

## **The impact of a mass terrorist attack on the health of mother and her fetus in light of the topics of the 4th Polish National Congress of Midwives, Warsaw, November 21-22, 2014**

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### **ABSTRACT**

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Facing the new challenges brought about by the global geopolitical situation with regards to terrorist threats and growing multiculturalism in Poland, 4th Polish National Congress of Midwives in Warsaw saw a need to present and discuss, among others, a transcultural approach to midwifery care and the effect of a mass terrorist attack on the health of an expectant woman and her fetus and the course of her pregnancy and delivery. It has to be emphasized that the issue of the impact on the health of an expectant woman and her

fetus as well as the course of her pregnancy and delivery had never been thematically researched (until said Congress) for presentation to a wide body of midwives, midwifery specialists, neonatologists, pediatricians, obstetricians, gynecologists and other healthcare providers in Poland during numerous congresses, conferences or scientific/training conventions.

**Key words:** maternity care, midwife, multiculturalism, obstetrics, pregnancy outcome, PTSD, terrorism, PBDE.

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The lead topics of 4th Polish National Congress of Midwives in Warsaw concerned the duties of a midwife in accordance with the Perinatal Care Standards, with a special consideration given to: a transcultural approach to obstetric care (lecture: Assoc. Prof. Grazyna Iwanowicz-Palus, Ph.D. in Medical Sciences, President of the Central Board of Management of the Polish Midwives Association), requirements of the Perinatal Care Standards (lecture: Leokadia Jedrzejewska, M.S., National Consultant in the Field of Gynecological and Obstetrical Nursing), the most frequent nutrition disorders in women (lecture: Agnieszka Bien, Ph.D. in Medical Sciences), diet and supplementation of expectant and breastfeeding women (lecture: Maria Zarajczyk, M.S.), caring for skin by women during pregnancy and after delivery (lecture: Maria Zarajczyk, M.S.), nutritional care of a premature baby and its influence of the further development of the child (lecture: Robert Walenciuk, M.S.), stimulating the activity of newborns and infants (lecture: Agnieszka Skurzak, M.S.), caring for a disabled woman during the perinatal period (lecture: Ewa Rzonca, M.S.) [1a].

Barbara Gardyjas, M.S., discussed legal issues in her lecture entitled, "The Accountability of Midwives: The Most Important Legal Duties of Midwives with Regards to Record-Keeping in Daily Practice." The moral and ethical issues related to the violation of law were also addressed. The speaker brought up the case of a midwife who, in order to avoid legal responsibility, submitted a petition for revocation of her Professional License with a District Board of Nurses and Midwives on the last day before the commencement of legal proceedings (against said midwife) at the Regional Court for Nurses and Midwives. This motion, albeit legal but morally and ethically dubious, prevented the trial from being initiated, because, under the law, a midwife who at the day of the trial is not licensed cannot be prosecuted. As a result, the Regional Court for Nurses and Midwives could not sentence the accused. In addition, the revocation of the professional license forced said court to dismiss the action against this midwife (i.e. reject all the charges). At the same time, said midwife was able to apply for reissuance of her license and her right to obtain her Professional License from the District Board of Nurses and Midwives was guaranteed by law (as this person was not convicted by the Regional Court for Nurses and Midwives).

The Special Panel of 4th Polish National Congress of Midwives in Warsaw featured the presentation of topics in three different categories: "pregnancy", "lactation assistance", and "foreign experiences". A – pregnancy: how to provide the best counseling to prospective parents (lecture: Barbara Gardyjas, M.S.); B – lactation assistance: how to

support young mothers (lecture: Agnieszka Bien, Ph.D. in Medical Sciences); C – foreign experiences: "The impact of a mass terrorist attack on the health of an expectant mother and her fetus as well as the course of her pregnancy and delivery" (lecture: Dariusz Wojciech Mazurkiewicz, Master of Midwifery, Ph.D.c.) [1a, 2].

