

OPINION

of Prof. Dr. Valeria Ignatova Kaleva

Medical University - Varna

Department of Pediatrics

Regarding

The dissertation for the educational and scientific degree Medical Doctor on the topic:
Immunization calendar and vaccinations in Bulgaria - current trends, problems and opportunities for solving them

in the field of higher education 7. Healthcare and sports, professional field 7.1.
Medicine, doctoral program *General Medicine*

AUTHOR: Dr. VANIA ANTONOVA ALEKSANDROVA

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General presentation of the procedure

According to order № R 109-592 / 31.12.2021 of the Rector of MU - Varna and on the basis of Protocol № 1 / 10.01.2022 of the Scientific Jury I was chosen to present an opinion on the dissertation of Dr. Vanya Antonova Aleksandrova.

The presented materials are in accordance with the procedure for acquiring an ONS Doctor in MU - Varna and the Regulations of MU for the development of the academic staff and include all necessary documents.

Brief presentation of the doctoral student

Dr. Vanya Antonova Aleksandrova was born on September 28, 1969 in Varna. She graduated from the Dimitar Blagoev Secondary School in 1987. In 1994 she graduated from the Medical University of Varna. She specialized in pediatrics and acquired a specialty in 1999. In 2008 she acquired a second specialty in *general medicine*. From 2005 to the present days she has been working as a general practitioner at the *St. Marina* - Varna, and since 2015 he has been an assistant at the Department *General Medicine* at the Medical University - Varna. Member of BMA, BPA and the Union of General Practitioners.

Relevance of the topic The

The dissertation presents the current problem of vaccine prevention in the country, related on the one hand to the diverse attitudes of society regarding its implementation and on the other hand, the challenges facing medicine to find effective solutions. In recent years, Bulgaria has lacked large-scale studies on this issue, including studies related to the use of vaccines according to the national immunization calendar.

In the context of this issue, the research of Dr. Vanya Aleksandrova is extremely relevant and useful for health professionals working with children and our entire health care system due to providing an opportunity to target the root causes of anti-vaccine attitudes and non-compliance with the immunization calendar.

The set goals and objectives are clearly and correctly formulated and involve drawing original conclusions, given the number of participants in the study and the possibility of obtaining significant correlations.

Managing the problem

The doctoral student presents an extensive literature review of current achievements in the field of immunity and vaccine prophylaxis, analyzing scientific data and formulating clinical concepts.

Characteristics and evaluation of the dissertation

The presented dissertation is presented on 145 standard pages with 26 tables and 45 figures. The list of cited literature includes 196 sources, of which 41 in Cyrillic and 155 in Latin.

The Literary Review is presented on 33 pages and contains current and detailed information about vaccines, their role in antibody production, history of vaccine prophylaxis, immunization calendar of the Republic of Bulgaria and various other aspects of vaccine prophylaxis in clinical and social terms. An analysis of unresolved and controversial issues is included and finally a goal, 6 tasks and 3 working hypotheses for research are formulated.

The *Material and Methods* is presented on 4 pages, and the design includes two parallel independent surveys, assessing parents and general practitioners, respectively, on knowledge about the benefits of vaccinations, attitudes towards the immunization calendar and the possibility of using pediatric counseling as a tool. The number of participants is relevant and balanced for the development of the dissertation topic. The statistical approaches are chosen adequately.

The *Results* are presented on 44 pages, illustrated with tables, figures and statistical interpretations of the results, divided into 2 sections: (1) Study "Immunization calendar - attitudes towards its observance and reasons for hesitation among parents and future parents" and (2) Study "GP and immunization calendar".

In the Discussion section, the authors' own results are discussed with reference publications and specific demographic and socio-economic characteristics of the participants, relevant to the working hypotheses, are analysed and have become the basis

for the formulation of 15 conclusions, 4 original research contributions and 4 contributions of a confirmatory nature.

The conclusions are defined precisely and clearly and correspond to the goal and the set tasks.

Evaluation of the contributions of the dissertation

The contributions are extracted mainly in scientific and social aspects and emphasize the scale of the study on current global recommendations for immunoprophylaxis in cases of prematurity, low birth weight and immunocompromised children; proving the fact that the main source of information is the Internet; inversely proportional dependence between anti-vaccine attitude and the level of education, employment, the number of children in the family and the proportional dependence on the influence of relatives and friends with such attitudes; the need for training courses and preparation of recommendations with scientific evidence for medical workers actively involved in immunoprophylaxis of the population in Bulgaria.

Assessment of the publications on the thesis

There are 4 full-text publications in medical journals, in one of which the PhD student is the first author.

Personal participation of the doctoral candidate

The doctoral candidate's own intellectual and sentimental activity includes formulating the scientific concept, structuring the study design, conducting the research, categorising the data and statistical processing.

Abstract

The document is spread over 51 pages and summarises the research, results, discussions and messages of the dissertation.

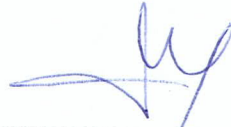
Conclusion

The submitted dissertation of Dr. Vanya Antonova Aleksandrova fully complies with the requirements of the Academic Staff Development Act in the Republic of Bulgaria (ASDA), its Implementing Regulations and the Regulations of MU - Varna.

The dissertation *Immunization calendar and vaccinations in Bulgaria - current trends, problems and opportunities for solving them* is a large-scale study on the current problem of vaccination prophylaxis in children in Bulgaria. On the basis of its topicality, methodological competence and scientific and practical contributions, I confidently give my positive assessment and propose the scientific jury to vote positively for the award of the degree of Doctor of Education and Science to Dr. Vanya

Antonova Aleksandrova.

27.11.2022

A handwritten signature in blue ink, consisting of a stylized 'V' followed by a horizontal line and a vertical line, all connected by a single stroke.

Signature:

Prof. Dr. Valeria Ignatova Kaleva, Ph.D.