

ORIGINAL PAPER

# COVID-19 lockdown and domestic violence in Poland – an analysis of crisis helpline and Google data

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## ABSTRACT

**Introduction:** Following the introduction of COVID-19 lockdown, studies have shown an increase in domestic violence in many countries. The aim of the study was to assess the frequency of seeking domestic violence information and support during the initial COVID-19 lockdown (March – April 2020) in Poland.

**Material and methods:** We analysed searches for information on domestic violence on Google and the use of the domestic violence crisis helpline in the lockdown period compared to previous years. Google search terms were selected by the authors of the paper and then the frequency of searches performed in March and April 2020 and in the corresponding months of 2015–2019 were determined using the Google Trends tool. Additionally, we compared the data obtained from the national helpline Blue Line in March – April 2020 vs. the corresponding months in 2019.

**Results:** An increase in the number of reports of domestic violence was observed in comparison to the previous year (+6.9%), with the largest increase in the number of reports by email (+77.7%). At the same time, the number of reports from persons under 18 years old was lower (–48.5%). An increase in reports of both physical and psychological violence was observed. Google Trends data showed an increase in searches for ‘psychological help’ and a decrease in searches for domestic violence and addiction ( $p < 0.05$ ).

**Conclusions:** The presented results highlight a potential short-term increase of domestic violence during COVID-19 lockdown periods, with growing importance of Internet-based tools for seeking help (e-mails, and web search engines to a lesser extent).

## KEY WORDS:

COVID-19, domestic violence, lockdown, children.

## INTRODUCTION

The syndrome caused by the SARS-CoV-2 virus (named COVID-19 disease) rapidly affected thousands of people worldwide and led the World Health Organization (WHO) to declare a pandemic on 11 March 2020 [1]. The situation forced societies to adapt without delay. Not only did people unexpectedly have to face fear for their lives and health and that of their families, but they also

faced a real threat of a deterioration in their material situation, including the loss of their jobs [2]. Reduced income and unemployment are known factors for domestic violence [3, 4] including violence against children [5]. The pandemic period and the resulting changes are also conducive to alcohol abuse [6], which is another factor that can lead to violent behaviour in households [4].

Actions taken by governments to slow and limit the spread of the virus have drastically changed the daily

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lives for many people [7]. Many countries have opted for a 'lockdown' by introducing strict measures restricting the movement and contact of citizens with each other, such as orders to maintain social distance in public spaces, stay at home orders, closure of services, and travel restrictions [7, 8]. However, social isolation to protect against SARS-CoV-2 infection is a phenomenon with significant social, economic, and psychological consequences [9]. Not only does it directly increase the risk of domestic violence, reducing the available and known sources of support for victims [10, 11], but it also helps to conceal the traces of violence from people and organizations outside the household [8]. The extent of domestic violence in Poland is difficult to estimate reliably because the official data are published by Police Headquarters with several months' delay. There is also a lack of short-term (weekly or monthly) data. Hence the use of indirect measures, such as the number of interventions made by crisis helplines or seeking help on the Internet, seems to be a method that is relatively easy and accessible during lockdown. Thus, we hypothesized that there would be an increase in indirect markers of domestic abuse, especially regarding Internet use, during the COVID-19 lockdown. The aim of the study was to estimate the frequency of seeking information about domestic violence-related queries on the Internet, as well as the use of the domestic violence crisis helpline in Poland during the initial months of the COVID-19 lockdown. The authors analysed the period March–April 2020 in comparison to 2019 (helpline data) and 2015–2019 (Internet search data).

## MATERIAL AND METHODS

Analysis of Google search queries and data on reports from the nationwide crisis hotline was performed. The study was descriptive in nature and consisted of analysing cumulative data obtained from Google and the nationwide crisis helpline: Blue Line. Individuals and their behaviour were not identified in the study.

In our work we used free, publicly available tools such as Google Trends and the Blue Line national helpline data. Neither method, as described below, enabled us to precisely characterize the studied group; we were not able to obtain information about the age or gender of people using the helpline and the Google search engine.

### HELPLINE DATA

In Poland, the most important crisis hotline is the Blue Line National Polish Helpline for Victims of Family Violence, which has been in operation since 1995. The line is coordinated by professionals from the Institute of Health Psychology (*Instytut Psychologii Zdrowia*).

The Blue Line is a nationwide, free, 24-hour telephone emergency service for victims of family violence. We have used the data published on their website <https://www.niebieskalinia.pl/>, including the number of first-time reports, the type of violence, and other selected data.

