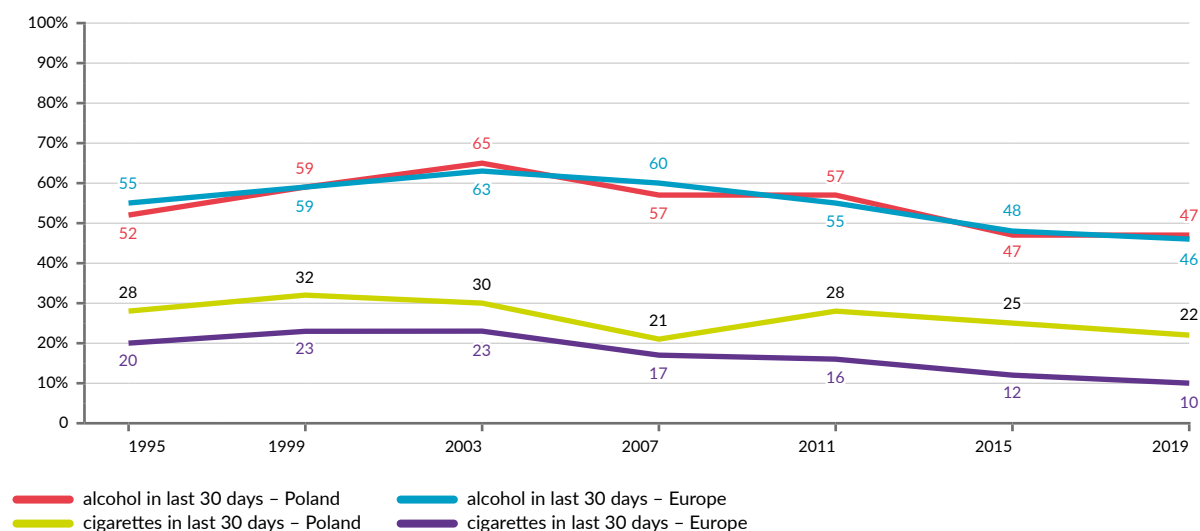
	Before the pandemic (2016; percentage)	During the pandemic (2020; percentage)
Smoking traditional cigarettes (at least once a year)	23.8	13.5*
Smoking traditional cigarettes (daily)	6.5	2.5*
Using e-cigarettes (at least once a year)	No data	16.7
Using e-cigarettes (daily)	No data	2.3
Drinking alcohol (at least once in last 30 days)	35.6	20.6*
Getting drunk (at least once in last 30 days)	15.1	5.4*
Using drugs (at least once in the last year)	14.9	5.8*
Use of tranquillisers/sedatives (at least once in the last year)	19.2	14.4*

* $p < 0.05$.

Source: Pracownia Pro-M, IPiN (unpublished data)³.

³ The 2020 Mokotów study was carried out within the framework of the Institute of Psychiatry and Neurology (IPiN) statutory project for 2020–2023. The study was conducted by the research team of the Pro-M Laboratory: Krzysztof Bobrowski, Jakub Greń, Krzysztof Ostaszewski (leader) and Agnieszka Pisarska.

Figure 2. Rates of drinking alcohol and smoking cigarettes among 15–16 year old adolescents in Poland in 1995–2019 in comparison with the results obtained in 30 European countries included in ESPAD surveys (%)



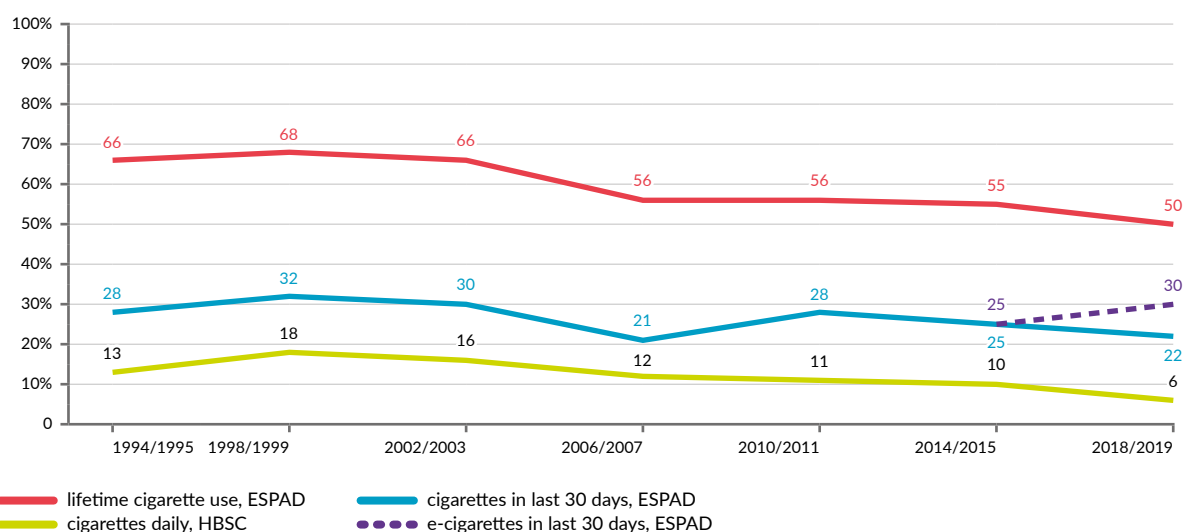
Source: Own analysis based on the results of the ESPAD survey (ESPAD Group, 2020).

