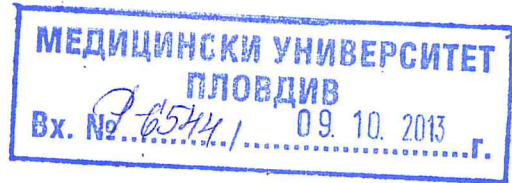


27 September 2013
London, UK



TO WHOM IT MAY CONCERN

[Graduate Education Committee, Medical University-Plovdiv, Bulgaria]

PhD REVIEW

CANDIDATE: Dr. Valeria Todorova Tananska MD

[Department of Anatomy, Histology and Embryology, Medical University-Plovdiv, Bulgaria]

Title of thesis: 'Anxiety and Empathy Levels of 1st and 2nd Year Medical Students Post-exposure to Dissection Cadavers.'

REVIEWER: Prof. Andrew Miles MSc MPhil PhD DSc (hc)

[Professor of Clinical Epidemiology and Social Medicine, World Health Organisation Collaborating Centre for Public Health Education and Training, Faculty of Medicine, Imperial College London UK].

This review is based upon: A 20-page Dissertation Synopsis (in English), an intra-departmental presentation, 3 articles published in scholarly journals (in English), progress reports and further information-targeted correspondence with the PhD Candidate

Declaration: I have known the Candidate in a scientific capacity for the full course of two years as part of my visiting professorship to MUP. During this period of time I have had the opportunity to familiarize myself well with her work on the impact that death and the dissection of deceased humans have had on first and second year medical students.

Importance of dissertation and obtained results

I would like to commend the Candidate for her insight and resolve to examine scientifically one of the most pressing problems of medicine today – healthcare's shift of focus away from *healing* an individual (physically, emotionally, mentally, spiritually), towards a scenario which sees the patient not as a person, but rather in the manner of a complex biological machine, an operational statistic within the health system.

The resulting dehumanization of patient care is now a major topic of discussion across Europe and the United States as I recently pointed out in a major contribution to *Folia Medica* and when delivering Plenary Lectures on the subject recently to major conferences in Madrid, Munich, Rome, Vienna and Brussels.

Thus far, attempts to find working solutions have been made primarily at the hospital level. New rules and procedures have been devised on how to treat patients humanely according to the particular needs of their illness. These efforts have so far met limited success, but the establishment of the new European Society for Person Centered Healthcare (of which I am Senior Vice President) and its official journal (of which I am Editor) are directed at changing this situation for the better.

Through her PhD work, the Candidate has contributed significantly to the European, indeed international, discussions of this subject. Indeed, the Candidate's research shows unequivocally that upon university entrance, medical students of different countries of origin and religion are not ethically and philosophically ready to treat patients empathetically. A great many of them lack a proper understanding of the connection between 'life and death' and their future role in dealing with such matters.

We learn from the research that neither one nor two years of intense medical study equip them better for the practice of medicine. Anxiety falls to abnormal levels. Empathy towards a departed person is altogether lacking. The presence of the anatomy cadaver in medical education is seen as 'normal.' There is no gratitude or appreciation towards the role of the deceased in physicians' training. Indeed, cadavers are often objectified as a 'thing' or a 'piece of meat', rather than the lifeless form of a human, a state of being that must be combatted by the physician at all costs. The worth of a person's life is devalued in this way.

The implications of these findings are of great concern. Realistically, if we, as teachers of medicine, cannot provide our students with the means to develop a modern version of the old Hippocratic ideal, then we run the risk of failing in our duties in a considerable way. This is not good for medical students and it is certainly not good for patients and their families.

Technical evaluation of the data

My contact with the Candidate in formal (written documents) and informal (personal conversations and written correspondence) capacities, has allowed me to form the strong opinion that the Candidate's work is of a highly progressive nature, certainly conforming to all normative scientific standards upheld by the best European university traditions.

The text is well-versed, reader-friendly and direct. The dissertation topic is cleverly formulated to examine key aspects of working with a dissection cadaver. The goals of the research are clearly defined and achievable within the scope of a PhD dissertation.

The use of 6 psychosomatic and 2 biochemical tests on 412 subjects is most impressive. The widely accepted and understandably strict regulations on humane and unobtrusive human testing required have been successfully met.

I am acquainted both with Dr. Hamilton's Test of Anxiety and Dr. Baron-Cohen's (also a British national) work on empathy and systemization. Testing medical students simultaneously on them has enabled the Candidate to explore further the as of yet not-so-well understood relationship between anxiety and empathy. In this context, it is exciting finally to see a project that has generated 'hard', scientifically verified data on the connection between these two conditions of mind.

I am most impressed with the Tests on the Dissection of Anatomy Cadavers formulated by the Candidate (T-ADT, 2010). These, split in three portions, containing an exhaustive range of non-leading questions on anxiety and empathy vis-à-vis anatomy dissection. The tests are the first in the world to explore so perceptively the medical student psyche on existentialist issues.

In terms of the statistical analysis, the data obtained has been processed extremely well. In this context, I strongly suspect that the new statistical method devised will prove greatly useful in future biochemical research. To my knowledge, it has no existing analogue.

The conjoint testing of salivary α -amylase and chromogranin A in the context of anxiety research is cutting edge. At present, only Japanese scientists - proven forerunners in biochemical research - have applied it. The reliability of the results is underlined by the use of the original processing kits for both substances.

From a presentational perspective, I am impressed with the innovative graphics employed within the dissertation. Far from using 'drab colors' and a simplistic design, the thesis presents the data that has been generated in an informative, easy-to-read and pleasantly painted two-dimensional manner.

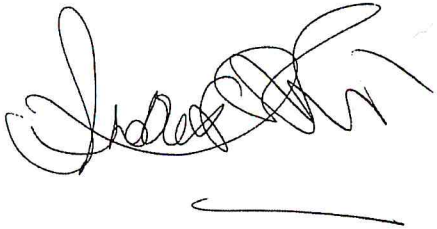
The dissertation produces important results in the quest to eradicate the dehumanization of medical care. Indeed, as Editor-in-Chief of the *European Journal for Person Centered Healthcare* and Senior Vice President of the European Society for Person Centered Healthcare, I have invited the Candidate to write a seminal paper for the *Journal* on her work and the many implications and applications that will derive from it.

Recommendation

With reference to what I have written above, I have no hesitation in recommending to the Medical University of Plovdiv that the Candidate's exceptional work be recognised through the award of the degree of Doctor of Philosophy [Medicine with applications to Anatomy, Histology and Cytology]

With kindest collegial regards, I am,

Yours faithfully

A handwritten signature in black ink, appearing to read 'Andrew Miles', with a horizontal line underneath it.

Professor Andrew Miles MSc MPhil PhD DSc (hc)

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College London, UK.

Editor-in-Chief: *Journal of Evaluation in Clinical Practice* & Editor-in-Chief: *European Journal for
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