

**OM Undergraduate Teaching in Greek Medical Schools Survey:
Used EASOM Methodology Deficiencies
& Requisite Rectifications to Improve Validity & European Comparisons"**

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RESULTS OF GREEK SURVEY OF UNDERGRADUATE TEACHING OF OM

PRIMA FACIE RESULTS 2022, ACADEMIC YEAR 2021-2022

(USING ONLY EASOM SURVEY QUESTIONNAIRE, (IDENTICAL IN 2011) Int Arch Occup Environ Health (214) 87:397401

MEDICAL SCHOOLS: 7, TOTAL STUDENTS: 11,880. YEARS OF STUDY TO OBTAIN MEDICAL DEGREE AND LICENSE TO PRACTICE: 6

STUDENTS (AND TEACHERS OF OCCUPATIONAL MEDICINE (OM):

ATHENS (ATH): 4,000 (3), “MANDATORY” ELECTIVE * STUDY UNIT,

THESSALONIKI (SAL): 2,880 (0), PATRAS (PA): 2,000 (0), IOANNINA (IO): 1,110 (0), CRETE (CRE) (0): 995 (0),

THRACE (THR): 800 (2) “MANDATORY” ELECTIVE* STUDY UNIT,

THESSALY (THES): 105 (1) “COMPULSORY” STUDY UNIT

*MANDATORY ELECTIVE UNIT: STUDENTS MUST SELECT (OUT OF MORE ON OFFER) AND BE EXAMINED IN 12 SUCH UNITS TO OBTAIN MEDICAL DEGREE AND LICENSE TO PRACTICE MEDICINE.

IN ONLY THREE MEDICAL SCHOOLS (THES, THR, ATH: TOTAL: 4,905 STUDENTS), WAS OCCUPATIONAL MEDICINE UNDERGRADUATE OM TEACHING PROVIDED, IN ACADEMIC YEAR 2021-2022. ALL FOLLOWING RESULTS PERTAIN TO THEM ONLY.

	THES	THR	ATH
CUMMULATVE ATTENDANCE HRS/STUDENT	30	13	20
SELF-LEARNING HRS/STUDENT	4	26	6
TRAINING PERFORMED DURING ACADEMIC YEAR	5	3	3-6

PRIMA FACIE RESULTS OF GREEK SURVEY OF UNDERGRADUATE OM TEACHING, 2021-2022, CONTINUED
TEACHING METHODS (Nos OF SCHOOLS):

LECTURES (3), WORKPLACE VISITS (2), E-LEARNING (2),

PROBLEM-BASED (1), PROJECT WORK (1), PERSONAL WORK (1)

NB. IN GREECE, NO WARD-BASED TUITION IN OM OR SHORT-TERM INTERNSHIP IN OM IS PART OF UNDERGRADUATE OM TEACHING OR OF SPECIALISATION TRAINING IN OM

THE **MAIN REASONS** STATED BY THE RESPONDING PROFESSORS IN THE FOUR MEDICAL SCHOOLS **FOR NOT PROVIDING OM TEACHING** EITHER AS A “MANDATORY” ELECTIVE UNIT OR AS A COMPULSORY STUDY UNIT WERE:

1. LACK OF FACULTY WITH OM CLINICAL EXPERIENCE & TIME NOT AVAILABLE FOR OM IN THE SCHOOL CURRICULUM,
2. OM NOT PERCEIVED BY CURRENT FACULTY MEMBERS TO BE IMPORTANT ENOUGH TO WARRANT THE
ESTABLISHMENT OF OM TEACHING POST,
3. LACK OF INTEREST ON THE PART OF STUDENTS TO SELECT IT AS A “MANDATORY” ELECTIVE (BECAUSE, IN
GREECE, OM IS NOT VALUED ENOUGH BY PHYSICIANS, AND IN GENERAL).