In the analysed period (March – April 2020) 3897 phone calls were reported, while in the corresponding months of the previous year the number of calls was 3646. Victims of violence can also contact the Blue Line by email. In the period March – April 2020, 501 email reports were received vs. 282 received in 2019.

This research was based on publicly available databases. These repositories contain only anonymous data. This kind of database, which was established for public health, does not require review by an ethics committee and so may be used for research without its approval.

### GOOGLE DATA

Using the Google Trends tool (Google Inc., USA, [www.google.com/trends](http://www.google.com/trends)) we wanted to determine the frequency of searches for our selected key words that may be related to risk factors for domestic violence in the months of March and April in 2020 and in the corresponding months in previous years (2015–2019). We decided to analyse only these 2 months in order to exclude possible seasonal variations, so as to take into account primarily the impact of the lockdown strategy on the results obtained with the Google tool.

When conducting the analysis, we used the guidelines for using the Google Trends tool in health sciences, published in PloS One [12]. The list of key words analysed in the study was initially developed during the authors' meeting using a brainstorming technique. The proposed terms were subsequently checked using the KWFinder: Keyword Research and Analysis Tool (Mangools Inc., Slovakia, <https://kwfinder.com/>) to find key words with a significant overall number of searches. Some words were eliminated at this stage due to incomplete analysis results or too little interest online. The final analysis included 7 key words: psychological help (*pomoc psychologiczna*), helpline (*telefon zaufania*), Blue Card (*Niebieska Karta* – popular name for procedure of reporting domestic violence), domestic violence (*przemoc domowa*), alcohol (*alkohol*), alcoholism (*alkoholizm*), and addiction (*uzależnienie*).

The presented results are given in Google relative search volume, a standardized unit introduced by Google and defining *numbers showing how often a word is searched in the highest point of the graph in a given time and region*. A value of 100 indicates the highest popularity of a word, whereas 0 means that the popularity was lower than 1% of the highest value (<https://trends.google.pl>). Data were collected and analysed in the period 1–25 July 2020.

### STATISTICAL METHODS

Data were entered into Excel spreadsheets (Microsoft, USA). Statistical analysis was performed using

the STATISTICA 10.0 software (StatSoft Inc., USA). All the quantitative variables were tested, using the Kolmogorov-Smirnov test, for meeting the criteria of normal distribution (Gaussian distribution). Depending on whether the variable met the normality condition, appropriate statistical tests were applied at further stages. For comparisons between groups the parametric T-test or nonparametric *U* Mann-Whitney test, were used. The level of statistical significance was set at  $p < 0.05$  threshold.

## RESULTS

There was a slight increase in the number of reports of domestic violence by telephone compared to the same period last year, at 3646 vs. 3897 (+6.88%). In addition, nearly double the number of email reports of violence were registered, at 282 vs. 501 (+77.65%). The decrease in the number of reports coming from children was another important change we observed. The number of reports directly from persons under the age of 18 was half of the previous year's level, at 132 vs. 68 (–48.48%) (Figure 1 A).

Violence in general was the main topic of conversation on the hotline with 1100 (2019) vs. 1293 (2020) enquiries, whereas the question about the possibilities to solve the problem of violence was asked 1580 vs. 1617 times, respectively. For both topics we observed increases in the number of enquiries of 17.45% and 2.34%, respectively. We also observed a significant increase in queries about alcohol addiction, at 30 vs. 76 (+153.33%) with a decrease in queries about other addictions at 7 vs. 2 (+71.42%) including drugs, at 4 vs. 1 (–75%) (Figure 1 B).

An increase in the number of reports of both physical (570 vs. 713 [+22.93%]) and psychological violence (980 vs. 1129 [+15.20%]) was observed (Figure 1 C), with a decrease in reports of sexual violence (120 vs. 70 [–41.66%]).

Analysing the data on the duration of violence, the highest increase in acts of aggression was observed in the group of people experiencing violence for a long time (2–10 years), at 67 vs. 258 calls (+285.12%), but the increase in the number of first-time reports of domestic violence is also significant, at 4 vs. 26 (+557.43%) (Figure 1 D).

There was an increase in reports of the current partner being the perpetrator, at 545 vs. 751 (+34.12%), with a reduction in reports of the victims' ex-partner being the perpetrator: 115 vs. 86 (–25.21%) and a slight reduction in reports of parental violence: 335 vs. 325 (–2.98%) (Figure 1 E).

