50 years of University of Split

SVEUČILIŠTE U SPLITU
MEDICINSKI FAKULTET
UNIVERSITY OF SPLIT
SCHOOL OF MEDICINE

TRIBE
PHD PROGRAM
TRANSLATIONAL
RESEARCH
IN BIOMEDICINE

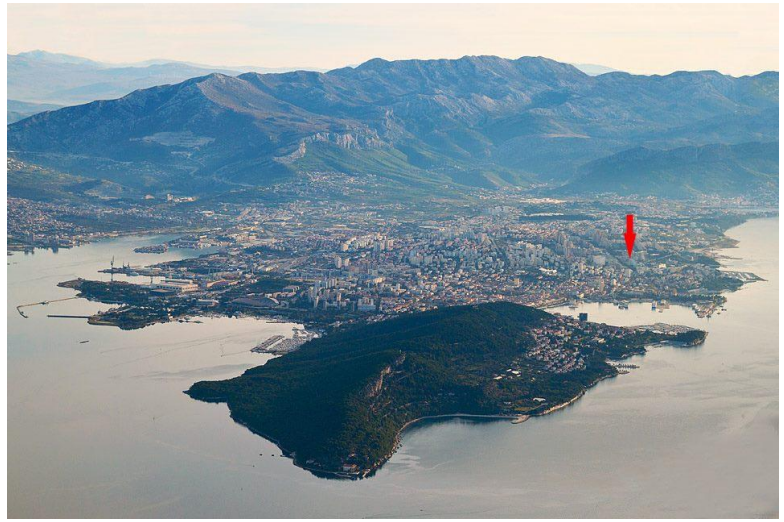
GIVING VOICE

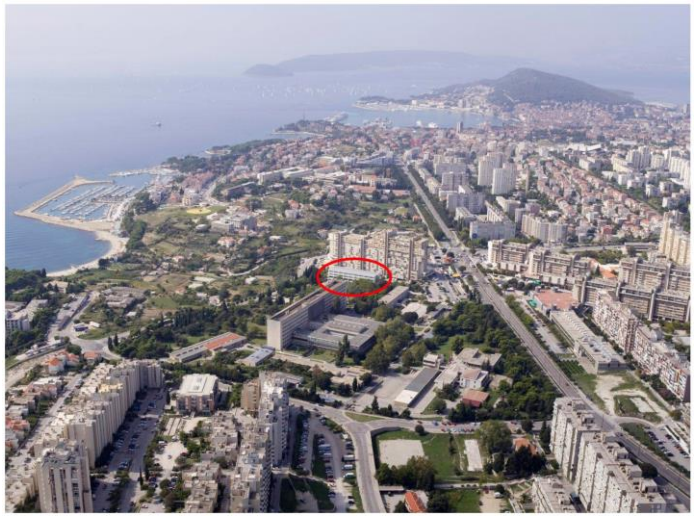
WORKSHOP:

How to plan new research and publish scientific articles?

Kyiv, March 25-25, 2024
Vinnicya, March 26, 2024

Professor Damir Sapunar
University of Split School of Medicine
ds@mefst.hr





TRIBE
PHD PROGRAM
TRANSLATIONAL
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Who we are?

Why we are here?

- To express our support for your fight
- To establish cooperation between our institutions
- To promote the Giving Voice project

What is the Giving Voice Project?

AIM: TRIBE doctoral program project "Giving voice" is aimed at helping Ukrainian authors publish their war-related experiences.

https://mefst.unist.hr/studies/graduate-school/tribe/giving-voice/12280

https://mefst.unist.hr/studies/graduate-school/tribe/giving-voice/giving-voice-publications/12461

https://st-open.unist.hr/index.php/st-open/catalog/category/war-ukraine

How we are planning to help?

- Build a network with the Ukrainian academic community.
- Search for interesting topics for publications especially articles on war crimes, human rights breaches, destruction of cultural heritage, and all other consequences of war.
- Connect them with our team of experts
- Provide **unique author-helpful prereview**
- Publish articles in the ST-OPEN supplement devoted to the War in Ukraine or in other journals

Why is important to publish war-related experiences?

We are using the experience of the Croatian Medical Journal (CMJ) editors during and after the 1991-1995 war in Croatia to show how one scientific journal can help in times of war.

Lancet. 2002 Dec:360 Suppl:s59-60. doi: 10.1016/s0140-6736(02)11825-3.

What can medical journal editors do in war?