PRIMA FACIE RESULTS USING ONLY EASOM QUESTIONNAIRE (CONTINUED)

OM SUBJECTS TAUGHT *

TOTAL HRS PER MEDICAL SCHOOL

A.TOP SUBJECTS TAUGHT IN THE 3 MEDICAL SCHOOLS

• OCCUPATIONAL TOXICOLOGY	4	1	4
• OCCUPATIONAL RESPIRATORY DISEASES	4	1	1

B. SUBJECTS MISSING IN SOME SCHOOL(S)

• PRINCIPLES OF WORK ERGONOMY	2	0	0
• OCCUPATIONAL SKIN DISEASES	0	1	1
• OCCUPATIONAL STRESS/MENTAL HEALTH	2	0	1
• WORKABILITY ASSESSMENT	1	0	0
• WORKERS COMPENSATION ISSUES	1	0	0
• WRITING MEDICO-LEGAL REPORTS	1	0	0

C. SUBJECTS MISSING IN ALL THREE SCHOOLS: 1.RETURN TO WORK, 2. ASSESSMENT OF DISABILITY,

3. HOW TO COLLABORATE WITH OCCUPATIONAL PHYSICIAN, 4. ENVIRONMENTAL IMPACT OF INDUSTRIAL ACTIVITY

*NB. ONLY A, B, & C SUBJECTS ARE PRESENTED. 3 SCHOOLS HAVE SYLLABUS/MANUAL)

EXAMINATION AS A PREREQUISITE OF MEDICAL DEGREE, ONLY IN THE THREE MEDICAL SCHOOLS

- ***IN TWO MEDICAL SCHOOLS, STUDENTS MUST PASS EXAMS TO OBTAIN MEDICAL DEGREE/LICENSE TO PRACTICE MEDICINE ONLY IF STUDENTS HAVE CHOSEN OM AS “MANDATORY” ELECTIVE COURSE.***
- ***IN THE ONLY ONE MEDICAL SCHOOL WHERE OM IS COMPULSORY, THEY MUST PASS EXAMS IN OM TO OBTAIN MEDICAL DEGREE/LICENSE TO PRACTICE MEDICINE.***

MAIN CONCLUSIONS (REACHED IF USING ONLY EASOM QUESTIONNAIRE)

- **OF ALL MEDICAL STUDENTS IN THE THREE SCHOOLS, ONLY 41,3% IN TOTAL CAN RECEIVE OM TEACHING IN GREECE.**
- **HOW MANY IN TOTAL ACTUALLY ATTEND & SIT EXAMS & PASS THEM CANNOT BE RECORDED IN EASOM QUESTIONNAIRE.**
ONLY THE 105 STUDENTS IN ONE SCHOOL WITH OM AS COMPULSORY UNIT MUST SIT EXAMS & PASS THEM !
- **THE % OF THOSE WHO CHOOSE TO RECEIVE OM TEACHING AS ELECTIVE IN THE OTHER TWO SCHOOLS CANNOT BE CALCULATED USING DATA FROM EASOM QUESTIONNAIRE!**
- **AMINISTRATION OF EASOM QUESTIONNAIRE BROUGHT THE TEACHING OF OM TO THE FORE, IN GREEK MEDICAL SCHOOLS.**

PRIMA FACIE RESULTS USING ONLY EASOM QUESTIONNAIRE (CONTINUED)

ASSESSMENT OF OM KNOWLEDGE

WAYS USED FOR ASSESSMENT OF KNOWLEDGE/COMPETENCIES NO. OF SCHOOLS USING

- **MULTIPLE CHOISE QUESTIONS..... 2**
- **OPEN QUESTIONS. 1**
- **CASE STUDY REPORTS.....1**
- **ORAL PRESENTATION.....1**
- **ORAL EXAMINATION.....1**

NOT USED FOR ASSESSMENT:

1. OBJECTIVE STRUCTURED CLINICAL, 2. THESIS/DISSERTATION, 3. PROJECT REPORTS

4. STAFF EVALUATIONS, 5. OPEN BOOK EXAMINATION, 6. EXAMINATIONS (OSCE [?]), USED.

ONLY OM KNOWLEDGE IS ASSESSED, NO COMPETENCIES!