The analysis of Google Trends data revealed a significant increase in searches for *psychological help* ( $p < 0.001$ ) and decreases in searches for *domestic violence* ( $p < 0.001$ ), *alcoholism* ( $p < 0.05$ ), and *addiction* ( $p < 0.05$ ) (Figure 2). No statistically significant difference was found for the frequency of searches for the other analysed key words: crisis hotline, blue card, and alcohol.

## DISCUSSION

During the pandemic, many countries saw a dramatic increase in reports of domestic violence [8, 9]. Police reports from 14 US cities and metropolitan areas show that the number of reported cases of domestic violence increased by 7.5% between March and May 2020 [3]. In Australia, during the lockdown period, Google reported a 75% increase in online searches related to getting help in the situation of domestic violence [13]. The organizations operating online to protect women, children, and adolescents in Brazil are also sounding the alarm about the increase in reported violence in the pandemic era: data collected from 180 hotlines by the Ministry of Women, Family, and Human Rights in Brazil showed a 17% increase in the number of phone calls related to violence against women in March 2020. In Rio de Janeiro, a 50% increase in cases of domestic violence was observed on the first weekend alone, when special precautions, including social distancing, came into effect (data from the Office of the State Public Prosecutor) [14]. A report compiled by the WHO shows that during the pandemic, the frequency of DV helpline calls increased by up to 50% in some countries [15]. However, the increasing number of calls may be the 'tip of the iceberg' as many victims, being close to the perpetrator, do not have the opportunity to report acts of violence to the relevant services [16].

Among those affected by violence, children deserve special attention. According to a study by researchers at Indiana University School of Medicine (Indianapolis, USA), minors are witnesses or participants in 59% of violent incidents that occur in the home [16]. During the COVID-19 lockdown, due to the closure of schools, minors are forced to spend much more time in their – not always safe – homes [15]. Reducing school activities also means disrupting social support networks [15, 17], which further exposes children to a risk of delayed detection of domestic violence. The work published to date on child safety in the COVID-19 pandemic leads to similar conclusions – although the disease is relatively mild in children, minors may be the group most severely affected by the psychosocial consequences of the pandemic [18].

Despite the above, data on domestic violence during the pandemic present conflicting results [10, 19]. On the one hand, more reports of violence in general are observed, while on the other hand, the statistics for children can be entirely different [15]. While concerns are being voiced that the spread of COVID-19 may lead to a secondary pandemic of child neglect and abuse [20], some child welfare organizations have been, paradoxically, reporting a decrease in child abuse or neglect [21]. In their work, Baron *et al.* analysed data on reported child abuse from the Florida Child Abuse Hotline in March and April 2020, the first 2 months of school closures. The number of calls was about 15,000 (27%) lower than expected [22].