The third topic of the Special Panel of the 4th Polish National Congress of Midwives in Warsaw, devoted to the impact of a terrorist attack on the health of an expectant woman and the course of her pregnancy and delivery, shed a totally new light on the issues unknown to midwives and other Polish healthcare providers due to the lack of research material in Poland, and, as a result, the lack of domestic scholarly publications on this subject. The issues listed below, such as the global geopolitical situation in light of the developing terrorist threat, the lack of comprehensive knowledge in Poland in the fields of midwifery, obstetrics, gynecology, neonatology and pediatrics with regards to the effects of a mass terrorist attack, as well as a need to promote knowledge on the subject based on the publications of US government and non-government institutions that have appeared after the World Trade Center terrorist attack in New York City in 2001, came to the forefront in line with the scientific and professional interests of Mazurkiewicz DW., Master of Midwifery, Ph.D.c, St. Mark's Place Institute for Mental Health, New York, New York, USA, who has conducted research on this subject in collaboration with Prof. Terlikowski SJ., M.D, Ph.D., Head of Department of Obstetrics, Gynecology, and Maternity Care at the Medical University of Bialystok, Poland.

During the lecture delivered by Mazurkiewicz, midwives acquired knowledge attesting to the negative impact of a mass terrorist attack on the health of an expectant woman and her fetus as well as the course of her pregnancy and delivery, related, among others, to [1b, 2]: documented toxicological results confirming the direct impact of toxins on a child's neurological development (e.g., the impact of PBDE (*Polybrominated diphenyl ethers*) concentration on the psychophysical development; age range: 12-72 months [3]; endocrinological system disorders (e.g., cortisol level disorders), which led to the development of diseases included in the psychiatric classification as PTSD (*Post-traumatic stress disorder*) and/or depression, as a result of a woman's traumatic experiences during pregnancy; incidence of post-traumatic stress disorders in a mother's womb and in newborns of mothers who experienced a terrorist attack during pregnancy; incidence of the risk of bearing hyperactive children by PTSD-diagnosed mothers; pregnancy stage on the very day of the attack and the effect of the impact of this type of terror on the

further course of the pregnancy (e.g., an increase in the frequency of miscarriages of in-vitro pregnancies in week 13; physiological delays of the initiation of labor in full-term pregnancies; increase in deliveries in weeks 33-36 with a birth weight below 1500g, when the conception coincided with the date of the terrorist attack); distances between the pregnant woman and the epicenter of the strike (attack) contributed to a low birth weight of newborns and anomalies in the course of the pregnancy, as well as fetus metrical disorders; IUGR frequency increase; birth weight distribution of those newborns whose intrauterine development coincided with the WTC terrorist attack of September 11, 2001 [4, 5]. In addition, the lecture on the impact of a mass terrorist attack on the health of an expectant woman and her fetus as well as the course of her pregnancy and delivery provided midwives with practical guidelines on PTSD diagnostic criteria in accordance with the Diagnostic and Statistical Manual Mental Health Disorders (DSM-5) [6].

The lecture also referred to the essence and significance of early diagnosis of post-traumatic stress and the role of a midwife with respect to that, with a possibility of establishing a diagnosis based on the most frequent clinical symptoms such as: emotional symptoms (e.g., shock, panic, numbness, fear, anxiety and nervousness, uncertainty, loneliness), physical symptoms (e.g., fatigue, exhaustion, weakness, headaches and/or dizziness, grinding teeth, difficulty breathing, rapid heart rate, worsening of existing medical conditions), behavioral symptoms (e.g., being suspicious and hyper-alert; outbursts and frequent crying; increased conflicts at home and work; increased smoking or/and alcohol drinking, and/ or substance use such as narcotics; avoidance of reminders of the traumatic event), cognitive symptoms (e.g., feeling confused, blaming others, poor attention and concentration, memory problems and impaired thinking, having nightmares, flashbacks and intrusive thoughts) [1,7]. The differences between the symptoms of depression and that of anxiety and fear were discussed. Practical tips on immediate care for expectant women experiencing a panic attack were provided [1b].

