

# LETTERS

of the Chiropractic Academy

Jan 2023  
S02E01



**What is your best tip  
to increase research  
productivity?**

# Letters of the Chiropractic Academy

# Here we go!

## Our Academy's debut Issue

### A great start

Welcome to the debut issue of *Letters of the Chiropractic Academy (LOTCA)*. This is the start of our own *academy*, where PhDs from various disciplines can come together to share their opinions and insights about their interest in chiropractic research. Our first issue starts with a bang - 17 contributors and 5 guests freely share their favourite hints, tips and tricks for increasing research productivity. There are absolute gems here for everyone whether you are a senior investigator, early career researcher or graduate school trainee. And as you will see, our contributors offer valuable perspectives on the latest developments and trends in research and academia. Not only does LOTCA provide stellar content, it does so from diverse voices and experiences that together, will provide a unique and thought-provoking resource for

anyone interested in staying up-to-date on the world of chiropractic academia.

### Did we miss you?

While the advisory committee attempted to spread the word about this first issue of LOTCA far and wide, we know we missed a few people who would have liked to contribute. Not to worry! It's never too late to get involved and send a contribution to the next issue. As we gain more and more contributors, we'll just keep adding pages! Please feel free to forward this issue to anyone you think would be interested.

### Mailing list

As we put this issue together, many people asked if there was a mailing list they could join. The short answer is



“coming soon“. While LOTCA is being distributed by peer-to-peer exchange at the moment, we are making plans to develop a mailing list that will notify you of our next topic, distribute each issue, take in topic suggestions and keep us connected about all things related to the research academy.

**Thank you**

Thank you to everyone who contributed to this debut issue, those who read it and all of those who will pass this issue along to others. Whether you are a fellow researcher, a student, or simply curious about the inner workings of the research community, we hope that *Letters of the Chiropractic Academy* will be a valuable addition to your professional life. Thank you for joining us on this journey of discovery and intellectual exchange.

**Our next topic**

We all face challenges in our work. Perhaps a choice to be made or a skill to learn. Maybe a position needs to be filled or advice would be helpful. Whatever it is, our colleagues probably have experienced similar challenges or could share possible solutions.

Our next topic will be ...

**Describe a major challenge in your research and how you overcame it – or not.**

**The deadline for submission is March 15, 2023.**

Instructions for submission are on our masthead page. If you have an idea for a topic you’d like to see in LOTCA, simply forward it to our advisory group.

# MAST HEAD

## How to submit a contribution

**Letters of the Chiropractic Academy** is a collection of scholarly letters that address a single, specific question posed on a quarterly basis.

### Goals

To build community and visibility for researchers through frequent and public discussion of important topics related to research, evidence and chiropractic practice.

### Topic selection

Topics for discussion in upcoming quarters can be nominated by anyone to a member of the steering committee who will keep a running list. The topic for the current quarter, and the deadline for submission of contributions, will be selected after discussion by the steering committee.

### Funding

**Letters of the Chiropractic Academy** does not receive funding, does not accept financial donations or allow advertising.

### Contributors to LOTCA must have:

1. A PhD
2. Published at least 5 peer-reviewed papers over the past 5 years
3. An active appointment at an academic institution.
4. \*\*Eligible contributors may nominate an unqualified contributor in the same issue.

### How to contribute?

Contributions about the current topic should be no longer than 500 words. The contribution should be sent in the body of an email to a member of the steering committee. The email should also include these 6 items:

1. Your 500-word letter
2. A current headshot
3. Evidence of your PhD qualification (e.g. photo)
4. Evidence of your academic appointment (e.g. photo of identification card)
5. A text list of 5 citations (not papers) from the last 5 years
6. A self-written conflict of interest statement (e.g. <https://www.biomedcentral.com/getpublished/writing-resources/competing-interests>)

### Submission deadline

The submission email must be received by the stated submission deadline. If nominating a guest contributor, the qualified contributor must submit their own materials together with the materials of the proposed guest.

### Distribution

Issues of **Letters of the Chiropractic Academy** will be assembled by the advisory committee and then circulated back to contributors who are free to forward the issue to their colleagues and beyond.

## CONTRIBUTORS (alphabetical order)

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# What is your best tip for increasing research productivity?

