KNOWLEDGE REGARDING FETAL ALCOHOL SYNDROME (FASD) SPECTRUM IN VARIOUS ENVIRONMENTS. COMPARATIVE STUDIES

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Abstract. In this article we are presenting the results of a study regarding Fetal Alcohol Syndrome that was conducted over a ten year period. Said studies were conducted within various groups and environments: high school students, college undergraduates, teachers and medical staff. The timeline of the study ran between 2006 until 2016 using the diagnostic poll method which was utilized by the use of various polls within a polling system. Due to the expansive nature of the method we are presenting just few excerpts from said report, focusing on selected aspects related to alcohol consumption and its negative effects for pregnant females as well as knowledge on how prenatal alcohol exposure affects the fetus and information sources.

Keywords: child, disorder, FASD.

CUNOȘTINȚE PRIVIND SPECTRUL SINDROMULUI ALCOOLISMULUI FETAL (SAF) ÎN DIFERITE MEDII. STUDII COMPARATIVE

Rezumat. În acest articol prezentăm rezultatele unui studiu privind Sindromul Alcoolismului Fetal care a fost efectuat timp de zece ani. Studiile menționate au fost realizate în cadrul mai multor grupuri și medii: elevi din liceu, colegiu, cadre universitare, cadre didactice și personal medical. Studiul a fost efectuat între 2006 și 2016, folosind metoda de diagnostic prin diferite tipuri de sondaj care a fost utilizată în cadrul unui sistem de votare. Datorită naturii expansive a metodei, prezentăm doar câteva fragmente din raportul menționat, concentrându-ne pe aspectele selectate legate de consumul de alcool și efectele sale negative asupra femelelor gravide, precum și cunoștințele despre modul în care expunerea prenatală la alcool afectează fătul și sursele de informare.

Cuvinte cheie: copil, tulburare, SAF.

Basic FASD facts

Pregnancy is a very special period in the life of any woman. During this time not only is she responsible for herself but also for the life and wellbeing of her child. It is a period of particular care in regards to the physical, mental, hygienic and nutritional health. Soon-to-be mother needs to pay special attention to both her health and the health of the fetus. The first factor is a well-balanced diet that can provide all nutrients required by the body. This often results in a change of eating habits. Pregnant women need to limit their intake of sweets, saturated fats and salty foods in favor of those rich in protein, fiber, carbohydrates, minerals, iron, calcium and vitamins – A, B6, B9, and B12. Even though a growing human organism requires vast amounts of nutrition that does not mean that the mother has to consume twice as much. A correct weight gain during the pregnancy term is calculated to be between 9 and 12 kilograms.

Another important factor during pregnancy is physical activity. It is wise to give up on extreme sports in favor of gymnastics and other forms of moderate physical activity (swimming, cycling, and walking) which are recommended. Most importantly

when carrying out the activities is for the mother not to overheat herself as it can potentially cause damage to the fetus. Moderate activity improves the circulation, strengthening of the muscle tissue and body condition, correction of body posture, preventing flatfoot, increasing joint mobility, improves the mood, improves mental stability and helps ease the childbirth process [3, p.135]. Any decision of undertaking physical activity while being pregnant, should be consulted with a gynecologist who in turn will provide detailed information regarding different practices and activities for the mother. It will allow the mother to understand the benefits and limit possible dangers that might occur without such supervision.

Child's development in the prenatal period can be disturbed by a number of different factors. Just to name a few are: psychoactive substances, chromosome anomalies, diseases, age, mother's emotional health and mechanical factors.