Cigarettes and e-cigarettes

Figure 3 provides a graphic illustration of trends in cigarette smoking among 15- to 16-year-old adolescents in Poland. As in the case of alcohol, the survey results clearly indicate a gradual decline in the prevalence of smoking among schoolchildren. Still, Polish adolescents continue to smoke cigarettes more often than the European average of the 30 countries included in the ESPAD survey (Figure 2). In the last 8–10 years, the rates of frequent smoking (smoking in the last 30 days) in our country were almost twice as high as the European average. However, the declining trend in smoking traditional cigarettes does not mean that young people are losing interest for nicotine as a psychoactive substance. A sizable group of schoolchildren are also using e-cigarettes. In 2019 30% of Polish teenagers aged 15–16 had used e-cigarettes in the 30 days prior to the survey. Based on the current results, we are unable to assess trends in this area, as earlier rounds of ESPAD surveys did not ask about e-cigarette use. We have to wait until the next round of surveys, scheduled for 2024, to assess them.

The decline in smoking rates is undoubtedly a consequence of changes in social attitudes toward this habit. It is less socially accepted than it was in the 1990s and during the communist times. Public attitudes averse to smoking go hand in hand with the legislative changes that restrict the freedom to smoke in public places and allow prices for tobacco products to continue to rise.

Figure 3. Rates of smoking cigarettes and e-cigarettes among 15–16 year old adolescents in Poland in 1995–2019 (%)



Source: Own analysis based on the results of the ESPAD (ESPAD Group, 2020) and HBSC surveys (Mazur and Małkowska-Szcutnik, 2018; Woynarowska and Mazur, 2012).

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Once with friends we decided to drink some alcohol before lessons. Unfortunately, someone noticed that we were drunk, and the police came to the school. I am very scared of what will happen next. My parents are very angry with me, and I really regret that.

16-year-old girl

A quote from phone calls and emails to 116 111 Helpline for Children and Young People

