

Greg Reeve
INFO 244
Online Searching
Fall 2015

EXERCISES

#1 - Subject search – Health and Medicine

A pharmaceutical researcher calls you wanting articles on malaria vaccines that have been tested on humans. Specifically, she is interested in recent results of clinical trials.

First construct a search using all databases in the Health and Medicine subject area. Then use MEDLINE and the appropriate descriptor(s) and/or limits for all of the facets. Limit the articles to those involving testing on humans, to ones that are written in English, and to clinical trials.

How do the searches and search results compare when searching all health and medicine databases vs searching in MEDLINE only? Select the 5 best results to submit with your search strategy and narrative.

Summary

I first performed a simple search using the key terms malaria and vaccines against all medicine and health databases. This resulted in a large number of results (46,414). If I narrowed down the results within the last 10 years it narrowed the results down to 17,381. Adding the phrase "human testing" to the search query narrowed the results down to 168. Filtering these results to within the last 10 years resulted in a more manageable 35 results. If I limited my search to just the abstract field and including the terms "malaria", "vaccine", "human testing", and "human clinical trials" while filtering the results to the last two years 13 results were returned.

When I limited my search to the MEDLINE database alone I experimented with the advanced search interface and using the subject headings (MeSH). My first search used the boolean operators loosely and returned 16,042 results that were about malaria vaccines or any of the clinical trial phases. This result was far too large but if narrowed down to 2015 and 2014 the result set reduced down to 1,144 results. When I switched the boolean operator from "OR" to "AND" between my two main concepts (clinical trials and malaria vaccines) 65 results were returned. Limiting that back to the last two years resulted in 14 results. Searching against the MEDLINE database resulted in more manageable result sets than searching against all the medicine and health databases. Using the database-specific subject-headings also helped narrow down the results more quickly and with confidence that the results were relevant to the search query.

Search History

Set	Query	Database(s)	Results
S1	malaria and vaccines	All	46,414
S2	(malaria AND vaccines) AND yr(2010-2019)	All	17,381
S3	malaria and vaccines and "human testing"	All	168
S4	(malaria AND vaccines AND "human testing") AND yr(2010-2019)	All	35
S5	(ab(malaria) AND ab(vaccine) AND ab(("human testing" OR "human clinical trials"))) AND yr(2013-2015)	All	13
S6	mesh.Exact("Clinical Trials, Phase IV as Topic" OR "Clinical Trials, Phase II as Topic" OR "Clinical Trials, Phase III as Topic" OR "Clinical Trials, Phase I as Topic" OR "Malaria Vaccines")	MEDLINE	16,042
S7	mesh.Exact("Clinical Trials, Phase IV as Topic" OR "Clinical Trials, Phase II as Topic" OR "Clinical Trials, Phase III as Topic" OR "Clinical Trials, Phase I as Topic" OR "Malaria Vaccines") AND yr(2014-2015)	MEDLINE	1,144
S8	mesh.Exact("Clinical Trials, Phase IV as Topic" OR "Clinical Trials, Phase II as Topic" OR "Clinical Trials, Phase III as Topic" OR "Clinical Trials, Phase I as Topic") AND Exact("Malaria Vaccines")	MEDLINE	65
S9	(mesh.Exact("Clinical Trials, Phase IV as Topic" OR "Clinical Trials, Phase II as Topic" OR "Clinical Trials, Phase III as Topic" OR "Clinical Trials, Phase I as Topic") AND Exact("Malaria Vaccines")) AND yr(2013-2014)	MEDLINE	14

Results

Afolabi, M. O., Adetifa, J. U., Imoukhuede, E. B., Viebig, N. K., Kampmann, B., & Bojang, K. (2014). Early phase clinical trials with human immunodeficiency virus-1 and malaria vectored vaccines in the gambia: Frontline challenges in study design and implementation. *The American Journal of Tropical Medicine and Hygiene*, 90(5), 908-914. doi:<http://dx.doi.org/10.4269/ajtmh.13-0615>

Abstract: Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) and malaria are among the most important infectious diseases in developing countries. Existing control strategies are unlikely to curtail these diseases in the absence of efficacious vaccines. Testing of HIV and malaria vaccines candidates start with early phase trials that are increasingly being conducted in developing countries where the burden of the diseases is high. Unique challenges, which affect planning and implementation of vaccine trials according to internationally accepted standards have thus been identified. In this review, we highlight specific challenges encountered during two early phase trials of novel HIV-1 and malaria vectored vaccine candidates conducted in The Gambia and how some of these issues were pragmatically addressed. We hope our experience will be useful for key study personnel involved in day-to-day running of similar clinical trials. It may also guide future design and implementation of vaccine trials in resource-constrained settings.

MeSH subject: Developing Countries; Gambia -- epidemiology; HIV-1; Humans; AIDS Vaccines -- therapeutic use (major); Acquired Immunodeficiency Syndrome -- epidemiology; Acquired Immunodeficiency Syndrome -- prevention & control (major); Clinical Trials, Phase I as Topic (major); Malaria -- epidemiology; Malaria -- prevention & control (major); Malaria Vaccines -- therapeutic use (major)

Campo, J. J., Sacarlal, J., Aponte, J. J., Aide, P., Nhabomba, A. J., Dobaño, C., & Alonso, P. L. (2014). Duration of vaccine efficacy against malaria: 5th year of follow-up in children vaccinated with RTS,S/AS02 in mozambique. *Vaccine*, 32(19), 2209-2216. doi:<http://dx.doi.org/10.1016/j.vaccine.2014.02.042>