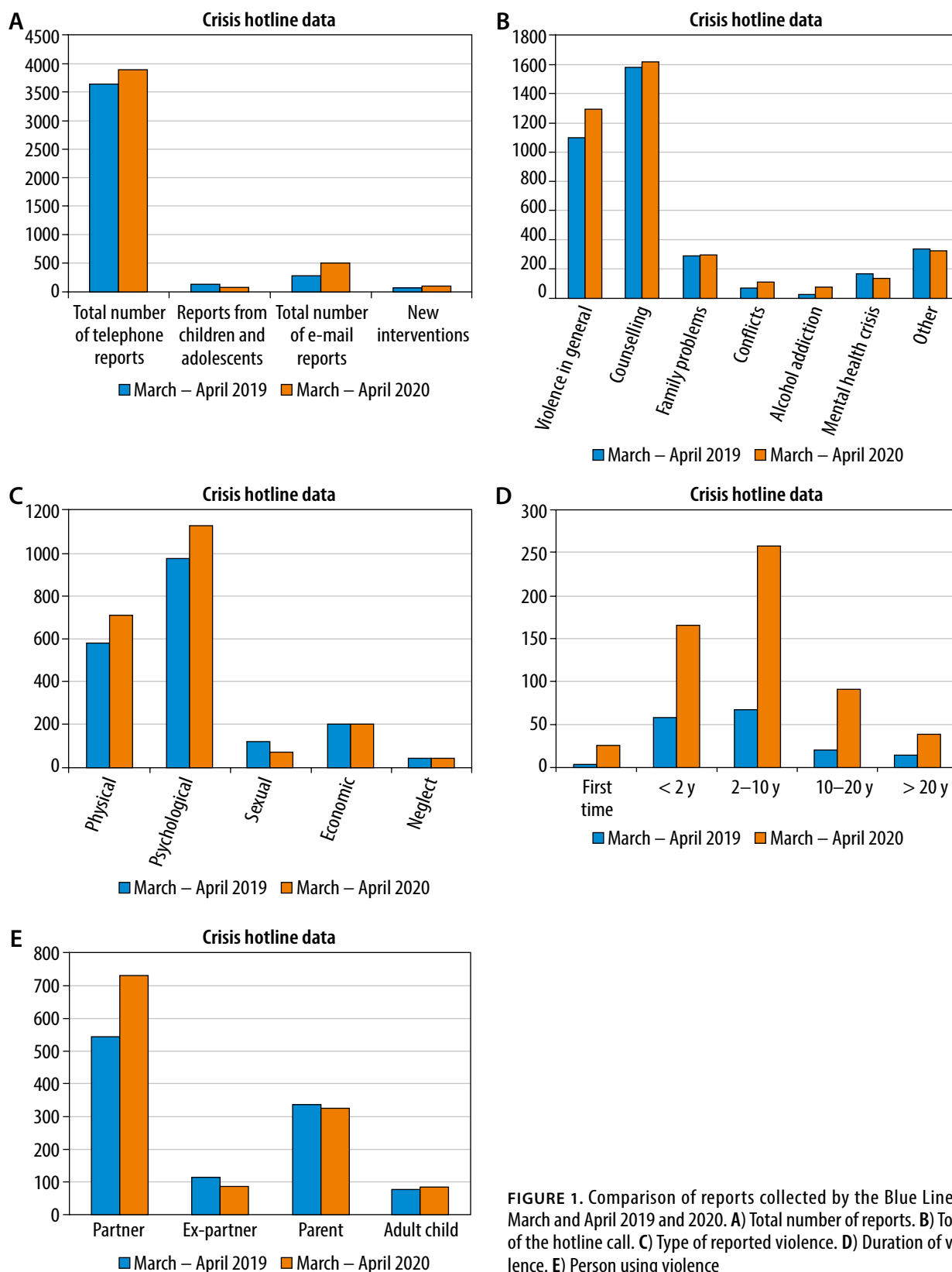


FIGURE 1. Comparison of reports collected by the Blue Line in March and April 2019 and 2020. A) Total number of reports. B) Topic of the hotline call. C) Type of reported violence. D) Duration of violence. E) Person using violence

These data should not give rise to premature optimism and must be interpreted with caution. Indeed, a report prepared by the state child protective services (CPS) shows that almost two-thirds of reports of violence against children in the United States in 2017 came from non-family professionals working with children (education workers, social workers, medical personnel) [23].

In view of the above, there is growing concern that the actual increase in reported violence against children will only occur when they return to school [21].

Humphreys *et al.* in their paper also write about the dangers of school closures and reduced detection of violence involving children, noting that school closures reduce the largest source of reports of violence to CPS [17].

Similar conclusions were reached by the authors of another study analysing data from the United States. They found that school closures (e.g. during holidays) resulted in fewer reports of child abuse, while the number of reports increased at the beginning of the school year by up to 65% compared to holidays [24]. The postponement of medical appointments and treatments due to the pandemic is also not insignificant – as a result, doctors also lose the opportunity to detect the first signs of violence against children [18]. Already, appeals to stay at home and fear for their own health have led to a drop in emergency department visits by a quarter during the UK pandemic [22]. The above data leave no doubt that during a pandemic all professional groups dealing with children should be particularly vigilant with regard to minors. Parents, paediatricians, psychologists, social workers, hospitals, and governmental and non-governmental organizations have a very important role to play in protecting children from the multi-faceted effects of the pandemic [18].

The unprecedented circumstances in which society finds itself may affect not only the number of cases of domestic violence, but also the forms of seeking help when it occurs. The limited opportunities for direct (in-person) contact during lockdown may contribute to the search for an easier-to-hide route of contact with support organizations. It seems that services offering help by phone or email may play a particular role during a pandemic. Canada's Kids Help Phone reported a 112% increase in calls in April 2020 compared to the previous year, while the Childhelp National Child Abuse Hotline operating in Canada and the US reported that calls increased by 20% and text messages by 439% in the period 1–24 March compared to the same period in 2019 [19].