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## Alice Kongsted DC, PhD

University of Southern Denmark



### **Do you really want to increase your research productivity? Then collaborate and make room for important tasks!**

There may be many reasons why academics want to be highly productive. There are so many interesting and fun projects to be involved with, and we want - or need - time to contribute to teaching, talks, conferences, self-promotion on social media, and much more. Also, the number of publications and citations are performance metrics that we are evaluated on, and there is thus a clear incitement to be productive in terms of publication output. Still, it may be worthwhile considering first if you want to increase your research productivity. Maybe your productivity is already fine? Just playing with the thought that perhaps at some point it is good enough....

If not, my first tip is to prioritise research collaboration early in your career. Working together is more effective and more fun. Find people you like to work with and be willing to share your knowledge and data. Making an effort to contribute to collaborative projects will pay off. You learn how others work and think, you get more papers published when you are not the first

author on all your publications, and most people are motivated from being part of a team.

My second tip is to insist on making time for research and put it in your calendar. Clinical work, teaching, supervision, and meetings may feel more urgent than your own research and can easily fill your day. To have focused time for research tasks, I make appointments with myself in my calendar - and I respect them. I book a full day at home for larger tasks and shorter bookings for other things I need to work on. This helps me get (at least some) things done, and it means that I do not have to worry about forgetting deadlines as I know tasks related to a deadline will appear in my calendar. Larger tasks are both important AND urgent, such as grant writing, and also things that are important but NOT urgent. For instance, learning new things. Small tasks that make it to my calendar are just about everything else that I cannot do immediately as I open my mail or return from a meeting where tasks were delegated, such as feed-back on manuscripts.

# What is your best tip for increasing research productivity?

**Andrée-Anne Marchand DC, PhD, Martin Descarreaux DC, PhD**

Université du Québec à Trois-Rivières, Université du Québec à Trois-Rivières



## Invest in students

When I was asked to share my “best tips to increase research productivity” with my fellow colleagues, I instantly thought of my former students that have become, over the years, my new colleagues, here in Trois-Rivières and around the world. What have I told them ten years, five years... six months ago? Was there at least one tip that was helpful for these former students? And then I thought: ... let’s ask one of them. Andrée-Anne and I decided to tackle this fiddly question as a team. A coffee and herbal tea later, we came down to these conclusions...

Although indicators of research productivity are quickly evolving, there are probably three things that are not likely to change in the near future. As young or not-so-young researchers it is expected that you will write grant applications (support your own research activities), disseminate your research (publish scientific articles but also reach out to broader audiences) and train the young, vivid and bright minds of your scientific successors (yes, your padawans! The Star Wars reference surprisingly won over the baseball one).

Amongst all the useful and not-so-useful pieces of advice I have provided to Andrée-Anne over the years there is one that seemed to have made its mark. This simple, but impactful advice, is to “make sure you invest (not only financially) in the students involved in your research activities”.

## Invest in students? What does that mean?

Most of us have no specific approaches to supervise graduate students and are mostly sailing blind throughout our first experiences as research supervisors. What has worked for us over the years (and is still working) is to ensure our research environment is engaging, collaborative and adaptive enough to meet the ever-changing parameters of academic research. We believe it is important for students to be in a research environment where their ideas, aspirations and opinions are not only valued but can shape the future direction of research activities. It is as equally important to involve students (both undergraduate and graduate students) in all aspects of the research spectrum (from ideas to dissemination strategies) in order to trigger interest (hopefully developing into passion) for research but also to provide them with a realistic and transparent overview of the researcher’s life. And what about investing money? Money is certainly not a panacea, but not having to worry about your rent while discovering a cure for back pain certainly helps.

## What’s in it for me?

Graduate students set apart a large amount of their time to prioritize their research-related activities (In short: YOUR RESEARCH ACTIVITIES). They are the most effective and enthusiastic ambassadors of your lab or research team. Therefore, dedicating time, financial and human resources to students is, in our view, the most important thing every researcher should do to increase his/her research productivity. If you are looking for tips on how to mentor and supervise students, we highly recommend the Oxford Centre for Teaching and Learning website; a rich resource for students and faculty. (<https://wwwctl.ox.ac.uk/>).