Abstract: A primary concern for the RTS,S malaria vaccine candidate is duration of protection. The ongoing Phase III trial reported evidence of waning efficacy within the first year following vaccination. Multiple Phase IIb trials demonstrated early waning of efficacy. The longest duration of protection for RTS,S recorded to date was in a trial of a cohort of 1605 Mozambican children age 1-4 yr at the time of immunization (C1), which showed an overall efficacy against clinical malaria of 30.5% over 43 subsequent months of surveillance. A significant reduction in parasite prevalence in RTS,S vaccinees indicated that the vaccine continued to protect at the end of this period. Although follow-up for recording incident cases of clinical malaria was stopped at 45 months, we were interested in evidence of further durability of protection, and revisited the cohort at 63 months, recording the secondary trial endpoint, prevalence of asexual *Plasmodium falciparum* parasitemia, in the RTS,S and comparator vaccine groups as a proxy for efficacy. As a comparator, we also visited the contemporaneous cohort of 417 children (C2), which showed waning efficacy after 6 months of follow-up. We also assessed anti-circumsporozoite antibody titers. These results were compared with those of other Phase IIb trials. Prevalence of parasitemia was not significantly lower in the RTS,S/AS02 group compared to comparator groups in C1 (57 [119%] Vs 62 [128%]; $p=0.696$) or C2 (30 [226%] Vs 35 [276%]; $p=0.391$), despite elevated antibody titers, suggesting that protection did not extend to 5 years after vaccination. This is in contrast to the earlier assessment of parasitemia in C1, where a 34% lower prevalence of parasitemia was observed in the RTS,S/AS02 group at month 45. Comparison with other Phase II trials highlights a complex relationship between efficacy, age and transmission intensity. RTS,S/AS02 provided partial protection from clinical malaria for at least 3.5 years in C1. Duration of protection may depend on environmental circumstances, such as changing malaria transmission, and special attention should be given in the Phase III trial to identifying factors that modify longevity of protection.

MeSH subject: Child; Child, Preschool; Clinical Trials, Phase II as Topic; Clinical Trials, Phase III as Topic; Cross-Sectional Studies; Follow-Up Studies; Humans; Immunoglobulin G -- blood; Infant; Mozambique; *Plasmodium falciparum*; Randomized Controlled Trials as Topic; Antibodies, Protozoan -- blood (major); Malaria Vaccines -- immunology; Malaria Vaccines -- therapeutic use (major); Malaria, *Falciparum* -- prevention & control (major); Parasitemia -- prevention & control (major)

White, M. T., Bejon, P., Olotu, A., Griffin, J. T., Bojang, K., Lusingu, J., . . . Ghani, A. C. (2014). A combined analysis of immunogenicity, antibody kinetics and vaccine efficacy from phase 2 trials of the RTS,S malaria vaccine. *BMC Medicine*, 12, 117. doi:<http://dx.doi.org/10.1186/s12916-014-0117-2>

Abstract: The RTS,S malaria vaccine is currently undergoing phase 3 trials. High vaccine-induced antibody titres to the circumsporozoite protein (CSP) antigen have been associated with protection from infection and episodes of clinical malaria. Using data from 5,144 participants in nine phase 2 trials, we explore predictors of vaccine immunogenicity (anti-CSP antibody titres), decay in antibody titres, and the association between antibody titres and clinical outcomes. We use empirically-observed relationships between these factors to predict vaccine efficacy in a range of scenarios. Vaccine-induced anti-CSP antibody titres were significantly associated with age ($P = 0.04$), adjuvant ($P < 0.001$), pre-vaccination anti-hepatitis B surface antigen titres ($P = 0.005$) and pre-vaccination anti-CSP titres ($P < 0.001$). Co-administration with other vaccines reduced anti-CSP antibody titres although not significantly ($P = 0.095$). Antibody titres showed a bi-phasic decay over time with an initial rapid decay in the first three months and a second slower decay over the next three to four years. Antibody titres were significantly associated with protection, with a titre of 51 (95% Credible Interval (CrI): 29 to 85) ELISA units/ml (EU/mL) predicted to prevent 50% of infections in children. Vaccine efficacy was predicted to decline to zero over four years in a setting with entomological inoculation rate (EIR) = 20 infectious bites per year (ibpy). Over a five-year follow-up period at an EIR = 20 ibpy, we predict RTS,S will avert 1,782 cases per 1,000 vaccinated children, 1,452 cases per 1,000 vaccinated infants, and 887 cases per 1,000 infants when co-administered with expanded programme on immunisation (EPI) vaccines. Our main study limitations include an absence of vaccine-induced cellular immune responses and short duration of follow-up in some individuals. Vaccine-induced anti-CSP antibody titres and transmission intensity can explain variations in observed vaccine efficacy.

MeSH subject: Adult; Africa South of the Sahara -- epidemiology; Bayes Theorem; Child; Child, Preschool; Clinical Trials, Phase II as Topic; Female; Humans; Infant; Male; Protozoan Proteins -- immunology; Treatment Outcome; Vaccination; Antibodies, Protozoan -- immunology (major); Malaria Vaccines -- administration & dosage (major); Malaria, Falciparum -- epidemiology; Malaria, Falciparum -- prevention & control (major)

Riedmann, E. M. (2013). Phase 3: RTS,S almost halves malaria cases in young children
Retrieved from <http://search.proquest.com/docview/1514436062?accountid=130717>

Abstract: None available.

MeSH subject: Africa; Child, Preschool; Humans; Infant; Clinical Trials, Phase III as Topic (major); Malaria -- epidemiology (major); Malaria -- prevention & control (major); Malaria Vaccines -- administration & dosage (major); Malaria Vaccines -- immunology (major);

Vaccines, Synthetic -- administration & dosage (major); Vaccines, Synthetic -- immunology (major)

Birkett, A. J., Moorthy, V. S., Loucq, C., Chitnis, C. E., & Kaslow, D. C. (2013). Malaria vaccine R&D in the decade of vaccines: Breakthroughs, challenges and opportunities. *Vaccine*, 31 Suppl 2, B233-B243. doi:<http://dx.doi.org/10.1016/j.vaccine.2013.02.040>