SOME REMARKS ABOUT EASOM QUESTIONNAIRE INDICATING DEFICIENCIES & SOME ESSENTIAL, ADDITIONAL RESULTS OBTAINED IN GREEK SURVEY, IN RESPONSE TO SUPPLEMENTARY QUESTIONS ASKED IN FURTHER INDIVIDUAL COMMUNICATIONS WITH RESPONDING PROFESSORS IN ALL MEDICAL SCHOOLS

1. RE.: “OSCE (OBJECTIVE STRUCTURED CLINICAL EXAMINATION)” QUESTION **DIFFERENCE** FROM “STRUCTURED CLINICAL” QUESTION PRESENTED IN EASOM QUESTIONNAIRE,
2. RE.: DOWNWARD OR UPWARD TRENDS (E.G., OVER 3 YEARS BEFORE YEAR OF SURVEY) QUESTION IS **MISSING**, **IN TWO GREEK MED SCHOOLS, DOWN WARD TREND TO “O”, IN TWO DOWN TO 35 AND 43 STUDENTS.**
3. RE.: QUESTION ON “*SELF LEARNING* HRS/STUDENT”: FOR REPLYING, HOW TO **ESTIMATE?** TO PRESENT AS MEAN OR MEDIAN?
4. RE.: QUESTION ON “HOW MANY MEDICAL STUDENTS CHOOSE THE “MANDATORY” ELECTIVE OM COURSE? HOW MANY PASS THE EXAMS AFTER COMPLETING IT?”, IS **MISSING**.

ADDITIONAL RESULTS (BASED ON REPLIES TO ADDITIONAL QUESTIONS ON NUMBERS OF STUDENTS REGISTERED FOR UNDERGRADUATE OM TRAINING)

- **2.25 %** OF TOTAL GREEK MED STUDENTS CHOSE AN OM ELECTIVE UNIT IN 2021-2022, IN THE TWO SCHOOLS WHICH OFFER IT.
- **4.98%** OF ALL STUDENTS IN THESE TWO GREEK SCHOOLS AND THE ONE SCHOOL WHERE OM IS COMPULSORY RECEIVED OM TUITION IN AN ELECTIVE OR COMPUSORY UNIT COURSE.
- **ONLY 1.54%** (AT BEST) OF THE 11,880 MEDICAL STUDENTS OF ALL SEVEN GREEK MEDICAL SCHOOLS, REGISTERED EITHER FOR AN ELECTIVE (IN 2 SCHOOLS) OR A COMPUSORY (IN 1 SCHOOL) OM STUDY UNIT (COURSE), IN 2021-22!
- **ONLY 5.6%** (AT BEST) OF GREEK MEDICAL STUDENTS GRADUATING EACH YEAR WILL HAVE RECEIVED OM TEACHING, ACCORDING TO THIS “SNAPSHOT” SURVEY.
- OM TEACHING % AS PART OF OTHER STUDY UNITS (COURSES) AND ITS QUALITY, ARE CURRENTLY UNKNOWN AND “IMPOSSIBLE TO ASSESS”.

FURTHER REMARKS ABOUT **EASOM QUESTIONNAIRE DEFICIENCIES & SUGGESTIONS FOR IMPROVEMENTS**

5. RE.: QUESTION “WHY STUDENTS DO NOT CHOOSE OM ELECTIVE?” WITH VARIOUS POSSIBLE REPLIES OPTIONS, WHICH IS **MISSING**.
6. RE.: IMPORTANT LEADING QUESTIONS (WITH REPLIES BOXES) ON IMPORTANT REASONS FOR OM TEACHING “NON-INVOLVMENT” OF MEDICAL SCHOOLS, E.G. “FINANCIAL/BUDGET DIFFICULTIES”, “ NEED PERCEIVED, BUT NOT ENOUGH OM KNOWLEDGE OF EXISTING FACULTY”, WHICH ARE **MISSING**.
7. RE.: IMPORTANT LEADING QUESTIONS (WITH REPLY BOXES) ON TEACHING OF MAJOR SUBJECTS, E.G “OCCUPATIONAL EPIDEMIOLOGY”, “HEALTH EDUCATION IN THE WORK PLACE”, “LEADERSHIP IN OM”, WHICH ARE **MISSING** (REGARDLESS OF WHETHER OR NOT MENTIONED BY RESPONDENTS IN EASOM 2011 SURVEY, UNDER “OTHER” QUESTION, THEY ARE NOT MENTIONED IN EASOM’S PUBLICATION OF IT).
8. REPLIES TO QUESTION ON “EXPERIENCE OF RESPONDENT REGARDING NATIONAL OM SITUATION”, ARE TOO **SUBJECTIVE**.
9. IMPORTANT QUESTIONS ON TEACHING OM AS (a) A SEPARATE STUDY UNIT OR (b) INTEGRATED IN OTHER STUDY UNITS (TO AVOID CONFUSION AMONG RESPONDENTS), ARE **MISSING**.
NB. EVEN IF SUCH A DISTINCTION WERE MADE, IT WOULD NECESSITATE TOO LONG A TIME FOR RESPONDENTS TO OBTAIN ACCURATE DATA ON ADEQUACY OF CONTENT AND HOURS OF TEACHING OM IN OTHER STUDY UNITS.
10. QUESTION RE.: QUESTION/SPACE FOR ADDITIONAL COMMENTS OR STATEMENTS, AT THE END OF QUESTIONNAIRE, IS **MISSING**.