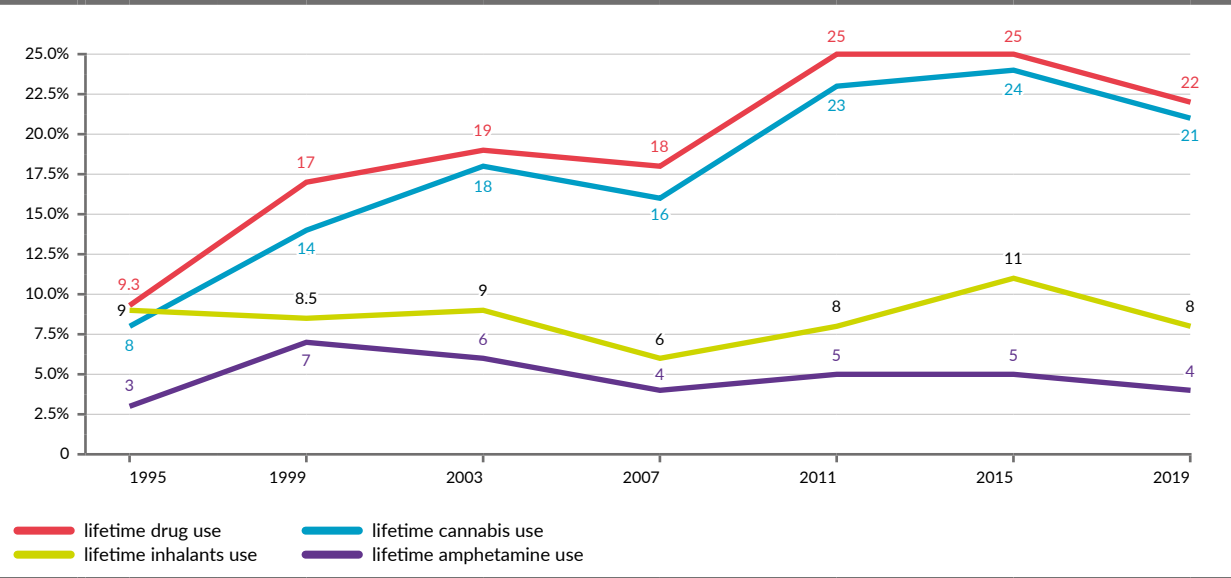
Drugs and other substances

Figure 4 provides a graphic illustration of trends in drug use among 15–16 year-old adolescents in Poland. It shows that for about 20 years, i.e. from 1995 to 2015, the rates of use of any drugs were on the rise (with the exception of 2007, when there was no increase in the rate). The upward trend in drug use was mainly influenced by an increase in the prevalence of the use of cannabis products (marijuana and hashish), which are drugs by far the most commonly used by young people. It is worth noting that the solid line illustrating changes in the use of cannabis preparations has almost exactly the same shape as the line indicating changes in the use of any drugs. The increase in the prevalence of cannabis use is probably related to changes in public sentiment and attitudes toward this drug. It is hard not to notice trends and real efforts around the world to decriminalize or legalize cannabis use. However, in the most recent measurement of the ESPAD survey, that is in 2019, there was a decline in Poland in the use of both any drugs and cannabis preparations. A break in the trend in 2019 can also be noticed in the rates of inhalant use and a mildly marked decline in amphetamine use. It is worth noting, however, that between 2011 and 2019, the prevalence of use of any drugs and cannabis preparations was higher in Poland than the European average by about 4–5 percentage points (Figure 5).

A certain differentiator of Polish adolescents, which has persisted throughout all years of observation under the ESPAD project (1995–2019), is the high rate of use of tranquillisers or sedatives. In 2019, 15% of Polish adolescents aged 15–16 had used such drugs at least once in their lifetime

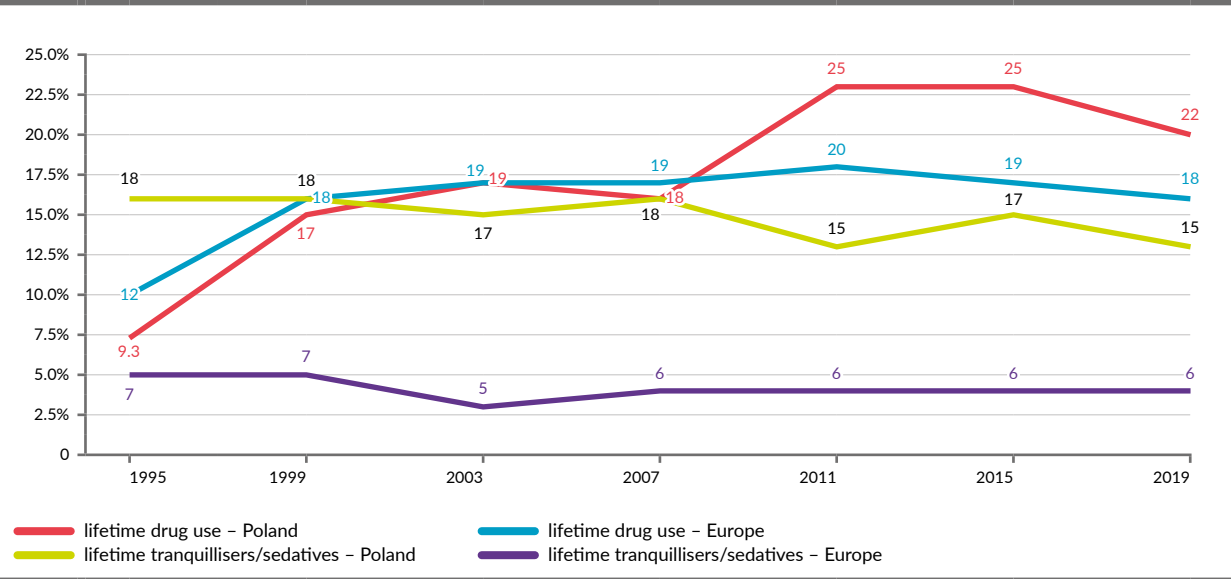
without a doctor's prescription. This rate is almost three times higher than the European average of the 30 countries participating in ESPAD surveys (Figure 5).