# What is your best tip for increasing research productivity?

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## Aron Downie BSc, MChiro, MPhil, PhD

Macquarie University



### Overcome (or at least acknowledge) procrastination.

There are many drivers of procrastination in academia.(1, 2) There are even different types of procrastination (e.g. perfectionist, dreamer, worrier, defier, crisis-maker, etc.).(3) For me, procrastination reveals itself when it is time to begin writing a manuscript.

If, like me, you suspect procrastination is limiting your productivity, a first step is to explore that type of procrastinator you may be. There are simple survey tools (of course!) for this purpose.(4) Note: I have not done an exhaustive review of all tools available.

I identify as a “perfectionist” procrastinator, particularly when sending a first draft to colleagues. The realisation that this should be a DRAFT and will most likely be edited beyond the original text/idea does not help me become more productive. I even care for the layout, font choice and visual balance of that draft! Also, I am comfortable with critique, so I do not think that this is a driving issue.

Some of the strategies that I have found to curb my

procrastination are to set realistic goals (what can I achieve TODAY?) and then give myself a hard time limit before sending anything out for my peers to review (e.g. 2 hours – set an alarm). When I have trouble even starting, I have learnt to start writing in the middle of the task, then let the ideas fill-in around a couple of sentences that are easy to get onto the page.

Regardless of the best strategy, acknowledging that procrastination can limit progression in academia is a great first step. Now, back to work...

### References

1. Kandemir M. Reasons of Academic Procrastination: Self-regulation, Academic Self-efficacy, Life Satisfaction and Demographics Variables. *Procedia - Social and Behavioral Sciences*. 2014;152:188-93.
2. Zacks S, Hen M. Academic interventions for academic procrastination: A review of the literature. *Journal of Prevention & Intervention in the Community*. 2018;46(2):117-30.
3. Procrastination types and strategies [Available from: <https://www.indstate.edu/sites/default/files/media/nstp/pdfs/procrastination-types-word.docx>].
4. Yockey RD. Validation of the Short Form of the Academic Procrastination Scale. *Psychological Reports*. 2016;118(1):171-9.



# What is your best tip for increasing research productivity?

## Casper Nim MSc, PhD

University of Southern Denmark



### The Love-Hate Relationship with Scientific Posters: A New Approach for Presenting Them Well and Efficiently

The scientific poster session has been a staple in the research community for the past 50 to 60 years, but it has not evolved much since its inception. In a typical poster session, researchers walk around a room filled with hundreds of posters that, from a distance, appear as a solid wall of text with the occasional figure. This method of presenting research has limited effectiveness and is a poor way to communicate findings. Researchers do not have the time or mental capacity to process the large amount of information presented in this manner. The limited time available to view posters means they must be selective in which ones they choose to engage. However, this is only part of the issue. The presenter, usually a young researcher, is often left with „puppy eyes“ pleading to have someone come over and talk. I am sure we all can relate to this. This often leads to important research being overlooked or glossed over.

Nevertheless, a solution to this problem is the Better-Poster format, introduced by psychologist Ph.D. student Mike Morrison in 2019. This format maximizes insight, focuses on essential data, and

makes it easier for researchers to produce and present their work (i.e., increases productivity). The format consists of three columns: the middle column presents the main findings in plain English and is the most critical aspect, as it will draw in the audience and quickly provide the main findings even from a distance; the right column, called the „ammo bar,“ contains additional information such as advanced graphs and statistics, and is where the presenter stands (i.e., where you block the view from the audience); and the left column, called the „presenter bar,“ provides more detailed information for those who have been drawn in by the main findings. Finally, you add a QR code where you can provide more information (e.g., the abstract, data visualizations, or the published paper). Taking pictures of posters is common, and with the QR code, researchers can explore the study even further when available.

Adopting the Better-Poster format may require courage and some initial effort to fit within university requirements for color, font, and logos. Still, it has the potential to significantly improve the effectiveness of poster sessions and increase research productivity.

Mike has two YouTube videos that provide even more information about the format, how to be more creative and draw more attention, and more detail on why this is important.