**SOME GENERAL SUGGESTIONS AND REMARKS ABOUT DEFICIENCIES OF STUDY DESIGN AND
MANAGEMENT OF EASOM SURVEY**
(UNRELATED TO SPECIFIC QUESTIONS IN EASOM QUESTIONNAIRE)

RESPONSE RATE (**RR**) OF EUROPEAN MEDICAL SCHOOLS 2011 EASOM SURVEY WAS ONLY **44%**. IN 2022 EASOM SURVEY (FOR WHICH EASOM ASKED UEMS OM SECTION TO ASSIST) STARTING IN MAY 2022, UP UNTIL SEPTEMBER 2022 RR WAS LESS: **17%**. **CONSEQUENTLY: RESULTS HAVE LITTLE OR NO VALIDITY FOR INTER-COUNTRY AND IN-COUNTRY COMPARISONS.**

TO ACHIEVE A REQUISITE 85-90% RR:

1. FIRST **ANNOUNCE** SURVEY, THEN **SEND IMPROVED** QUESTIONNAIRE (AND **ADD** SOME **CLARIFICATION** NOTES, RE.: ITS COMPLETION, AND ALSO EXPLAIN WHY IT IS IN THE INTEREST OF RECEIPIENTS TO FILL IT IN).
2. IDENTIFY **ONE** PRINCIPAL RESEARCHER (AND HIS/HER DEPUTY), IN **ONE** ORGANIZATION (EASOM **OR** UEMS OM SECTION) [NB. THIS DID NOT HAPPEN IN 2022], WHO WILL:
 - (a) **SEND OUT** THE QUESTIONNAIRE TO THE “RIGHT” PERSON IN **ALL MEDICAL** SCHOOLS INVOLVED IN **UNDERGRADUATE TEACHING** (*NOT POSTGRADUATE...*) IN COUNTRY, **ACCOMPANIED BY** AN OFFICIAL **ENDORSEMENT** LETTER (BY ONE OF THE FOUR MAIN EUROPEAN INSTITUTIONS, WHICH ENJOY HIGH PRESTIGE, E.G. BY AN EC COMMISSIONER OR AN EC SENIOR OFFICIAL, SUCH AS THE EC OHS UNIT HEAD, OR BY THE EUROPEAN AGENCY FOR SAFETY AND HEALTH AT WORK DG), AND
 - (b) **COORDINATE** THE SURVEY AND **UNDERTAKE** “CLARIFICATION **CORRESPONDENCE**” AND **RECEIVE ALL** RESPONSES, IN HIS/HER COUNTRY.

