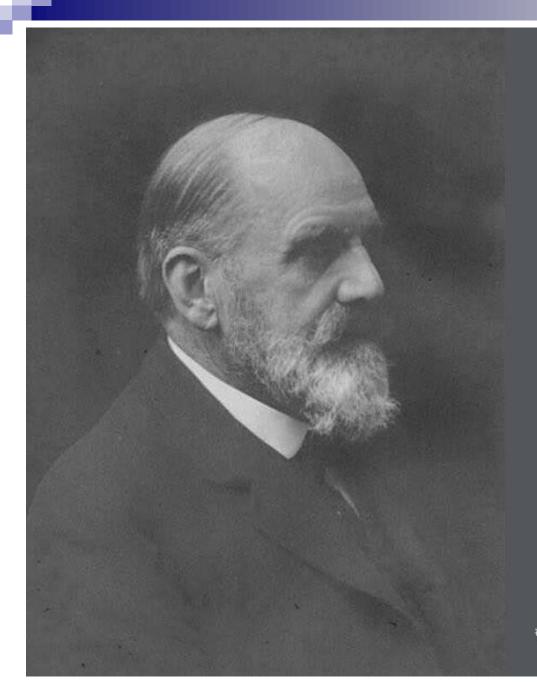
How to improve our research impact?

Payam Kabiri
Clinical Epidemiologist
Tehran University of Medical Sciences

چگونه یک پژوهش اثربخش داشته باشیم؟

چگونه اثربخشی پژوهش خود را افزایش دهیم؟



In science, the credit goes to the man who convinces the world, not to whom the idea first occurs.

- Francis Darwin -



The Story of Impact



Todays Outline

■ In this session, we will talk about:

- 1. What is Research Impact?
- 2. How is Research Impact measured?
- 3. What are the resources for assessing impact?
- 4. How to improve our research impact?
- 5. How can I demonstrate my research Impact?

پژوهش پاسخگو، نافع، کاربردی، هدفمند، مساله، محصول محور



Publish or Perish!



Substitute of old "Publish or Perish"!

Getting Found, Staying Found & Increasing Impact

Science Circle

The circle of science from origination to usage consist of many steps as follows:

- 1- Doing Research
- 2- Research Publication (Paper)
- 3- Knowledge Dissemination
- 4- Knowledge Utilization & Application



What is Impact?

- The Oxford dictionary defines impact as "A Marked Effect or Influence."
- So, Research Impact means that our research has affected or influenced something or someone.
- This arouse the following questions:
 - □ Whom has it impacted, who is the target audience?
 - □ How has it made an impact, what was its ultimate goal?
 - □ Through what means has this impact occurred, i.e., what are the primary outlets?
 - □ How do we know this impact has occurred, i.e., how can we measure it?

How Research Impact Differs By Academic Role?

Academic Role	Whom? Target Audience	How? Ultimate Goal	Through Which <i>Means?</i> Primary Outlets	How Do We <i>Know?</i> Measures
Research	Other academics	Progress scientific knowledge	Academic journals, Research Monographs, Conferences	Citations in academic journals / books / conference papers
Teaching	Students	Develop critical thinking skills	Textbooks, Practitioner journals	Citations in textbooks / syllabi
External Engagement *HDI = United N	Industry, Government, Public and society Nations Human Developi	Address societal problems ment Index ; SDG = Unit	Practitioner journals / magazines, Policy reports, (Social) Media ed Nations Sustainable I	Citations in policy documents, policy / legal changes, improved

- It is all the diverse ways that research benefits individuals, organizations and nations through increasing effectiveness of public services and policy, improving quality of life and health, or economic benefits.
- It may translate as benefit, payback, translation, transfer, uptake and utilization.
- The "Academic Impact", considered to be the research knowledge contribution to a field of study within academia, should be distinguished from "Non-academic Impact", which goes beyond academia.

Research impact is defined as how broadly scholarly research is being read, discussed, and used both inside and outside of the academy.

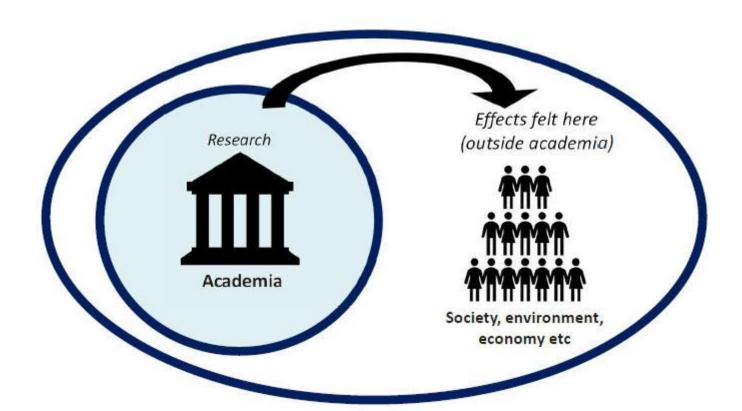
Research impact is the contribution that research makes to the economy, society, environment or culture, <u>beyond</u> the contribution to academic research.

(Australian Research Council)

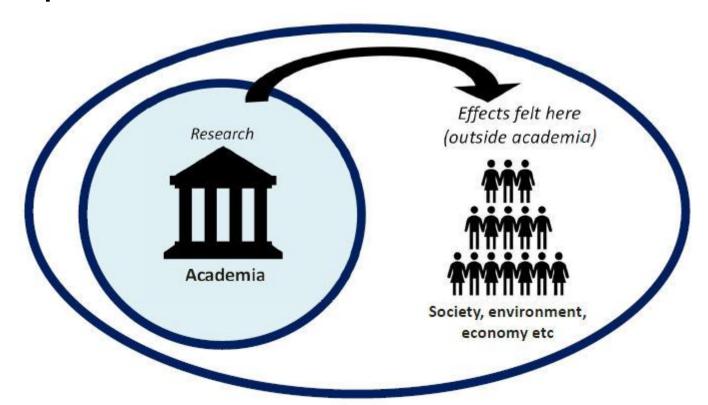


An effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, <u>beyond</u> academia.

Any Real Effect of Research in Real World is called impact.



Any provable Effect (Benefits) of Research in Real World is called impact.



Research Impact Application

Research impact is taken into account when research groups are being evaluated formally, but also when your own your academic work or career is being evaluated for funding, promotion or appointments.

Researchers use different strategies to improve their potential research impact in all phases of the publishing process.

Pathways to Research Impact and Engagement

Inputs

Time and material resources e.g. research income, staff, infrastructure

Activities

Research work, facility use, community and stakeholders engagement

Outputs

Deliverables from the research project e.g. publications, IP, patents, media, policy briefings, presentations

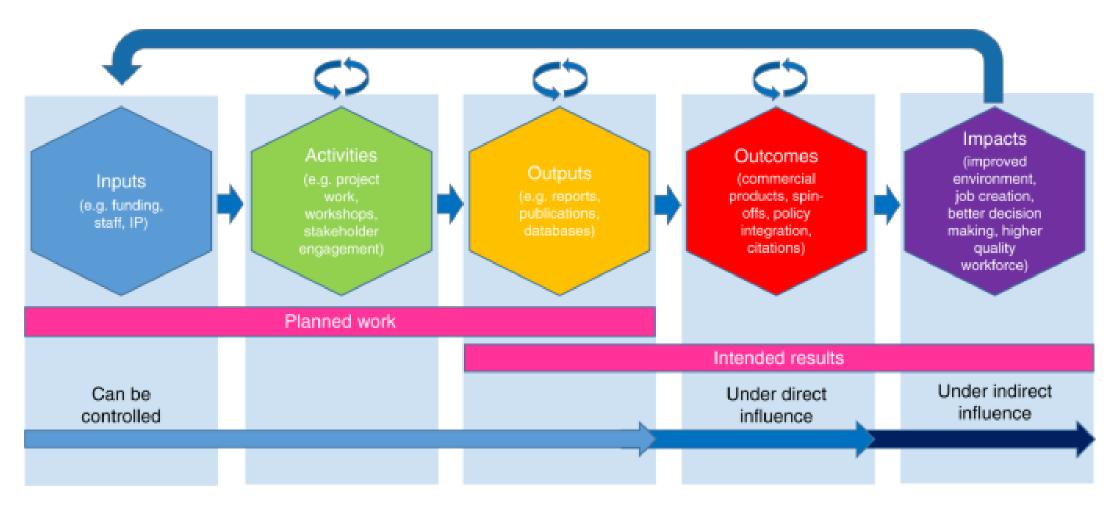
Outcomes

Changes that happen e.g. change in policy, new companies, improved training, commercial changes

Impact

Measurable
change that
occurs
e.g. lower
unemployment,
increased quality
of life, reduced
accidents

Research Impact Assessment



Fryirs, K.A., Brierley, G.J. & Dixon, T. Engaging with research impact assessment for an environmental science case study. Nat Commun 10, 4542 (2019). https://doi.org/10.1038/s41467-019-12020-z

A Real Case of Research Impact!

HORMONE RESEARCH

Original Paper

Horm Res 2004;62:79–83 DOI: 10.1159/000079392 Received: September 27, 2003 Accepted: April 20, 2004 Published online: June 24, 2004

Prevalence of Congenital Hypothyroidism in Isfahan, Iran: Results of a Survey on 20,000 Neonates

Mahin Hashemipour^{a,b} Massoud Amini^{a,b} Ramin Iranpour^b Gholam Hossein Sadri^c Narges Javaheri^a Sassan Haghighi^a Silva Hovsepian^a Abbas Ali Javadi^d Mahdi Nematbakhsh^e Goshtasb Sattari^a

^aIsfahan Endocrine & Metabolism Research Center, ^bDepartment of Pediatrics, School of Medicine,

^cDepartment of Social Medicine, School of Medicine, ^dDepartment of Infectious Diseases, School of Medicine, and

^eDepartment of Physiology, School of Medicine, Isfahan University of Medical Sciences & Health Services, Isfahan, Iran

A Real Case of Research Impact!

> Horm Res. 2004;62(2):79-83. doi: 10.1159/000079392. Epub 2004 Jun 24.

Prevalence of congenital hypothyroidism in Isfahan, Iran: results of a survey on 20,000 neonates

Mahin Hashemipour ¹, Massoud Amini, Ramin Iranpour, Gholam Hossein Sadri, Narges Javaheri, Sassan Haghighi, Silva Hovsepian, Abbas Ali Javadi, Mahdi Nematbakhsh, Goshtasb Sattari

Affiliations + expand

MID: 15237248 DOI: 10.1159/000079392

tract

Aims: To evaluate the prevalence of congenital hypothyroidism (CH) in a screening program performed for the first time in Isfahan, Iran.

Methods: From May 2002 to December 2002, T4 and TSH serum concentrations of 20,000 3- to 7-day-old newborns, born in all 17 hospitals of the city, were measured by radioimmunoassay and immunoradiometric assay, respectively. The newborns with abnormal screening results (TSH >20 mIU/l, T4 <6.5 microg/dl and based on the weight) were re-examined.