Special attention should be paid to the so called teratogens or „factors originating from external environment which can cause birth defects or increase their occurrence" [2, p. 213]. Occurrence of the birth defect is decided by the period during which the fetus is exposed to the teratogen, its dosage and the genotype of both the mother and the child. The fetus is at its most vulnerable up until the 12^{th} week due to the fact that most organ differentiation occurs in this period. Teratogen can be the lead cause of birth defects, embryo/fetal death, growth suppression as well as functional, hormonal, neurological and other disorders [2, p. 213-217]. A major factor in the development of a fetus is a presence of psychoactive substances that the mother is exposed to during pregnancy. They contain but are not limited to:

- Drugs, including marihuana, heroin or cocaine causing the Fetal Drug Syndrome (FDS)
- Nicotine causing the Fetal Tobacco Syndrome (FTS)
- Alcohol causing in developing fetus the risk of miscarriage, premature birth, growth suppression, brain damage, facial disfiguration, hyperactivity, coordination disorders, and organ defects defined as FASD (Fetal Alcohol Spectrum Disorders) occurring in the offspring of mothers who consumed alcohol during pregnancy period.

FASD is a new phenomenon that does not have a strong presence in the minds of the society at large. It has been introduced as a term in 2000 as not suitable for clinical practice. It's base elements are: fully symptomatic Fetal Alcohol Syndrome (FAS), partial Fetal Alcohol Syndrome (pFAS), Fetal Alcohol Effect (FAE), Alcohol Related Birth Defect (ARBD) and related to alcohol, Alcohol Related Neurodevelopment Disorder (ARND).

FAS – *Fetal Alcohol Syndrome* – is a disease entity occurring in children which, during the prenatal period, have been exposed to alcohol and due to its harmful influence have developed a range of birth defects such as: physical underdevelopment,

microcephaly, low birth weight as well as developmental defects: cleft lip and cleft palate, heart defects, earlobe and other organ defects. Said children will often exhibit characteristic facial features, so called dysmorphias: small and widely offset eyes, drooping eyelids, snub noses, lack of philtrum, narrow upper lip, lack of lip redness, smallish jaw, flattened mid facial region [4, p.8].

pFAS – *Partial Fetal Alcohol Syndrome* – in which we can note a presence of specific facial features characteristic to FAS, presence of at least one FAS symptom, brain damage occurring most visibly during the learning process and growth suppression.

ARND - *Alcohol Related Neurodevelopment Disorder* – neurological disorders related to alcohol are grouped into cases with defined presence of Central Nervous System pathology, functional disorders and disorders that are inconsistent with desired level of development (taking in consideration environmental and genetic factors) with confirmed prenatal fetal exposition to alcohol.

ARBD - *Alcohol Related Birth Defect* – consists of deformities, disfigurations, body part dysplasia, heart, limb, bone, kidney, sight and hearing defects.

In literature we can come across the Fetal Alcohol Effect term, which is used to determine the three above terms – pFAS, ARND, ARBD. In source literature we can also find terminology such as Alcohol Related Birth Defects (ARBD) and Fetal Alcohol Related Conditions (FARC).

In the context of FASD it is necessary to pay attention to separate specific disorder that affect the child to primary disorders (basic) and secondary disorders (inherited). Primary disorders are characterized by aspects in which we can distinct: lowered intellectual abilities, direct memory functionality disorders, difficulties in anticipating consequences, planning, increased sensitivity to touch, delay in social, emotional and cognitive functionality. Difficulties in communicating and language development will make it mandatory to instruct and educate the affected person in the simplest and least complex way. With those disorders it is vital to periodically repeat and solidify gathered knowledge as information can be easily forgotten. It should be mentioned that despite ascertaining a presence of mental disability it is not always right to connect it to FAS. FAS children often excel at IQ tests and can exhibit predispositions for various other aspects such as music or art. Symptoms that can suggest a presence of brain defects are: short attention span, easiness of distraction, loss of concentration, memory loss and difficulty forming permanent memories, hyperactivity, illogical actions and thoughts, spasms.