Abstract: While recent progress has been made in reducing malaria mortality with other interventions, vaccines are still urgently needed to further reduce the incidence of clinical disease, including during pregnancy, and to provide "herd protection" by blocking parasite transmission. The most clinically advanced candidate, RTS,S, is presently undergoing Phase 3 evaluation in young African children across 13 clinical sites in eight African countries. In the 12-month period following vaccination, RTS,S conferred approximately 50% protection from clinical *Plasmodium falciparum* disease in children aged 5-17 months, and approximately 30% protection in children aged 6-12 weeks when administered in conjunction with Expanded Program for Immunization (EPI) vaccines. The development of more highly efficacious vaccines to prevent clinical disease caused by both *P. falciparum* and *Plasmodium vivax*, as well as vaccines to support elimination efforts by inducing immunity that blocks malaria parasite transmission, are priorities. Some key barriers to malaria vaccine development include: a paucity of well-characterized target immunogens and an absence of clear correlates of protection to enable vaccine development targeting all stages of the *P. falciparum* and *P. vivax* lifecycles; a limited number of safe and effective delivery systems, including adjuvants, that induce potent, long-lived protective immunity, be it by antibody, CD4+, and/or CD8+ T cell responses; and, for vaccines designed to provide "herd protection" by targeting sexual stage and/or mosquito antigens, the lack of a clear clinical and regulatory pathway to licensure using non-traditional endpoints. Recommendations to overcome these, and other key challenges, are suggested in this document.

MeSH subject: Africa; Clinical Trials, Phase III as Topic; Humans; *Plasmodium falciparum*; *Plasmodium vivax*; T-Lymphocytes -- immunology; Biomedical Research -- trends (major); Malaria -- prevention & control (major); Malaria Vaccines -- therapeutic use (major)

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EXERCISES

#1 - Aquatic Sciences

An aquatic research scientist is looking for strategies to manage the impact of climate change on freshwater lake ecosystems. In particular, she would be grateful for any graphic items, such as figures or tables, about the effects of climate change on freshwater lakes.

Provide a list of 5 citations, including images of special figures or tables, if available.

Summary

My initial search identified the main concepts for formulating a search query. They included “climate change”, “freshwater”, “lakes, and “ecosystems”. I didn’t feel that these results included additional key concepts from the search inquiry like “strategies” or “manage”. I also restructured the freshwater concepts to more efficiently check concepts related to “freshwater”. This second search resulted in high recall (11,190 results). To narrow these results down more I included another important concept I missed: “climate change”. I also excluded results with “COS” in the result metadata that seemed non-relevant to the patron’s information needs. This improved precision (823 results). The next search experimented with the classification field to see if that could reduce the result set down to a more management amount. Identifying a few classification fields that matched the concepts from the original search question helped to narrow the search results down (339 results) but still not precise enough.

I then tried to narrow the results down by selecting specific document features (tables, graphs, maps, diagrams, illustrations, and charts). Including this in the query narrowed the results down to a more manageable size (171 results). I felt I could still do better. I then tried a search that replaced my queries for “strateg*”, “manag*”, and “conserv*” with one classification field that seemed to best match these same concepts. This helped improve precision (106 results) but I wasn’t sure that the results included graphic items as the original search question mentioned. So I tried the final search query that removed the classification field and re-added the document feature limits to include graphical items. This resulted in a much more manageable result set (30 results). From this set I was able to identify five relevant results that answered the search question.

Search History

Set	Query	Database	Results
S1	"climate change" AND ("freshwater lake*" OR "freshwater ecosystems")	All	5,311
S2	AB("strateg*" OR "manag*" OR "conserv*") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*"))	All	11,190
S3	AB("strateg*" OR "manag*" OR "conserv*") AND AB("climate change") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*")) NOT "COS"	All	823
S4	(AB("strateg*" OR "manag*" OR "conserv*") AND AB("climate change") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*")) NOT "COS") AND ccl.exact("Issues in Sustainable Development" OR "Management and Conservation")	All	339
S5	(AB("strateg*" OR "manag*" OR "conserv*") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*")) NOT "COS") AND df.exact("tables" OR "graphs" OR "maps" OR "diagrams" OR "illustrations" OR "charts")	All	171
S6	cl("04060 Management and Conservation") AND (AB("climate change") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*")) NOT "COS")	All	106
S7	(AB("climate change") AND AB(freshwater AND ("lake*" OR "ecosys*" OR "environ*")) NOT "COS") AND df.exact("tables" OR "graphs" OR "maps" OR "diagrams" OR "illustrations" OR "charts")	All	30

Results

Dyer, F., Elsworth, S., Croke, B., Griffiths, R., Harrison, E., Lucena-moya, P., & Jakeman, A. (2014). The effects of climate change on ecologically-relevant flow regime and water quality attributes. *Stochastic Environmental Research and Risk Assessment*, 28(1), 67-82. doi:<http://dx.doi.org/10.1007/s00477-013-0744-8>

Abstract:

The management of freshwater ecosystems is usually targeted through the regulation of water quantity (limiting diversions and providing environmental flows) and regulation of water quality (setting limits or targets for constituent concentrations). Climate change is likely to affect water quantity and quality in multiple ways and the future management of freshwater ecosystems requires predictions of plausible future conditions. We use a suite of ecologically-relevant hydrological indicators to determine the significance of projected climate-driven hydrological changes in the Upper Murrumbidgee River Catchment in south eastern Australia in relation to river regulation. We also determine the possible water quality changes (in relation to guidelines for aquatic ecosystem protection) associated with the climate change projections to identify the combined effects of hydrological and water quality changes. The results of this study suggest that river regulation has resulted in greater changes to ecologically-relevant streamflow characteristics than climate change scenarios that involve a 1 and 2 °C temperature rise in the Upper Murrumbidgee River Catchment. In contrast to the projected hydrological changes,

Bayesian Network modelling suggests very small changes to violations of water quality thresholds designed to protect aquatic ecosystems as a result of climate change. By identifying key components of the flow and water quality regimes that may be affected by climate change, we are able to provide managers with information that assists in developing adaptation initiatives.[PUBLICATION ABSTRACT]