Results: Of 531 recalled subjects (recall rate 2.6%), 54 were confirmed to be hypothyroid, showing a prevalence of 1:370 for CH.

Conclusion: Considering the high frequency of CH, the necessity of implementing a routine screening program in the healthcare system of Isfahan Province is emphasized.





تاریخچه و طراحی برنامه کشوری غربالگری بیماری کم کاری تیروپید نوزادان در ایران

با توجه به گذار اپیدمیولوژیک از شیوع و بروز بالای بیماریهای واگیر به غیرواگیر در سالهای اخیر، مداخله در هر سه سطح پیشگیری (اولیه، ثانویه و ثالثیه) در مدیریت بیماریهای غیرواگیر جزو اولویتهای بهداشتی کشور قرار گرفته است. در دهه ۶۰ و قبل از اجرای برنامه غنی سازی نمک با ید، دکتر عزیزی و همکارانشان اقدام به غربالگری نوزادان برای بیماری كم كارى تيروييد كردند. اما به علت كمبود يد ميزان فراخوان بسيار بالا بود، لذا اين اقدام پس از مدتى متوقف گرديد. مطالعاتی در ارتباط با میزان بروز بیماری کم کاری تیرویید در دانشگاههای علوم پزشکی مختلف (دکتر عزیزی و همکاران-دانشگاه شهید بهشتی، دکترکرمیزاده و همکاران- دانشگاه فارس و دکتر هاشمیپور و همکاران — دانشگاه اصفهان) انجام شد. نتایج حاصل ازکلیه این مطالعات نشان داد که بروز بیماری کمکاری تیرویید در نوزادان کشور بسیار بالاست. با توجه به پژوهشهای انجام شده در اصفهان، تهران و شیراز، بروز کمکاری تیرویید در کشور ۱ بیمار در هر ۱۰۰۰ نوزاد زنده متولد شده تخمین زده شد.

به نام خالق هستی



برنامه کشوری غربالگری بیماری کمکاری تیرویید نوزادان

دستورالعمل ويژه كارشناس

نویسندگان: دکتر شهین یاراحمدی دکتر نسرین آژنگ

زیر نظر: دکتر علیرضا مصداقینیا دکتر کورش اعتماد دکتر سید محمد علوینیا

به نام پروردگار هستی غمال کری کثوری نوزادان وزارت بهداشت، دمان وآموزش نرتگی

برنامه كشوري غربالگری بیماری کمکاری تیروپید نوزادان

دستورالعمل ویژه بهورز و مراقب سلامت

نویسندگان دكتر شهين ياراحمدي دکتر نسرین آژنگ

بیماری کمکاری تیرویید نوزادان، وضعیتی از کمبود هورمون تیرویید قابل درمان است که در صورت عدم تشخیص به هنگام و یا درمان نامناسب، می تواند موجب بروز عقبماندگی شدید و اختلال در رشد کودک شود. عدم تـشخیص و درمان مناسب و بههنگام بیماری در مبتلایان، بار بیماری سنگینی را بر خانواده و جامعه وارد می کند. در حالی که در صورت تشخیص به هنگام، درمان ساده، آسان، ارزان و موثر است. بـا غربـالگری نـوزادان و شناسـایی بیمـاران و درمـان مناسب انان، عوارض جدی بیماری اتفاق نیفتاده و با حفظ ضریب هوشی طبیعی در بیمار، فردی مولد و سالم به جامعه تحویل داده میشود.

ادغام برنامه کشوری غربالگری نوزادان برای بیماری کـمکـاری تیروییـد، در مهر ماه سال ۱۳۸۴، اجرای هم زمان آن در روستاها و شهرها، دستیابی به پوشش بیش از ۹۷٪ در کمترین زمان ممکن، شروع درمان در کلیـه بیمـاران سناسایی شده، حفظ به سود مناسب بر مناسایی شده، حفظ به سود به سود به سود به سود است که این به به سود به و قابل (Case مناسب بر مروم ودن هزینه به سود است. Case و قابل رکوده است. مهم و قابل رکوده است. الگری شعه 370 in 12,000 Recognized مهم و قابل کرده است. اد غه سالگری شعه 32,000 Recognized مهم است. الگری شعه می اد غه سالگری شعه می اد خه سالگری شعه می اد خه سالگری شعه می اداران است.

درجات مختلف در این بیماران غیر قابل اجتناب بود.



A Real Case of Research Impact!

شیوع بالای بیماری، عوارض جبران اپذیر مغزی بیماری در صورت عدم تشخیص و درمان بهموقع که تنها با غربالگری دوران نوزادی قابل پیشگیری است و از طرف دیگر مقرون به مراف بودن اجرای برنامه در کشور مسئولین وزارت بهداشت درمان و آموزش پزشکی را بر آن داشت تا برنامه غربالگری را در سطح ملی به اجرا درآورند. لذا با استفاده از نتایج و تجارب بهدستآمده طرح غربالگری کمکاری مادر زادی تیروئید در سطح کشور بهعنوان یک برنامه ملی طراحی گردید و در سال 1382 در اولین برنامه کشوری بهطور آزمایشی در استانهای اصفهان، بوشهر و شهر شیراز اجرا شد و نهایتاً از سال 1384 این برنامه در سیستم سلامت کشور ادغام شده است. از زمان اجرای برنامه در سطح ملی تا آبان ماه سال جاری مجموعاً شش میلیون و هفت مده هزار نوزاد (49 درصد نوزاد دختر و 51 درصد نوزاد برنامه کشوری برای پسر) تحت غربالگری قرارگرفته که پانزده هزار نفر آزمودن غربالگری مثبت داشته و اقدامات تشخیصی و درمانی بر طبق دستورالعمل کمیته علمی کشوری برای آنان انجام شده است. این برنامه درمجموع حدود 95 درصد زایمانهای شهری و روستایی را تحت پوشش قرار داده و میزان فراخوان برنامه کرورد که درصد زایمانهای شهری و روستایی را تحت پوشش قرار داده و میزان فراخوان برنامه 290 در صد است.



رییس اداره غدد و متابولیک وزارت بهداشت تشریح کرد

دستاوردهای ۱۸ ساله برنامه کشوری غربالگری کم کاری تیروئید نوزادان/ غربالگری ۲۲ میلیون نوزاد ایرانی و غیرایرانی

رییس اداره غدد و متابولیک وزارت بهداشت، درمان و آموزش پزشکی دستاوردهای ۱۸ ساله برنامه کشوری غربالگری کم کاری تیروئید نوزادان را تشریح کرد.



به گزارش وبدا، دکتر شهین یار احمدی در نشست «دستاوردهای ۱۸ ساله اجرای برنامه کشوری غربالگری بیماری کم کاری تیروئید نوزادان در ایران» که در بیمارستان قلب شهید رجایی برگزار شد، گفت: برنامه کشوری غربالگری کم کاری تیروئید به عنوان زیرساخت غربالگری بقیه بیماری های مهم نوزادان از مهرماه ۱۳۸۴ در سیستم سلامت کشور ادغام شد.

وی افزود: طی این مدت، برنامه به اهداف کوتاه مدت، میان مدت و درازمدت خود دست یافته و به عنوان یکی از موفق ترین برنامه های ملی در حوزه سلامت کودکان شناخته شده است.

رییس اداره غدد و متابولیک وزارت بهداشت با بیان این که در مدت این ۱۸ سال بالغ بر ۲۲ میلیون نوزاد ایرانی و غیرایرانی مورد غربالگری قرار گرفته و بیش از ۶۴ هزار بیمار نیز شناسایی شده اند، بیان داشت: تمام بیماران شناسایی و درمان شده از بهره هوشی طبیعی برخوردارند و هیچ بیماری عقب مانده ذهنی نشده است که نشانگر اثربخشی برنامه بوده است.

یاراحمدی تصریح کرد: با اجرای برنامه کشوری بیماری کم کاری تیروئید نوزدان، هر ساله حداقل ۴۵۰۰ تا ۴۵۰۰ کودک از عقب ماندگی ذهنی نجات مي يابند.

وی خاطرنشان کرد: در تمام روستاها و شهرهای کشور نوزادان از دریافت خدمت برخوردارند و پوشش برنامه در هیج زمانی حتی در همه گیری کرونا دچار وقفه نشد. علاوه بر نوزادان ایرانی، نوزادان غیرایرانی نیز غربالگری شده و در صورت بیمار بودن تحت مراقبت قرار می گیرند.

رییس اداره غدد و متابولیک وزارت بهداشت با بیان این که کم کاری تیروئید در ۴.۳ نوزاد ایرانی از هر ۱۰۰۰ تولد وجود داشته و یک بیمار در هر ۲۲۱ نوزاد غربالگری شده است، گفت: بیماری کم کاری تیروئید در همه نقاط دنیا بروز می کند و روند افزایشی داشته است.

وی اضافه کرد: بروز این بیماری در ایران ۴ تا ۸ برابر میزان جهانی است در عین حال ۵۰ درصد از موارد ابتلا در نوزادان گذراست. اگرچه هر دو نوع دائم و گذاری این بیماری برای مصونیت از عوارض جدی، نیاز به درمان دارند.

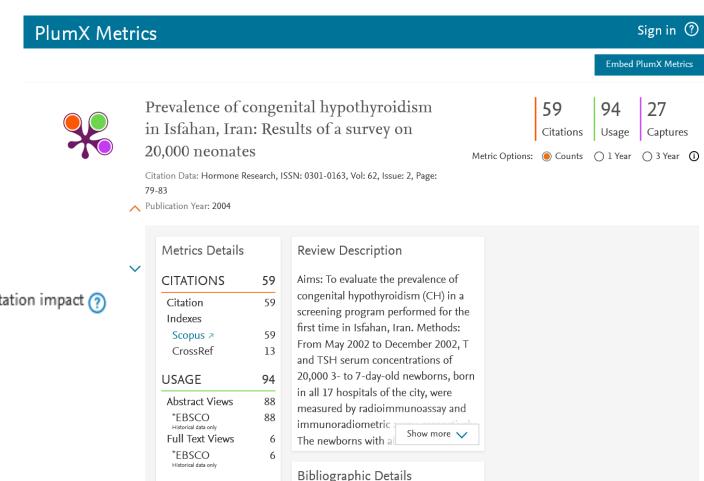
دکتر یار احمدی مهم ترین عوامل بروز بالای کم کاری تیروئید نوزادان در کشور را چنین برشمرد: اختلالات ید در محیط، نارس بودن، وزن کم نوزاد هنگام تولد، دوقلو یا چند قلو بودن، زردی طول کشیده، کمبود دریافت ید روزانه در مادر باردار، ابتلای مادر به بیماری تیروئیدی، ابتلای مادر به دیابت، وجود ناهنجاری مادرزادی، سابقه داشتن خواهر یا برادر مبتلا به کم کاری تیروئید و ازدواج های فامیلی.

وی با اشاره به غربالگری کم کاری تیروئید در نوزادان غیرایرانی، گفت: از سال ۹۰ تا ۱۴۰۱ بالغ بر ۵۴۰ هزار و ۲۸۷ نوزاد غیر ایرانی غربالگری شده و از میان آن ها ۲ هزار و ۵۸۷ بیمار شناسایی شده است.