Original video from 2019: <https://youtu.be/1RwJbhkCA58>

Updated video from 2020 (2nd generation posters): <https://youtu.be/SYk29tnxASs>

# What is your best tip for increasing research productivity?

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**Iben Axen DC, PhD, Charlotte Leboeuf-Yde DC, MPH, PhD**

**Karolinska Institutet, University of Southern Denmark**



## **The ten technical commandments on how to increase research productivity**

It can be so disappointing, our perfect manuscript returned from the editor with multiple (stupid) comments and questions. To be able to publish, relatively painlessly and quickly, not only should our research be of good quality, but we also need to observe some technical rules, in relation to how the material is presented. We have collected a couple of items that we consider important when preparing a paper for submission.

- 1: Choose the audience. Who is this work relevant to? Is it something that clinicians should take on board directly? Or is it for researchers to build on in their future work? Or is this potentially for educators? This will also influence points 2 and 3:
- 2: The target audience will also determine the tone of the article; scholarly, research-heavy, or practically-oriented?
- 3: Select the appropriate journal. Often, we think the journal impact factor is so important, but for our work to have an impact on future practice and research, the target audience should actually be reading the journal we select.
- 4: Make sure the research objectives are crystal clear. Then, immediately: check that our results provide answers to these and that we provide no more answers than there are research objectives.

5: To make the article more reader-friendly, we could put long and boring methodology stuff in tables or additional files, use a photo or a figure, or possibly write: “available from the authors on request”, if it is only interesting for nerds. And when detailed results are available in tables or figures, we should not repeat this information in the text, only summarize.

6: The summary is just that: a summary. I.e., here it is not suitable to provide detailed information on the Results.

7: The conclusion (and especially that in the abstract) may be all most ‘readers’ actually read. We must make sure it conveys the message that we want to get across. It is important to remember that this is not the summary (again) but a more overall view of the topic. It might include perspectives if that aspect is not already included in the text.

8: Between the summary and the conclusion, we must fight our natural tendency to put the reader asleep by instead dealing swiftly and clearly with our methodological considerations (good and bad) and their potential consequences. If we remember to follow the consecutive development of the study process, when discussing this, it will help avoiding reader confusion.

9: This is true also for the Background section. It would be a good idea, perhaps, to go through the text removing all the ‘nice-to-know’ stuff and keep only the ‘need-to-know’ stuff. We know, we know; removing text is like pulling out teeth, but the article will probably be easier to read afterwards.

10: And in the Discussion section, we must not repeat the background literature review again but use references only to compare your results to those in other studies.

# What is your best tip for increasing research productivity?

**Diana De Carvalho BSc, DC, MSc, PhD**

**Memorial University of Newfoundland**



## **Are you stealing time from your writing? Head to writing jail!**

Carving out time to keep papers moving forward has always been difficult. It seemed no matter how hard I tried (or worried) about the papers at the end of my desk, I could never get past the other tasks and commitments that demanded my time. Last year I promised myself that I would do something about it. This is what I tried, and it worked. Perhaps there is something here that might be helpful to you too. First, I started by clearly articulating my goal. I sat down and thought about what papers I really wanted to get out of the way. I had three of them, in various stages of completion, that I really needed to finish. Next, I came up with a timeline that I thought was reasonable given my experience and my planned commitments for the year. I chose to attack them from easiest (almost done) to hardest and picked deadlines that coincided with holidays so I could celebrate each milestone. Finally, I tackled accountability. I vocalized my goal, timeline, and deadlines with a close group of colleagues and found a writing buddy. I committed to writing jail – a concept I had long thought to be absolutely horrible – for 2 hours every Thursday for the Fall semester. My writing buddy (in Boston,

MA) and I would log on to a zoom call, chat briefly for a couple of minutes to catch up and state what our goals were for the session, then it was cameras off, timers on, web-browsers closed for our session. After a few weeks, I started to notice that my stress levels were coming down. As busy as I was, I was beginning to see progress toward my goal. Gaining more confidence and trust in the process, I found myself better able to focus on the rest of my tasks during the week because I was no longer thinking about the writing I had to do, knowing it would get done in its own time slot. It reduced my mental load. I started to hit my deadlines and with those little wins the inertia of writing started to melt away, and what I initially thought were the “harder” papers didn’t seem so difficult anymore. I was so thrilled with this process that I started to explore other tactics for productivity (that I also previously shook my head at) and was delighted to find that they also were helpful: going to bed/waking up early to work a few hours before the kids get up (albeit much easier to do in the bright summer months), turning off my inner critic when writing (please check out Dr. Badenhorsts’ blog for academic writing tips: <https://cecilebadenhorst.wordpress.com/>), and starting a bullet journal (<https://bulletjournal.com/pages/book>). Tackling these projects was fulfilling beyond measure, but even more rewarding was discovering a process for increasing productivity that really worked for me. Like adding sand to a jar of rocks, I found a way to efficiently add time to a blocked schedule for projects that were meaningful to me.