FAS secondary disorders are an effect of a lack of knowledge and proper care when directing child development. They are linked to its behavior as well as mental functionality. Such disorders occur in the moment when parents start treating the child as healthy and require normal development, however due to the damage it has sustained in its prenatal cycle, it cannot develop as required [1, p. 122-123]. Persons affected by

FASD, which have not been treated as children with disorders but rather as healthy children that cause issues, have developed the following symptoms: alienation, phobias, anger, impulsiveness, shutting in, pathological lying, running away from home, problems at school, assuming victim or persecutor role, unemployment, homelessness, lack of self-reliance, depression, self-mutilation, trouble with the law. Inherited disorders most often can be seen in the cognitive, emotional, social and health related spheres. Below we are listing the most characteristic ones per below categories:

Cognitive functionality:

- learning difficulties
- difficulties in math, geometry and geography
- concentration and awareness disorders
- difficulties in memorizing provided materials
- slow working pace
- difficulties in learning to read and write
- difficulties in understanding various commands
- difficulties in understanding written materials, poems, jokes
- mechanical learning and memorizing, difficulties in intentional memorization and logical learning

Social and emotional functionality:

- constantly on „Stress Alert" – hyperactive, impulsive, easy to irritate
- fearful, avoiding new experiences, coming on as „grumpy"
- during adolescence they are prone to depressive behaviors
- poor judgement, immaturity, often being the „sacrificial sheep" of the group and easy to become submissive in result
- difficulties in predicting consequences of their actions
- difficulties in empathy towards others
- problems in initiating and continuing friendships
- difficulties in having a proper distance towards strangers
- strong oppositional behaviors
- difficulties in recreating facts perceived by society as a lie

Health related functionality:

- disorders in perceiving satiety and hunger
- difficulties in reading various stimuli : touch, pain, visual, audio
- damage to eyesight
- damage to hearing
- cardio anomalies
- fragile skeleton, spinal deformities

- disorders of both fine and gross motor skills

Caring for a child affected by FAS it is important to pay attention to a couple of basic aspects that can help protect it from deepening the disorders caused by prenatal exposure to alcohol. These include: diagnosing FASD prior to 6 years of age, development in a stable environment that is able to satisfy childs various needs, consistency and predictability of the environment, family life devoid of violence [5]. In terms of conducting ourselves and the child we have to be straight and to the point, in communication avoid complicated words and terms, long monologues and speeches and in the environment of the FAS affected person we should limit presence of ornaments and toys. Keeping in mind the increased impulsiveness, it is vital to reduce the amount of unplanned and confusion or anger inducing situations. Uneasiness increase can lead to behavior that will directly threaten the safety of both the FAS affected person as well as persons in their vicinity. How we deal with the child as well as the environment it will grow up in has a profound effect on secondary disorders appearance. If FAS is diagnosed early, the child is encompassed with proper family care and psychological treatment those extreme behaviors can be avoided.

Research Method

The goal of the research was to find and answer to the question: what is the level of knowledge regarding FAS amongst people from different walks of life? Keeping in mind the necessity of gathering information required to pass the judgement, reaching conclusion regarding this specific aspect of reality, in our case showing the level of knowledge of FAS amongst various groups, an adequate research method has been chosen. In social pedagogy most often used are four methods of research: diagnostic polling, experimentation, pedagogical monography and case studies. To gather the knowledge presented below, diagnostic polling method has been used. It is a way of gathering information from structural, functional and social dynamic fields that are not localized but hold educational meaning and allow to understand views held by selected groups of individuals.

In the spectrum of this method a diagnostic polling process was used with the tool being the poll questionnaire. The undertaken study had a purely statistical and numerical character.

Research group and the course of study

First of the presented research studies were conducted among Krakow's students in 2006. It was a group of 180 female students from Krakow's University of Technology with 88 participants and Pedagogical University of Krakow with 92 participants.

In 2010 another series of polling has been conducted within 4 separate groups. First group counting 100 participants from Krakow's universities: Agricultural University

of Krakow and Pedagogical University of Krakow. Second 100 participant group consisted of primary school teachers from across the Lesser Poland region. Third group was made of residents and personnel from St. Luke's Hospital in Tarnow counting at 66 members. Grand total of the research group from this series was listed at 266 participants.

