

اصول پایه روش تحقیق در علوم پزشکی

دکترهدی شیرافکن
بهار ۱۴۰۱

عناوین

- ▶ کلیات
- ▶ بیان مساله و بررسی متون
- ▶ انواع مطالعات اپیدمیولوژیک
 - ✓ کارآزمایی بالینی
- ▶ اهداف، فرضیات و متغیرها
- ▶ تجزیه و تحلیل اطلاعات
- ▶ نگارش
- ▶ رفرنس نویسی

کلیات

ایده جدید ▶

متدولوژی و روش درست ▶

کلیات تحقیق در علوم پزشکی

چگونه به ایده های تحقیقاتی جدید دست یابیم؟

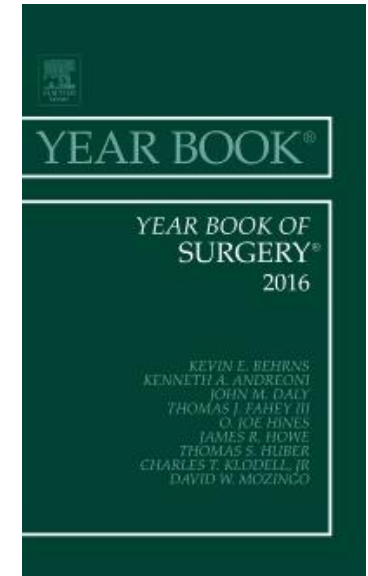
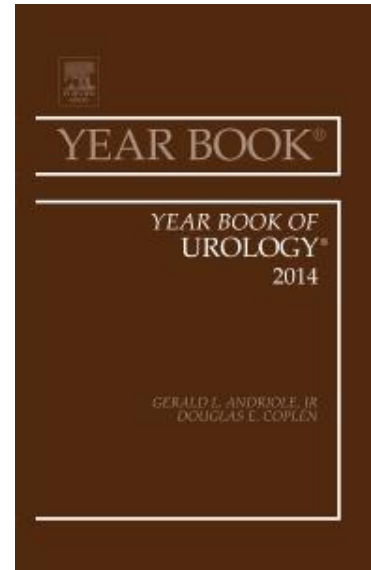
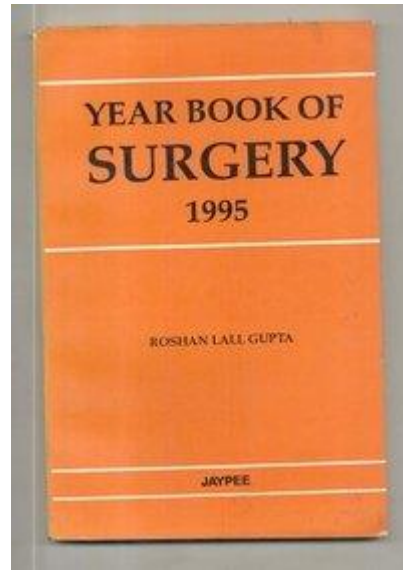
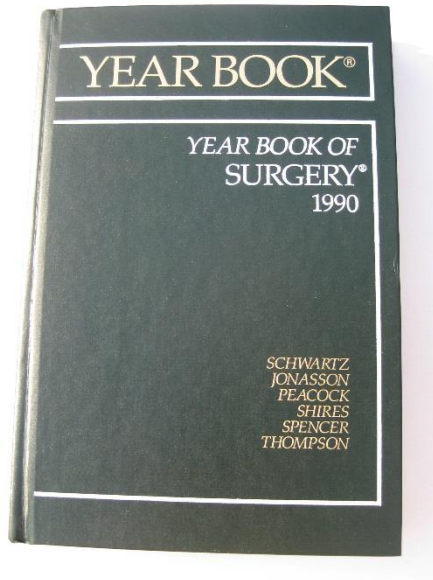
✓ مقالات

