

About the Advisability of Training Intern Doctors in Public Health, Especially About the Problem of Alcoholism and Its Effects

Jerzy T Marcinkowski^{1*}, Jacek Kotuła², Mariusz P Witczak³, Paulina Rosińska⁴, Krzysztof Kotuła⁵ and Zofia Konopielko⁶

¹Department of Hygiene and Epidemiology, Collegium Medicum, University of Zielona Góra, Poland

²Wrocław Medical University, Department of Dentofacial Orthopedics and Orthodontics, Poland

³Department of Internal Diseases, Diabetology and Endocrinology, University of Zielona Góra, Poland

⁴Institute of Psychology, Faculty of Christian Philosophy, University of Cardinal Stefan Wyszyński, Poland

⁵5th-year student of the Faculty of Medicine of the Pomeranian Medical University in Szczecin, Poland

⁶Nephrology Clinic, Nephrology and Hypertension Clinic, Institute "Pomnik Centrum Zdrowia Dziecka" Warsaw, Poland

*Corresponding author: Jacek Kotuła, Wrocław Medical University, Department of Dentofacial Orthopedics and Orthodontics, Krakowska 26, 50-425 Wrocław, Poland

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ABSTRACT

The article presents the results of a survey conducted among intern doctors during a public health course regarding the level of knowledge regarding the impact of alcohol consumption on the occurrence of FAS/FASD in the human fetus. The epidemiology of FAS syndrome, its social consequences and the possibility of its prevention are discussed. The need for quality pre-graduate education of medical students and intern doctors and their impact on health-promoting behavior in the population was emphasized.

Keywords: Public Health; Postgraduate Internship; FAS

Abbreviations: FAS: Fetal Alcohol Syndrome; EDCs: Endocrine Disrupting Chemicals; FAS/FASD: Fetal Alcohol Syndrome; HCV: Hepatitis Virus

Introduction

Obtaining a permanent license to practice the profession by a doctor completing medical studies in medicine and medicine and dentistry requires completing a postgraduate internship and passing the Medical Final Examination or the Medical and Dental Final Examination with a positive result. The postgraduate training program as part of the postgraduate internship of doctors and dentists is specified in the Regulation of the Minister of Health¹ on postgraduate

internship of doctors and dentists. In Annex No. 1, point Xa, the Minister of Health outlined the public health training program for doctors completing postgraduate internships [1]. While carrying out the above training, the authors noticed some discrepancies in the level of knowledge among intern doctors, which affect the information they can provide to their patients in independent practice. Unfortunately, in the authors' opinion, this level of knowledge does not correspond to Evidence Based Medicine. Bearing in mind the need to systemati-

cally improve the level of knowledge of doctors, the authors present below their observations on the advisability of conducting this type of training.

Materials and Method

According to the regulation of the Minister of Health, the course in public health as part of a postgraduate internship is 20 teaching hours. The training was carried out by the District Medical Chamber in Zielona Góra for 81 doctors and dentists, members of the District Medical Chambers in Zielona Góra and Gorzów Wielkopolski, who started a postgraduate internship on October 1, 2023 in order to obtain a permanent license to practice their profession. The course was conducted online on the Teams platform. The participants included 68 doctors and dentists who graduated from Polish medical universities, 10 graduates of Belarusian and 3 Ukrainian universities (Table 1). The aim of the training was to acquire and consolidate knowledge in the field of ensuring the health security of citizens by implementing tasks with an individual, local and macro-social dimension contributing to the improvement, protection and restoration of population

health and health promotion. Referring to the topic of the training, six questions were asked to the trainee doctors after its completion (Table 2). Participants responded electronically by sending an e-mail answering individual questions. Participants were informed that they could choose one of the answer options: yes or no. By answering question 5 in the affirmative, it was possible to propose an original social campaign related to health promotion. Ultimately, only 58 people responded, i.e. 71.6% of the participants.

Table 1: Number of people taking part in the course divided by the country of completion of medical studies.

	Number of training participants (n/%)	Number of people responding (n/%)
Total	81/100	58 /71,6
Graduates from Poland	68 / 83,96	47/ 69,1
Graduates from Belarus	10 / 12,35	8/ 80
Graduates from Ukraine	3 / 3,70	3/ 100

Table 2: Survey addressed to interns and intern dentists, along with possible answers.