رییس اداره غدد و متابولیک وزارت بهداشت خاطرنشان کرد: این در حالی است که تعداد نوزادان غیرایرانی بیش از ۳.۵ برابر افزایش و تعداد بیماران شناسایی شده در بین آنان نیز ۷ برابر افزایش یافته است.

یاراحمدی در پایان برنامه کشوری غربالگری نوزادان را یکی از برنامه های موفق در سیستم سلامت کشور دانست و ابراز داشت: پوشش ۹۵ درصدی برنامه نشان از موفقیت برنامه در سیاستگذاری و اجرا و ناشی از تلاش های همکاران در دانشگاه های علوم پزشکی کشور در اجرای موفق برنامه بوده است./۲۰۲

A Real Case of Research Impact!



Scopus metrics

59 50th percentile Citations in Scopus

Views count ??

Last updated on 18 June 2021

8

Views count 2021

0.33

Field-Weighted citation impact (?)

18

Views count 2013-2022

- Research funders and research organizations globally are looking to measure impact.
- The impacts are not easily recognized & quantified.
- There can be considerable time lags between research and impact.
- Impact is often made from accumulated knowledge and not a specific research finding.

Research Impact Goals & Application

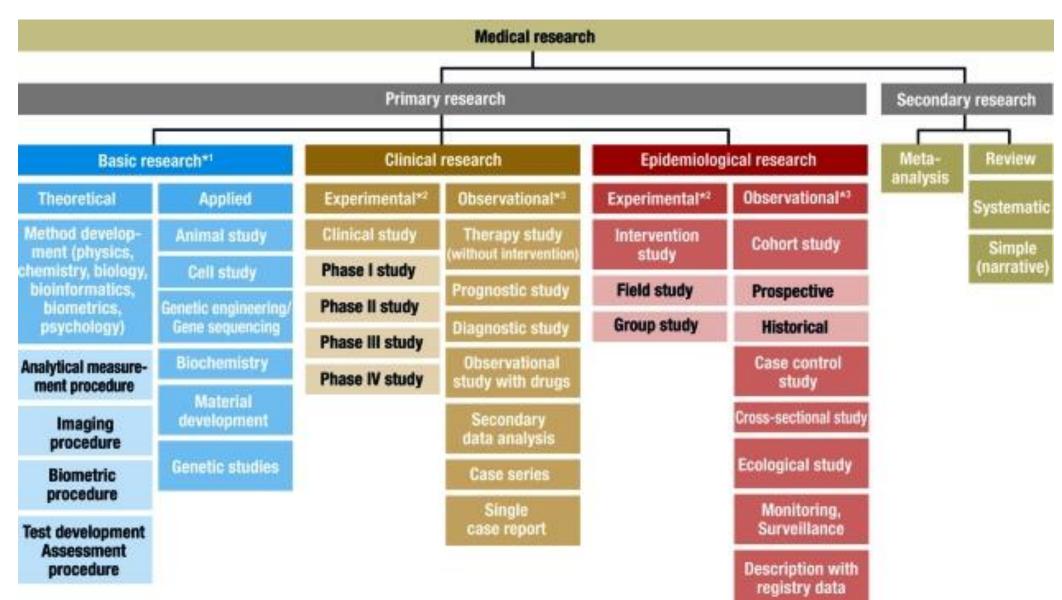
- What type of impact you are trying to achieve?
- Who will benefit from your research?
- How will they benefit?
- How can you measure this impact?
- How can you capture & provide evidence of this?

A Quick Look at: Steps in Scientific Writing

- Design well
- Decide politics
- Choose journal
- Read instructions to authors/papers
- Set framework
- Prepare drafts
- Distribute
- Polish
- Submit

Röhrig B, du Prel JB, Wachtlin D, Blettner M. Types of study in medical research: part 3 of a series on evaluation of scientific publications. Dtsch Arztebl Int. 2009 Apr;106(15):262-8. doi: 10.3238/arztebl.2009.0262. Epub 2009 Apr 10. PMID: 19547627; PMCID: PMC2689572.

Which Type of Study Makes the Research Impact?



Different Types of Impacts

- Research impact
- Social impact
- Clinical impact
- Economic impact
- Environmental impact
- Impact on health and wellbeing
- Policy influence and change
- Technological developments

Altmetrics (Alternative Metrics) Article Level Metrics

Scores article social impact & Monitors "mentions" in society

- □Conventional Media
- □Social Media
- □ Reference Managers
- □Post-pub & Peer-review Sites



Score in context

Is one of the highest ever scores in this journal (ranked #1 of 3,692)

show more...

Mentioned by

32 news outlets
17 blogs
209 tweeters
4 Facebook users
21 Google+ users

Readers on

8 Mendeley 7 CiteULike

Track this article

 Get email updates when this article is shared

Altmetrics (Alternative Metrics) Article Level Metrics

Article metrics | Last updated: Mon, 27 Jun 2022 3:05:26 Z

The toxic truth about sugar

Access & Citations

165k 467 475

Article Accesses Web of Science CrossRef

Citation counts are provided from Web of Science and CrossRef. The counts may vary by service, and are reliant on the availability of their data. Counts will update daily once available.

Online attention



This article is in the 99th percentile (ranked 9th) of the 248,715 tracked articles of a similar age in all journals and the 99th percentile (ranked 2nd) of the 1,093 tracked articles of a similar age in *Nature*

Altmetric calculates a score based on the online attention an article receives. Each coloured thread in the circle represents a different type of online attention. The number in the centre is the Altmetric score. Social media and mainstream news media are the main sources that calculate the score. Reference managers such as Mendeley are also tracked but do not contribute to the score. Older articles often score higher because they have had more time to get noticed. To account for this, Altmetric has included the context data for other articles of a similar age.

Altmetrics (Alternative Metrics) Article Level Metrics

Article metrics | Last updated: Mon, 27 Jun 2022 8:20:19 Z

Effect of a vitamin/mineral supplement on children and adults with autism

Access & Citations

51k Article Accesses 114

Web of Science

140

CrossRef

Citation counts are provided from Web of Science and CrossRef.

The counts may vary by service, and are reliant on the availability of their data. Counts will update daily once available.

Online attention



This article is in the 99th percentile (ranked 1,544th) of the 247,988 tracked articles of a similar age in all journals and the 98th percentile (ranked 1st) of the 86 tracked articles of a similar age in *BMC Pediatrics*

Altmetric calculates a score based on the online attention an article receives. Each coloured thread in the circle represents a different type of online attention. The number in the centre is the Altmetric score. Social media and mainstream news media are the main sources that calculate the score. Reference managers such as Mendeley are also tracked but do not contribute to the score. Older articles often score higher because they have had more time to get noticed. To account for this, Altmetric has included the context data for other articles of a similar age.

ACS **ACS Publications** CAS Find my institution Log In C&EN

CiteULike (1)





y, Carbohydrates,

nd proteins, Sensors





Publications



RETURN TO ISSUE < PREV **TECHNICAL NOTE** NEXT >

Tattoo-Based Noninvasive Glucose Monitoring: A Proof-of-Concept Study

Amay J. Bandodkar, Wenzhao Jia, Ceren Yardımcı, Xuan Wang, Julian Ramirez, and Joseph Wang*



Add to Export Share

Analytical Chemistry

Abstract

We present a proof-of-concept demonstration of an all-printed temporary tattoo-based glucose sensor for noninvasive glycemic monitoring. The sensor represents the first example of an easy-to-wear flexible tattoo-based



Embed PlumX Metrics



Long-term neurologic outcomes of COVID-19

Citation Data: Nature Medicine, ISSN: 1546-170X, Vol. 28, Issue: 11, Page: 2406-2415

Publication Year: 2022



Metric Options:
Ounts 1 Year 3 Year (i)



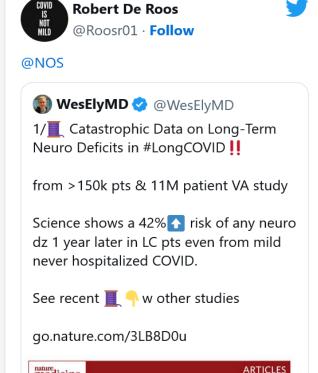
Overview

Highlights

- > Policy Citations
- News Mentions
- > Blog Mentions
- > Wikipedia References
- **>** Twitter

This article has 1,846 Twitter interactions across 1 URL. It has received 462 tweets and 1,384 retweets.







Embed PlumX Metrics



Long-term neurologic outcomes of COVID-19

Citation Data: Nature Medicine, ISSN: 1546-170X, Vol. 28, Issue: 11, Page: 2406-2415

Publication Year: 2022

45 Citations

16 Usage 189

Captures

50

3,928 Social Media

Metric Options: O Counts 1 Year 3 Year (i)

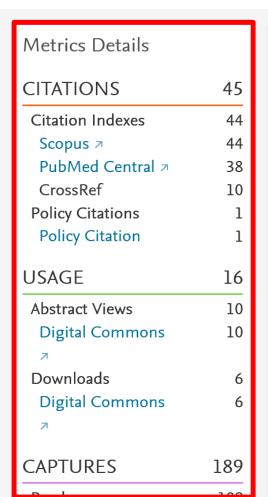
Mentions



Overview

Highlights

- > Policy Citations
- News Mentions
- > Blog Mentions
- Wikipedia References
- > Twitter





Article Description

The neurologic manifestations of acute COVID-19 are well characterized, but a comprehensive evaluation of postacute neurologic sequelae at 1 year has not been undertaken. Here we use the national healthcare databases of the US Department of Veterans Affairs to build a cohort of 154,068 individuals with COVID-19, 5,638,795 contemporary controls and 5,859,621 historical controls; we use inverse probability weighting to Show more 🗸 cohorts, and estimate risks and

Bibliographic Details

DOI: 10.1038/s41591-022-02001-z

PMID: 36138154 7 **REPOSITORY URL:**

https://digitalcommons.wustl.edu/oa_4/732 >

Altmetric (Alternative Metrics) Article Level Metrics

- Evaluate your publication Social Impact
- Benchmark your article effect against others
- Connect to discussion on your article
- Shows decisions made based on your papers
- Communicate impact to people, colleagues etc.
- Increasingly....demonstrate societal impact to funders

Five Categories to Learn: Citations

- Citations: Traditional index which also citations that help indicate societal impact such as Clinical or Policy Citations.
- Examples: citation indexes, patent citations, clinical citations, policy citations.
- Sources: Web of Science, Scopus, Google Scholar, ...

Five Categories to Learn: Usage

■ **Usage:** A way to signal if anyone is reading the articles or otherwise using the research. Usage is the number one statistic researchers want to know after citations.

Sources: Clicks, Downloads, Views, Library Holdings, Video Plays.

Five Categories to Learn: Captures

■ Captures: Indicates that someone wants to come back to the work. Captures can be an leading indicator of future citations.

Sources: Bookmarks, Code Forks, Favorites, Readers, Watchers.