✓ Year Book

✓ www.mdLINX.com

✓ کنگره ها

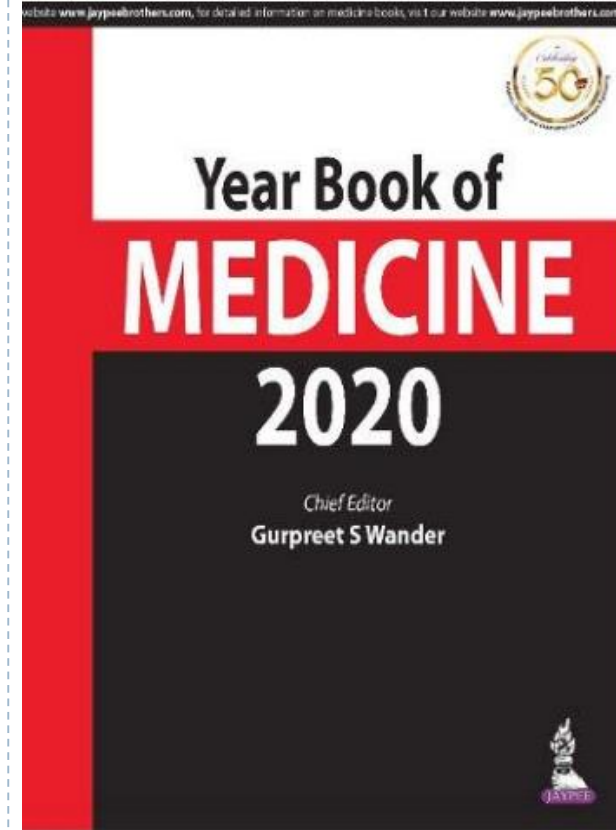
Year Books



The book contains 9 sections of Cardiology;

- ▶ Chest and Critical Care;
- ▶ Diabetes and Metabolic Disorders;
- ▶ Gastroenterology and Hepatology;
- ▶ Infectious Diseases, HIV and TB;
- ▶ Miscellaneous (Geriatrics, Genetics, and Pregnancy Related);
- ▶ Nephrology and Hypertension;
- ▶ Neurology;
- ▶ and Rheumatology and Immunology.

Each section has around 20 articles covering useful new information in the literature.



Year Books

- ▶ Each section has approx. 21 articles from high-impact factor journals and some important journals.
- ▶ A title is given to each commentary, which gives the main message of the trial.
- ▶ The commentary discusses the article and relevant issues.
- ▶ Uniformity in the pattern of commentaries, simple expressive language, and associated clinical message are distinguished features of the book
- ▶ A compilation of all the significant trials of 2019



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FOOD & DIET

5 healthy foods to keep you feeling full

ALZHEIMER DISEASE

First-in-human clinical trial to assess gene therapy for Alzheimer's disease

MedicalXpress Breaking News-and-Events | Feb 19



FOOD & DIET

Can these popular diets do more harm than good?

PHYSICIAN

10 Black Doctors Who Made Medical History [Gallery]

PhysicianSense | Feb 16

DIABETES

Trends in predominant causes of death in individuals with and without diabetes in England from 2001 to 2018: An epidemiological analysis of linked primary care records

The Lancet Diabetes & Endocrinology | Feb 20

ASTHMA

ALL

ARTICLE (3153)

NEWS (3876)

BLOG POST (208)

CONFERENCE LISTING (9)

COFFEE & CAFFEINE

Is coffee actually good for you? Here's the latest research



MDLinx | Feb 19

NEUROSCIENCE

Study finds link between spinal antibodies and neurological covid symptoms

MedicalXpress Breaking News-and-Events | Feb 19

NEW DRUG APPROVALS

5 new FDA-approved drugs every physician should have on their radar



MDLinx | Feb 19

AGING

Stereotypes can harm performance of older adults on cognitive and physical tasks

MedicalXpress Breaking News-and-Events | Feb 19

CARDIOLOGY CONFERENCE

Cardiac Arrhythmia Mechanisms Gordon Research Conference

منشور تحقیق



معیارهای انتخاب عنوان

مدل اول (مطالعات مشاهده‌ای)

▶ معیارهای اساسی

- ▶ قابلیت اجرا
- ▶ اجتناب از دوباره کاری
- ▶ متناسب با زمان بودن

▶ معیارهای جنبی

- ▶ مناسبت داشتن (وسعت و شدت مساله)
- ▶ با صرفه بودن

▶ ملاحظات اخلاقی

مدل دوم (مطالعات مداخله ای)

- ▶ ضرورت
- ▶ مناسبت
- ▶ احتمال موفقیت
- ▶ تاثیرنهایی حاصل از پیامدهای پژوهش

How to write a good title

Title

- ▶ First & most of the times the **only part of an article** that readers and editors **see and read**.
- ▶ Key elements that advertises the paper's contents
 - ▶ **Informative** and **Specific**
- ▶ Maybe helpful to choose the title when the paper is complete

