

## EVALUATION REPORT

by Prof. Ruska Vasileva Paskaleva, PhD

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Member of the Scientific Jury appointed by Order No. P-109-  
504/10.12.2025 regarding procedure for conferral of the PhD educational  
and scientific degree in doctoral program “Public Health Management”,  
professional field: 7.4. Public Health, higher education field: 7. Health and  
Sports

**Professional field:** 7.4. Public Health

**Doctoral program:** Public Health Management

**Author:** Aiham Gotani

**PhD study form:** independent

Department of Social Medicine and Health Care Management, Medical  
University - Varna

**Subject:** “Unveiling Placebo Potential: A Public Health Approach to  
Understanding and Harnessing Low Back Pain Responses in Israel”

**Scientific supervisor:** Prof. Silvia Pavlova Nikolova, PhD

### **1. General overview of the procedure and the PhD student.**

By Order No. P-109-504/10.12.2025 of the Rector of the Medical  
University – Varna, I am appointed as external scientific jury member for public  
defense of a thesis for conferral of the PhD educational and scientific degree.

The PhD student Aiham Gotani presents a set of materials both on paper  
and electronic media meeting the requirements of Art. 44, para. 3 of the Statute  
for the Academic Staff Development at the Medical University - Varna  
regarding the conferral of the PhD educational and scientific degree. In addition  
to the dissertation and thesis abstract, the set contains a summary of the  
scientific works in English, copies of the publications related to the dissertation,  
the PhD student’s CV and the required notarized copies of diplomas,  
declarations and transcripts from the decisions of the Department councils in  
connection with the readiness for preliminary defense and opening of the official  
defense procedure.

I have neither objections nor comments regarding the presented documents.

## **2. Brief biographical data about the PhD student.**

Aiham Gotani completed his secondary education in 2011 in Mas'adeh High School, Golan Heights. In 2017 has obtained a Bachelor's degree in Nursing at the Safed Academic College. The student is a registered nurse with more than 8 years experience in emergency medicine, combining sound clinical skills with a solid academic and research experience in health care and has obtained a Master's degree in Health Administration in 2021. The PhD student has specialized in patient-centered communication, empathy, cultural competence and health impact of climate change and during 2021-2023 has carried out a research program (dissertation) at the University of Haifa and has acquired the Doctor of Public Health academic degree. The PhD student is a lecturer at the Zefat Academic College with experience in teaching emergency nursing and public health courses; research coordinator and author of original educational and technological tools for healthcare professionals. He demonstrates a strong commitment to evidence-based practice, interdisciplinary collaboration, and improving healthcare quality through research-based innovation.

## **3. Relevance of the problem and appropriateness of the thesis' goals and objectives.**

The evaluated PhD thesis is of **high medico-social importance**, as it combines a **holistic and humane approach** to connect biomedical science with psychosocial care to achieve more effective management of chronic pain in public health. The dissertation offers a transition to a biopsychosocial model that sees pain as a subjective experience influenced by cognitive and emotional factors. It provides ground about the need for therapeutic communication as a basic clinical skill capable of activating body endogenous pain modulation systems. This is achieved by increasing the quality of care and patient

satisfaction, integrating empathy, building trust and shared decision-making, and strengthening the clinician-patient relationship. In the context of the multicultural Israeli society, the PhD thesis emphasizes the need to adapt communication to diverse linguistic and religious environments, as an influential factor for equity in health care.

The addressed problems are of primary importance in coping with the leading cause of disability in Israel, with approximately 25% of adults reporting low back pain on an annual basis, with 10–15% of chronic cases. The condition results in high work disability, significant costs to the healthcare system, including direct medical costs and indirect losses from reduced working capacity.

The main goal and objectives of the dissertation are clearly defined and structured to cover the theoretical, practical and sociocultural aspects of pain management. The main objective of the study is to **investigate the knowledge, awareness and clinical practices** of healthcare providers (physicians and nurses) in Israel about **non-clinical strategies**, such as verbal placebo mechanisms, empathic communication and trust building in the treatment of low back pain (LBP).