## SITUATION IN POLAND

Due to the increasing number of SARS-CoV-2 cases in Poland in March 2020, the country's authorities decided to close educational institutions until the end of the school and academic year in June 2020. In the autumn, in-person learning in schools and universities was partially resumed, but due to the continuously worsening epidemic situation in the country, on 9 November 2020, educational institutions were again closed and remote education began. The number of new SARS-CoV-2 infections in Poland at that time was 21,713, which was the fifth highest in the world in terms of the daily increase in new infections. The data collected after the first wave of the epidemic left no doubt – the period of isolation and pandemic favours acts of domestic violence [15, 25] and at the same time may hinder their detection [8]. The renewed restrictions on in-person education in Polish schools, in addition to the resulting health and epidemic benefits, therefore raised concerns about its impact on domestic violence and, above all, the possibility of its detection.

A report published in January 2021 by the Polish police showed a slight, 1.23% decrease in domestic violence in

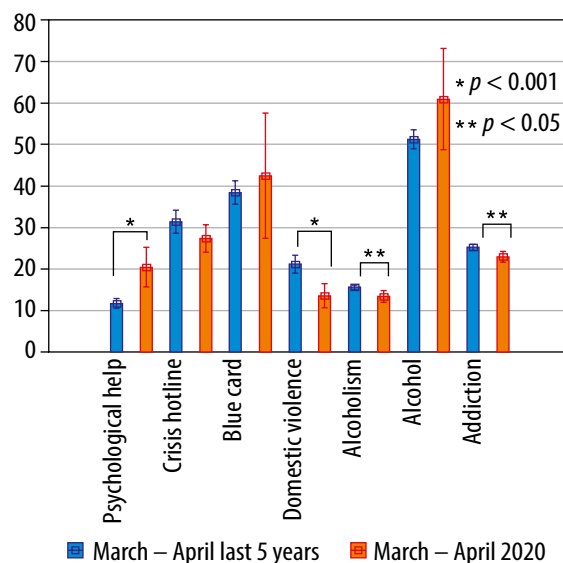


FIGURE 2. Comparison of google relative search volume across queries from March to April in 2020 in comparison to previous years (March – April in 2015–2019)

2020 compared to 2019 (2037 fewer reported cases), while the number of completed Blue Cards fell by 2.3% [26]. This data needs to be interpreted with caution; we must remember that victims of domestic violence during lockdown may have greater difficulty reporting acts of violence due to being close to the perpetrator [21]. There may also be a data bias because Police publish only yearly statistics, without any data for shorter periods; therefore, some transient trend changes may not have been clearly observed.

Further data on the situation in Poland comes from the foundation *Dajemy Dzieciom Siłę* (translated as “we empower children”), the largest non-governmental organization that deals with children experiencing psychological, physical, and sexual violence. In September, the foundation *Dajemy Dzieciom Siłę* conducted a survey of 500 teenagers aged 13–17 years; the data collected concerned the lockdown period (from mid-March to the end of June) [27]. The published report shows that almost every ninth (10.8%) minor experienced violence from close adults; it was mainly psychological violence (experienced by 9.2% of respondents, and physical violence by 3.2% of respondents) [27]. In addition, 1 in 20 respondents (5.4%) witnessed violence at home in the period from mid-March to the end of June 2020 [27].

The scale of acts of family violence in the lockdown era and the inconclusive results obtained so far suggest that a continuous further study of this problem is necessary also in Poland. The data obtained by the authors in this study do not differ significantly from the results of other studies on domestic violence during the pandemic. The analysis of the data from the Blue Line showed an increase in the total number of violence-related calls and emails. The nearly twofold increase in the number of reports of violence by email seems to be particularly significant. The advantage of this way of contact is the

ease of hiding it from other household members; this also applies to minors. The epidemic situation and the limitation of school activities forced young people to study every day using a computer, which may make it easier for them to contact organizations providing help to victims of violence by email. Another important finding of our study is that the number of reports coming from minors has decreased by half. However, as mentioned above, it can be assumed that despite the recorded decrease, the actual number of acts of violence against minors has not decreased, but only their reporting. A similar decrease was also observed by other authors [15, 22].

Current partners of the victims made up the largest group of reported abusers, and their proportion among all reported abusers was higher than in 2019. Thus, the slogan *stay home, stay safe* repeated in the media acquired a new meaning – home is not always a safe place, especially for families already affected by violence. However, not only people struggling with domestic violence in the past found themselves in a difficult situation.

It is noteworthy that first-time reports of domestic violence have revealed a high, 6-fold increase in incidents of domestic violence.