Ana Marusić [1], Matko Marusić

CMJ Homeland War supplements (Supplement 1, Supplement 2)

Editorial: A Physician and the War
War Casualties in the Split Region
Head and Neck Injuries Treated in Zadar Medical Center
Heavy Artillery Attack on the Pulmology Ward of the Osijek General Hospital
Identification of the Dead in War: The Case of the Twenty Killed Croatian Soldiers Found near Pakrac
Infections of War Wounds
Injuries Acquired in the War in the Area of Sisak City During 1991
Manjaca - How the Yugoslav Federal Army Treats the Prisoners
The Deliberate Preconceived Destruction of the Hospital During the Seizure of Vukovar
Medical Status of Prisoners-of-war from Manjaca and Glina Camps
Migratory Dynamics Due to the War in Croatia
The Third Military Destruction of the Lipik Rehabilitation Center in This Century
Organization and Functioning of the Sisters of Mercy University Hospital in the War against Croatia
Sisak: A Hospital as a War Target
Person Displacement Pattern in Croatia
Psychiatric Perspective of the War against Croatia
Psychic Status of the Manjaca Camp Prisoners
Psychologic Sources of the Serbian Aggression against the Croats
Psychological State of the Croatian Refugees in the Republic of Hungary
Remember They are Humans
Suffering of Croatian School Children during War
Towards Understanding the War in Croatia during 1990-1991: Sociopsychologic Perspectives
War in Croatia: Medical Care in Biograd Orthopedic Hospital
War Against Croatia: A View through Human Casualties in the Region of Bjelovar, Grubisno Polje, Daruvar and Pakrac
War against Croatia: Medical Care in Zadar
Ozone Treatment of War Injuries
War Blast Injuries of the Ear
War Hospital in Velika Gorica: The First Seventy Days
War Victims in Eastern Slavonia
War Wounds and Injuries of the Spine
Wounds Inflicted by High Velocity Projectiles
External Fixation for lnj uril's in the War against Croatia
Yugoslavia as a Group
Blood Transfusion Service in Sisak Medical Center during the 1991 War against Croatia

Battlefield Experience of a Mobile Surgical Team: Anesthesiological Approach
Chemical and Ecological Aspects of the War against Croatia
Children in War: Four Case Reports from Split
Moral of the War against Croatia: A Forensic Picture
Chronology of Civilian Suffering in the War against Croatia
Civilian Massacre in Lovinac
Civilian Massacres in Banija: Kraljevčani and Pecki
Civilian Massacre in Dalj
Civilian Massacre in Škabrnje and Nadin
Civilian Massacre near Podravska Slatina
Civilian Victims in Bjelovar: Attack on Medical Personnel and a Church
Civilian Victims of the War against Croatia in the Kordun Region
Nuclear Terrorism
CMC (Croatian Medical Corps) External Fixator Intended for War Surgery
Croatian Medical Corps First Echelon: A Front Line Doctor
Croatian Medicine in 1991 War against Croatia: A Preliminary Report
Children Casualties in the War against Croatia
Deliberate Destruction of the Vinkovci Hospital During the War against Croatia
Children War Casualties in the District of Rijeka and Senj
Deliberate Military Destruction of the General Hospital in the City of Osijek
Deliberate Attack on an Ambulance near Karlovac
Destruction of the Gospic Medical Center
Destruction of the Karlovac Medical Center during War against Croatia
Deliberate Killings of Reporters and TV and Radio Personnel in the War against Croatia
Destruction of the Pakrac Hospital and Evacuation of 280 Psychiatric Patients after a Forty-day Blockade
Disregard of the Red Cross Sign
Editorial - War Supplement 1

> Forensic Sci Int. 2004 Dec 2:146 Suppl:S63-4.

The role of DNA technology in identification of skeletal remains discovered in mass graves

Dragan Primorac [1]

Review > Healthcare (Basel). 2023 Jul 10;11(14):1993. doi: 10.3390/healthcare11141993.

Long-Term Consequences of War Captivity in Military Veterans

Melita Jukić [1 2], Luka Malenica [1 2], Vanja Đuričić [1], Jasminka Talapko [2], Jasmina Lukinac [3], Marko Jukić [3], Ivana Škrlec [2]

> Coll Antropol. 2014 Dec:38 Suppl 2:237-41.

Will the war for the Croatian Homeland War veterans ever end?

Davor Rak, Aldenita Matić, Benedict Rak

> Psychiatr Danub. 2022 Fall;34(3):464-474. doi: 10.24869/psyd.2022.464.

A Cross-Sectional Study of Psychiatric Comorbidity in Croatian Homeland War Veterans Who Were Held as Prisoners of War and Are Affected by Posttraumatic Stress Disorder

Melita Jukić [1], Jasminka Talapko, Ivana Škrlec, Petra Čičak, Marko Jukić, Jasmina Lukinac, Ivan Požgain

> Croat Med J. 2006 Feb;47(1):76-84.

Long-term dynamic-oriented group psychotherapy of posttraumatic stress disorder in war veterans: prospective study of five-year treatment

Dolores Britvić [1], Natasa Radelić, Ivan Urlić

> J Forensic Sci. 1996 Sep;41(5):891-4.