Question number	Question content	Possible answers
1.	Do you think that every school should have a doctor?	yes, no
2.	Do you think that drinking an occasional glass of wine by a pregnant woman may cause FAS/FASD syndrome in the fetus?	Yes, no
3.	Do you think that knowledge about the harmful effects of smoking and alcohol use is conveyed frequently and convincingly through the mass media?	Yes, no
4.	Do you think that Poles' awareness of the use of antibiotic therapy is sufficient?	Yes, no
5.	Would you have an idea for a social advertising campaign related to health promotion? If your answer is yes, please send me your project.	Yes, no
6.	Do you think that veganism is mainly related to: (please mark the most important statements in your opinion)	a. Caring for animals b. Taking care of your own health c. fashion

Discussion of the Results

The authors were particularly concerned about the answer to question 2. Young medical students' perception of the harmfulness of alcohol consumption and its impact on the early development of the fetus was the basis for broad discussion of this topic. To the question included in the survey: "Could drinking an occasional glass of wine by a pregnant woman cause FAS/FASD syndrome in the fetus?" you could select one of the answers: YES or NO. The gradations of answers to this question are presented in Table 3. Due to the low number of groups, statistical evaluation was waived and the data were presented only to illustrate the problem. Knowledge about the harmful

effects of alcohol consumption, especially among women expecting children, is intensively disseminated. It would seem that when asked to a trainee doctor whether drinking an occasional glass of wine by a pregnant woman is harmful to the fetus/child, a 100% affirmative answer should be expected. Meanwhile, as many as 15.5% of young doctors taking part in the training mentioned above answered "NO". Initially, the trainers thought that perhaps the trainee doctors graduated from universities outside Poland and either did not know the Polish language well enough, which could mean misunderstanding the question, or in the medical education system in neighboring countries, insufficient emphasis was placed on providing knowledge about prohibition among women. expecting offspring.

Table 3: Gradation of answers to the question about the impact of alcohol consumption by pregnant women on the development of FAS/FASD in the fetus, divided by country of medical studies.

	Number of training participants (n/%)	Number of people providing answers (n/%)	Answer yes - in relation to the number of people who answered (n/%)	Answer NO - in relation to the number of people who answered (n/%)
Total	81/100	58 /71,6	49/ 84,5	9 /15,5
Graduates from Poland	68 / 83,96	47/ 69,1	42/89,5	5/ 10,5
Graduates from Belarus	10 / 12,35	8/ 80	5/62,5	3/ 37,5
Graduates from Ukraine	3 / 3,70	3/ 100	2/66,7	1/ 33,3

Unfortunately, the group of people who answered yes to this question included as many as 5 graduates of medical universities in Poland. To properly assess the harmful effects of alcohol consumption and the possibility of FAS occurring in the fetus, it should be noted that the consumption of even small amounts of alcohol has a dramatic impact on fetal development (50 mg of alcohol causes the death of 50 million neurons in the fetus) [2,3]. Already between the 17th and 27th day of pregnancy, after the mother consumes even trace amounts of alcohol, the migration of neural tube cells is disturbed and irreversible changes occur in the structures of the developing body [4]. Analyzing the problem, you can undoubtedly imagine that doctors who gave an affirmative answer will tell their patients: "Yes, you can drink alcohol occasionally while pregnant, it is not harmful to you and the baby." This constitutes a fundamental deficiency in acquiring basic knowledge in the field of health and development from the early period of fetal life. Unfortunately, no one will hold such a doctor accountable when pregnancy complications occur. For a child born with fetal alcohol syndrome (FAS/FSD), it will not only be a 100% personal problem, but also a family and social one.

Discussion

After entering the term fetal alcohol syndrome (FAS) in the PubMed search engine alone (accessed January 16, 2024), 1,049 publications with the highest scientific indexes were published over the last 5 years. The materials were contained in the resources of the Washington National Library. As many as 218 articles on FAS are publications from the last year. Global epidemiological data indicate that approximately 630,000 babies are born every year. children with FAS/FASD syndrome and many of these cases remain undiagnosed. Globally, the incidence of FAS/FASD is 7.7 affected live births per 1,000 births. Such a high rate of births affected by FAS syndrome is associated with the occurrence of approximately 400 physical and mental health problems. As shown in a meta-analysis of studies conducted around the world conducted by Svetlana Popova, et al. [5], among children staying in institutional care, correctional facilities, special education facilities, specialized clinics and in Aboriginal populations, this frequency was 10-40 times higher than the general population. Moore FM research. and all [3] cited by Drelich E [2] indicate that currently the birth rate of children with FAS / FASD is ten times higher than that of children born with Down syndrome. Other publications report the occurrence of FAS/FASD among prisoners.