Next series of research were undertaken in 2012 on two groups. First group had 52 teachers from Cieszyn's primary schools attend the polling. 98 students from the IV High School in Olkusz made the second group. In total – 150 participants took part in the 2012 study. Last series of research took place in 2016 on a 63 participant group from Public Higher Vocational School „Pomerania" from Chojnice.

In comparison studies for years between 2006 and 2016 total number of respondents was counted at 659 persons. Results quoted in the article come from conducted research studies in which various environment participants had their knowledge was checked in regards to FASD term familiarity and are in the possession of the article authors.

Research results

The main goal was to gather and analyze information showing the level of knowledge regarding FASD related topics amongst a wide variety of participants. The spectrum of alcohol related fetal issues is an effect of alcohol consumption during pregnancy by the pregnant mothers. In order to prove that the problem is a severe one, all we have to do is present results from various studies conducted on this topic, i.e.: research by the National Agency of Counteracting the Alcohol Related Problems which concluded that almost a third of pregnant females consume alcohol during their term [6]. In order to be able to successfully prevent the negative effects of FASD we need to first and foremost familiarize ourselves with the environments that are most likely to be affected by FASD or people who are either spending time or working with FASD affected persons. This is why the research has been conducted within groups of middle to high school youth, students, teachers as well as residents and staff of hospitals.

The results are focused on few key elements: familiarity with the FASD terminology, public opinion on consuming alcohol during pregnancy and consequences of doing so, sources of information regarding the post alcohol fetal disorders and the institutions who are tackling the presented issue.

In the below chart we would like to present the results of familiarity with the FASD definition amongst the participants. As indicated by the collected data there are severe differences in the outcome depending on the year the study has been conducted in. Comparatively the least amount of participants were familiar with the FASD term (in years 2006 and 2010 said term was FAS – Fetal Alcohol Syndrome). In 2006 the result was 46,6% of students who took part in the poll. The result itself is mostly due to the Pedagogy University students who were more familiar with the knowledge in this topic.

In following research from 2010 which was conducted over a group of Krakow's students and residents and staff from St Luke's hospital in Tarnow the percentage has increased by several points up to 62,79%. Even though the familiarity with the terminology was noted to be on the decline in 2012 it is mostly due to the fact that the topic not widely known in middle and high school environment. The teacher group has encountered this terminology far more often. A significant spike in familiarity with the FASD term (96.82%) was noted in 2016. That research was conducted over groups of part-time students and graduates of the pedagogy curriculum, in many cases active teachers, pedagogues and counselors – workers of many institutions from the social and educational sectors and schools which has contributed to such a high result.

Chart - 1. Familiarity with the FASD term

Year	**Yes**		**No**	
	#	**%**	**#**	**%**
2006	84	46,66	96	53,34
2010	167	62,79	99	37,21
2012	85	56,66	65	43,34
2016	61	96,82	2	3,18
Total	**397**	**60,24**	**262**	**39,76**

Source: Own research

On the other hand those results actively portray the current level of knowledge in the topic by a wide variety of social groups. Most importantly environments which by design should be familiar with the issue, have actual knowledge regarding FASD. Most knowledgeable are the groups of Pedagogy students and medical personnel. This can benefit in having an appropriate stance and ability to work in regards to persons who are showing symptoms of this particular illness.

Another question we would like to point to would be the question of societal acceptance for females to drink alcohol during pregnancy. As we can see from the chart below the answers are not as clear-cut as we might think.