The major focus of the dissertation is to *investigate how empathic communication, trust, and shared decision-making modulate placebo effects in the treatment of low back pain in Israel. The training of healthcare providers in these skills significantly improves patients' clinical attitudes and outcomes.*

**4. Knowledge of the problem.** The PhD student candidate has in-depth knowledge of the topic. Aiham Gotani's theoretical reasoning and conclusions are based on detailed analysis presented on 192 pages, and over 200 literary sources. The presented publications are related to the topic. The structure of the dissertation comprises seven main chapters, a summary, lists of tables and figures, and a detailed reference list. It follows a logical exposition from

theoretical reasoning and literature review to empirical research and practical recommendations.

**The main parts of the PhD thesis include:**

**Summary and research context:** Presents the magnitude of the low back pain (LBP) problem and the need to strengthen the communication care infrastructure.

**Chapter 1. Introduction:** This chapter reviews the background of the problem, defines the primary and additional research questions, the aims of the thesis, and the public health significance of the study. The section considers pain as a multidimensional phenomenon that includes sensory, physiological, and subjective components.

*The main highlights are: **Low back pain (LBP):** LBP is outlined as the leading cause of disability worldwide and a significant socioeconomic burden; **Biopsychosocial model:** It is emphasized that traditional biomedical models are insufficient so that cognitive, emotional, and interpersonal factors need to be taken into account; **Verbal placebo and empathy:** These strategies are presented as biologically active tools that are often overlooked due to a lack of formal training for healthcare professionals; **Israeli context:** The specific role of cultural heterogeneity and organisational constraints of the Israeli healthcare system are highlighted.*

*The dissertation aims to fill a critical gap in research and practice by integrating therapeutic communication as a core clinical skill. The results are expected to clarify the development of culturally sensitive and cost-effective interventions that will improve patient satisfaction and reduce healthcare costs in Israel.*

**Chapter 2. Theoretical framework:** It examines the biopsychosocial model (BPS) and patient-centered care (PCC). *The chapter identifies five key strategies that serve as mechanisms for improving patient outcomes: **Empathy** - accurate understanding and validation of patient's experiences; **Trust-building***

- behaviour signalling compassion, credibility, and transparency; ***Shared decision-making*** - A collaborative model in treatment decision-making; ***Cultural competence*** - The ability to adapt communication to the patient's linguistic and sociocultural background; ***Verbal placebo communication*** - The use of credible, reassuring messages activating endogenous pain-relieving systems without deception.

Six guiding hypotheses (H1–H6) testing these pathways and the effect of the educational intervention on the final outcomes (pain, observance, satisfaction) are formulated.

*Chapter two positions the clinical meeting as an independent therapeutic agent and provides proof that ethical management of expectations and empathy is fundamental to the effective low back pain treatment.*

**Chapter 3. Literature review:** Presents a comprehensive theoretical analysis of existing research related to pain, communication, and the placebo phenomenon. The chapter is structured in a way that passes from the epidemiology of pain to the complex psychological and neurobiological mechanisms of its management.

***The main parts and topics covered in this chapter include:***

- Low back pain (LBP) is defined as the leading cause of disability worldwide that affects the quality of life and economic productivity. The LBP prevalence and statistics are reviewed, as well as the profile of the typical patient.
- The development of pain management as a standard of care in Israel is analyzed, including pharmacological practices and the increasing prescription of opioids. The cultural differences are identified; the way multicultural Israeli society influences the perception and expression of pain is outlined.
- Challenges in pain assessment are identified – e.g. subjectivity, emphasizing the lack of an objective “gold standard” for measurement of

pain, necessitating reliance on patient's self-evaluation; dynamics of modulation, examining the mechanisms of ascending and descending pain pathways, including the phenomenon.