Characteristics of an effective title

- ▶ Short and simple
- ▶ Concise and precise
- ▶ State subject, not conclusion
- ▶ Include study design (no consensus)
- ▶ Include time and place if necessary
- ▶ Remove empty phrases such as “A study of ...”
- ▶ Use subtitles (notice number of words) “Exercise and Coronary Heart Disease: Framingham Offspring Study”

Characteristics of an effective title

- ▶ Identify the main issue of your paper
- ▶ Begin with the subject of your paper
- ▶ A good title must be accurate, unambiguous, specific, and complete
- ▶ Do not contain abbreviations.
- ▶ Informative
- ▶ Attract readers

Different ways of writing titles

- ▶ **Titles that give independent variable, dependent variable, and population (classic method):**
 - Effect of asthma on linear growth in children
 - **Asthma** and **linear growth in children**
- ❑ Classic titles can be boring, especially if they are not short and concise.

Titles that give independent variable, dependent variable, and population

REVIEW

Human Health and Ocean Pollution

Philip J. Landrigan^{*}, John J. Stegeman[†], Lora E. Fleming^{‡,§}, Denis Allemand^{||}, Donald M. Anderson[†], Lorraine C. Backer[¶], Françoise Brucker-Davis^{**††}, Nicolas Chevalier^{**††}, Lilian Corra^{**§§}, Dorota Czerucka^{||}, Marie-Yasmine Dechraoui Bottein^{||,¶¶***}, Barbara Demeneix^{†††,‡‡‡}, Michael Depledge[§], Dimitri D. Deheyn^{§§§}, Charles J. Dorman^{||||}, Patrick Fénelin^{**††}, Samantha Fisher^{*}, Françoise Gaill^{†††}, François Galgani^{¶¶¶}, William H. Gaze^{****}, Laura Giuliano^{††††}, Philippe Grandjean^{††††}, Mark E. Hahn[†], Amro Hamdoun^{§§§§}, Philipp Hess^{¶¶¶}, Bret Judson^{*}, Amalia Laborde^{||||||}, Jacqueline McGlade^{¶¶¶¶*****}, Jenna Mu^{*}, Adetoun Mustapha^{†††††,‡‡‡‡}, Maria Neira^{§§§§§}, Rachel T. Noble^{|||||||}, Maria Luiza Pedrotti^{†††,¶¶¶¶}, Christopher Reddy^{*****}, Joacim Rocklöv^{†††††}, Ursula M. Scharler^{†††††}, Hariharan Shanmugam^{*}, Gabriella Taghian^{*}, Jeroen A. J. M. van de Water^{||}, Luigi Vezzulli^{§§§§§}, Pál Weihe^{|||||||}, Ariana Zeka^{¶¶¶¶¶}, Hervé Raps^{||*****} and Patrick Rampa^{||*****}

Background: Pollution – unwanted waste released to air, water, and land by human activity – is the largest environmental cause of disease in the world today. It is responsible for an estimated nine million premature deaths per year, enormous economic losses, erosion of human capital, and degradation of ecosystems. Ocean pollution is an important, but insufficiently recognized and inadequately controlled component of global pollution. It poses serious threats to human health and well-being. The nature and magnitude of these impacts are only beginning to be understood.

Goals: (1) Broadly examine the known and potential impacts of ocean pollution on human health. (2) Inform policy makers, government leaders, international organizations, civil society, and the global public of these threats. (3) Propose priorities for interventions to control and prevent pollution of the seas and safeguard human health.

Titles that give independent variable, dependent variable, and population

> [SICOT J. 2021;7:5. doi: 10.1051/sicotj/2021001. Epub 2021 Feb 17.](#)

Older patients with proximal femur fractures and SARS-CoV-2 infection – An observational study

Abdus S Burahee ¹, Veronica E Barry ¹, Robert P Sutcliffe ², Sabreena Mahroof ¹

Affiliations [+ expand](#)

PMID: 33595434 DOI: 10.1051/sicotj/2021001

[Free article](#)

Abstract

Background: Older patients are at increased risk of severe COVID-19 infection and associated mortality. There are limited data evaluating the outcome of older patients with hip fractures treated during the COVID-19 pandemic, and it has been suggested that these patients should be treated non-operatively due to high mortality risk. The aim of this study was to report the outcomes of COVID-19 infected hip fracture patients treated at a single centre.

Methods: This was a retrospective cohort study. Data were collected from February 2020 (after the first confirmed COVID-19 infected patient was reported in the Midlands region of the UK). All patients admitted to the hospital with femoral neck fractures were included. Patient demographics, comorbidity, COVID-19 status, and short-term clinical outcomes were obtained by review of electronic medical records. The outcomes of COVID-19 infected patients were compared with non-COVID-19 patients treated during the study period.