Chart - 2. Acceptance in regards to females drinking alcohol during pregnancy

Year	**Yes**		**No**	
	#	**%**	**#**	**%**
2006	37	20,55	143	79,45
2010	10	3,76	256	96,24
2012	48	32,00	102	68,00
2016	9	14,28	54	85,72
Total	**104**	**15,78**	**555**	**84,22**

Source: Own research

Unfortunately, a statistically higher percentage appears, that consists of persons who are accepting of such practice. We have to point out however, that even though no

specified dosage can be considered harmful to the fetus, it has been widely assumed that even the smallest of dosages can potentially have ill effects. This is why total abstinence from alcohol is advised during the term. Not all of the participants however, have such understanding of the matter.

The worst results are presented in the 2012 research where the participants consisted of middle and high school teachers and students. Such high results are mostly influenced by the young participants who were asked to share their opinion during the study. An unsettling result is one from 2016 where 14.28% of future pedagogues accept female drinking during pregnancy and it is not a very optimistic looking statistic. Most commonly they will refer to prophylactic consumption of red wine or a symbolic glass of champagne. It is however a gross misunderstanding, even though said participants do have a large understanding about harmful effects of alcohol overall. Vast majority of participants (91.20% on average) do have an understanding on how alcohol can negatively affect the fetus (Chart - 3) and the consequences derived from its consumption (Chart - 4).

Chart – 3. Harmful effects of alcohol on the fetus

Year	**Yes**		**No**	
	#	**%**	**#**	**%**
2006	165	91,66	15	8,34
2010	225	84,58	41	15,42
2012	149	99,33	1	0,67
2016	62	98,41	1	1,59
Total	**601**	**91,20**	**58**	**8,80**

Source: Own research

Chart – 4. Consequences of consuming alcohol during pregnancy

Year	**Yes**		**No**	
	#	**%**	**#**	**%**
2006	82	45,55	98	54,45
2010	181	90,50	19	9,50
2012	139	92,66	11	7,34
2016	59	93,65	4	6,35
Total	**461**	**77,74**	**132**	**22,26**

Source: Own research. Total number of participants is lower by 66 as when hospital residents and staff were taking part in the polls in 2010 such questions were not asked.

The consequences of drinking alcohol are the subject of analysis results presented in Chart – 5. It is worth noting that not all listed disorders are specific to alcohol related fetal issues. We know that alcohol consumption during pregnancy is a common cause for

miscarriages, however it is not a symptom of FASD. Just like physical disabilities, genetic defects, alcohol withdrawals or mental retardation are not a symptom either (those have been presented in *italics* in Chart - 5).

Chart – 5. Knowledge of consequences of drinking alcohol during pregnancy

Consequence	**2006**		**2010**		**2012**		**2016**		**Total**	
	# - 180	**%**	**# - 266**	**%**	**# - 150**	**%**	**# - 63**	**%**	**# - 659**	**%**
Fetal under-development	10	5,55	34	12,78	38	25,33	21	33,33	103	15,63
Damage to CNS	3	1,66	33	12,40	32	21,33	25	39,68	93	14,11
Miscarriage	32	17,77	36	13,53	21	14,00	3	5,28	92	13,96
Mental retardation	29	16,11	19	7,14	35	23,33	2	3,17	85	12,90
Development disorders	2	1,11	23	8,65	31	20,66	22	34,92	78	11,84
Physical disabilities	2	1,11	21	7,89	49	32,66	-	-	72	10,92
Diseases	11	6,11	27	10,15	20	13,33	-	-	58	8,80
Facial dysmorphia	-	-	26	9,77	-	-	17	26,98	43	6,52
Low birth weight	-	-	28	10,52	4	2,66	11	17,46	43	6,52
Organ damage	-	-	17	6,39	13	8,66	5	7,93	35	5,31
Hyperactivity	2	1,11	22	8,27	-	-	8	12,70	32	4,52
Low height	-	-	18	6,76	4	2,66	9	14,28	31	4,70
Genetic defects	17	9,44	5	1,88	9	6,00	-	-	31	4,70
Memory disorders	-	-	14	5,26	-	-	2	3,17	16	2,43
Alcohol withdrawals	-	-	7	2,63	-	-	-	-	7	1,06
No answer	112	62,22	46	17,29	15	10,00	2	3,17	175	26,55
Total	**220**	**122,19**	**376**	**141,35**	**271**	**180,66**	**127**	**201,58**	**994**	**150,83**