Figure 4. Drug use rates among 15–16 year old adolescents in Poland in 1995–2019 (%)



Source: Own analysis based on the results of the ESPAD survey (ESPAD Group, 2020).

Figure 5. Rates of using drugs and tranquillisers/sedatives among 15–16 year old adolescents in Poland in 1995–2019 in comparison with the results obtained in 30 European countries included in ESPAD surveys (%)



Source: Own analysis based on the results of the ESPAD survey (ESPAD Group, 2020).

Adolescent risk behaviour and the COVID-19 pandemic

In March 2020, after the World Health Organization declared the state of COVID-19 pandemic, governments in many countries, including Poland, introduced a number of preventive restrictions on public and social life. This was to stop or reduce transmission of the virus and prevent infections. Schools, cinemas, theatres, cafes and sports fields were closed, freedom of movement was restricted and free access to public institutions was radically curtailed. These restrictions changed peoples' daily functioning and had a major impact on their wellbeing. Among the factors that may have influenced the behaviour of adolescents, including their risky behaviour, were: reduced opportunities to spend time out of home, disruption of the educational process at school, a significant reduction in physical activity and isolation from direct contact with peers. Peer contacts have largely shifted to distance learning and social media. How has this affected adolescents' risky behaviour? I will try to answer this question using the results of the Mokotow study and CBOS surveys conducted among schoolchildren. The cyclical nature of both of these research projects makes it possible to use their results to compare the prevalence of adolescent risk behaviour before and during the pandemic.

The Mokotow study aims at monitoring risky behaviours and mental health problems among 15-year-old schoolchildren from Warsaw. The surveys have been conducted at four-year intervals since 1984 (Ostaszewski, 2017b). As it happened, their latest round coincided with the pandemic – it was conducted in November and December 2020, when the schoolchildren had 8–9 months of pandemic experience behind them. This was a period of distance schooling and far-reaching restrictions on public life. Vaccination against COVID-19 was not yet available. A year later, in the autumn of 2021, another CBOS survey on youth attitudes and behaviour was commissioned by the National Bureau for Drug Prevention. The survey took place in the second year of the pandemic, when COVID-19 vaccination became available and when many restrictions were lifted, including the return of students to residential schooling.

The CBOS surveys are conducted on a nationwide sample of students in the final grades of secondary school, i.e. among 18- to 20-year-olds (Grabowska and Gwiazda, 2022). Like the Mokotow survey, they were used here to compare the prevalence of risky behaviour before the pandemic (2018 survey) and during the pandemic (2021 survey). The citation of these results thus provides an important addition to our knowledge of changes in the prevalence of risky behaviours in the oldest age group of school youth.

Substance use

Typical risk behaviours of adolescents include the use of psychoactive substances, i.e. smoking traditional cigarettes, using e-cigarettes, drinking alcohol, and using drugs and psychoactive medications. The use of psychoactive substances is associated with many risks to health, safety and proper psychosocial development. Among them are: social (e.g. in relationships), health-related (e.g. poisonings, overdoses, infections, injuries and bodily harm, mental disorders, addictions), cognitive and emotional (impairment of memory, attention and other cognitive processes, difficult emotional experiences, symptoms of mental disorders), financial (e.g. expenses on psychoactive substances) and legal (e.g. offences and petty offenses committed "under the influence", criminal liability and conflicts with the law, especially when using and acquiring illegal substances).

A comparison of the results of the 2016 and 2020 Mokotów surveys indicates that the use of all types of psychoactive substances (nicotine, alcohol, drugs and psychoactive medications) among Warsaw 15-year-olds decreased markedly during the pandemic. The largest decreases were observed in the prevalence of daily cigarette smoking and in the rates of drunkenness and drug use (Table 1). Substance use declined to a similar extent among girls and boys, with the exception of tranquillizers/sedatives. In their case, a significant decrease in use was recorded only among girls. The rates of medication use among boys did not change significantly during the pandemic.

Based on the results of the Mokotów survey, it was not possible to assess changes in e-cigarette use, as it was not asked about in the 2016 survey. It is interesting to note that in 2020 the rate of daily e-cigarette use was similar to that of traditional cigarette smoking (about 2.5%), while at the same time the rate of occasional e-cigarette use (about 17%) was about 3 percentage points higher than the rate of occasional smoking of traditional cigarettes (13.5%; Table 1). These results suggest that, to a large extent, the use of e-cigarettes among adolescents has equalled the prevalence of traditional smoking, as confirmed by the results of the nationwide ESPAD 2019 survey (Sierosławski, 2020).