Five Categories to Learn: Mentions

Mentions: Measurement of activities such as news articles or blog posts about research. Mentions is a way to tell that people are truly engaging with the research.

Sources: Blog Posts, Comments, Reviews, Wikipedia References, News Media.

Five Categories to Learn: Social Media

- Social Media: This category includes the tweets, Facebook likes, etc. that reference the research. Social Media can attract attention. Social media can also be a good measure of how well a particular piece of research has been promoted.
- **Examples:** Facebook, Twitter, ...
- Sources: Shares, Likes, Comments, Tweets

Papers Different Impact Measures

	Index	Measuring Systems
1	View	Academia, ResearchGate, PloS, Different Publishers
2	Downloaded/Saved	Mendeley, Different Publishers, PloS
3	Discussed	Wikipedia, Facebook, Blogs, ScienceSeeker
4	Recommended	F1000 Prime
5	Citations	Web of Science, Scopus, Google Scholar, CorssRef, Patent Citation,
6	Mentions	Blogs, News, Reddit, Wikipedia
7	Shares, Likes & Comments	Facebook, Twitter

Altmetric (Alternative Metrics) Article Level Metrics Benefits

- Wide Used Resourced, NOT limited to indexed Journals
- Goof for Young Researchers
- Shows immediate impact, No more time needed
- Free, No Subscription required
- Article Level Metrics instead of Journal Level Metrics









Article Usage (Downloads)

Academic Citation



Blog Coverage	News Coverage
Non-Scholarly Citation	Community Input

Dissemination, Altmetrics, Citations & Impact

■ Dissemination is not impact, even if you have the impressive number of reads, downloads, views or use.

How did you know if anyone really used it or learned from it, benefitted or did anything different as results.

Keep asking, what happened next?!

The Impact Story

Citation ≠ Impact
Altmetrics ≠ Impact

Research Visibility Importance

$$100 \times 0 = 0$$

Research Visibility & Impact

You may consider your research papers visibility in 2 stage:

- 1. Pre-publication Phase Visibility
- 2. Post-publication Phase Visibility

Research Impact Story

- Pre-Research Execution
- Post-Research Execution

- Pre-Publication
- Post-Publication

Publication Process

Business Plan for Your Article

- 1. Preparing your article
- 2. Publishing your article
- 3. Promoting your published article
- 4. Monitoring your article

Business Plan for Your Article

- Pre-Publication
 - Preparing your article
 - Publishing your article

- Post-Publication
 - Promoting your published article
 - Monitoring your article

Research Impact Story

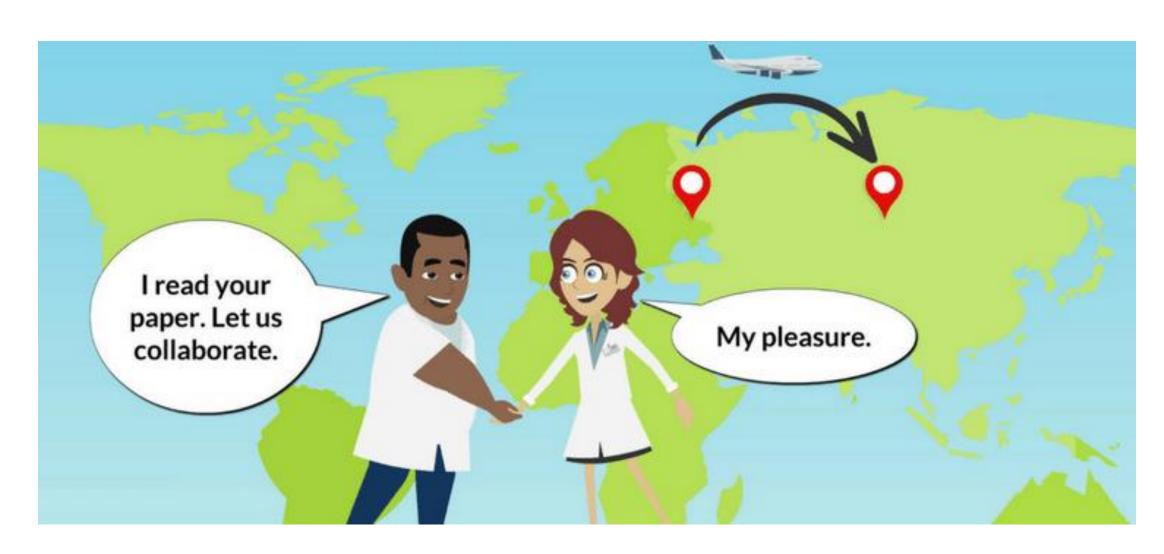
- Pre-Research Execution
- Post-Research Execution

- Pre-Publication
- Post-Publication

Pre-Publication (Pre-Research Execution)

- Select Research topics with a high potential academic and/or societal relevance.
- Consider the related Hot Topics.
- Consider the study types & designs like reviews.
- Don't forget that a good topic will result in a good impact.

How Collaborations Increase Research Impact?



Institutional, National & International Collaboration & Its Effect on Citation



Preparing Your Article

- Spend time on abstract and introduction & conclusion
- Use easy to understand charts and professional illustrations
- Use clear and correct manuscript language
- Consider Brevity in paper, Conciseness & Precision in title
- Sharing research data



Oswald Avery (1877-1955)

1944: DNA is genes

= function

(nearly) Forgotten



James Watson (1928-Current) Francis Crick (1916-2004)

1953: DNA two intertwined spirals

= structure /mmortal

Writing Does Matter!



A structure for Desoxyribose Nucleic Acid *Nature 1953, 737-738* Studies on the Chemical Nature of the Substance Inducing Transformation of Pneumococcal Types



J. Exp. Med. 1944, 137-158

~900 words, 1 sketch 1st mention of DNA: 2nd line

"It has not escaped our notice that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material." ~7'500 words, 4 tables 1st mention of DNA: p9/23

"The evidence presented supports the belief that a nucleic acid of the desoxyribose type is the fundamental unit of the transforming principle of Pneumococcus Type III."

Pre-Publication (Pre-Research Execution)

Ensure your research output has a clear title that is direct and concise. This will promote readership and attract citations from beyond your own discipline.

Think about writing a plain language summary of your research that is understandable to a non-specialist audience including public or researchers from other disciplines

Enrich Your Article

Enrich Your Article to present your research in the best possible way

- Search Engine Optimization (keywords, Captions, Highlights)
- Using Multimedia (Editorial Podcasts, AudioSlides)
- Graphical Abstract

Highlights Gynecologic Oncology Journal Example

Cervical Cancer

The efficacy and safety of neoadjuvant chemotherapy in the treatment of locally advanced cervical cancer: A randomized multicenter study Original Research Article



Pages 231-239

Zhijun Yang, Dandan Chen, Jieqing Zhang, Desheng Yao, Kun Gao, He Wang, Cui Liu, Jiang Yu, Li Li



PDF (909 K)

Highlights

- NACT reduces rate of patients requiring postoperative radiation by eliminating pathological risk factors, including LVSI and deep stromal invasion.
- IP as neoadjuvant chemotherapy has similar efficacy comparing to TP, but higher rates of neutropenia and diarrhea.
- LVSI was the only factor that indicates prognosis.

Graphical Abstract Gynecologic Oncology Journal Example

Reviews

Article

The sentinel node procedure in early stage cervical cancer, taking the next step; a diagnostic review Review



Pages 559-567

Casper Tax, Maroeska M. Rovers, Corine de Graaf, Petra L.M. Zusterzeel, Ruud L.M. Bekkers

Planted SE N

Alexantaises present

SLN detected and positive

No Metostases present

Abstract

Close graphical abstract

Research highlights

PDF (883 K) Supplementary content

Early stage Cervical cancer patients
(FIGO IA2, IB1, IIA primary tumour size <40mm)

Pelvic Lymph Node dissection

Sentinel Node Procedure

BUN - CRT

Only FUND

SUN - FUND

S

No Metastages present

SLM detected and regulive

Metastause present

No metastaceo present Additional rioka due to 'sventiagonistic

No materials are present

No additional risk due to diagnostics

No additional risk due to diagnostics

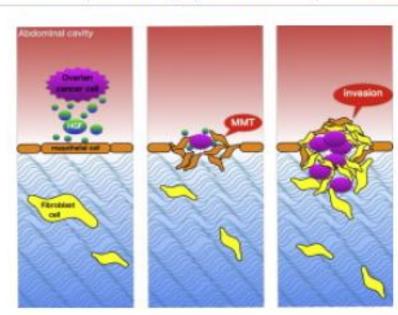
Graphical Abstract Gynecologic Oncology Journal Example

Hepatocyte growth factor secreted by ovarian cancer cells stimulates peritoneal implantation via the mesothelial-mesenchymal transition of the peritoneum Original Research Article Pages 345-354



Michihiko Nakamura, Yoshihiro J. Ono, Masanori Kanemura, Tomohito Tanaka, Masami Hayashi, Yoshito Terai, Masahide Ohmichi

▶ Abstract ▼ Close graphical abstract ▶ Research highlights 📆 PDF (1873 K) Supplementary content



Business Plan for Your Article

- 1. Preparing your article
- 2. Publishing your article
- 3. Promoting your published article
- 4. Monitoring your article

Pre-Publication (Pre-Research Execution)

- Choose the Right Journal to publish your manuscript
- Consider Open Access Journals
- Consider the indexing Database of target Journal

Considerations in Selecting a Journal

- 1. National or international audience?
- 2. Language?
- 3. Databases indexes Journal?
- 4. Multidisciplinary or specialty journals?
- 5. The journal's content area/scope?
- 6. Chances of acceptance?
- 7. What about the impact factor?
- 8. Practical matters (time to publication, etc.)

The Journal Spectrum

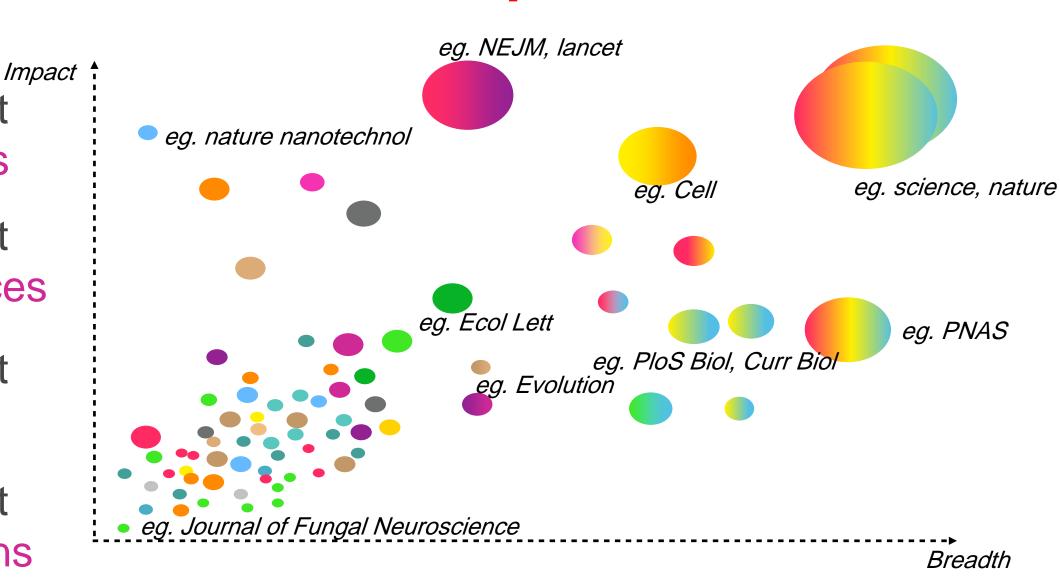
Different

Journals

Different Audiences

Different Papers

Different Functions



Elsevier Journal Finder

http://journalfinder.elsevier.com

ELSEVIER

Send us feedback

Find the perfect journal for your article

Elsevier® Journal Finder helps you find journals that could be best suited for publishing your scientific article. Please also consult the journal's Aims and Scope for further guidance. Ultimately, the Editor will decide on how well your article matches the journal.