Source: Own research

Nevertheless these symptoms are often listed by the participants. On the basis of the above table, we can determine that participants from the 2016 study can identify them most effectively. A correlation can be seen as time went on, participants were more knowledgeable overall regarding the alcohol usage during pregnancy. I can be explained as nowadays we are coming across more and more information regarding the problem. Among the symptoms listed by the participants we can identify specific ones: damage to the CNS, facial dysmorphia, hyperactivity, memory disorders, low birth weight, low height as well as the more broad: fetal underdevelopment, development disorders and organ damage. Such result can be attributed to the FASD related topics being taught and

discussed in schools, universities and conferences that are regarding this problem. It also has a hold in social campaigns organized by dedicated institutions such as the country wide social campaign „Pregnancy without alcohol" organized between 2007 and 2008 by the National Agency of Counteracting the Alcohol Related Problems.

The fact of providing a much higher dose of information to the public is not without any meaning. We will tackle the way respondents receive their information regarding FASD further in this article.

As we can see from the data presented in Chart – 6, participants will most likely link their knowledge regarding FASD to television programs. It is however not a reliable source as there are very few programs that actually touch on FASD in both commercial and state ran stations. They do appear, but they are rather sporadic in nature and most of them portray „just another child born to an alcoholic mother".

It is not a surprise however, that statistically high percentage for providing information would be taken by the Internet. Persons who want to know more about the terminology and the science behind it can find vast amounts of information there both on Polish and English website, however there is a prevalence of the latter on the web. Those sites can inform about the disease itself, its specifications, causes, course symptoms and problems associated with raising an FASD affected child. On the other hand it would be a good thing to know what we are looking for and why we do. It could be that some people come across the information by accident, while browsing for data not necessarily related to FASD but having common grounds or topics. Indicating press as another good source of information can also be seen. Specialist and in depth articles are published in many different publications, be it medical, educational, sociological or psychology related and most importantly in women magazines.

Chart - 6. Sources of information regarding FASD

Source	**2006**		**2010**		**2012**		**2016**		**Total**	
	# - 180	**%**	**# - 266**	**%**	**# - 150**	**%**	**# - 63**	**%**	**# - 659**	**%**
Television	36	20,03	71	26,69	76	50,66	15	23,81	198	30,04
Internet	12	6,66	45	16,91	71	47,33	26	41,27	154	23,37
Press	23	12,77	35	13,15	68	45,33	8	12,69	134	20,33
Schools, Universities	45	25,00	-	-	48	32,00	4	6,35	97	14,72
Radio	34	18,88	32	12,03	8	5,33	1	1,59	75	11,38
Medical personnel	8	4,44	15	5,64	11	7,33	7	11,11	41	6,22
Work	-	-	8	3,01	23	15,33	4	6,35	35	5,31
Family	4	2,22	19	7,14	2	1,33	2	3,17	27	4,10
Friends and colleagues	7	3,88	5	1,88	7	4,66	4	6,35	23	3,49
Conferences and training	2	1,11	8	3,01	7	4,66	5	7,94	22	3,34

sessions										
Leaflets and pamphlets	4	2,22	-	-	6	4,00	6	9,52	16	2,43
Other	17	9,44	29	10,90	9	6,00	1	1,59	56	8,50
No answer	5	2,77	20	7,52	3	2,00	1	1,59	29	4,40
Total	**197**	**110,53**	**287**	**107,88**	**339**	**225,96**	**84**	**133,33**	**907**	**137,63**

Source: Own research

We can consider it to be a high point in the studies that more and more information regarding FASD is provided at the school or university levels. It is an important element of the spectrum of social related problems prevention, including preventing addictions and substance abuse. Another positive result is the amount of knowledge shared at work and on specialist conferences that increased over the years.