Identification of war victims from mass graves in Croatia, Bosnia, and Herzegovina by use of standard forensic methods and DNA typing

D Primorac [1], S Andelinovic, M Definis-Gojanovic, I Drmic, B Rezic, M M Baden, M A Kennedy, M S Schanfield, S B Skakel, H C Lee

JOURNAL ARTICLE

In from the Margins: Survivors of Wartime Sexual Violence in Croatia and an Early Analysis of the New Law

Janine Natalya Clark

Journal of Human Rights Practice, Volume 8, Issue 1, February 2016, Pages 128–147,

> J Forensic Sci. 2009 May;54(3):608-9. doi: 10.1111/j.1556-4029.2009.01015.x. Epub 2009 Mar 16.

Evaluation of the reliability of DNA typing in the process of identification of war victims in Croatia

Snjezana Dzijan [1], Goran Curić, Dinko Pavlinić, Mladen Marcikić, Dragan Primorac, Gordan Lauc

> J Forensic Sci. 2006 Jan;51(1):103-8. doi: 10.1111/j.1556-4029.2005.00035.x.

Forensic anthropology and the most probable cause of death in cases of violations against international humanitarian law: an example from Bosnia and Herzegovina

Jose Pablo Baraybar [1], Marek Gasior

Why is important to publish war-related experiences?

- Document History
- Raise Awareness and Build Solidarity
- Fight Propaganda and Misinformation
- Preserve Culture and Identity
- Therapeutic Expression
- Influence Policy and Legal Action

… so publishing in times of war is YOUR SOCIAL RESPONSIBILITY

Why is important to publish anyway?

- **Because you have something important to say to other scientists**
- **To improve medical practice**
- To stimulate discussion and evaluation of your work
- Career advancement
- Money, fame, and love of a beautiful girl/guy
- To teach
- To entertain/forget/comfort

Why is important to publish anyway?

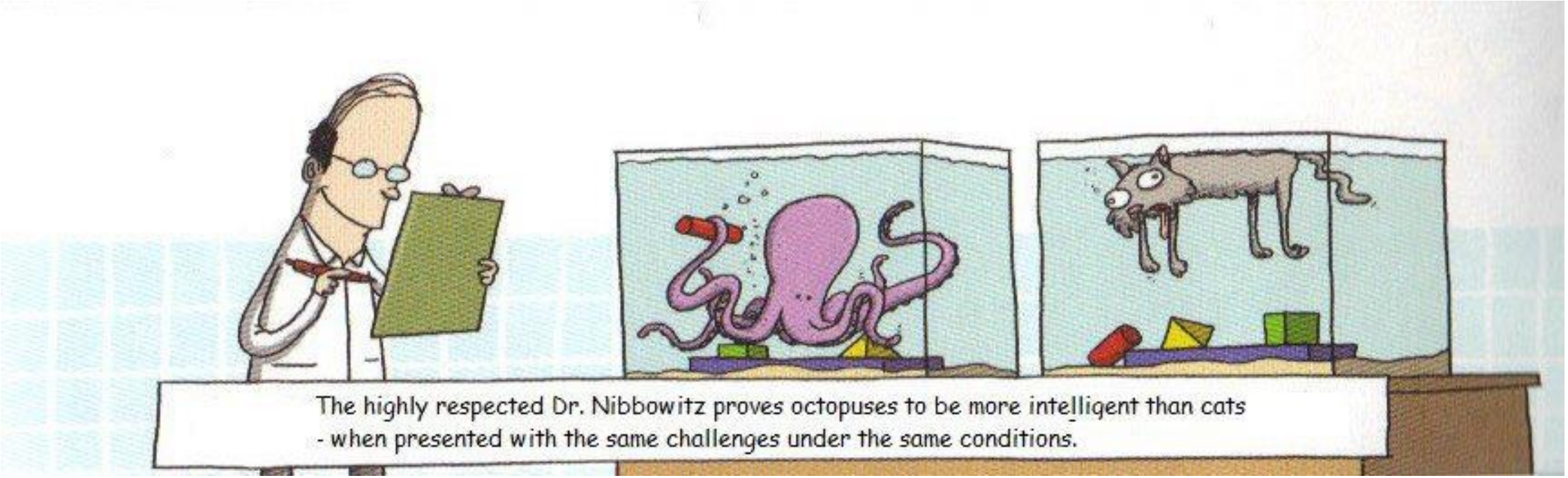
That is the role of science

- A source of real knowledge for humanity
- A source of well-being and security in everyday life
- A key component of the educational system
- Part of the culture of a nation or environment

Planning Research: Key Questions

- What is the subject of research?
- What is the plan for research?
- What is the clinical significance of research?