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Paper title							
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Paper abstract							
Copy and paste your paper abstract here.							
Fields of research							
Optional: refine your search by s	selecting up to three research fields						
☐ Agriculture ♂	Economics 🗷	☐ Materials Science and Engineering ☑					
☐ GeoSciences ☑	Humanities and Arts	☐ Life and Health Sciences ☑					

Springer Journal Selector

http://www.springer.com/gp/authors-editors/journal-author/journal-author-helpdesk/preparation/1276

Springer journal selector

t... Top

How It Works

Select the journal that suits your research best from over 2,600 Springer publications.

The Springer Journal Selector uses semantic technology to help you quickly choose the Springer journal that is right for your paper.

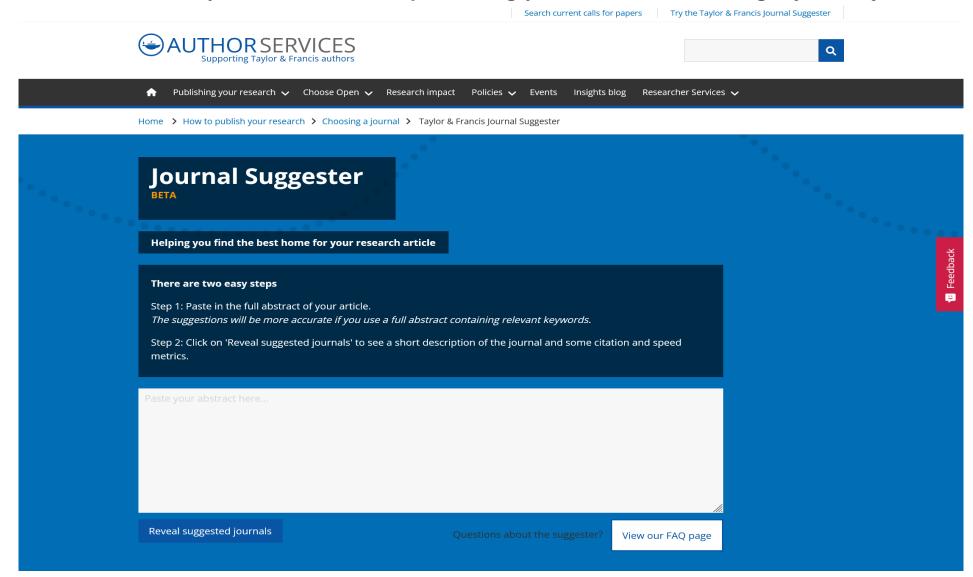
Enter your abstract, description of your research, or a sample text and the Springer Journal Selector provides a list of relevant journals. You can refine the results based on requirements for Impact Factor or publishing model, including an option to match to journals that are fully open access or have open access options.

Enter your abstract or article description

the period of investigation, it is found that the troposphere temperature has increased by about 0.033 °C/year at Helwan, Egypt, 0.03 °C/year at Coimbra, Portugal, and 0.028 °C/year in Hurbanovo/Stará Lesná, Slovakia. The Sq geomagnetic variations depend on the intensity of the electric currents generated by the effect of solar radiation in the ionosphere.

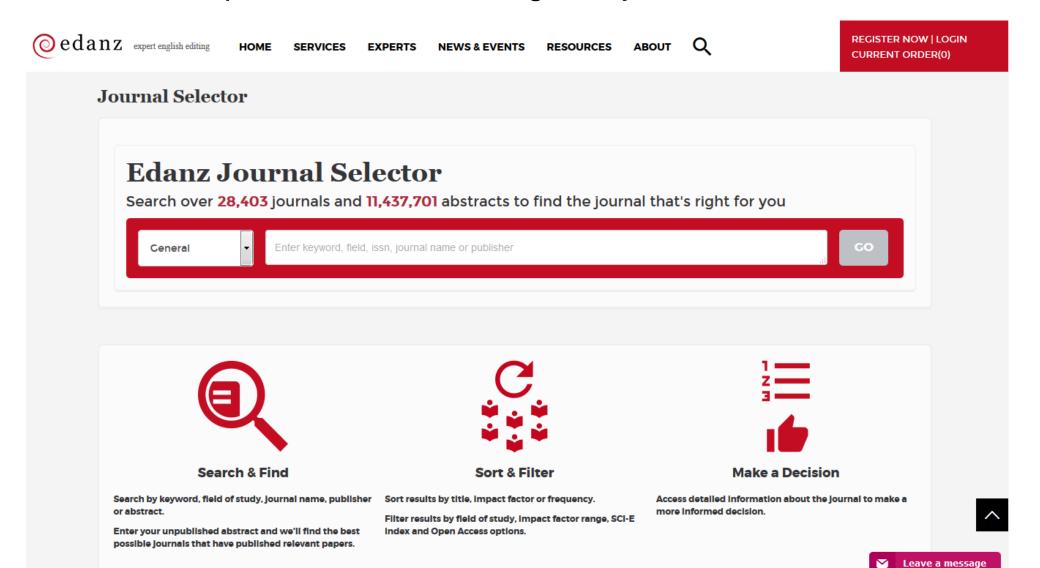
Taylor & Francis Journal Selector

https://authorservices.taylorandfrancis.com/publishing-your-research/choosing-a-journal/journal-suggester/



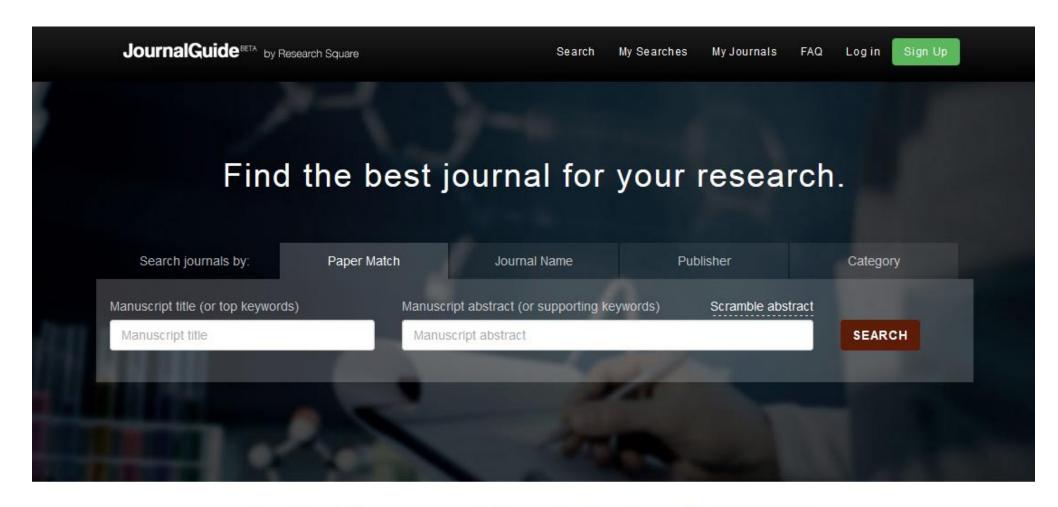
Edanz Journal Selector

https://www.edanzediting.com/journal-selector



Journal Guide

https://www.journalguide.com/



Optimizing articles for search-engines (SEO)

- Although search engine optimization (SEO) is usually associated with websites and webpages, it can be used for scientific articles as well.
- Not only to ensure that articles are found (crawled) and indexed, but also to influence the position where the articles are displayed in the results list.
- Just like any other type of ranked search results, articles displayed in top positions are more likely to be read and cited.

How to SEO your articles



Pre-Publication (Pre-Research Execution)

 Use Alternative and/or parallel publishing channels, such as Pre-print Services and Pre-print Servers to generate feedback and interest in your publication (e.g. arXiv.org eprint service and others)

Research Impact Story

- Pre-Research Execution
- Post-Research Execution

- Pre-Publication
- Post-Publication

Business Plan for Your Article

- Pre-Publication
 - Preparing your article
 - Publishing your article

- Post-Publication
 - Promoting your published article
 - Monitoring your article

Promoting your published article

Post-Publication (Post-Research Execution)

Writing and publishing your scholarly article is not the final step. You must Market your research.

To maximize your research impact, you must inform everyone in your academic and social networks about it.

Use social media to discuss your article or study, focusing on special interest groups.

Impact & So Correlated With Visibility

To make an impact, first you have to make yourself & your work visible.

The more visible you are, the more probable you make an impact.

The ways for researchers to increase their visibility and impact are different across different.

Make & Mind Your Academic Profiles

Use & Update Author Identifiers and Profiles:

- ORCiD
- Google Scholar
- ResearcherID (Publons)
- Scopus Author ID
- Loop

Post-Publication (Post-Research Execution)

Share links to your abstract or publication on Academia, LinkedIn, on your website, your academic institution's profile page, Facebook, Twitter, etc.