Subject: Aquatic ecosystems; Climate change; Bayesian analysis; Hydrologic modeling; Studies

Location: Australia

Publication title: Stochastic Environmental Research and Risk Assessment

Volume: 28

Issue: 1

Pages: 67-82

Publication year: 2014

Publication date: Jan 2014

Year: 2014

Publisher: Springer Science & Business Media

Place of publication: Heidelberg

Country of publication: Netherlands

Publication subject: Engineering--Hydraulic Engineering

ISSN: 14363240

Source type: Scholarly Journals

Language of publication: English

Document type: Feature

Document feature: Tables References

DOI: <http://dx.doi.org/10.1007/s00477-013-0744-8>

ProQuest document ID: 1462485473

Document URL: <http://search.proquest.com/docview/1462485473?accountid=130717>

Copyright: Springer-Verlag Berlin Heidelberg 2013

Last updated: 2014-08-22

Database: ProQuest Illustrata: Technology Collection

Yáñez-Arancibia, A., Day, J. W., & Reyes, E. (2013). Understanding the coastal ecosystem-based management approach in the gulf of mexico. *Journal of Coastal Research*, (63), 244-262. Retrieved from <http://search.proquest.com/docview/1399976078?accountid=130717>

Abstract:

The Gulf of Mexico (GOM) is a shared ecosystem in which problems and solutions are a common responsibility among governments, primarily the United States and Mexico. Concepts about management of coastal systems suggest that GOM ecosystem-based management approaches should be coupled with ecological risk assessment and that quantitative modeling is a valuable tool for ecosystem-based management, which results in sound sustainable management. Sustainable management requires the consideration of a number of processes and issues. These include definition of ecological regions, description of processes controlling primary

productivity, wetland restoration and coastal fisheries, and an understanding that pulsing is a fundamental characteristic of coastal systems, that climate change must be taken into consideration in management, and that environmental sustainability and socioeconomic development are strongly related. Throughout the 6,134 km of coastline stretching from Florida to Quintana Roo, there are several major geographic regions that include the warm-temperate GOM, the tropical GOM, and the Caribbean coast connected to the GOM. Within each geographic region, discrete complex systems can be defined as geographic/hydrological subregions, characterized by the interactions of geology, geomorphology, oceanography, climate, freshwater input, biogeochemistry, coastal vegetation, wildlife, estuary-shelf interactions, and human factors. We conclude: (a) system functioning should serve as a basis for sustainable coastal management; and (b) to sustain environmental and socioeconomic conditions, the GOM must be maintained as a healthy, productive, and resilient ecosystem. The challenge for future coastal management in the GOM should be towards an integration of coastal management with large marine ecosystem management. [PUBLICATION ABSTRACT]

Subject: Coastal zone management; Ecosystems; Climate change; Wetlands; Decision making; Environmental protection; Environmental impact

Location: Cuba, United States--US

Publication title: Journal of Coastal Research

Issue: 63

Pages: 244-262

Number of pages: 19

Publication year: 2013

Publication date: Spring 2013

Year: 2013

Publisher: Allen Press Publishing Services

Place of publication: Fort Lauderdale

Country of publication: United Kingdom

Publication subject: Earth Sciences--Oceanography, Earth Sciences--Geology

ISSN: 07490208

Source type: Scholarly Journals

Language of publication: English

Document type: Feature

Document feature: Tables Maps Diagrams Photographs References

ProQuest document ID: 1399976078

Document URL: <http://search.proquest.com/docview/1399976078?accountid=130717>

Copyright: Copyright Allen Press Publishing Services Spring 2013

Last updated: 2015-05-16

Database: ProQuest Illustrata: Technology Collection

Villanueva, R. R., Araneda, M. E., Vela, M., & Seijo, J. C. (2013). Selecting stocking density in different climatic seasons: A decision theory approach to intensive aquaculture.

Aquaculture, 384-387, 25. Retrieved from <http://search.proquest.com/docview/1312663444?accountid=130717>

Abstract:

This study aimed to select the most appropriate stocking density in the different annual climatic seasons, taking into account the thermal uncertainty and the risk preferences of the producer. To achieve this objective a decision theory approach (the decision table framework) and decision criteria with and without probabilities were used. The decision framework utilized was built using a bioeconomic model. This model was designed with data from an experimental freshwater aquaculture system (with three stocking densities: D1 = 230, D2 = 280 and D3 = 330 shrimps m...), literature research and local market conditions. The decision framework used acknowledged uncertainty associated to temperature variability, by defining three possible states of nature using historical records of environmental variables in the study region area. Due to the tropical location and the geography of the study area, the thermal oscillation within the climatic seasons and between the states of nature was low (around 4 ...C). However, these minor differences in temperature were enough to produce variations up to 30% in the profits, depending on the climatic season, stocking density selected and the state of nature. Decision criteria with and without probabilities chose the highest density (D3) as the best option in dry and rainy season (both warm seasons), and D1 in the cold-front season (cold season). These results showed the importance of taking into account seasonal variations in the selection of production management strategies. This study also showed the pertinence of using decision criteria without probabilities in situations with a shortage of historical data, and when the historical behaviour is not a reliable indicator of future patterns, like the current climate change situation. This kind of analysis is even more important in locations with greater thermal oscillation, like middle and higher latitudes sites. (ProQuest: ... denotes formulae/symbols omitted.)

Subject: Aquaculture; Climate change; Fish stocking; Temperature effects

Publication title: *Aquaculture*

Volume: 384-387

First page: 25

Publication year: 2013

Publication date: Mar 25, 2013

Year: 2013

Publisher: Elsevier Sequoia S.A.