Do not be like respected Dr. Nibbowitz



Key Phases of Research

- **Prepare a research plan**

  Define: the hypothesis
  the type of the study
  the methodology
  the main outcome measure

- Collect data
- Analyze the data and interpret them
- Write a manuscript
- Submit a manuscript

- Cross your fingers

TRIBE research plan form

Planning Research

- Literature search
- Definition of the problem – HYPOTHESIS
- The hypothesis defines the TYPE OF THE STUDY
- Practical issues (*finances, time, equipment, technical expertise, authorships, ethical issues*)

Literature Search

- **What has been investigated so far, and how?**
  - population(s) (e.g., injured soldiers patients from one hospital)
  - type of the study (descriptive, observational, interventional)
  - statistical methods (which methods were utilized?)
  - mechanisms, procedures, methods…
- **What has NOT been investigated so far?**
  - Identify limitations of published reports (sample imperfections, biases, methods, outcome measures, pertinence of the conclusions).
  - unanswered questions (associations, mechanisms, different outcomes, side effects)
- **Focus on secondary research**
  - systematic reviews and meta-analyses

The key to the planning research is **THE HYPOTHESIS**

- **Observation: wounded soldiers with symptoms of anxiety and depression are developing chronic pain.**
- Hypothesis: There is a positive correlation between high levels of anxiety and depression with chronic pain.
- Deductive analysis of the hypothesis: provide the AIM of the study:
    - How many soldiers show symptoms of anxiety and depression
    - Is there a higher incidence of chronic pain in those patients
    - Can we prevent the development of chronic pain by adequate treatment of depression and anxiety?
    - More ideas?

The hypothesis defines the research strategy

- Description, assessment (of the situation in a population, prevalence of disease, etc.).
- Comparison (of the effectiveness of two drugs/procedures).
- Association (of a risk factor and disease).

A Problem Well Defined is a Problem Half Solved

- **Foundation and formulation of the hypothesis**
  - Hypothesis is founded on the existing knowledge and, whenever possible, on the own preliminary research.
  - Hypothesis is formulated as a short statement, in one sentence.
  - Planned research is actually testing of the hypothesis, ie, its deductive consequences.
- **Is the planned research qualitative or quantitative in its nature?**
  - Qualitative
  - Quantitative
- **Advise the experts – before starting the investigation.**

Variables

Independent Variable is what the researcher changes or manipulates in an experiment.

Dependent Variable is what is being studied or measured in an experiment.

Defining Outcome Measures

- Relevance of Outcome Measure
- Primary vs. Secondary Outcomes
- Clinical Endpoints vs. Surrogate Endpoints
- Composite Measures

Formation of the Sample

Characteristics of the sample:

- allows researchers to make inferences about the population based on the analysis of the sample data
- Representativeness (reflects characteristics of the population)
- Size (determined by data variability, the expected difference between experimental and control groups, and the desired power of the study to detect the difference at the given *P*-level.

Sampling

Probability sampling

- Simple Random Sampling
- Systematic Sampling
- Stratified Sampling
- Cluster Sampling
- Multistage Sampling

Non-Probability Sampling

- Convenience Sampling
- Judgmental or Purposive Sampling
- Snowball Sampling
- Quota Sampling

Collection of Data

- Methods: a form or measuring instrument
- Principles:
  - *Validity* – adequate procedures applied.
  - *Reliability* – repeated measurements yield reasonably the same data
  - *Consistency* – always measured in the same way, with the same accuracy (units, decimals).
  - *Completeness* – all questions answered, measurements done with all samples/groups
  - *Objectivity* – different investigators obtain the same results, masking/blinding
- Archiving, security, confidentiality
- Preparation for data analysis and interpretation

Formation of Research Groups (allocation of members of the sample to groups)

- Experimental and control groups should be identical in all aspects except in the feature investigated.
- Formation of the groups (allocation) depends on the design (type) of the study:
    - Allocation based on the feature investigated.
    - Pairing appropriate individuals.
    - **Randomization** – subjects are allocated to groups randomly (do not confuse with a random selection of the sample).

Variables that Cause Bias – Distort the Results

- *Bias* is an additional effect that makes the observed result different from the real one.
- *Confounding variable* (*confounder*) is a variable associated with the risk factor, but independently of it contributes to the risk of disease.

Bias

- Biases are possible at all levels of investigation.
- Examples:
- “Sampling bias”
- “Allocation bias”
- “Different treatment bias”
- “Follow-up bias”
- “Measurement bias”
- “Detection bias”
- And the list goes on and on….Etc.

Confounding Factor

*A **confounding factor** is* (too late recognized) association between the disease and that unrecognized risk factor (which affects the disease in a manner that is not controlled for), which causes or aggravates the disease.