A comparison of the results of the 2018 and 2021 CBOS surveys is summarized in Table 2, indicating that during the pandemic there was a marked decrease in frequent beer and wine consumption among 18–20-year-olds. There was also a decrease in drug use by 3 percentage points (pp), down from 16% to 13%. At the same time, no significant changes were found in the rates of cigarette smoking and drinking strong alcoholic beverages (vodka). The research carried out in the oldest age group of school youth indicates a decrease in some indicators of psychoactive substance use during the pandemic, but is not as unambiguous in its meaning as the results of the Mokotów study conducted in a group of 15-year-olds. In interpretation, it is worth taking into account the time of the study and the age of the subjects. The Mokotów survey was carried out in the autumn of 2020, when heavy restrictions on social contact related to the pandemic were in effect. The CBOS survey was conducted later (autumn 2021), when most of the onerous restrictions on social contact had already been lifted. In addition, it is worth remembering that the mobility restrictions applied to young people up to 16 years of age, so they did not affect 18–20-year-olds, who were able to contact their peers despite the pandemic.

Table 2. Psychoactive substance use before and during the COVID-19 pandemic. Data from two nationwide CBOS surveys of 18–20-year-old school students (percentages)

	Before the pandemic (2018; percentage)	During the pandemic (2021; percentage)
Smoking traditional cigarettes (only on special occasions)	21.0	19.0
Smoking traditional cigarettes (regularly)	18.0	20.0
Drinking alcohol beverages (at least once in last 30 days):		
beer	74.0	66.0
wine	43.0	37.0
vodka	62.0	62.0
Getting drunk (at least once in last 30 days)	44.0	43.0
Using drugs (at least once in the last year)	16.0	13.0

Source: Malczewski, 2022.

Violent and aggressive behaviours

Violence and aggression are often considered in terms of antisocial behaviour, which is understood as violating the norms of social life or the rights of others (Farrington, 2005). Some of the most common antisocial behaviours among adolescents include bullying and cyberbullying, shoplifting and other misappropriation, destruction of public or other people's property, and cruelty to animals. Violence can have very serious consequences for the mental health of those affected. It can be for them a source of anxiety disorders, mood disorders and suicidal thoughts or attempts. Incidental fights or theft of items of little value happen to many people during adolescence and are considered transient "antisocial incidents" in the developmental process. However, these behaviours sometimes escalate and, for some people, take the form of a recurring pattern of behaviour that disrupts the young person's normal functioning at home or school. In such cases, the behaviours become a serious educational or social problem that requires educational intervention and sometimes even rehabilitative interventions in inpatient centres for socially maladjusted youth (Ostaszewski et al., 2019).

The prevalence of violent and delinquent behaviours among adolescents recorded in the last two rounds of the Mokotów survey is presented in Table 3. The results clearly indicate that among 15-year-old adolescents from Warsaw during the pandemic, there was a marked decrease in the percentages of all types of violent behaviours studied. Among the most prevalent were theft of things or money (about 29% before the pandemic and 18% during the pandemic) and using physical or psychological violence (more than 20% before the pandemic and about 12% during the pandemic). In interpreting these results, it is important to take into account that distance learning naturally reduced the possibility of peer victimisation and other violent behaviours at school (with the exception of cyberbullying).

Table 3. Violent and delinquent behaviours – at least once in the last year. Data from the last two rounds of the Mokotów survey conducted in Warsaw among 15-year-old school students (percentage of answers *at least once in the last year*)

	Before the pandemic (2016; percentage of answers <i>at least once in the last year</i>)	During the pandemic (2020; percentage of answers <i>at least once in the last year</i>)
Intentional breaking or damaging of other people's property	12.7	7.2*
Stealing property/money	28.7	18.3*
Intentionally hitting or injuring someone	21.7	12.4*
Engaging in cyberbullying, that is, regularly harassing a colleague using the internet or smartphones in such a way that it was difficult for him/her to defend himself/herself	14.5	10.1*
Engaging in physical or psychological violence against other students on or near school grounds	24.1	11.4*
Any violent behaviour from the above	51.6	36.4*

* $p < 0.05$.

Source: Pracownia Pro-M, IPiN (unpublished data).

The prevalence rates of persistent cyberbullying among 15-year-olds from Warsaw were quite high (14.5% before the pandemic and about 10% during it). Interestingly, the prevalence of this form of violence did not increase during the pandemic. On the contrary, there was a decrease in its use, although in the 2020/21 school year, adolescents mainly interacted via instant messaging on a daily basis. These results suggest that the pandemic threat and the associated restrictions have contributed to a reduction in violent and delinquent behaviour among 15-year-old students. This is evident when considering the rate of any violent behaviour in the last year (about 52% before the pandemic vs. about 36% during the pandemic). The decrease in the prevalence of violent and delinquent behaviour was more or less equal among 15-year-old girls and boys.