Place of publication: Amsterdam

Country of publication: Switzerland

Publication subject: Fish And Fisheries

ISSN: 00448486

Source type: Scholarly Journals

Language of publication: English

Document type: Feature

Document feature: Graphs Tables

ProQuest document ID: 1312663444

Document URL: <http://search.proquest.com/docview/1312663444?accountid=130717>

Copyright: Copyright Elsevier Sequoia S.A. Mar 25, 2013

Last updated: 2013-03-06

Database: ProQuest Research Library: Science & Technology

Meredith, M. P., Venables, H. J., Clarke, A., Ducklow, H. W., Erickson, M., Leng, M. J., . . . van den Broeke, M.,R. (2013). The freshwater system west of the antarctic peninsula: Spatial and temporal changes. *Journal of Climate*, 26(5), 1669-1684. Retrieved from <http://search.proquest.com/docview/1345203954?accountid=130717>

Abstract:

Climate change west of the Antarctic Peninsula is the most rapid of anywhere in the Southern Hemisphere, with associated changes in the rates and distributions of freshwater inputs to the ocean. Here, results from the first comprehensive survey of oxygen isotopes in seawater in this region are used to quantify spatial patterns of meteoric water (glacial discharge and precipitation) separately from sea ice melt. High levels of meteoric water are found close to the coast, due to orographic effects on precipitation and strong glacial discharge. Concentrations decrease offshore, driving significant southward geostrophic flows (up to $\sim 30 \text{ cm s}^{-1}$). These produce high meteoric water concentrations at the southern end of the sampling grid, where collapse of the Wilkins Ice Shelf may also have contributed. Sea ice melt concentrations are lower than meteoric water and patchier because of the mobile nature of the sea ice itself. Nonetheless, net sea ice production in the northern part of the sampling grid is inferred; combined with net sea ice melt in the south, this indicates an overall southward ice motion. The survey is contextualized temporally using a decade-long series of isotope data from a coastal Antarctic Peninsula site. This shows a temporal decline in meteoric water in the upper ocean, contrary to expectations based on increasing precipitation and accelerating deglaciation. This is driven by the increasing occurrence of deeper winter mixed layers and has potential implications for concentrations of trace metals supplied to the euphotic zone by glacial discharge. As the regional freshwater system evolves, the continuing isotope monitoring described here will elucidate the ongoing impacts on climate and the ecosystem. [PUBLICATION ABSTRACT]

Subject: Ice; Global warming; Oceans; Ecosystems; Winter; Trends; Glaciers; Isotopes; Precipitation

Location: Southern Hemisphere, Antarctica, Antarctic Peninsula, Ross Sea

Publication title: *Journal of Climate*

Volume: 26

Issue: 5

Pages: 1669-1684

Number of pages: 16

Publication year: 2013

Publication date: Mar 1, 2013

Year: 2013

Publisher: American Meteorological Society

Place of publication: Boston
Country of publication: United States
Publication subject: Meteorology
ISSN: 08948755
Source type: Scholarly Journals
Language of publication: English
Document type: Feature
Document feature: Maps Graphs References
ProQuest document ID: 1345203954
Document URL: <http://search.proquest.com/docview/1345203954?accountid=130717>
Copyright: Copyright American Meteorological Society Mar 1, 2013
Last updated: 2013-04-25
Database: ProQuest Illustrata: Technology Collection; ProQuest Research Library: Science & Technology

Yang, Y., & Chen, H. (2013). Assessing impacts of flow regulation on trophic interactions in a wetland ecosystem. *Journal of Environmental Informatics*, 21(1), 63-71. Retrieved from <http://search.proquest.com/docview/1471952180?accountid=130717>

Abstract:

Wetland plays an important role in maintaining ecological balance. Water regimes are the most important driving forces for wetland structure and function. Unfortunately, in recent decades, impacts of anthropogenic activities (e.g. dam construction, agricultural irrigation, industry, settlements) compounded with climate change have altered natural flow regimes profoundly and led to severe degradation of wetlands worldwide. Baiyangdian Wetland, the largest freshwater lake wetland in North China, has dried up on several occasions due to increasing human activities since the 1960s. To alleviate the ecosystem degradation trends, flow regulation was introduced to recharge the drying wetland on 19 occasions from 1997 to 2009. However, the impacts of these actions on ecosystem structure and function remain poorly understood. In this study the Ecopath software was employed to establish two mass-balance ecosystem models before and after the flow regulation in September 2009. The changes in trophic composition, flow processes, and other ecosystem indices were compared. The results show that following the flow regulation process the biomass in the first trophic level increased, while a decrease was recorded for the higher trophic levels. Furthermore, total primary productivity /total respiration (TPP/R) increased by 12.07%, while the system omnivorous index (SOI), Finn's cycling index (FCI), and average path length (APL) decreased by 4.16, 20.13, and 23.40%, respectively. Overall, the shift in indices indicates that ecosystem process during flow regulation was contrary to natural wetland succession. The weakened interactions among organisms in different trophic level will result in degrading ecosystem maturity. Hence flow regulation in September 2009 increased the vulnerability of Baiyangdian Wetland to external disturbance. This study indicates that ecosystem trophic interactions should be modelled before flow regulation to prevent ecosystem degradation and key ecosystem indices should be monitored and regulated toward natural ecosystems during and after flow regulation. [PUBLICATION ABSTRACT]

Subject: Wetlands; Food chains; Ecology; Land degradation
Publication title: Journal of Environmental Informatics
Volume: 21
Issue: 1
Pages: 63-71
Number of pages: 9
Publication year: 2013
Publication date: Mar 2013
Year: 2013
Publisher: International Society for Environmental Information Sciences
Place of publication: Regina
Country of publication: Canada
Publication subject: Environmental Studies--Computer Applications
ISSN: 17262135
Source type: Scholarly Journals
Language of publication: English
Document type: Feature
Document feature: Equations Tables References Diagrams
ProQuest document ID: 1471952180
Document URL: <http://search.proquest.com/docview/1471952180?accountid=130717>
Copyright: Copyright International Society for Environmental Information Sciences Mar 2013
Last updated: 2013-12-31
Database: ProQuest Illustrata: Technology Collection

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EXERCISES

#1 – Historical Newspapers

A patron is curious about regional differences in coverage of Jesse Owens' participation and subsequent snubbing in the 1936 Olympics. Find editorials or letters to the editor from American minority newspapers or international newspapers about the event.