Results: Twenty-nine patients were included (mean age of 80 years), of whom 14 (48%) were tested

Different ways of writing titles

❑ **Titles that pose a question:**

- Does asthma reduce linear growth?
- Are asthmatic children shorter than non-asthmatic children?
- ✓ May attract readers who want to know the answer.
- They tend to **suggest a positive result** and are therefore **misleading** if ...

Titles that pose a question



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(L.H. Olsen)

Keywords

Congenital urinary tract obstruction; Transforming growth factor β 1; Fibrosis; Therapeutics

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Available online xxx

Journal of Pediatric Urology (2017) xx, 1–7

Review Article

Can bladder fibrosis in congenital urinary tract obstruction be reversed?

Yu Tao Lu ^a, Stine Julie Tingskov ^a, Jens Christian Djurhuus ^a,
Rikke Nørregaard ^a, L. Henning Olsen ^{a,b}

Summary

A variety of conditions exists in adults and children in which functional or anatomical urinary tract obstructions cause bladder fibrosis, which reduces the bladder's ability to store and empty urine. Current surgical procedures include removal of the obstructions to facilitate bladder emptying or prompt pre-natal or postnatal spinal closure to prevent further neurogenic damage. Bladder fibrosis may occur, and it can get worse if a flow hindrance persists or

deteriorates. Anti-fibrotic therapeutic strategies that target a variety of factors have been developed in animal models, but currently there are no anti-fibrotic therapies available for clinical use. This review examines the pathogenesis of bladder fibrosis that is caused by congenital obstructions of the lower urinary tract, and it focuses on the principal signalling factors and potential treatment modalities.

Introduction

Congenital urinary tract obstruction (CUTO) accounts for most of the chronic kidney disease that occurs during childhood [1], and the obstructions are categorised into upper and lower urinary tract obstructions according to the obstruction site. Congenital upper urinary tract obstruction causes hydronephrosis, which is accompanied by abnormalities in the smooth muscle tissue of the pelvis and ureter

available to manage these fibrotic changes, there is a significant unmet medical need.

This review examines the pathogenesis of fibrosis in the lower urinary tract, and it focuses on the principal signalling factors involved in fibrosis and offers potential treatment modalities.

Literature search

We searched the literature using the PubMed,

Titles that pose a question

Can anthropometric measures be used as proxies for body composition and physical function in geriatric outpatients?

Carolina H Y Ling ¹, Carel G M Meskers ², Andrea B Maier ³

Affiliations [+](#) expand

PMID: 33610124 DOI: [10.1016/j.archger.2021.104379](https://doi.org/10.1016/j.archger.2021.104379)

Abstract

Objectives: The study aimed to evaluate the associations between anthropometric measures with body composition, in particular skeletal muscle mass, and with physical function in a cohort of geriatric outpatients.

Methods: We included 572 outpatients who attended geriatric clinics at Amsterdam UMC, location VUmc, Netherlands from January 2014 to December 2015. Anthropometric measures (height, weight, body circumferences, body mass index (BMI), waist-to-hip ratio (WHR) and waist-to-height ratio (WHtR)), and physical function measures (handgrip strength (HGS), Short Physical Performance Battery (SPPB) and Timed Up and Go test (TUG)) were obtained. Body composition was analysed using bioimpedance analysis (BIA) in a subgroup of 78 patients. Gender-stratified regression analyses were performed to test associations between anthropometric measures with body composition and physical function, adjusted for age.

Results: In females, BMI, WHtR and all measured body circumferences were positively associated with body fat mass (BFM) (all $\beta \geq 0.64$, all $p \leq 0.001$). BMI and mid-upper arm circumference were also associated with fat-free mass (FFM) ($\beta = 0.49$, $p = 0.001$; $\beta = 0.53$, $p = 0.01$), skeletal muscle mass (SMM)

Different ways of writing titles

- ❑ **Titles that give the answer to the question: (The “assertive sentence title”)**
 - Asthma is negatively associated with growth in height during adolescence
 - Linear growth deficit in asthmatic children

- ❑ **Whilst these title work well to attract attention amongst the poster rows at a conference, they should certainly not be used to report study results in a journal article.**

Different ways of writing titles

❑ **Titles that give the answer to the question (cont.):**

- ❖ The “assertive sentence title” has grown in popularity but **Should Be Avoided** at all costs for journal articles.
- ❖ These titles give an answer to the study question and, as such, convey an impression of eternal truth.
- ❖ What about possibility of error???
- ❖ It remains in literature forever.