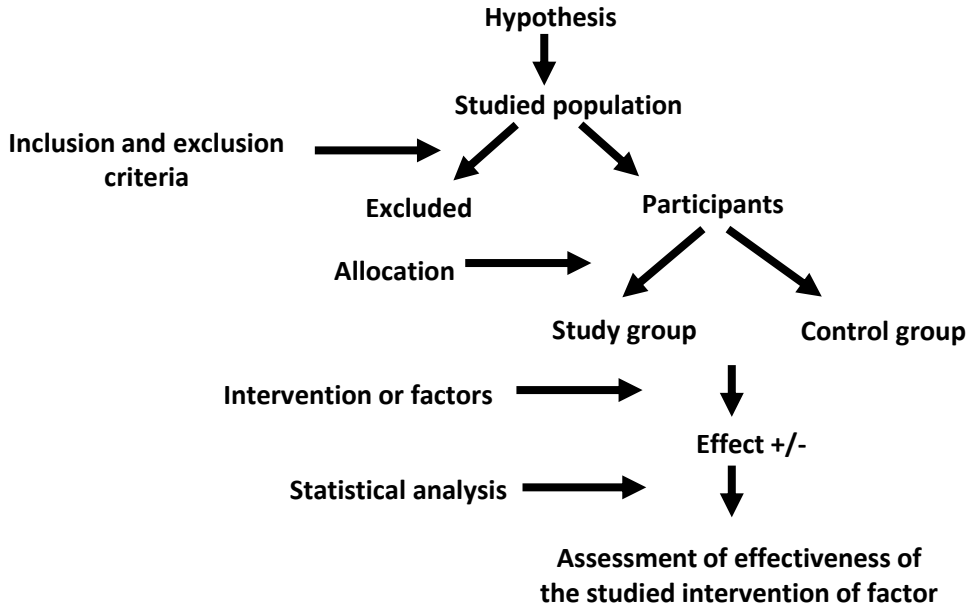
Control of Confounding Factors

- Study design
  - Increase criteria of inclusion and exclusion.
  - Pairing of subjects/groups in accord to confounding factors.
  - Randomization (adequate!) of subjects to the study groups excludes effects of unknown confounding factors.
  - All nonrandomized trials are sensitive to confounding factors, for example historic controls, age differences; environmental factor differences, additional diseases of therapies).
- Data analysis
  - Stratification of the sample (to study groups) with respect to the confounding factors (careful selection, pairing).
  - Balancing study groups with respect to the confounding factors.
  - Multivariate statistical analysis.

Assessment of the Validity of the Study

- ***Internal validity*** is determined by the relevance of the main outcome measure for adequate testing of the given hypothesis. (For the assessment of the severity of asthma – is it better to rely on (measure) quality of life or number of hospitalizations?)
- ***External validity*** *is determined* by the appropriateness of the main outcome measure ("Operation successful, the patient died."), i.e., how generalizable are the findings of the study (the result of a Croatian study is not valid in Germany).
- *The* ***power of the study*** is determined by its potential to detect a difference (association, correlation) that does exist in the population. (Primarily depends on the sample size and quality.)

Blueprint of the Research Plan



Summary: Key points of Planning a Study

Clearly and concretely define hypothesis and then variables.

Use a study design that can answer the question(s) deduced from the hypothesis

Plan statistical analysis before beginning of the study.

Analyze acquired data and consider them all.

Avoid mistakes in measurements and analysis of the data.

Consider the clinical relevance of the study.

Consult experts.

A naturalist's life would be a happy one if he had only to observe and never to write.

Sir Charles Darwin

Survey

https://www.surveymonkey.com/r/82RV2D2

How to choose a journal?

- Scope and Audience
- Reputation
- Impact Factor
- Indexing
- Feedback from Peers
- Peer Review Process
- Open Access Options and APC
- Publication Speed
- Ethical Standards (Predatory journals)

Journals

- Medline 5 600 journals
- SCI 9 200 journals
- CC 10 000 journals
- Scoups 20 000 journal
- WoS 21 000 journal

- 90% of relevant information are published in 10% of journals
- Only 10-15% of articles are „usable”
- Half of the published articles are never cited.
- Half of the journals on library shelves are never opened.

Find the right journal

Journal Citation Reports

UKRAINE ⊗ JCR Year: 2022 ⊗

Journal name	ISSN	eISSN	Category	Total Citations	2022 JIF	JIF Rank	5 Year JIF
Ukrainian Journal of Physical Optics	1609-1833	N/A	OPTICS - SCIE	382	3.9	28/100	1.9
Uspekhi Fiziki Metallov-Progress in Physics of Metals	1608-1021	2617-0795	Multiple	151	1.6	N/A	1.4
Mining of Mineral Deposits	2415-3435	2415-3443	MINING & MINERAL PROCESSING - ESCI	369	1.9	N/A	1.1
Marketing and Management of Innovations	2218-4511	2227-6718	MANAGEMENT - ESCI	662	1.3	N/A	1.0
POWDER METALLURGY AND METAL CERAMICS	1068-1302	1573-9066	Multiple	1,094	1.0	21/29	0.9

The main characteristics of scientific communication

Accuracy
Clarity
Objectivity
Conciseness
Structured
Credible
Engaging
Ethical
Targeted
Timely

Scientific publication

- new knowledge
- for the first time

Carefully follow Guidelines for the authors

- Find instructions or guidelines for authors
- ST-OPEN instructions
- **Prepare the article strictly according to the guidelines!**

Research paper
Structure is everything

- **I**ntroduction — What did I want to do?
- **M**ethod — How did I do it?
- **R**esults — What did I find?
- **A**nd
- **D**iscussion — What might it mean?