Provide a list of 5 relevant, high-quality citations along with your search strategy and summary.

Summary

I first tried identifying the major concepts for this information need: "Jesse Owens", "1936 Olympics", editorials, letters to the editor, American minority newspapers, and international newspapers. Searching for "jesse owens 1936 olympics" in all 90 news and newspapers databases within ProQuest returned 13,237 results. From this I tried to narrow the results by limiting the databases or newspapers I searched against. This seemed to be the trickiest part. It wasn't clear to me how to identify an American minority newspaper. Identifying an international newspaper was much easier but it wasn't clear to me how to identify an American minority newspaper without doing my own research of each one included among the ProQuest Historical Newspapers databases. I was able to identify 16 databases that included American minority newspapers as well as international newspapers. When I ran the same search query against these 16 databases I had 1,245 results. From these results I was able to limit the results by the decade reported and then even further to just editorial or letter to the editor items. This was able to reduce the result set to 8. This may be too precise and missing some other relevant results due to possibly missing other American minority newspapers to search against.

I also experimented a bit identifying a record that I continued to see in the results. From this result I found a search subject field that searched against "Ethnic Interests" in the newspapers. Using this search phrase ("jsu("Ethnic Interests")) combined with other concepts from the information request I tried to see if my results would be able to approach what I found in my initial searching. Using the "jsu("Ethnic Interests") field I was able to eventually narrow down the result set to three results which was far too narrow for what was needed. Although I could confirm my initial set of eight results was good because those three results were included in the results from my first set of searches. From the original eight results I chose five newspaper items (see below) that help answer the information request.

Search History

Set	Query	Database	Results
S1	jesse owns 1936 olympics	90	13,237
S2	jesse owns 1936 olympics	16	1,245
S3	jesse owns 1936 olympics (note: limits applied)	16	40
S4	jesse owns 1936 olympics (note: limits applied)	16	8
S5	jsu("Ethnic Interests")	16	3,270,388
S6	jsu("Ethnic Interests") jesse owens AND olympics AND 1936	16	208
S7	jsu("Ethnic Interests") jesse owens AND olympics AND 1936 (note: limits applied)	16	3

The following 16 newspapers were searched against from the ProQuest Historical Newspapers databases:

- Chicago Defender
- Chinese Newspapers Collection
- Norfolk Journal and Guide
- South China Morning Post
- The American Hebrew & Jewish Messenger
- The American Israelite
- The Atlanta Constitution
- The Baltimore Afro-American
- The Guardian and The Observer
- The Irish Times and The Weekly Irish Times
- The Jerusalem Post
- The Jewish Advocate
- The Jewish Exponent
- The Scotsman
- The Times of India
- Toronto Star

Limits applied included:

- Document type: Editorial; Letter to the Editor
- Decade: 1930-1939

Results

Result 1:

The Olympic Returns Come In And Mr. Bruhdage Goes Out

Abstract:

ANY DOUBT as to whether or not the Americans really won the Olympics (in the only worthwhile conception of victory) was thoroughly dissipated when the Amateur Athletic Union swept former Justice Jeremiah T. Mahoney back into the presidency Sunday.

Publication title: The American Israelite (1874-2000)

First page: 4

Number of pages: 1

Publication year: 1936

Publication date: Dec 10, 1936

Year: 1936

Publisher: American Israelite

Place of publication: Cincinnati, Ohio

Country of publication: United States

Publication subject: General Interest Periodicals--United States, Jewish

Source type: Historical Newspapers

Language of publication: English

Document type: editorial_article

ProQuest document ID: 1011686405

Document URL: <http://search.proquest.com/docview/1011686405?accountid=130717>

Copyright: Copyright American Israelite Dec 10, 1936

Last updated: 2012-05-10

Database: ProQuest Historical Newspapers: The American Israelite

Result 2:

Open Forum

Author: Hooper, Charles

Abstract:

Editor, Journal and Guide: Jesse Owens, hail to thee! Thy victory is America's victory! Thou hast put America in the forefront of the nations! Thy shapely limbs and...

Publication title: New Journal and Guide (1916-2003)

First page: 8

Number of pages: 1

Publication year: 1936

Publication date: Sep 5, 1936

Year: 1936

Section: NATIONAL EDITION

Publisher: Norfolk Journal & Guide

Place of publication: Norfolk, Va.
Country of publication: United States
Publication subject: Ethnic Interests
Source type: Historical Newspapers
Language of publication: English
Document type: letter_to_editor
ProQuest document ID: 567258479
Document URL: <http://search.proquest.com/docview/567258479?accountid=130717>
Copyright: Copyright Norfolk Journal & Guide Sep 5, 1936
Last updated: 2010-07-12
Database: ProQuest Historical Newspapers: Norfolk Journal and Guide

Result 3:

How About It

Abstract:

How do you do, Mr. Airry Brundge Welcome back to America. There should be a grand and glorious welcome awaiting you from the citizens of the United States, the same citizens to whom you told such lovely laity tales a few months ago.

Publication title: Jewish Advocate (1909-1990)
First page: 2
Number of pages: 1
Publication year: 1936
Publication date: Aug 25, 1936
Year: 1936
Publisher: The Jewish Advocate
Place of publication: Boston, Mass.
Country of publication: United States
Publication subject: Ethnic Interests
ISSN: 10772995
Source type: Historical Newspapers
Language of publication: English
Document type: editorial_article
ProQuest document ID: 881202395
Document URL: <http://search.proquest.com/docview/881202395?accountid=130717>
Copyright: Copyright The Jewish Advocate Aug 25, 1936
Last updated: 2011-08-05
Database: ProQuest Historical Newspapers: The Jewish Advocate

Result 4:

At the Olympics

Abstract:

The fate of the Jews in the Olympics is living up to expectations. Sammy Stoller and Many Clickman, two members of the American relay team, were at the last minute dropped from the team, and discovered that their trip to Berlin had been in vain, Helene Mayer, the only Jewish member of the Aryan athletes, she who had accepted the Nazi invitation to participate...