The prevalence of violent and delinquent behaviour based on the 2018 and 2021 CBOS surveys is compared in Table 4. The results of this comparison are inconclusive. The prevalence of some violent behaviours has increased slightly (e.g. exclusion, sending offensive text messages), others have decreased (e.g. publishing humiliating information, photos/videos, stealing money/things), and still others have not changed in number (e.g. sexual harassment). The overall rate of any such behaviour decreased by 3 pp in the pandemic, from 42% to 39%. Thus, the results of the CBOS survey tend to indicate a stabilization of school violence rates and a return to the pre-pandemic situation.

Table 4. Violent and delinquent behaviours. Data from two most recent CBOS surveys of 18–20-year-old school students (percentage of answers *at least once in the last year*)

	Before the pandemic (2018; percentage of answers at least once in the last year)	During the pandemic (2021; percentage of answers at least once in the last year)
Exclusion, rejection by other students	24.0	26.0
An offensive text message or abusive instant message from any student at your school	10.0	13.0
Publishing humiliating information or photos/videos on the internet	10.0	6.0
Stealing money or an item at school	12.0	9.0
Being hit or beaten by your classmates or a student from another class	7.0	6.0
Sexual harassment at school (e.g. touching, stripping)	3.0	3.0
Use of violence by colleagues to extort or obtain something e.g. money	6.0	5.0
Any violent behaviour from the above	42.0	39.0

Source: Scovil, 2022.

Gambling and other behavioural addictions

Behavioural addictions include a broad group of behavioural disorders or disorders of the sphere of habits and drives. Their most well-known examples are problem gambling and internet addiction. These behaviours are associated with damage to adolescents' mental health and social functioning. Loss of control over gambling is associated with many health, personal and social harms. Addiction often leads to the development of depression and suicidal behaviour, and can foster criminal behaviour (Silczuk and Habrat, 2017).

Data on the participation of 15-year-old adolescents in gambling are presented in Table 5. The results clearly indicate that the pandemic period contributed to a lower prevalence of all types of gambling. The most common form of adolescent participation in gambling was popular number games (e.g. Lotto). Young people also played cards or other games for money quite frequently. The overall gambling prevalence rate (participation in at least one gambling game in the last year) halved during the pandemic period, from about 37% to about 18%. This reduction equally affected both sexes, although the prevalence of gambling participation is much higher among boys. A similar trend is suggested by the results of the 2021 CBOS survey, which shows a 10 pp lower interest in gambling among 18- to 20-year-olds compared to the 2018 survey. (down from 51% to 41%). However, the results of the CBOS survey show that the pandemic has not

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A few years ago, friends persuaded me to try drugs. Since then, there have been no more situations like that, and I no longer have contact with them. Still, I'm all the time worried that someone might find out and that it could affect my future.

17-year-old boy

A quote from phone calls and emails to 116 111 Helpline for Children and Young People

reduced the number of gamblers at risk of gambling addiction (this data is not shown in Table 5). In both 2018 and 2021, these “risky gamblers” made around 6–7% in the group of surveyed students of secondary school final grades (Gwiazda, 2022).

Table 5. Gambling in the last year. Data from two rounds of the Mokotów survey conducted among 15-year-old school students in Warsaw, percentages

	Before the pandemic (2016; percentage)	During the pandemic (2020; percentage)
Using gambling machines	8.6	4.1*
Playing LOTTO or other lotteries	21.5	7.2*
Betting money at bookmakers (sports or other)	8.7	3.5*
Playing cards, dice or other games for money (face to face or online)	13.5	6.9*
Participating in competitions or games where participation is paid by telephone	3.0	1.2*
Spending money on other types of gambling than those listed above	8.5	5.1*
Participation in at least one of the above games	36.8	17.8*

* $p < 0.05$.

Source: Pracownia Pro-M, IPIŃ (unpublished data).

Risky behaviour in the digital world

The world of cyberspace, the internet and computer games have become part of the everyday life of today's adolescents. The internet enables adolescents to satisfy many important developmental needs, including the need to maintain relationships with peers, the need for achievement or the need for information. Computer games exercise eye-hand coordination, develop strategic thinking, provide entertainment and thrills. However, excessive use of the internet and computer games involves a risk of losing control, an inability to use them rationally and has a negative impact on other spheres of life (family, school and peers). During the pandemic, when adolescents fulfilled their compulsory schooling remotely, online use became even a necessity, exacerbating the risk of excessive, unhealthy contact with cyberspace (Bigaj and Dębski, 2020).