Title – Definition and Types

A highly condensed version of your abstract

Irreducible number of terms needed to accurately describe the content of the paper

Informative

- Association between catastrophizing, postoperative pain, and injury severity in soldiers injured during the first year of the war in Ukraine: a cross-sectional study

Indicative

- The impact of war on cytopathological practice in Ukraine

Authors - Byline

The International Committee of Medical Journal Editors (ICMJE) criteria:

- **Substantial Contributions**
- **Drafting and Reviewing**
- **Final Approval**
- **Accountability**

JOURNAL ARTICLE

SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international prospective cohort study

COVIDSurg Collaborative, GlobalSurg Collaborative Author Notes

British Journal of Surgery, Volume 108, Issue 9, September 2021, Pages 1056–1063,
https://doi.org/10.1093/bjs/znab101

Published: 24 March 2021 **Article history** ▾

Most authors on a single peer-reviewed academic paper: 15,025 scientists

Abstract

Classical form

› Sci Rep. 2024 Mar 4;14(1):5308. doi: 10.1038/s41598-024-55933-6.

The role of school functioning, physical activity, BMI, sex and age in building resilience among Ukrainian refugee children in Poland

Agata Korcz [1], Elżbieta Cieśla [2], Piotr Urbański [3]

Affiliations + expand

PMID: 38438464 PMCID: PMC10912741 DOI: 10.1038/s41598-024-55933-6

Free PMC article

Abstract

The study aims to examine the relationship between school functioning, physical activity (PA), sex, Body Mass Index (BMI), age, and resilience in Ukrainian children who migrated to Poland due to the war. A cross-sectional study was conducted in 2022, focusing on 248 children aged 10-15 years. The findings suggest that school environment, including enjoyment of school and strong support from teachers, plays a significant role in building resilience in children. PA enhanced the resilience of girls, whereas a higher BMI negatively impacted it. A child-friendly school environment that encourages PA and provides social support could be a promising approach for the mental health of Ukrainian refugee children.

Structured

› J Spec Oper Med. 2024 Mar 8:CB0O-GYYX. doi: 10.55460/CB0O-GYYX. Online ahead of print.

The Use of Tourniquets in the Russo-Ukrainian War

Igor M Samarskiy, Eduard M Khoroshun, Yurii Vorokhta

PMID: 38408044 DOI: 10.55460/CB0O-GYYX

Abstract

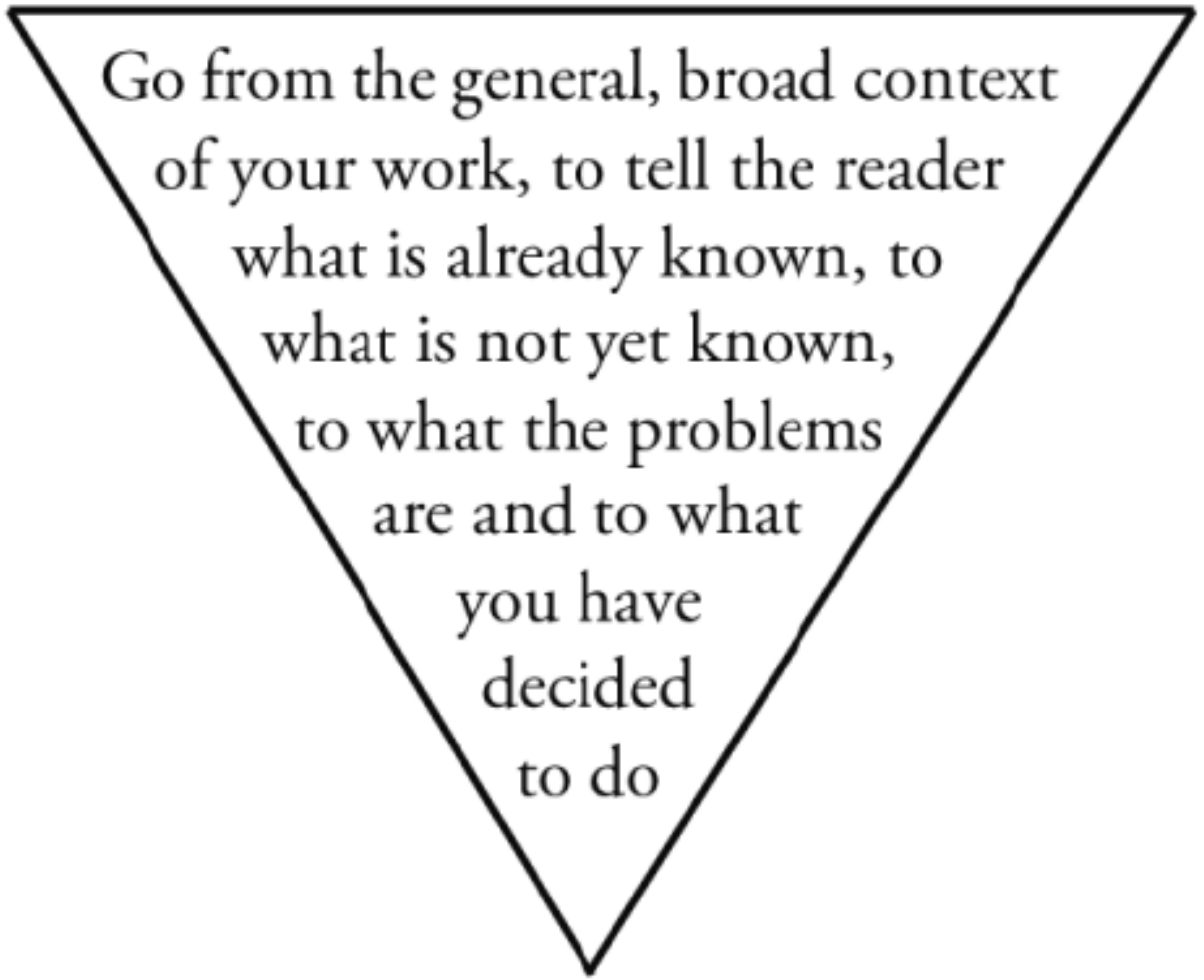
Aim: The objective of the study was to evaluate the use of tourniquets in the Russo-Ukrainian war.