Publication title: Jewish Advocate (1909-1990)

First page: 2

Number of pages: 1

Publication year: 1936

Publication date: Aug 14, 1936

Year: 1936

Publisher: The Jewish Advocate

Place of publication: Boston, Mass.

Country of publication: United States

Publication subject: Ethnic Interests

ISSN: 10772995

Source type: Historical Newspapers

Language of publication: English

Document type: editorial_article

ProQuest document ID: 885130497

Document URL: <http://search.proquest.com/docview/885130497?accountid=130717>

Copyright: Copyright The Jewish Advocate Aug 14, 1936

Last updated: 2011-08-25

Database: ProQuest Historical Newspapers: The Jewish Advocate

Result 5:

MR. HITLER GETS AN ERROR

Abstract: None available.

Publication title: The American Israelite (1874-2000)

First page: 4

Number of pages: 1

Publication year: 1936

Publication date: Aug 13, 1936

Year: 1936

Publisher: American Israelite

Place of publication: Cincinnati, Ohio

Country of publication: United States

Publication subject: General Interest Periodicals--United States, Jewish

Source type: Historical Newspapers

Language of publication: English

Document type: editorial_article

ProQuest document ID: 1011668764

Document URL: <http://search.proquest.com/docview/1011668764?accountid=130717>

Copyright: Copyright American Israelite Aug 13, 1936

Last updated: 2012-05-10

Database: ProQuest Historical Newspapers: The American Israelite

Assignment 6 – Web of Science

1. Search for the author Marydee Ojala. She writes in the field of Library and Information Science. Document the following:
 - I. How did you search for her (search terms and fields used and whether you added any limiters/refinements once on the results screen)
 - search term: Ojala M*
 - search field: AUTHOR
 - II. How many publications by this author does WoS index?
 - 327 published items indexed
 - 12 source titles represented in the indexed results
 - III. What is this author's most cited publication? How many times has it been cited? Of the articles that have cited Ojala's, provide the citation in APA formatting for the most highly cited article and the number of times IT has been cited. Indicate how you were able to get an auto-generated citation (it may not be within WoS that this functionality is available)
 - "Views on end-user searching", published in the *Journal of the American Society for Information Science*, is cited 21 times.
 - Marchionini, G. (1989). Information-seeking strategies of novices using a full-text electronic encyclopedia. *Journal of the American Society for Information Science*, 40(1), 54-66.
 - Marchionini's article has been cited 184 times.
 - To find this citation information I looked at the times cited link from the "Views on end-user searching" article page and then sorted those results by times cited.
 - IV. Finally, compare the Times Cited list of the article you have provided this APA citation for with that of Ojala's most cited article. Look at the dates they were each last cited. What are they? Provide a screen shot of the system-generated graph showing citation counts by year for each of these articles. What does the data represented in these graphs tell you about use/relevance of these articles over time?
 - The most cited article by Ojala, M was last cited Spring 2008.
 - The most cited article by Marchionini, G was last cited Dec 2015.
 - Marchionini's article has become and stayed relevant since 1997 with a dip in times cited in 2008. Ojala's article has little to no relevance for that same time period being only cited a handful of times.
 - For screenshots see Figures 1 and 2 in the appendix.
2. Return to the record for Ojala's most cited article. Answer the following:
 - I. How many Cited References are there?
 - 21 cited references
 - II. Describe the difference between Times Cited and Cited References (not numerically, but rather, fundamentally).

- Times cited are all the articles in the database that cite the specified article. The cited references are the number of documents cited within the article.
- III. What is the other Citation Network tool available in Web of Science? Please describe its relationship between Times Cited and Cited References.
- The Citation Map tool visually shows in a mind-map style of the relationship between articles citing the specified article as well as the articles referenced in the article (bibliographic references).
3. Authors/researchers are often interested to know their 'H-Index' from WoS, Scopus and Google Scholar.
- I. What is Ojala's WoS H-Index?
- H-Index is 5
- II. Provide a URL to a page within Web of Science that describes what an H-Index is and how it is calculated.
- http://images.webofknowledge.com.libaccess.sjlibrary.org/WOKRS519B3/help/WOK/hp_citation_report_hindex.html
- III. In your favorite search engine, look up ORCID and ResearcherID. Briefly describe what these services are (100 words or less)
- ORCID and ResearcherID are both ways to uniquely identify a scientific or academic author by using a series of alphanumeric characters. ORCID is provided in an open and free manner while ResearcherID is a commercial product available through Thompson Reuters.
4. Ojala has published many items in 'Online'. Use Journal Citation Reports (JCR) to discover the 2012 JCR Impact Factor for this publication.
- I. I. Provide the Impact Factor number (it is a decimal) for the journal Online.
- 0.341
- II. Within the system, locate a definition of what the JCR Impact Factor is – indicate where you located this information and cut and paste the definition into your report.
- Click the impact factor number in the report summary. Then click on the "i" image next to the heading *Journal Impact Factor* to get a definition of the impact factor.
 - Journal Impact Factor: The journal Impact Factor is the average number of times articles from the journal published in the past two years have been cited in the JCR year. The Impact Factor is calculated by dividing the number of citations in the JCR year by the total number of articles published in the two previous years. An Impact Factor of 1.0 means that, on average, the articles published one or two year ago have been cited one time. An Impact Factor of 2.5 means that, on average, the articles published one or two year ago have been cited two and a half times. The citing works may be articles published in the same journal. However, most citing works are from different journals, proceedings, or books indexed by Web of Science.