The studies by Walker K, et al. [6-8] point to studies conducted years ago among prisoners and those staying in correctional facilities in Canada and Australia, on the basis of which fetal alcohol syndrome was diagnosed in 10 - 34% of convicts, while in the general population this syndrome occurred in 2-5% of citizens of these countries. Referring to the results presented at the beginning related to the answers provided by intern doctors who will start working independently in the Polish health care system in a few months, it is advisable to present the epidemiology of fetal alcohol syndromes in the Polish population. In 2017, a petition was submitted on the website of the Senate of the Republic of Poland to take a legislative initiative regarding the adoption of regulations informing about the harmful effects of alcohol on the unborn child [9], and in 2019 it was stated: "The scale of the occurrence of FAS in Poland may be in the range of 1- 3 cases per 1,000 births (0.3%), which means that up to 900 children a year are born with full symptoms of this disease, probably 20 children per 1,000 have the disorder described as FASD. In 2021, the Ombudsman [10] in Poland indicates: "Many children are still born with FASD. Commissioner for Human Rights: the state must take effective measures to promote abstinence among pregnant women.

The authors wonder whether the survey results may indicate not only a lack of knowledge of the problem but also the possibility of alcoholism among intern doctors? This is a topic that came up in an individual conversation with professionally experienced doctors when, after reporting the results of the survey, one of the doctors, who had been working as a gynecologist and obstetrician for over 20 years, expressed surprise because she believed that the knowledge about the harmfulness of even an occasional glass of wine during pregnancy is widely known. She also added one important thought - perhaps in the group of intern doctors who decided that alcohol does not harm pregnant women there are people addicted to alcohol and who do not have any reasonable knowledge about its consumption. The authors of this study will not forget their friend who came to the graduation ceremony after graduating from medical studies in 1971 with a bottle of strong alcohol. He offered to others, when they refused, he drank a huge gulp, saying that now he could act. The history of this colleague was sad, because throughout his professional life, despite his obvious addiction, he obtained scientific degrees, but he finally died at the age of 55. due to liver cirrhosis....

In 2017, the results of a survey conducted by the team of Purandar B, et al. [11] among 245 (156 women and 89 men) intern doctors of the three largest hospitals in Poznań were published. In the study group, only 5.7% were abstainers, this was more common among women, but three times as many men reported consuming alcohol more frequently. "Almost 35% of study participants declared that they had become unconscious drunk at least once in the last month, more often young people who felt less burdened with professional responsibilities than older and more burdened people. Men got drunk until they lost consciousness much more often than women (24.7% vs 10.3%; $p = 0.003$). The results of the respondents' answers to the questions included in the CAGE questionnaire indicated that 30 people (15%) could be considered to have a high probability of alcohol-related problems, i.e. alcoholism and its consequences. The authors of the study, citing the work of other scientists, indicate that alcohol abuse usually begins during medical studies, and the number of doctors addicted to alcohol is greater than in the general population. Already at the end of the 20th century and in the first years of the 21st century, for example, doctors in Scotland were three times more likely to suffer from alcoholism than the average society, and in the United States, 7,000 were diagnosed in studies.

Surgeons - 12.9% of men but even 21.4% of women abused alcohol. A higher incidence of diseases related to alcohol abuse (e.g. alcoholic cirrhosis) was also observed among doctors than in the rest of the population. The authors of the cited study conducted in Poznań also note that already in the early 1990s, the Medical Chamber in Hamburg was the first in Germany to get involved in helping people overcome addiction, offering an intervention program entitled Help instead of punishment. Polish researchers point out the need for educational activities, including learning how to cope with stress among medical students from the first year of studies and doctors-interns, as well as creating psychological support programs. Numerous district medical chambers, including the district medical chamber in Zielona Góra, provide their members with opportunities to provide support and help in quitting addiction. On the Medical Chamber in Zielona Góra website you can find information on how doctors can use psychological and psychiatric support in everyday struggles with addiction [12]. The problem of alcoholism among Polish doctors was also discussed in 2017 in the popular weekly Newsweek, in an article entitled Dual gas duty.

Up to 15 percent doctors in Poland may be addicted to alcohol [13]. The title provided data based on the words of a psychiatrist, Dr. Bohdan Woronowicz, then the plenipotentiary for doctors' health at the District Medical Chamber in Warsaw. Marek Stankiewicz in the article entitled *Wódka, pozwól leczyć* [14] published in *Gazeta Lekarska*, indicates that: "Doctors are afraid of being labeled an 'alcoholic' and even professional death." Alcohol is harmful, yes, but not to them - that is their motto. Dr. Stankiewicz claims that "the most terrifying thing is the large number of female doctors who drink. These are generally single, childless middle-aged and older women, deprived of

any family support. They also consume the largest amounts of easily available psychotropic drugs. In addition to discussing the problem, the article includes the result of a 2015 study conducted under the supervision of prof. Janusz Czapiński regarding the program: Social Diagnosis 2015. Conditions and quality of life of Poles. The program results show the percentage of people abusing alcohol and using alcohol in difficult life situations, depending on professional groups.