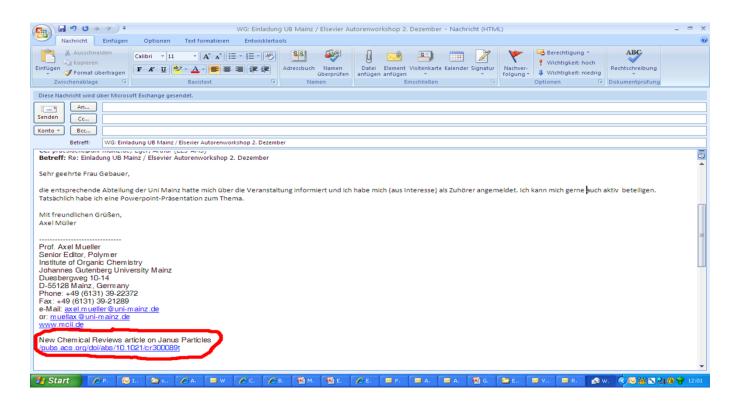
- When publisher policy permits, post your article/study (or author version) to:
 - □ Subject repositories, (e.g. SSRN, DOAJ, PubMed Central)
 - Mendeley, ResearchGate, Academia and elsewhere

Promoting your article

- 1. Press Release
- 2. Conferences
- 3. Media relations
- 4. Shared links to your article
- 5. Online CV
- 6. Social Networks

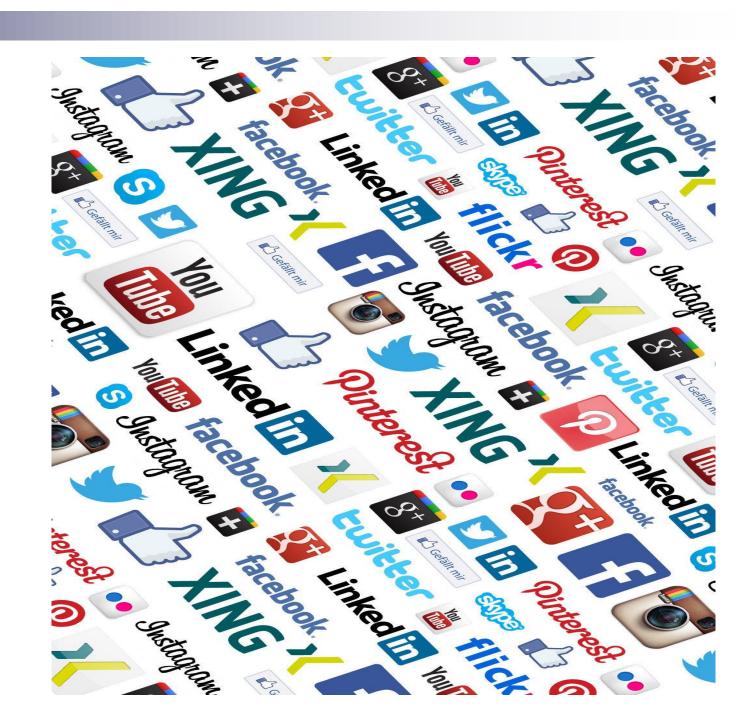
Share links to your article

- Customized short link with free access
- Link from university website & Emails to boost SEO



Social Networks

Maximize your research impact of your published papers through Social Networks



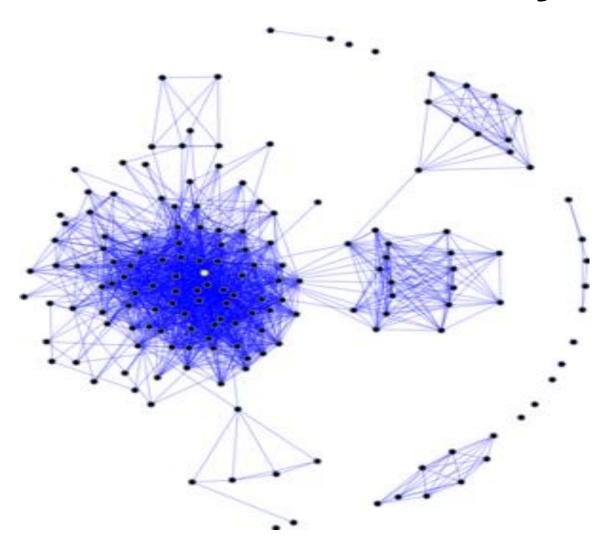
Academic Social Networks

Facts Don't Change Minds; Social Networks, Group Dialogue, and Stories Do.

What is a Social Network?

A social network is a social structure made up of individuals which are connected by one or more specific types of interdependency, such as friendship, common interest, relationships of beliefs, knowledge or prestige.

Social Network Analysis



AIRBNB **GUESTS BOOK** 747 STAYS

USERS SEND 360K

6.3M GOOGLE

WHATSAPP USERS SEND

41.6M MESSAGES

LINKEDIN USERS SUBMIT

6,060 RESUMES

CRIMINALS

CYBER-

VIEWERS WATCH 43 YEARS OF STREAMING CONTENT

3,720 USERS DOWNLOAD INSTAGRAM

CHATGPT

FACEBOOK USERS LIKE 4M POSTS

FANS STREAM A TAYLOR SWIFT SONG 69.4K TIMES

> GLOBAL INTERNET USERS SPEND HOURS ONLINE

AMAZON SHOPPERS SPEND \$455K

TWEETS

\$







01:00 OF THE DAY





8

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=3

(\$)

INSTAGRAM

USERS SEND

LAUNCH 30 DOS ATTACKS

694K REELS VIA DM

DOORDASH DINERS PLACE \$122K

IN ORDERS

VENMO USERS SEND \$463K

TWITCH

48K

(HD)

(O)

000

THE AVERAGE PERSON **PRODUCES** 102 MB OF DATA

4一身

PEOPLE TRADE \$398M IN TREASURY BONDS

PEOPLE SEND 241M **EMAILS**



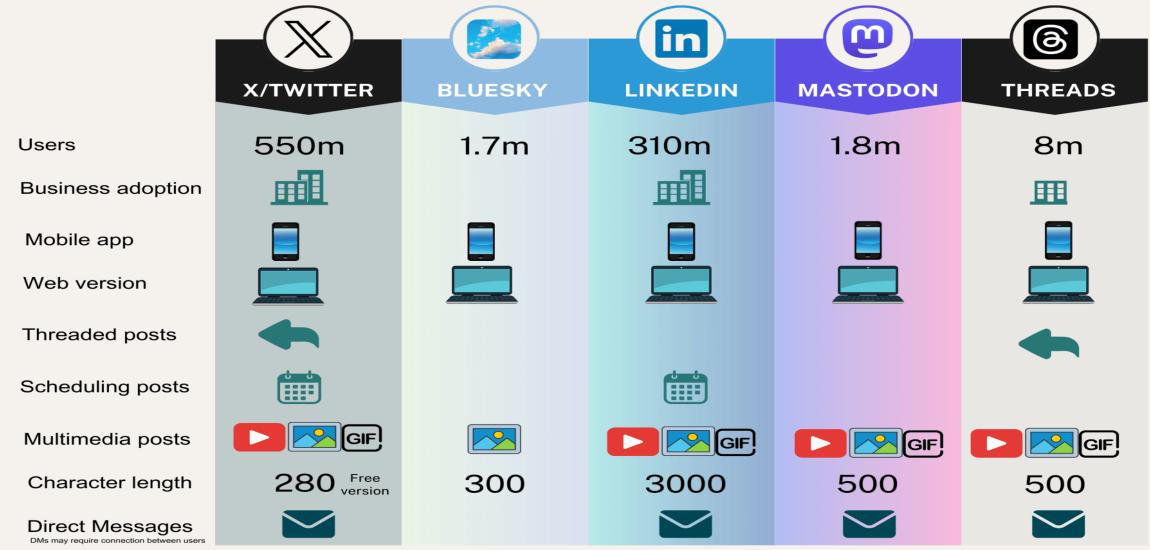




M m



SOCIAL MEDIA AND ACADEMIA



Data source: Wikipedia (accessed 1st November 2023)

linktr.ee/andy_tattersall



BY 4.0

Examples of Social Networks

Scientific Social Networks

- http://www.researchgate.net/
- http://www.academia.edu/
- http://www.mendeley.com/

General Social Networks

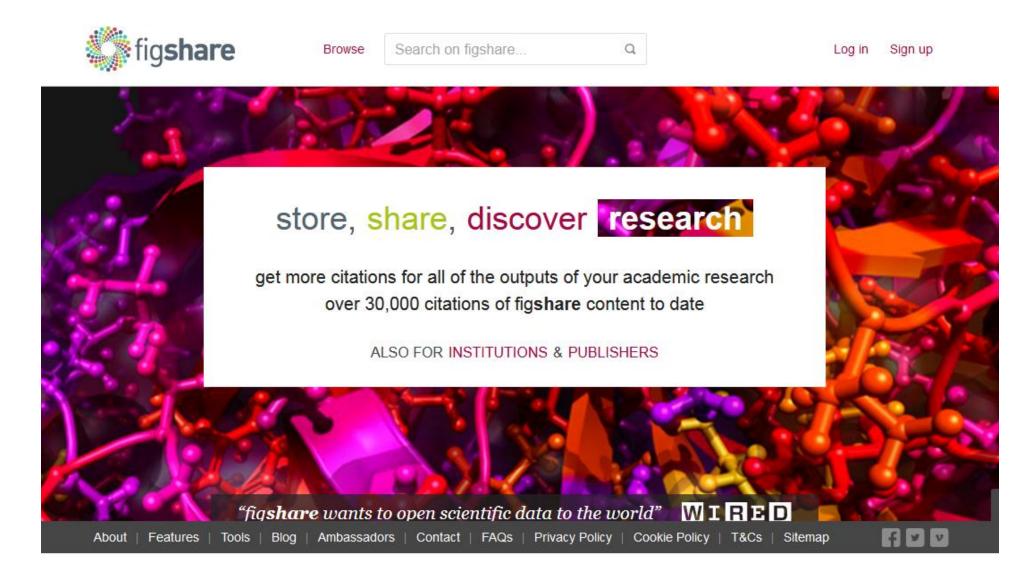
- http://www.facebook.com
- http://www.twitter.com
- http://www.linkedin.com

Share Your Profiles & Research

Use & Update Author Identifiers and Profiles:

- Figshare (https://figshare.com)
- Twitter (http://twitter.com)
- Facebook (https://facebook.com)
- GitHub (https://github.com)
- Universities Repositories

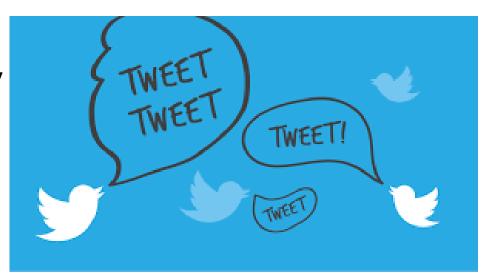
Figshare (https://figshare.com/)



Social Media: Twitter

- Tweet of 280 Character
- Audio and video tweets limited to 140 seconds
- Follow other researchers
- Post regularly and respond promptly
- Retweet
- Use images, movies & audios







Twitter Visibility

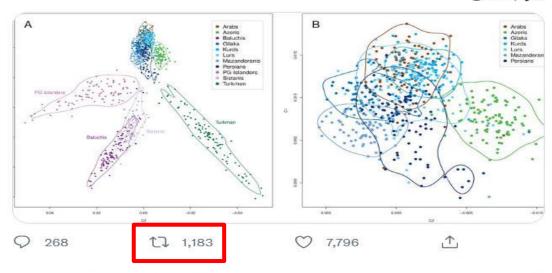


Neo @legendoffall_ · Aug 5

رشتو:

۱/ آزمایش ژنتیکی ۱۰۰۰ ایرانی از اقوام مختلف:

پژوهشگران تعداد مشخصی از گروه های ترک، لر، عرب، فارس، بلوچ، ترکمن، کرد، زرتشتی، گیلک، جزایر خلیج فارس و سیستانی را انتخاب میکنن و آزمایس میگیرن. نتایج نشون می ده که همه از یک ریشه هستیم؛ فقط بلوچ و جزایر خلیج فارس و اعراب کمی





Neo @legendoffall_ · Aug 5

۲:التقاط با همسایه ها داشتن.

زرتشتی ها وسط کلاستر همه اقوام هستن.