- The mechanisms of placebo analgesia are defined. Anticipatory expectations and classical conditioning are described as the leading psychological processes activating endogenous opioid systems.
- An analysis on how negative expectations (the *nocebo* effect) and catastrophic language can worsen patient's symptoms is provided.
- The therapeutic power of words and communication is presented. *Language is examined as a therapeutic agent*, investigating how positive verbal framing and clinician reassurance can measurably alleviate pain. *The empathy and emotional support* are presented as cornerstones of care that modulate stress physiology and strengthen the therapeutic alliance. *The shared decision making* emphasizes the role of collaboration in treatment selection to reduce decisional conflict.
- Psychocognitive factors and optimisation of care *through reduction of stress and optimisation* of empathic dialogue and cultural responsiveness serve as "silent healers" that improve treatment outcomes.

*Chapter three lays down the scientific basis of the dissertation, connecting the biology of pain with communication psychology and demonstrates the potential of non-clinical strategies for improving healthcare.*

**Chapter 4. Research methodology:** The study used a two-wave quantitative "before-and-after" design with a planned three-month follow-up for assessment of the sustainability of changes. The design is explicitly based on the biopsychosocial model (BPS) and the patient-centered care (PCC) principles, where the clinical meeting itself is viewed as the therapeutic agent. The quantitative approach is chosen to ensure measurable, statistically significant results and generalizability.

*The study was conducted in the emergency medicine and orthopaedic departments of Ziv Medical Center (Northern Israel) with a sample of 50 licensed physicians and nurses with at least one year of clinical experience who regularly treated patients with low back pain.*

*The intervention targeted five key mediators:* empathy, trust building, shared decision-making (SDM), cultural competence, and verbal placebo. It included a didactic part with a structured lecture on the role of communication and the placebo effect, a video presentation demonstrating effective empathic dialogue in a real clinical setting, role-playing games and scenarios for practicing the techniques, weekly “micro-tips,” and case examples sent via WhatsApp or email over a period of 1–2 months.

*A comprehensive questionnaire*, including validated scales adapted to the context of LBP; items from the Jefferson Scale of Empathy; validated items for compassion, trustworthiness, and transparency; items based on the SDM-Q-Doc; awareness inventories, skills and language adaptation was used. All questions used a 5-point Likert scale.

*Statistical analysis* - data are analyzed using JAMOVI and SPSS Statistics software. Descriptive statistics, paired-samples t-tests, and repeated-measures ANOVA were used to track progress over time. Regression models were used to evaluate cause-and-effect relationships and the influence of demographic factors.

*Ethical considerations.* The study was approved by the Ethics Committee of the Ziv Medical Center (ZIV-0072-24). All participants gave informed consent. Complete anonymity was guaranteed through the use of unique identifiers.

**Chapter 5. Quantitative results:** It presents sample characteristics, descriptive and inferential statistics for pre- and post-intervention outcomes, and regression models predicting changes in empathy, trust, shared decision-making, and cultural competence.

**Sample characteristics:** A total of 50 healthcare professionals were involved (90.9% participation rate). **Of these**, 38% were physicians (n=19) and 62% were nurses (n=31), 44% male and 56% female. Most participants were between 35 and 45 years of age with clinical experience ranging from 10 to 20 years.

**The pre-intervention results** showed significant baseline professional differences. Nurses showed significantly higher levels of empathy than physicians in almost all dimensions (emotional recognition, emotional support), except for paraphrasing. They were superior in trust-building and transparency strategies. However, physicians were more likely to discuss directly the placebo effect with patients. Nurses showed higher cultural awareness and communication style adaptation compared to physicians. No statistically significant differences were found between male and female professionals in any of the constructs.

After the training, a significant change and convergence of the results were observed. The differences between doctors and nurses were erased, and both groups achieved an identically high overall score. In shared decision-making, doctors outperformed nurses, showing a statistically significant greater commitment to including patients in decisions and encouraging questions. **In the study** of trust and cultural competence, the results remained relatively high in both groups, with maintained tendency to more frequent discussion of placebo mechanisms by physicians. Multivariate analyses confirmed the effectiveness of the training and identified the intervention as the main factor for the statistically significant improvement in the results ( $p=0.031$  and  $p=0.018$ , respectively) in all subgroups. The professional role remained leading, with lower results for physicians than for nurses in both periods.