Methods: The type, number, and duration of tourniquets per limb, the clinical course of limb injuries, and the functional status of the injured limbs during the 24 hours post-injury were evaluated in military hospital facilities for the period of 2014-2022. Statistical frequencies and variances were analyzed.

Results: During active hostilities, the medical units of the Southern Operational Command received 2,496 patients with limb injuries that required the application of tourniquets. Lower extremity injuries were predominantly observed (84.4%). A single tourniquet was used in 1,538 cases (61.6%), whereas two tourniquets were used in 533 (21.4%), and three tourniquets in 425 cases (17.0%). During the 2014- 2021 period, Esmarch's tourniquet was most commonly used. However, in 2022, it was mostly replaced by the Combat Application Tourniquet and similar systems (e.g., Sich, Dnipro). The duration of the tourniquet use ranged from 50 to 380 minutes (mean 205.9 [standard error 8.1] min), which prolonged ischemia in a significant number of cases. Limb amputations, mainly due to extensive necrosis, were performed in 92 cases (3.7%). In addition to 101 deaths (4.0% of patients), 11 cases of severe tourniquet syndrome were encountered. The limb was salvaged in 9 cases (81.8%).

Conclusion: Prompt triage and evacuation of injured combatants can save affected limbs, even when the duration of tourniquet use exceeds 2 hours. Tourniquet syndrome can be prevented using a hemostatic tourniquet.

Structure of a scientific article: **Introduction**



Structure of a scientific article: **Material & Methods**

- Like a recipe
- For informed readers this is the most important section
- Describe how subjects were selected and excluded
- Don’t describe standard methods in detail - use references
- Statistics
- Ethics

Structure of a scientific article

Results

- Figures and Tables should:
  - Add information
  - Save space
  - Be self-explanatory
  - Not be overloaded with numbers
  - or ink