According to the data presented in the report, doctors who abuse alcohol are located in the central part of the diagram, which is as follows: creators, artists, writers, journalists 21.5; 7.1: operators of mining machines and equipment 16.2; 7.2; auxiliary workers in mining and construction 13.8;16.8; doctors, veterinarians, dentists 12.6;7.5; drivers of passenger cars and trucks 10.9;4; representatives of authorities, directors 10.4;4; security service workers, firefighters, police officers, and related 8.9;6.1; soldiers 6.9; 3.4; lawyers 3.4; 2.3; nurses and midwives 3.2; 1.4; hairdressers, beauticians 2.5; 2.6. The results are given in percentages. The first result concerns people abusing alcohol, the second one concerns people who use alcohol to cope with professional, family or social stress. The same author, on June 9, 2023, published a column in *Puls Medycyny* entitled *Doctors rarely drink while on duty, more often after returning home* [15]. He clearly emphasized the positive impact of press reports about drunk doctors, as well as the reaction of society and random police checks on the change in alcohol consumption habits among doctors. He points out that until quite recently, driving under the influence of alcohol, e.g. after hunting, was perceived as a "doctor's Uhlan fantasy", and for years common and medical courts imposed the lowest penalties in such circumstances.

Currently: "Working drunk is slowly becoming an embarrassment." However, psychologists say that although doctors nowadays rarely drink on duty, they drink more often after returning home. "They drink according to the schedule and keep their finger on the pulse." In this situation, there is still a lack of research in the Polish medical population that could indicate possible addictions and their types. The author also asks a question: "Abroad people are not afraid of such tests. So what holds us back? Reflection that we are treated by alcoholics? And often effectively. Who else gets the words: I'm an alcoholic stuck in their throat? (...). All campaigns like 'you only have one life' are a nuisance, because you cannot expect common sense from an addicted person if his life is ruled by addiction. (...) We need to fight the causes, not the effects," the author appeals. And it is worth repeating the question asked at the beginning: whether the numerous universities in Poland adequately educate young doctors in public health, especially alcohol consumption and its harmful effects? The results, although not obtained on the basis of groups representative of the entire community of intern doctors, but only in one survey after the training, seem to contradict this.

And the second question - how universities take care of the mental health of medical students and help solve problems with addic-

tions, including alcohol addiction. The problem is discussed, among others, in the monograph [16] which is in the final stage of editorial development by the Lazarski University Publishing House (planned publication in the first quarter of 2024). Conclusions from research and proposals for changes in study programs to increase the level of knowledge of doctors and dentists. In the light of the data presented, the response of as many as 9 doctors-interns, including as many as 5 graduates of medical universities in Poland, indicates the belief that occasional drinking of wine by a pregnant woman does not affect the health and development of the fetus. Unfortunately, this thesis is terrifying. During pre-diploma education, knowledge about fetal alcohol syndrome and its clinical and social effects is provided during classes on hygiene (in the first year) or epidemiology (in the fourth year). The topics are discussed on the basis of academic textbooks [17,18] and during lectures on the mentioned subjects.

Further issues concerning not only the problem related to the harmful effects of alcohol or identified and unidentified chemical compounds called EDCs (endocrine disrupting chemicals) on the endocrine system and the problem of the negative impact of alcohol on the human body are presented during classes on the physiology of the endocrine system for second-year students and during classes in endocrinology for fourth-year students. Even more "it is incomprehensible (...) that among those answering the question about the harmful effects of alcohol on the fetus - I see the names of our graduates" say lecturers of these subjects. However, it is worth asking ourselves and other lecturers/authorities of medical schools whether the problem of fetal alcohol syndrome (FAS/FASD) is "missing" somewhere in the education of doctors. Maybe it does not fit into the very broad topics of pediatrics, neurology or psychiatry curricula? As part of a lively discussion of lecturers who conducted the above-mentioned training for doctors-interns, Mariusz Witczak, M.D., Ph.D., from the Department of Internal Diseases, Diabetology and Endocrinology, Collegium Medicum of the University of Zielona Góra, presented a proposal with which everyone agreed that in the framework of events organized since 2018 in Focus Park shopping center in Zielona Góra, an action of students of this faculty but also in many other cities entitled "Health Under Control" to include an action discussing, also graphically, with examples and epidemiological data, the harmful effects of alcohol on the body - especially on human fetuses. It may also influence the health-promoting behavior of future doctors.