اُختلاف بین دوتا فارس ممکنه از یک فارس و یک ترک بیشتر باشه. نتایج نشون میده که ماها با مردم Tuscany ایتالیا ژن مشترک زیادی داریم. همچنین اگه ما را با اعراب و جنوب آسیا و شرق آسیا و ... مقایسه کنن، م

همچنین اگه ما را با اعراب و جنوب آسیا و شرق آسیا و ... مقایسه کنن، ما با اروپایی ها

Twitter Visibility

PLOS GENETICS

BROWSE PUBLISH ABOUT

Total

SEARCH Q advanced search



Viewed

Distinct genetic variation and heterogeneity of the Iranian population

Zohreh Mehrjoo, Zohreh Fattahi, Maryam Beheshtian, Marzieh Mohseni, Hossein Poustchi, Fariba Ardalani, Khadijeh Jalalvand, Sanaz Arzhangi, Zahra Mohammadi, Shahrouz Khoshbakht, Farid Najafi, Pooneh Nikuei, Mohammad Haddadi, [...], Michael Nothnagel

[view all]

Published: September 24, 2019 https://doi.org/10.1371/journal.pgen.1008385

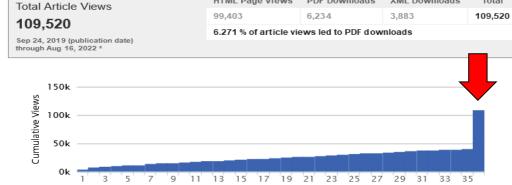
Article	Authors	Metrics	Comments	Media Coverage
		*		

61 19 Citation 109,521 465 Share





ADVERTISEMENT



1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35

Months

*Although we update our data on a daily basis, there may be a 48-hour delay before the most recent numbers are available.



How to Post on Paper on X Twitter?!

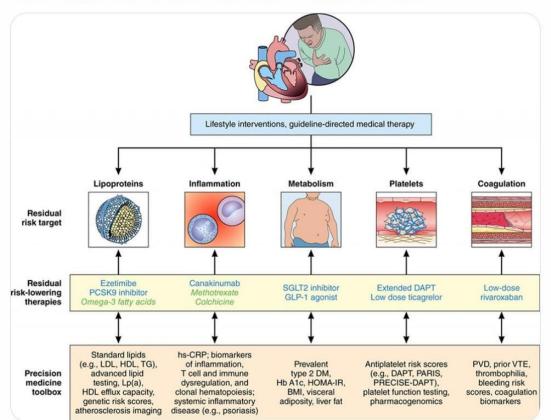


The Heart @ZHeart11768530 · 22h

Residual Atherosclerotic Cardiovascular Disease Risk : Evaluation and Treatment

ejinme.com/article/S0953-...

#cardiology #CardioTwitter #CardioEd #medtwitter #MedEd



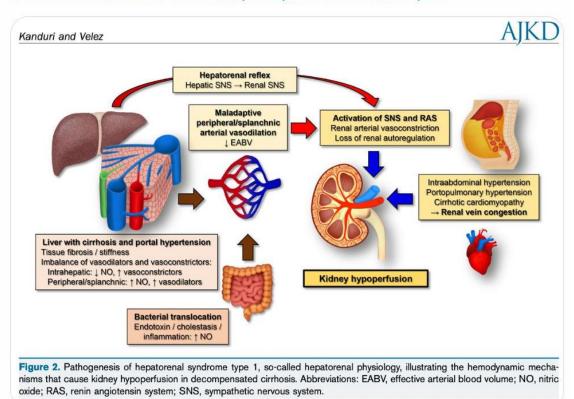
AIKD

AJKD @AJKDonline · 17h

Kidney Dysfunction in the Setting of Liver Failure: Core Curriculum 2024

buff.ly/3NoEcfZ

@SwethaKanduriMD @VelezNephHepato @OchsnerNephro



How to Post on Paper on X Twitter?!

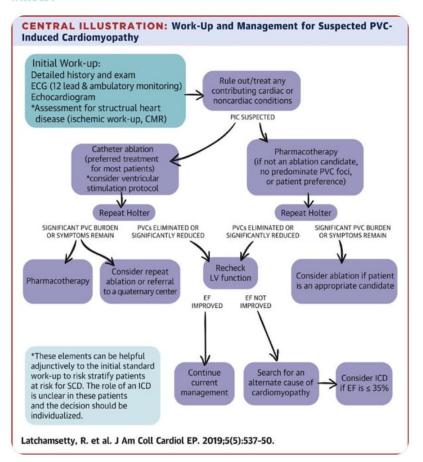


The Heart @ZHeart11768530 · 21h

Premature Ventricular Complex-Induced Cardiomyopathy @JACCJournals

jacc.org/doi/abs/10.101...

#CardioEd #CardioTwitter #cardiology #cardiotwitter #MedEd #ECG #MedX

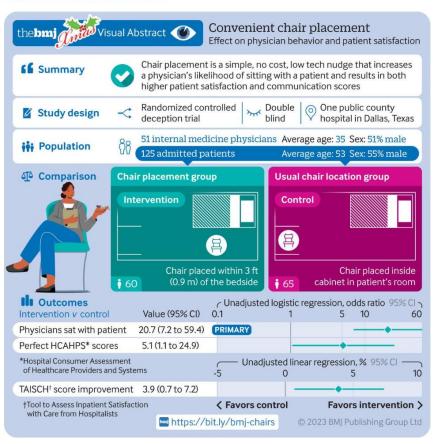




The BMJ 🧼 @bmj_latest · Dec 18

Study finds that placing a chair by a patient's bedside makes physicians more likely to sit during patient encounters, receiving higher patient communication and satisfaction scores #

Includes a #VisualAbstract summarising the study #BMJChristmas bmj.com/content/383/bm...



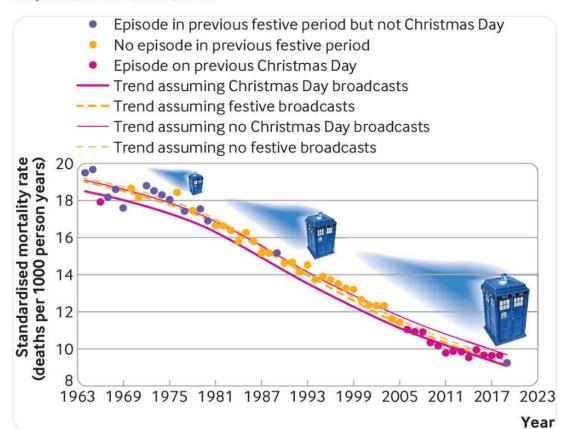
How to Post on Paper on X Twitter?!



The BMJ @ @bmj latest · 9h

A new #DoctorWho episode shown during the festive period, especially on Christmas Day, is associated with lower death rates in the subsequent year across the UK, finds new #ChristmasBMJ study

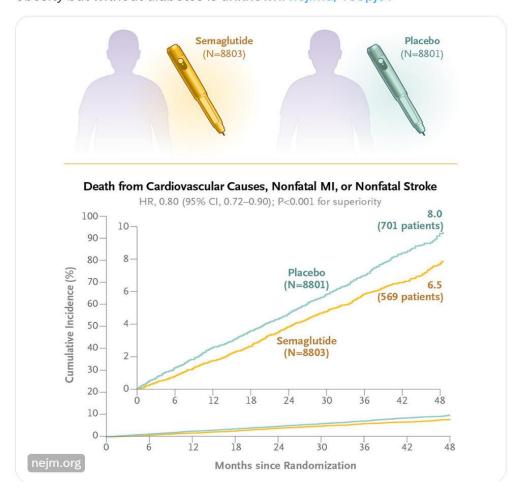
#DrWho @Richard_D_Riley bmj.com/content/383/bm...





NEJM @NEJM · Dec 18

GLP-1 receptor agonists can reduce the risk of adverse cardiovascular events in pts with diabetes. Whether the GLP-1 receptor agonist semaglutide can also reduce cardiovascular risk in pts with overweight or obesity but without diabetes is unknown. nej.md/465pj91



Bug in a mug: are hospital coffee machines transmitting pathogens?

BMJ 2023; 383 doi: https://doi.org/10.1136/bmj.p2564 (Published 18 December 2023) Cite this as: BMJ 2023;383:p2564

Altmetric

Who is talking about this article?



BMJ 🤣 @bmj_company · 4h

BMJ

Good news for healthcare workers! New study in bmj_latest
gives hospital coffee machines a clean bill of health—no need for a general ban Time to enjoy that much-needed coffee break worry-free!

#HealthcareNews #CoffeeSafety

Read it here: bit.ly/3uX6JCY



How to Post on Paper on X Twitter?!



Wiley Clinical Health @WileyHealth · 2h

Is trustworthiness an adequate screening criterion to ensure the accuracy of #SystematicReviews? This #CochraneESM article looks at the impact of removing untrustworthy #RCTs. #InclusionCriterion @cochranemthds

● Read the full article for free: ow.ly/Bxs150QjCqn

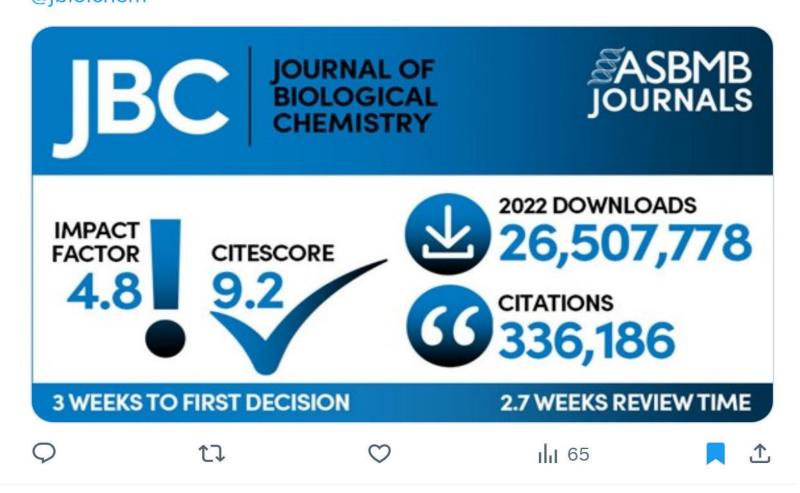


How to Post on Article on X Twitter?!