APPENDIX

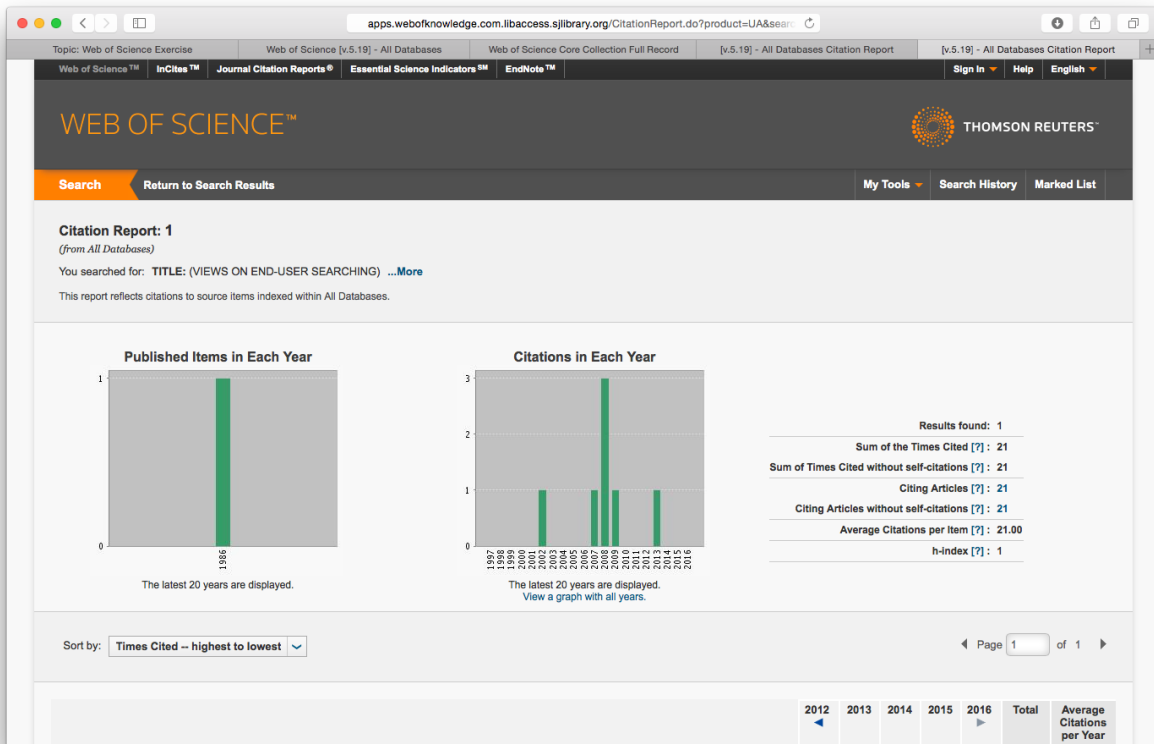


Figure 1. Citation report for VIEWS ON END-USER SEARCHING by OJALA M.

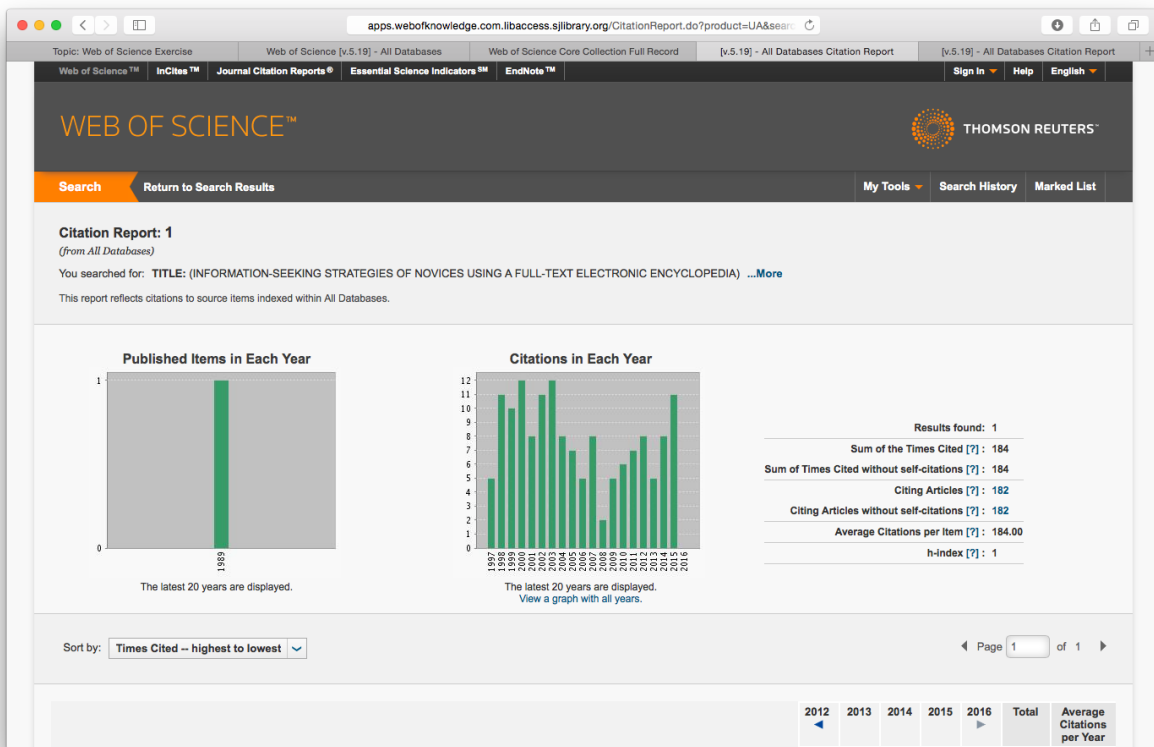


Figure 2. Citation report for INFORMATION-SEEKING STRATEGIES OF NOVICES USING A FULL-TEXT ELECTRONIC ENCYCLOPEDIA by Marchionini, G.