As a reminder: The Health under Control campaign is a nationwide initiative of the International Association of Medical Students IFMSA-Poland, operating since 1956, bringing together over a million young people around the world, whose members also include students of the University of Zielona Góra. The campaigns have been organized since 2018 and are addressed to people staying in such frequently visited places or those who are interested in the campaign and come there on purpose. Topics vary from raising awareness and educating people of both sexes about testicular and prostate cancer, cervical cancer, and preventive examinations [19]. For example, the

website of the Collegium Medicum of the University of Zielona Góra describes such an action carried out in 2022. 37 students of the Collegium Medicum UZ participated in the research, thanks to the support of, among others, The District Medical Chamber of Zielona Góra and under the honorary patronage of the president of the District Medical Council in Zielona Góra over 1,000 people were examined. Blood glucose and blood pressure were measured, tests were performed for hepatitis virus (HCV) infection, volunteers completed a short questionnaire to assess depression, doctors also performed ultrasound examinations of the thyroid gland and abdominal aorta and taught the principles of first aid in life-threatening situations and fainting, injuries, traffic accidents or poisoning.

During various studies, knowledge about mental health, infectious diseases and chronic diseases was presented, and education on self-examination of testicles and breasts was continued. Moreover, at one of the stands it was possible to join the group of potential blood and bone marrow donors, which 31 people decided to do. One of the positions that was very important for the early implementation of interest in the health of the youngest was the so-called Teddy Bear Hospital, which was visited by over 100 children - they could play the role of doctors there and cure teddy bears of various diseases, which were discussed in an accessible way. Therefore, it is also a good forum for health promotion, recognizing problems in yourself or your loved ones, and obtaining knowledge about the possibility of quitting addictions - including the addiction of excessive and uncontrolled alcohol consumption and showing ways to seek help. It is also a place to spread health education regarding prohibition to women expecting children and to make them aware of the effects of even occasional consumption of even small amounts of low-proof alcohol, such as the proverbial glass of wine or one beer. The fact that Collegium Medicum students organized the Health under Control campaign in the Focus Mall and other places in Zielona Góra was announced not only on the university's website, but also in the local and national press [20,21]. Information about subsequent campaigns is available on numerous websites of medical universities and cities, as well as on social media, e.g. Facebook.

The medical self-government ensures the proper performance of the medical profession in Poland. Taking into account the concern for the quality of health care in the local community and the care of doctors in need of help, the medical self-government should, first of all, ensure that its members acquire and deepen knowledge and implement it into good medical practice. For this purpose, it seems appropriate to plan and implement training both for doctors-interns but also for all doctors and dentists, checking basic knowledge and reporting the results of observations to: the Ministry of Health, the Ministry of Science and Higher Education, the authorities of medical universities and the organizers of training for all doctors. specialties. It seems socially useful to organize training on this topic in the last grades of primary and secondary schools. Equally important from the point of view of public health of the society seems to be, while

ensuring real financial outlays, the promotion of health-promoting behaviors, including prohibition and the negative impact of alcohol consumption on the fetus, through social campaigns or educational programs implemented by the mass media and the increasingly popular social media, from which young people use it more often. Unfortunately, this mode of universal promotion of health-promoting behaviors is not yet sufficiently used.

This is proven by the results of the presented survey. In one of the questions: "Is knowledge about the harmful effects of smoking and alcohol consumption conveyed frequently and convincingly in the mass media?" - only 5% of doctors-interns were of the opinion that there is a sufficient amount of materials in the mass media about the harmful effects of smoking and alcohol consumption, the remaining (95%) answered NO, even though materials on the principles of quitting smoking can be found on the Internet [22].

Conclusion

- 1) Public health and health promotion courses are essential for increasing knowledge about important aspects of health in local and global populations.
- 2) During the course, topics related to the possibility of addictions and their treatment should be discussed.
- 3) Particular attention should be paid to the education of medical students, to the quality of education, which is particularly at risk in the era of enabling the education of future doctors by entities that do not meet the requirements of the State Accreditation Agency in medical sciences.
- 4) Significant challenges face the medical self-government, whose tasks include ensuring the correct principles of practicing the profession based on modern knowledge and good medical practice by each doctor.

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