We must be aware that only quick reactions and increased vigilance on the part of the people closest to potential abuse victims can protect them from the negative and often dangerous consequences of long-term confinement under the same roof as the perpetrator. Any sign that domestic violence may be occurring should be reported immediately. With this knowledge we are obliged to constantly raise public awareness of the increased risk of incidents of domestic violence. Otherwise, the problem may be pushed to the margins of society in the face of new threats and problems (new illness, fear for health and life, financial difficulties, fear of long-term economic consequences of a pandemic).

Alcohol consumption related to domestic violence was another important aspect of the study [4]. Other studies have shown that the pandemic period favours the purchase and consumption of more alcohol [6, 20, 28]. Our results show that the number of queries about alcohol dependence was higher. At the same time, a decrease in queries about other addictions, including drugs, was observed. We can speculate that the pandemic period and the imposed social distancing made face-to-face encounters more difficult and thus reduced access to stimulants other than alcohol.

An analysis of the Google Trends data revealed an increase in searches for *psychological help*, but at the same time the number of searches for *domestic violence*, *alcoholism*, and *addiction* decreased. While the increased interest in psychological help seems understandable in view of the examples cited above from other works, it is difficult to interpret unequivocally the decreases in the number of searches for other key words.

There is a clear, although statistically insignificant, increase in interest in the Blue Card procedure, and thus

in reporting domestic violence, even though the search for information on domestic violence itself has decreased. At the same time, the number of searches for crisis hotlines decreased, even though, as we proved on the example of the Blue Line and data from other countries [20], helplines recorded a significant increase in reports in the period under study [19]. This is a very interesting phenomenon, possibly indicating a certain type of inverse relationship. Similar observations were already made regarding searches for information on suicides in Poland – the fewer the number of queries in Google, the greater the number of suicide deaths [29].

Also worrying is the decrease in interest in the topic of addiction and alcoholism during conversations with Blue Line staff, with a simultaneous increase (although not statistically significant) in searches for information about alcohol. It is possibly an indirect signal indicating an incipient problem with increased abuse of this substance in the population, combined with a decrease in interest in the negative consequences of immoderate alcohol consumption and a decrease in interest in addiction therapies (which may be difficult to access during lockdown) [30, 31].

In view of the above data and the fact that in-school teaching is limited in many countries, it seems necessary to adapt the forms of aid available to the potential victim's constraints and opportunities, especially if they are experiencing violence in their own home. Victims of domestic violence must have permanent, rapid, and easy access to forms of assistance that go unnoticed by the perpetrators. Pandemic times may call not only for support for existing organizations dealing with violence, but also for an active search for new forms of assistance, with an emphasis on remote forms (online consultation, helplines, telephone applications). Nowadays, an increasing number of children and young people have their own smartphones, and free phone apps seem to be a good solution, which could facilitate not only easy reporting of violence, but even continuous monitoring of the situation in homes.

#### LIMITATIONS OF THE STUDY

The authors of the paper are aware of the limitations of their chosen methods as well as of the relatively short observation period (March – April 2020 vs. the corresponding months in 2019 in the case of data from the Blue Line and 2015–2019 in the case of data from Google Trends). Although the initial assumption of the study was to only investigate the phenomenon of violence affecting persons under 18 years old, the methods chosen by the authors do not allow us to characterize the groups of people who used the Blue Line and the Google search engine – we do not know their age, gender/sex and, in the case of data from Google Trends, also their specific search intentions. When selecting the key words to be analysed in Google Trends, the authors were aware that some of the key words have a very general meaning and may not

sufficiently overlap with the key words selected by people using the Google search engine. At the same time, the authors are aware that the method they have chosen, using the Google Trends tool, which does not allow for a thorough analysis of the surveyed group, might not be the optimal tool for obtaining answers to the questions posed by the authors. Blue Line is a popular and easily accessible form of help for people experiencing domestic violence. Unfortunately, the authors of the paper were not able to obtain from Blue Line the answers to questions that would enable a detailed analysis of the data collected and published by the Blue Line. We have no information as to which of the reported forms of violence concerned only children and which concerned adults, nor do we know what criteria were used to classify reports into different categories, for example *mental crisis*.

## CONCLUSIONS

There is a strong suspicion of a short-term increase of domestic violence during the COVID-19 lockdown period (March – April 2020) in Poland. Crisis hotline data and (with much less clarity) search volumes may be promising tools for indirect reporting of the real-time scale of domestic violence. E-mails and web search engines are becoming important tools of seeking help/information related to domestic violence.

## DISCLOSURE

The authors declare no conflict of interest.

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