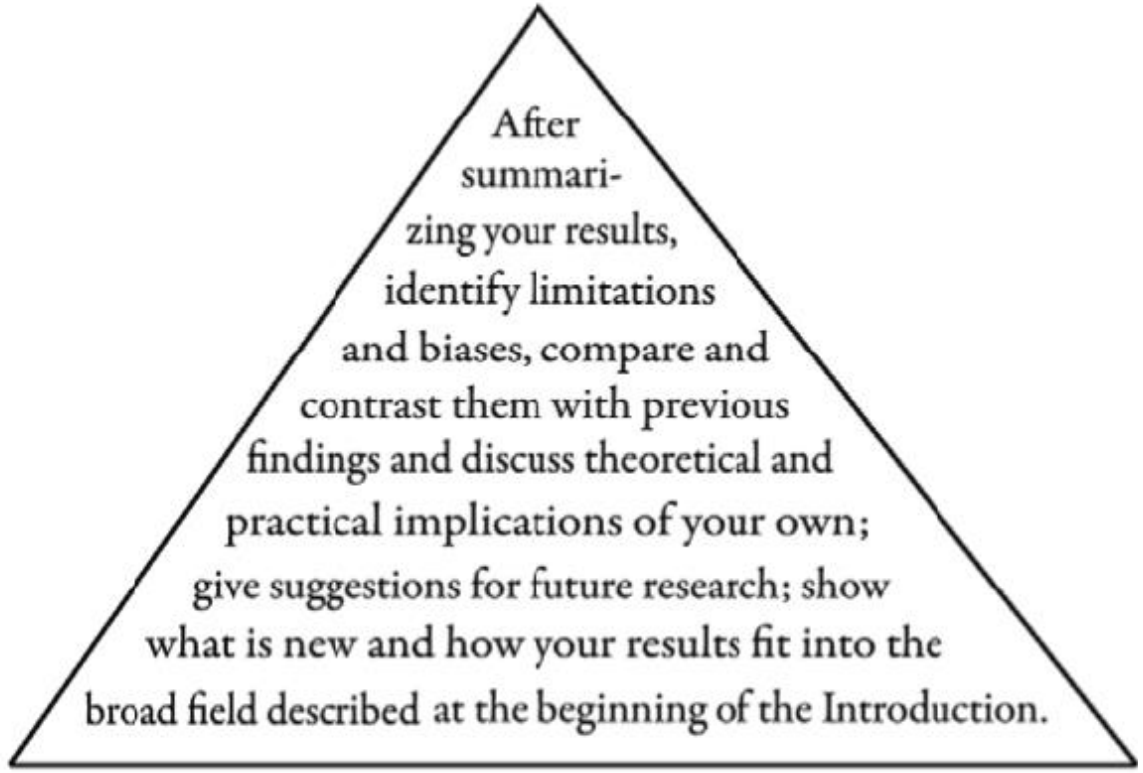
Results: Understanding numbers

- Evidence-based guidelines:
- Numbers should be kept to significant digits (except where absolutely necessary).
- Fractions should be given with percents; raw numbers for small samples.
- People don’t appreciate the magnitude of large numbers (greater than a million).
- Roman numerals should be avoided, except for cranial nerves, clotting factors, and world wars.

Manipulation of images

- No specific feature within an image may be enhanced, obscured, moved, removed, or introduced.
- Adjustments of brightness, contrast, or color balance are acceptable if they are applied to the whole image and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments must be disclosed in the figure legend.

Structure of a scientific article Discussion



What do journal editors want?

- Scope
- Excitement (Wow effect!)
- Importance / relevance for the scientific community
- Originality
- Truthfulness
- Clarity/readability
- Interestingly written text

COVER LETTER

- **Editor's Information**:
  - Address the letter to the **Editor-in-Chief** of the journal (if known).
  - Mention the **manuscript's title** and the **name of the journal** you are submitting to.
- **Introduction**:
  - State that your paper has **not been previously published** and is **not under consideration** by any other journal.
  - Briefly describe the **research topic** and the **question/problem** your study addresses.
- **Relevance to the Journal**:
  - Explain why your work is **relevant** and **important** for the readership of the journal.
  - Highlight what makes your research **unique** and how it contributes to the field.
- **Author Information**:
  - Provide **contact information** for yourself and any co-authors.
  - Confirm that you have **no competing interests** to disclose.
- **Best Practices**:
  - **Avoid copying** your abstract into the cover letter. Instead, use your own words to convey the significance of your work.
  - Keep the language **clear**, **concise**, and **jargon-free**.
  - Limit your cover letter to a **maximum of one page**.
  - Proofread thoroughly to eliminate any spelling or grammar errors.

PEER REVIEW

Peer review is the evaluation of your paper by one or more people of similar competence to the authors of the paper (peers = colleagues), which serves as a form of quality assurance before publication or presentation in an academic or professional context.

KEEP IN MIND:
They are not your enemy, they are helping you!

PEER REVIEW

Accept	→	Open a bottle of wine, celebrate, and start working on the next one
Minor revision **Major revision**	→	DO NOT GIVE UP! Correct everything that was asked of you
Reject	→	Correct and look for another journal

PEER REVIEW

Comment: Please kindly delete the first sentence of the introduction, although true, it is generally not the language used in a medical journal

Response: I urge you to reconsider this request. I assume that the “problem” is in the term “Russian aggression” which can be easily replaced with “War in Ukraine”, however, the consequences of military conflict are the result of a specific context that needs to be explained.

Regarding medical journal “vocabulary” there are numerous examples where this term or similar terms were used in medical journals. Here are just a few examples from BMJ or from other renowned journals.

In addition, this statement is supported by numerous governments, international organizations, and analysts around the world. EU and UK Governments are using the term "Russian aggression" in official statements and diplomatic communications.

Conclusion

1. The doctorate is not homework, it cannot be done easily
2. The PhD-related research should be done at the very workplace at which the student is employed.
3. The plan of the research must be meticulously prepared.
4. Rush slowly
5. If the mentor does not publish, there is a high chance that the PhD student will not, either

Textbook: **PRINCIPLES OF RESEARCH IN MEDICINE**

Marušić M. Acta Medica Academica 2015;44(1):75-76

SVEUČILIŠTE U SPLITU
MEDICINSKI FAKULTET
UNIVERSITY OF SPLIT
SCHOOL OF MEDICINE

TRIBE
PHD PROGRAM
TRANSLATIONAL
RESEARCH
IN BIOMEDICINE

50 years of
University
of Split

GIVING
VOICE