GENERAL REMARKS ABOUT DEFICIENCIES OF STUDY DESIGN AND MANAGEMENT OF EASOM SURVEY, CONTINUED

3. ALLOW FOR LONGER PREPARATION TIME

TO IDENTIFY AND **ENGAGE ONE** KEY ACADEMIC IN EACH COUNTRY, **BEFORE** SENDING OUT QUESTIONNAIRE, WHO WILL:

- I. ESTABLISH A **CO-RESEARCHERS TEAMS**, IN **EACH COUNTRY**
- II. **PILOT** THE QUESTIONNAIRE **IN MOST MEDICAL SCHOOLS, WITHIN A COUNTRY**,
(I.E., **“PILOTING” IN ALL COUNTRIES**, NOT ONLY IN A FEW), TO IMPROVE IT AND ALLOW FOR SIGNIFICANT INTER-COUNTRY DIFFERENCES IN EUROPE),
- III. **CLARIFY** QUESTIONS, AS NEEDED, BY **COMMUNICATING** WITH RESPONDENTS (AND A RANDOM SAMPLE OF NON-ESPONDENTS TO IDENTIFY POSSIBLE DIFFERENCES IN THEIR RESPONSES FROM THOSE OF THE RESPONDENTS THUS FAR), AND CHECK COMPLETENESS OF RESPONSES,
- IV. CARRY OUT NATIONAL SURVEYS OF OM UNDERGRADUATE TEACHING IN INDIVIDUAL COUNTRIES, AND
- V. THEN **BE PART** OF THE WHOLE TEAM OF **CO-AUTHORS** OF EUROPEAN STUDY.

4. COMPLEMENT THE EASOM TEACHING SURVEY WITH AN OM LEARNING SURVEY, USING A SEPARATE “STUDENTS QUESTIONNAIRE”,
TO BE CARRIED OUT IN EACH COUNTRY, IN ALL EUROPEAN COUNTRIES, AMONG A RANDOM SAMPLE IN ALL UNDERGRADUATE MEDICAL SCHOOLS, IN COLLABORATION WITH NATIONAL MEDICAL STUDENTS ASSOCIATIONS, AND THE EUROPEAN JUNIOR DOCTORS ASSOCIATION.

CONCLUDING REMARKS, RECOMMENDATIONS, KEY MESSAGES

1. UEMS, EASOM AND **ALL EUROPEAN MAJOR ORGANIZATIONS** HAVE:

GREAT **RESPONSIBILITY** FOR EVIDENCE-BASED, **WELL DESIGNED SURVEYS** (INTERNAL & EXTERNAL VALIDITY) **TO PERSUADE** KEY NATIONAL AND EUROPEAN ORGANIZATIONS TO **TAKE ACTION** **BAZASED** ON EVIDENCE FROM **OM SURVEYS**, THE **PRIMARY PURPOSE** OF WHICH SHOULD BE:

- (a) TO FIND OUT **WHAT MEDICAL STUDENTS** ACTUALLY **LEARN** ABOUT OM AND HOW THEY THINK THEY ARE TAUGHT BEST, SO THAT ALL MDICAL GRADUATES CAN USEFULLY **UTILISE OM LEARNING OUTCOME**, & PERFORM COMPETENTLY THEIR PROFESSIONAL TASKS AS PHYSICIANS, & **NOT MERELY** SHARING DATA ON **WHAT THEY** ARE BEING **TAUGHT** & HOW, **AND THUS**
- (b) **TO SUBSTANTIATE** ANY RECOMMENDATIONS (AND UEMS STATEMENTS) REGARDING **NEED FOR CHANGES** IN RELEVANT NATIONAL AND EUROPEAN **LEGISLATION** TO ENSURE MATCHING OF INCREASED OM LEARNING OUTCOMES TO ADEQUATE EXAMINATION OF MEDICAL STUDENTS REQUIREMENTS.

2. WAY AHEAD IN EUROPE: DETERMINING **COMPULSORY**

- (a) **MINIMUM HRS** OF UNDERGRADUATE OM TEACHING, **AND**
- (b) **NATIONAL CORE OM CURRICULA**

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OCCUPATIONAL MEDICINE IS THE CINDERRELA OF THE MEDICAL PROFESSION AND HER PRINCE CHARMING IS YET IN SIGHT (AS IS ALSO SUGGESTED BY THE RESULTS OF THE SURVEY OF UNDERGRADUATE OM TEACHING IN MEDICAL SCHOOLS IN GREECE [AUGUST 2022], WHICH MIGHT BE COMPARABLE TO THOSE REVEALED BY SURVEYS IN SEVERAL OTHER EUROPEAN COUNTRIES)

BAZAS GREEK SURVEY ON OM UNDERGRDUATE TEACHING IN 2021-22, P13