Data on 15-year-olds' participation in the digital world is presented in Table 6, which shows that, in 2020 compared to 2016 data, there was an increase of approximately 8 pp in the number of 15-year-olds who spent at least 5 hours per day on various extracurricular online activities. This increase did not include time spent on online lessons, which was counted separately. Experts emphasise that time spent online is one of the main factors that increase the risk of internet use disorders (Bigaj and Dębski, 2020). The results of the Mokotow study indicate that among Warsaw 15-year-olds,

the prevalence of risky patterns of internet use increased by 2–3 pp during the pandemic. High risk (5–8 symptoms of internet addiction) was demonstrated by around 6% of Warsaw 15-year-olds, while moderate risk (3–4 symptoms) by approximately 15% (in 2016, about 5% and about 13%, respectively). Based on the results of the most recent CBOS survey, it is estimated that approximately 5% of 18–20 year olds exhibit symptoms of internet addiction and 26% are characterised by moderate risk of addiction (Feliński and Omyła-Rudzka, 2022).

Table 6. Risky behaviour in the digital world. Data from two rounds of the Mokotów survey conducted in Warsaw among 15-year-old school students (percentages)

	Before the pandemic (2016; percentage)	During the pandemic (2020; percentage)
Number of hours per day spent using the internet		
1–2 hours	35.5	29.8*
3–4 hours	27.9	28.7
5 or more hours	16.4	24.2*
Risky internet use		
5–8 symptoms of internet addiction	4.8	6.3
3–4 symptoms of internet addiction	12.8	15.3
Number of hours per day spent on playing computer games		
1–2 hours	20.5	23.2
3–4 hours	8.2	16.7*
5 more hours	5.6	9.6*

* $p < 0.05$.

Source: Greń et al. (in print).

The results of the Mokotów study indicate that during the pandemic, adolescents spent significantly more time not only on (extracurricular) internet use, but also on computer games. Approximately 10% of 15-year-olds played them 5 hours a day or more, and almost 17% played 3–4 hours a day (Table 6). These high rates were “earned” mainly by boys, who clearly play screen games more often than girls. More time in front of the computer meant, at the same time, a decrease in teenagers’ time spent on other forms of leisure activity. The results of the Mokotów study, also indicate that students spent less time out of home and outdoors as well as reading books for pleasure (Greń et al., in print).

Symptoms of depressed mood that induce suicidal behaviour

Suicidal behaviour is a process or sequence of risk behaviours in which suicidal thoughts (ideation) and plans play an important role. Ideation starts a process that, in a crisis situation or other unfavourable circumstances, may result in a suicide attempt or lead to a suicidal death. Suicidal thoughts are fantasies and desires of one’s own death. They can take an active form, when accompanied by plans to attempt suicide, or a passive form, when it is a desire to be in a situation of serious danger (Popek, 2017). The most common mental health disorders accompanying suicidal behaviour in adolescents include depressive disorders, behavioural disorders and substance use disorders (alcohol, drugs or medication).

Data on the prevalence of depressed mood symptoms and suicidal thoughts in 15-year-old adolescents are presented in Table 7. A comparison of the 2016 and 2020 results clearly shows that among 15-year-old adolescents from Warsaw the prevalence of all four depressed mood symptoms (sadness, loneliness, depression and crying) increased markedly during the pandemic. These increases were “earned” by girls, who exhibit a significantly higher prevalence of depressed mood symptoms. The sense of loneliness increased to the greatest extent, by approximately 14 percentage points (from 19.6% to 33.4%) in the entire study group. This marked deterioration in the mood of adolescents may largely account for the rather high prevalence of suicidal thoughts among 15-year-olds. Approximately 25% of adolescents had suicidal thoughts at least once or twice in the last year before the survey. Based on the results of the 2020 Mokotów survey, it is not possible to compare the prevalence of suicidal thoughts with earlier data, as neither in 2016 nor earlier was such a question asked. The studies to which these results can be compared are from the early 2000s. At that time, in a comparable age group, around 19% of young people reported having had suicidal thoughts in the year before the survey (Ostaszewski, 2018). The most recent CBOS survey of 2021, which also included a question about suicidal ideation (worded slightly differently), shows that

16% of young people in the final year of secondary school had suicidal thoughts *often* or *very often* (Roguska, 2022). As in the Mokotów study, also in the CBOS survey there are, unfortunately, no data to compare the prevalence of suicidal thoughts with the pre-pandemic period.