The subsequent parts of said lecture presented the principles of using antidepressant medications during pregnancy taking into consideration the breastfeeding criteria; side effects of medications such as TCA (Tricyclid Antidepressants) and SSRI (Selective Serotonin Reuptake Inhibitors). Also, SSRI withdrawal symptoms in newborns of mothers who were given SSRI medications during the third trimester of pregnancy were discussed [1b]. The lecture also analyzed the non-pharmacological treatment methods of PTSD, depression, anxiety and fear with respect to group, individual and family therapy; art therapy;

therapy in overcoming anxiety and fear, an relaxation techniques (e.g., yoga therapy and visualization therapy) [1b].

## CONCLUSIONS

1. There is a deficit of knowledge with respect to a possible impact of a mass terrorist attack on the health of an expectant woman and her fetus as well as the course of her pregnancy and delivery.
2. There are no comprehensive educational programs preparing midwives for a possible need to provide services for expectant women during the pre-, peri-, and postnatal period and for a necessity to implement medical assistance methods for expectant women and newborns in the aftermath of a mass terrorist attack.
3. In an era of a growing terrorist threat, it is necessary to develop standards of proceedings and expand the extent of rights (in pharmacotherapy, among others) and duties for midwives when a necessity arises to provide medical services in emergency situations, including the aftermath and impact of a mass terrorist attack.
4. It seems justified that educational offerings at the undergraduate and graduate level in the field of midwifery be expanded to include topics covering the impact of a mass terrorist attack on the health of an expectant woman and her fetus as well as the course of her pregnancy and delivery, and issues related to the methods of provision of medical services by midwives to expectant women, postpartum women and newborns when there is a threat of a terrorist attack and/or in its aftermath.

## Conflicts of interest

The authors declare that there are no conflicts of interest of this paper.

## REFERENCES

1. Zeszyt Edukacyjny-Obowiązki Położnej wg Standardu Opieki Okołoporodowej, IV Ogólnopolski Kongres Położnych, Wyd. PZWL, Warszawa, 21-22 listopada 2014:1a-1,1b-52-7. (Polish)
2. Kolańska K, Łasek K, Mackiewicz Z, Pawłowska B. IV Ogólnopolski Kongres Położnych. Okręgowa Izba Pielęgniarek i Położnych w Łodzi 2014;12:14-6. (Polish)
3. Herbstman JB, Sjödin A, Kurzon M, Lederman SA, Jones RS, Rauh V, Needham LL, Tang D, Niedzwiecki M, Wang RY, Perera F. Prenatal exposure to PBDEs and neurodevelopment.

- Environ Health Perspect. 2010 May;118(5):712-9.
4. Brown R. The Intergenerational Impact of Terror: Does the 9/11 Tragedy Reverberate into the Outcomes of the Next Generation? Duke University, April, 2012. Available from: [http://sites.duke.edu/ryanbrown/files/2013/09/Terror\\_BW\\_FINAL\\_2013\\_w\\_tables.pdf](http://sites.duke.edu/ryanbrown/files/2013/09/Terror_BW_FINAL_2013_w_tables.pdf). [cited 2015 May 11].
  5. National Center of Health Statistics 1995-2002 birth certificates. Available from: <http://wonder.cdc.gov/wonder/help/natality.html>. [cited 2015 May 17].
  6. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, VA, American Psychiatric Association, 2013. Available from: <http://psychiatryonline.org/doi/book/10.1176/appi.books.9780890425596>. [cited 2015 May 03].
  7. New York City Department of Health and Mental Hygiene, Office of Mental Health Disaster Preparedness and Response, How People React to Traumatic Events. Available from: <http://home2.nyc.gov/html/doh/downloads/pdf/mhdpr/mhdpr-how-people-react.pdf>. [cited 2015 May 08]