*The results in chapter five evidence that the educational intervention successfully standardized empathic behaviour and improved shared decision-making, transforming them into more cohesive clinical practices.*

**Chapter 6. Discussion:** Interprets the findings in the context of the Israeli healthcare system, analyzes barriers and facilitators to the implementation of communication strategies, and assesses the limitations of the study.

Results showed that the structured training program was effective in promoting measurable short-term improvements in clinicians' communication practices through: increased use of transparent justification for clinical decisions; clearer presentation of treatment options and active elicitation of patient preferences; and increased sensitivity to cultural and linguistic congruence. The study found that the gender of the clinician did not significantly influence behavior change. Variations were observed in terms of role expectations – physicians tended to lead shared decision-making (SDM) discussions, while nurses emphasized patient education and cultural mediation. The intervention successfully standardized empathic attunement and trust, erasing initial differences between physicians and nurses in these areas. Trust and cultural competence showed positive but statistically insignificant changes. They were perceived as merits requiring continued practice, feedback, and institutional support.

Chapter six analyzes methodological limitations, including the self-evaluation data (risk of social desirability) and the lack of direct patient-level measurement of results (pain intensity, satisfaction).

The results are considered most applicable to high-capacity hospital settings with multilingual staff (e.g. emergency and orthopaedic departments), where consultation time is limited.

The dissertation validates the concept that empathic dialogue and ethical expectation management are “active elements” of care that can modulate pain physiology without need for medical fraud.

*Chapter six claims that structured training of microskills is a viable strategy for an operational biopsychosocial model in the multicultural Israeli clinical context.*

**Chapter 7. Conclusions and recommendations:** The chapter summarizes the scientific contributions and offers specific directions for clinical practice and future research in the field of non-clinical pain management strategies.

The study achieves its empirical aims and demonstrates that structured training leads to significant short-term improvements in empathy and shared decision-making (SDM). The thesis confirms the concept that therapeutic communication is an “active agent” that may be purposefully developed to improve clinical relationships and patient experience.

The author has identified several critical limitations that should be considered in the interpretation of results:

- The reliance on self-evaluation questionnaires carries the risk of bias from to social desirability and recall errors;
- Lack of a control group - limited causality as the study was conducted in a before-and-after design without simultaneous control.
- The three-month period is not sufficiently long to assess long-term retention of skills and their impact on patient outcomes (such as pain intensity or functionality).

The results are most applicable to a high-load hospital settings in Israel and may not be fully applicable to primary care.

The author presents the following recommendations for the practice:

- Health care facilities should implement structured programmes for empathy, trust building, and cultural competence into professional training.
- A multidisciplinary approach to training, involving both physicians and nurses to achieve coherence in care is necessary.
- The use of simulations, role-playing games, and feedback sessions facilitating the application of skills in real-world settings is recommended.

Recommendations for future research are focused on the use of randomized controlled trials for more definitive establishment of causal relationships, inclusion of behavioural observation, and clinical meeting coding.

*Chapter seven concludes with the argument that nonclinical strategies are a viable and scalable strategy for an operational biopsychosocial model in the multicultural context of Israel.*

The study demonstrates that therapeutic communication is an “active agent” that can be purposefully developed to improve clinical relationships and the patient experience.

**CONCLUSION.** The dissertation entitled: "**Unveiling Placebo Potential: A Public Health Approach to Understanding and Harnessing Low Back Pain Responses in Israel**" by Aiham Gotani is written in good literary language and is dedicated to a serious medical and social problem, reflecting a correctly conducted detailed scientific study. The dissertation meets the requirements of the Statute on the terms and procedures for conferral of the PhD educational and scientific degree at the Medical University – Varna.

Based on the presented evaluation report, I give my positive evaluation and propose to the honorable Scientific jury members to confer the PhD educational and scientific degree to the PhD student **Aiham Gotani** in the PhD programme "Public Health Management"; professional field 7.4. Public Health; higher education field: 7. Health and Sports.

**22 February 2026**

**Undersigned:**

Заличено на основание чл. 5, §1, б. „В“ от Регламент (ЕС) 2016/679
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**/Prof. Ruska Paskaleva, PhD/**