Surveys, both under Mokotów and CBOS studies, indicate that the pandemic period is conducive to significant risk factors for suicidal behaviour in young people. Hard data in this regard is provided by statistics of the National Police Headquarters (Policja, 2022), which show that in 2021 there was a sharp increase in the number of police-recorded suicide attempts among teenagers. Between 2017 and 2020, the prevalence of suicide attempts remained between 600 and 850 per year, while in 2021, 1,369 were recorded. It is important to bear in mind that the number of suicide attempts by teenagers recorded by the police is only a small fraction of these extremely dangerous behaviours. Their true number is difficult to estimate. On the basis of the EZOP II survey carried out before the pandemic, it can be conservatively estimated that around 14,000 adolescents aged 12–17 years have had a suicide attempt in their lifetime (Ostaszewski et al., 2021).

Table 7. Mental state that may induce self-harming behaviour. Data from two rounds of the Mokotów survey conducted in Warsaw among 15-year-old school students (percentages)

	Before the pandemic (2016; percentage)	During the pandemic (2020; percentage)
Symptoms of depressed mood all the time or frequently in the last 7 days		
I was sad	30.9	39.0*
I felt lonely	19.6	33.4*
I was depressed	30.3	35.4*
I felt like crying	19.3	27.6*
Suicidal thoughts in the last year		
Once or twice	No data	14.2
Sometimes		7.8
Often		3.4
----- At least once or twice		25.4

* $p < 0.05$.

Source: Pracownia Pro-M, IPiN (unpublished data).

Summary

Analysis of long-term trends in substance use among 15- to 16-year-old adolescents in Poland suggests a gradual decline in the prevalence of drinking alcohol and smoking traditional cigarettes. These trends are consistent with those observed among adolescents in other European countries. In 2019, a decrease in the prevalence of drug use was also observed among Polish adolescents. In this case, however, we cannot speak of a clear trend, as a decrease was recorded in only one (the most recent) measurement. We will have to wait for the next surveys to confirm or deny this favourable trend. From the perspective of long-term trends, reports on persistently high levels of use of tranquillisers/sedatives by adolescents in Poland taken without a doctor's prescription are alarming. New phenomena carrying significant risks for young people include the use of e-cigarettes.

The results of empirical studies indicate that changes in the prevalence of risk behaviour of schoolchildren during the COVID-19 pandemic vary depending on the type of behaviour. Firstly, empirical data are available to suggest that the prevalence of adolescent externalizing behaviour decreased particularly during the first year of the pandemic, when distance learning and significant restrictions on school-age adolescents' social contacts were in place. The Mokotów study, which covers the first 8–9 months of the pandemic, shows a marked reduction in the prevalence of risk behaviours such as the use of different types of psychoactive substances, violent behaviour and gambling among 15-year-olds. This marked decrease in prevalence was probably related to a reduction in important risk factors for adolescents' externalising behaviours, in particular negative peer influences, which for adolescents are one of the strongest risk factors (Hair et al., 2009). In this context, it is interesting to ask how rates of these risky behaviours will change in the post-pandemic period. Will they return to pre-pandemic levels? This question will soon be answered by the next rounds of cyclical surveys conducted among 15-year-olds, i.e. HBSC 2022 and ESPAD 2024. The CBOS survey, conducted in autumn 2021 in the oldest age group of school youth, confirmed

a decrease in the prevalence of only some behaviours (mainly the use of certain psychoactive substances). In the case of violent behaviours and gambling, however, it did not provide grounds for finding a decrease or increase in the prevalence. Rather, the results indicate a stabilisation of their prevalence at pre-pandemic levels.

Secondly, the pandemic period was associated with an increase in the number of hours schoolchildren spent in front of a computer for browsing the internet or playing computer games. Time spent in front of a computer screen or mobile device is one of the strongest predictors of problematic internet use or compulsive gaming. Data from the Mokotów and CBOS surveys give grounds to conclude that the pandemic period has contributed to an

increase in risky or problematic use of digital devices by schoolchildren. This is also confirmed by reports of other studies conducted during the pandemic (Pyżalski, 2021).

Finally, survey results suggest that the pandemic period contributed to an increase in youth mental health disorders (internalising problems), which are associated with suicidal behaviour. The results of the Mokotów survey clearly indicate that the prevalence of depressed mood symptoms among schoolchildren increased during the pandemic. This was associated with the occurrence of suicidal thoughts in a significant group of adolescents, as confirmed by both the Mokotów and CBOS surveys. These trends translate into the number of suicide attempts among adolescents as observed by the Police.

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