Elsevier Biomedchem 🧼 @elsbiomedchem · 1h

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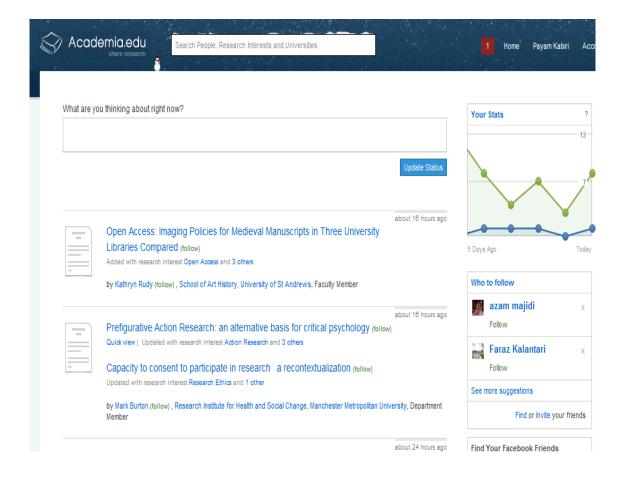
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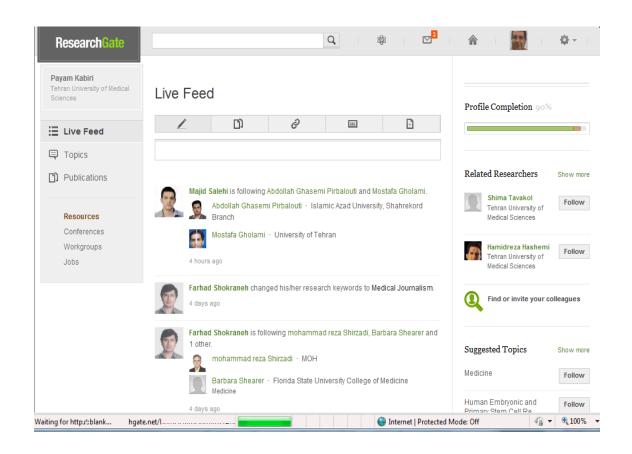
- Create a profile in Academia.edu
- 7.9m papers uploaded)
- Provides analytics on visitors to your papers, country they came from, keywords used







- Create a profile in ResearchGATE.net
- Social network for scientists (esp. biological and health) with over 8m members
- Emphasis on sharing papers, asking and answering questions, finding collaborators



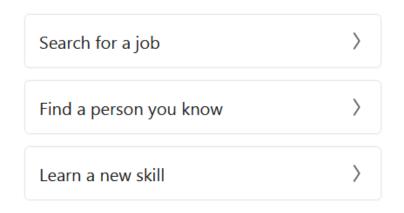
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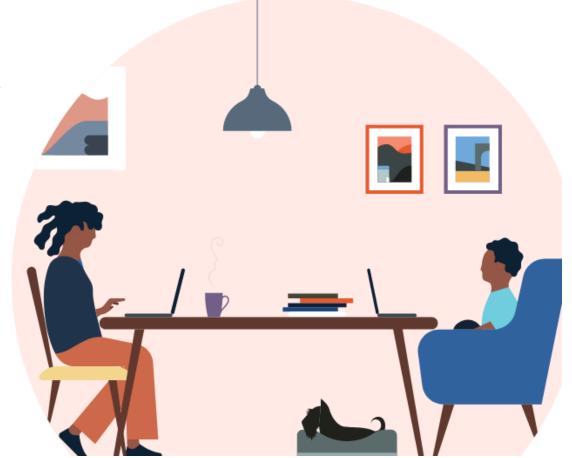


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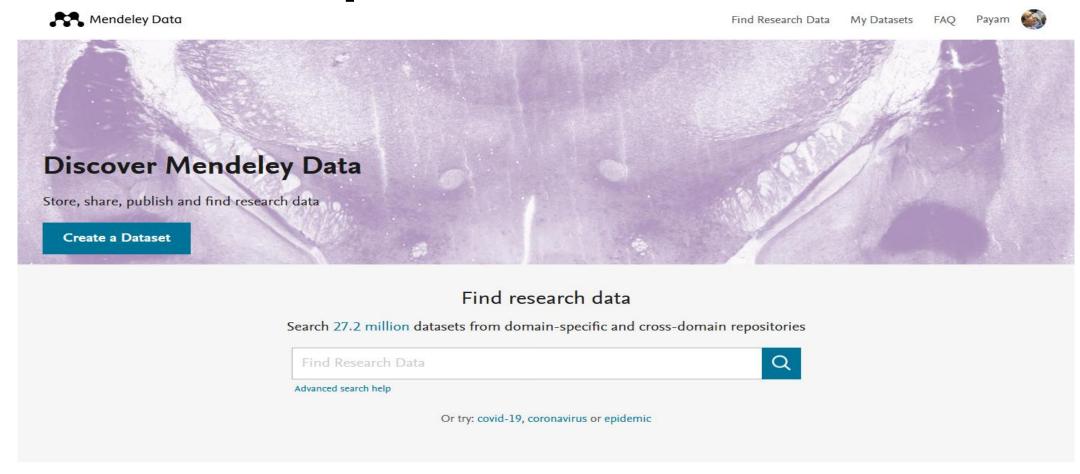
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Post your datasets to Data Registration Platforms for and storage of datasets.

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Use data.mendeley.com & Re3data.org & to identify a suitable service for your discipline.

Datasets Repositories (https://data.mendeley.com)



Open research data repositories in our index







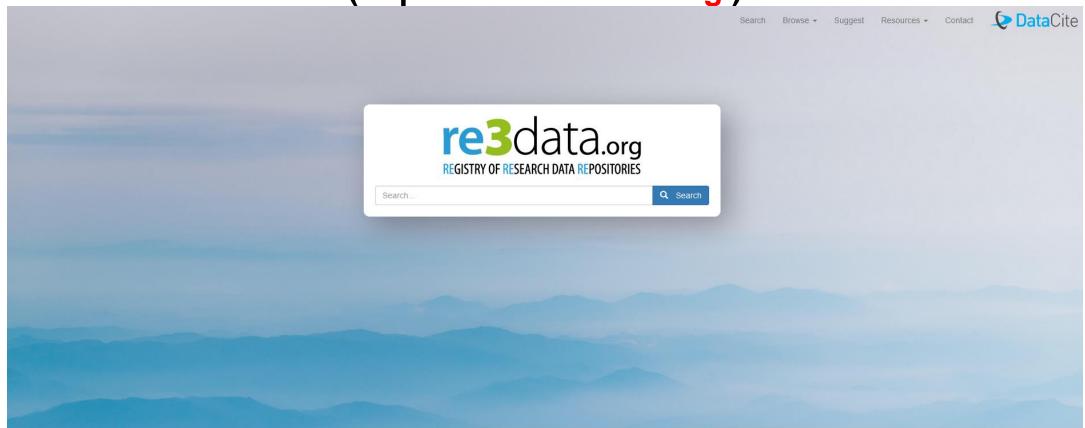






Registry of Data Repositories

(https://www.re3data.org/)





Datasets Registrations in Repositories

- Data journals offer another route to making data more discoverable and citable. They are often based on data deposited in a data repository and involve some level of peer review.
 - □ Data in Brief
 - □ Journal of Open Humanities Data
 - □ Open Health Data
 - □ Journal of Open Psychology Data
 - □ Scientific Data

Business Plan for Your Article

- 1. Preparing your article
- 2. Publishing your article
- 3. Promoting your published article
- 4. Monitoring your article

Monitoring Your Article

Monitoring your article

- 1. Publishers Research Dashboard
- 2. Altmetrics Indices
- 3. Social Networks Tools
- 4. Scientometric Tools

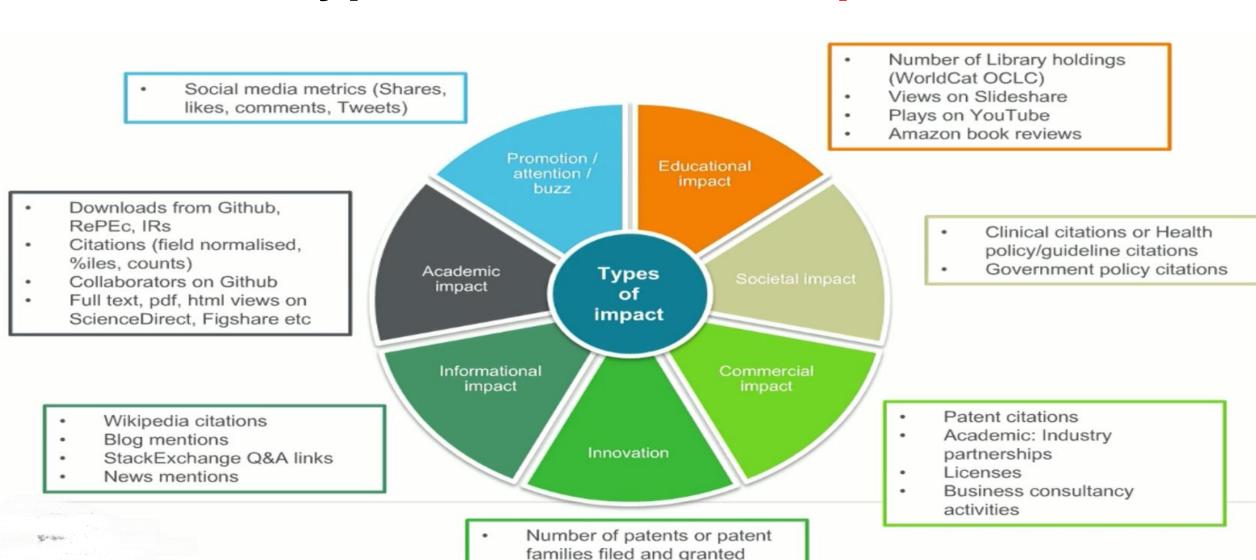
Research Dashboard

- Early feedback on downloads, shares and citations
- Data about the geographic locations and research disciplines of your readers
- Search terms used in ScienceDirect to find your publications
- A comparison of the performance of your article with other people's articles

Different Types of Impacts

- Research impact
- Social impact
- Clinical impact
- Economic impact
- Environmental impact
- Impact on health and wellbeing
- Policy influence and change
- Technological developments

Different Types of Research Impacts & Metrics



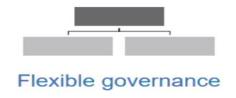
Metrics That Help You

Articles Custor	n document Journals, set Conference Papers, Books	Portfolio	Author, Editor, Institution Reviewer Grou	Subject Area
Community	Contributions	Consumption	Scholarly Impact	Social Impact
Editor Board Authors	Outputs Funding awards	Usage Citations Audience Patents	Scholarly Activity Academic Opinion	Social Activity Media Activity
Geographical spread	Scholarly output	CiteScore	Scholarly discussion	Social media mentions
Collaboration network	Research data output	Impact Factor	Mendeley Counts	Media mentions
Sector distribution	Conference output	FWCI, SJR, SNIP	Peer Review metrics	Medical guidelines
h-, g-, m- indices	Funding sources	Citation Counts	Prizes and awards	Influence policies
		Usage counts		
		Patent metrics		

Key Characteristic of World Class University



















Love Yourself Make an Impact

با خود مهربان باشید از خود نام و نشانی به یادگار گذارید

بماند سالها این نظم و ترتیب زما هر ذره خاک افتاده جایی

غرض نقشی است کن ما باز ماند که هستی را نمی بینم بقایی

زندگی صحنه یکتای هنرمندی ماست هرکسی نغمه خود خواند و از صحنه رود صحنه پیوسته به جاست ...

خرم آن نغمه که مردم بسپارند به یاد

اگر میل داشتید Email بزنید!

kabiri@tums.ac.ir

Good Luck!