Title

- ▶ Try and work towards a title that is
 - Short
 - Informative
 - Attractive
 - Factually correct

بیان مساله

بیان مساله چیست و چگونه نوشته می شود؟

- ▶ اولین بخش یک طرح تحقیقاتی است که ما را با کل مسئله مورد تحقیق آشنا می کند. این بخش شالوده و بنیان بنای تحقیق است.
- ▶ در این قسمت محقق سوالی را که در ذهنش به وجود آمده تحت عنوان «بیان مسئله تحقیق» برای خواننده توضیح می دهد.
- ▶ خواننده با مطالعه بیان مساله در مورد ضرورت انجام تحقیق مورد نظر توجیه خواهد شد.
- ▶ به خاطر اهمیت این بخش بهتر است حداکثر تلاش در جهت زیباتر کردن و رساتر کردن آن انجام شود.
- ▶ فرض کنید می خواهید استاندار را برای اعطای بودجه تحقیقاتی به طرحی راضی نمایید. کلیه توضیحات شما در جهت توجیه وی در واقع نوعی بیان مسئله است.

بیان مساله چیست و چگونه نوشته می شود؟

- ▶ در توصیف مساله باید به صورت یک رشته منطقی و گویا حرکت نمائیم .
- ▶ مسئله را از جنبه‌های مختلف مورد توصیف قرار دهیم .
- ▶ با آوردن آمار های دقیق و مناسب در جهت ارائه دلایل کافی در مورد مسئله بودن تحقیق مورد نظر باشیم.

اهمیت بیان مساله

- ▶ وسیله ای برای توضیح و توجیه طرح تحقیقاتی است.
 - ▶ باعث روشن شدن ابعاد مختلف مساله می شود.
 - ▶ ضرورت انجام طرح را نمایان خواهد ساخت.
 - ▶ ارایه طرح را به مسوولین و سازمان های تامین کننده بودجه آسان می سازد.
- بیان مساله باید واضح، دقیق و مختصر و حاوی نکات اصلی باشد و معمولا نباید از ۲ تا ۳ صفحه (هزار کلمه) تجاوز نماید.

در نگارش بیان مساله باید به چه نکاتی توجه شود؟

الف- توصیف دقیق مسأله

- توصیف ماهیت مشکل ونحوه بروز یا وقوع

- وسعت و شدت وپراکندگی مشکل

- عوامل دخیل در بروز مسأله

- نحوه برخورد فعلی با مشکل

در این قسمت شما دیگران را توجیه می کنید که موضوع شما مناسبت (اولویت) دارد.

ب- اطلاعات زمینه ای

ج - فواید پژوهش

- چه نتایجی از حل مشکل انتظار می رود.

محتوای بیان مسئله

► - در تنظیم بیان مسئله رعایت نه بند الزامی است

۱. تعریف مشکل طرح

۲. اهمیت مشکل : با تاکید و ارائه آمارهای موجود (بروز-شیوع)

۳. نحوه برخورد با مشکل ، راه حلها و خدمات موجود (در حال حاضر)

۴. عوارض ناشی از تداوم این مشکل

۵. معرفی راه حلها و یا عوامل موثر بر موضوع

۶. تناقضات موجود (در صورت وجود): اگر تناقض نباشد نمی توان طرح را توجیه کرد.

۷. اطلاعات زمینه ای

۸. در این تحقیق می خواهید چه کنید (توضیح بیشتری از عنوان، زمان، مکان انجام طرح، گروه شاهد و مورد)

۹. فواید ناشی از اجرای این تحقیق (کاربرد)

اطلاعات زمینه ای در بیان مسئله

توصیف زمینه ای که در آن، مشکل و علل آن به وجود می آید.

مثل : ویژگیهای جغرافیایی، اجتماعی و اقتصادی منطقه و سایر اطلاعات مربوط به منطقه ای که مشکل در آن بروز کرده است.

در قسمت آخر بیان مسئله اصطلاحات، عناوین و مخففها را برای خواننده ای که با این عناوین آشنا نیست مشخص می کنید. بهتر است فهرست این موارد را در بخش تعریف واژه های پروپوزال بنویسید.

ساختار بیان مساله (مقدمه)

Paragraph 1

What we know



Paragraph 2

What we don't know



Paragraph 3

What we want to do in this study



دکتر هدی شیر افکن