It is worth noting that more and more often (almost doubled progress from 4,44% in 2006 to 11,11% in 2016) information regarding FASD is being provided by trained medical staff, doctors and nurses alike. Furthermore an increase in percentage of participants who can name institutions tackling the issue can be noted (from 0.55% in 2006 to 44,44% in 2016). Even though a large portion of the participants still cannot correctly identify them, the correct identification percentage is getting higher as time goes by.

Chart - 7. Knowledge regarding institutions that are involved with FASD

Year	**Yes**		**No**	
	#	**%**	**#**	**%**
2006	1	0,55	179	99,45
2010	92	46,00	108	54,00
2012	20	13,33	130	86,67
2016	28	44,44	35	55,56
Total	**141**	**23,77**	**452**	**76,23**

Source: Own research. Total number of participants is lower by 66 as when hospital residents and staff were taking part in the polls in 2010 such questions were not asked.

Unfortunately, according to the statistic, the group that has the least amount of knowledge is middle to high school students. In practice, they can only point out to institutions that are specifically dealing with psychiatry or education and those not always diagnose and treat FASD afflicted patients.

Summary

The spectrum of alcohol related fetal issues indeed has a negative effect. It leads to severe amount of brain damage that will impact to the quality of life for both youth and

adults that are affected by FASD. The overall amount of knowledge in regards to FASD is not high amongst participant but a significant growth in awareness can be seen over the years.

The term itself (FASD) is not well known to the participants. It is however becoming more and more known and it is worth mentioning that practically all respondents are in agreement that consumption of alcohol during pregnancy can have harmful effects on the developing fetus. Although participants are aware of the negative impacts alcohol has on a human body, they will allow its use on special occasions even by pregnant women. This argument most often comes up when discussing the use of red wine which, in opinion of a part of the pollsters, is improving various blood parameters. Similarly viewed is consumption of cognac as it is seen as a panacea that can affect mother's circulation during pregnancy. Unfortunately both of those myths have strong enough following in today's society. A large group of females is prepared to partake in alcohol consumption if it is recommended by either her GP, family or friends.

Despite knowing about alcohol's harmful effects, participants cannot exactly point out what specifically can be affected and in what way. It is of note that the amount of knowledge is on the increase and with almost each consequent study, the awareness regarding alcohol relation to the fetus is growing. Those are indicated by the many correct answers in regards to functional and developmental disorders. Much of the important information is provided to the participants via multiple knowledge sources. They consist of television, internet, press, radio, schools, universities and work. A very important role is that of the media. It allows shaping of societal stances towards the issue as well as influencing social beliefs. Media give a chance for the information to reach as wide of an audience as possible. It is in the best interest that the possible dangers of alcohol use to be shared more often. It should be mentioned that respondents pointed out to medical staff, family and friends as their source of information in this matter. This leads us to believe that overall amount of familiarity with FASD is becoming more and more popular.

It remains however a problem, the amount of persons who still do not have information as to which institutions are responsible for combating FASD and where to seek help if such assistance is needed. Rarely can the participant point as to which Polish institutions have begun popularizing knowledge about FASD, to diagnose the disease or provide treatment to those affected by it. Vast majority would point out to specialized psychiatric and psychological clinics as those who diagnose and treat FASD patients. It is not always the case, however more and more staff members from said institutions receive specialist courses on how to treat and care for a FASD affected child which is a great improvement in and of itself.

FAS and other alcohol related disorders remain incurable as destructive changes in the body occur during the fetal stage. We can simply prevent those ill effects by not

allowing mothers to consume alcohol during their pregnancies. We assume that providing information regarding the consequences to the mothers early, will lead to a decrease in FASD affected child births. This is why the role of prophylactic, information and prevention is so important in this matter.

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