# What is your best tip for increasing research productivity?

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## Greg Kawchuk BSC, DC, MSc, PhD

University of Alberta



### Citation management + ChatGPT.

There are so many ways to increase research productivity. While it is important to focus on getting grants or increasing paper outputs, my absolutely favorite is finding ways of increasing productivity through the research process. If you are as old as me, you will remember writing papers in undergraduate courses and having to go to the library and look through the massive volumes of index medicus for relevant references, then go find those references in the stacks, and then write up your bibliography BY HAND. And if you are long in the game too, you also remember the sheer delight at abandoning this process as PDFs became prominent and software could be used to add citations to your “word processor”.

Now, hard cut to the 2000s where you can not only add citations to any document but use the same software to collect and annotate your pdfs. But now things have taken another step forward through new software to make sure you exploit all of the metadata that goes along with the papers we collect. Here’s a snapshot of how it works.

First, use Zotero as your citation manager. It’s free

and supported with a ton of community add-ons. Nothing new. But then, add Research Rabbit. This handy lupine takes papers and then shows you graphically how they connect and if there may be other related papers. It’s not just a new way to search the literature, it TELLS YOU WHERE to search the literature so you don’t miss a thing.

Zotero also has some other great features. Not only can you highlight parts of your favorite papers, you can then assemble these into a note that stays attached to the PDF. You can use a notepad feature in Zotero to write down your thoughts as you are looking over your papers, add these to other notes and basically create the foundation of your research idea all within this environment. Take it to the next step by adding Zotero Better Notes which is a next-level notepad with many more features. Say goodbye to re-reading papers, searching for where you typed that paragraph you are missing and having to pay for the privilege.

Oh, and quickly. Get an account on ChatGPT. Yes, it’s the big thing and you’ve probably tried it. But if you haven’t, do yourself a favour. Sign-up is easier than anything, it’s free and you can immediately ask this amazing AI questions that will give text-based answers. And while there is a lot of buzz about how it may be used to write essays, it is a great tool to begin writing that discussion section you’ve been meaning to get to for the last year. By typing in a simple question, you get some great text to start you off when you add your own words.

I did not include specific directions about these tools because they are all over Twitter, YouTube etc etc. But then again, you could just ask ChatGPT.

# What is your best tip for increasing research productivity?

**Hazel Jenkins PhD, MChir, MAppSci (Med Imaging), BMedSc**

**Macquarie University**



## **Increasing research productivity that will result in a difference to you**

Research productivity can be measured in different ways. I don't believe that productivity should just be measured by the number of papers published, HDR students supervised, or grants received. These are of course important metrics; however, of more importance is whether your research productivity will help you achieve your end goals. Therefore, my tips are centred around increasing research productivity that will result in a difference to you. These include:

1. Take time to outline your goals. It is impossible to know what type of research activities will be important to you until you know where you want to go. Do you have particular goals related to the research field you are working in? Are you working towards promotion, grant funding, or building your profile in a particular research field? All of these decisions may impact the type of research activities that will be most productive for you.
2. Plan what research activities will be most productive in helping you to reach your goals. This may include many steps. For example, if you plan to submit for large-grant funding for a particular project, you will need to consider what preliminary/pilot work may be important to perform beforehand and what collaborations you may need to make to build your research team.
3. Reach out to potential mentors or collaborators in the field. Building connections is really important to help perform your own research and you also never know what you may learn and what other opportunities will be presented to you through these networks.
4. Learn when to say no. Working on projects that won't help you reach your goals will often limit your research productivity. It takes your time and focus away from activities that do matter. Whenever a new opportunity is presented, or when planning future projects yourself, it is important to stop and consider whether this work will help you reach your goals. That is not to say that you will only work on projects directly related to your field of research, but you need to be able to see some important value in the opportunity, otherwise, you should say no.
5. Last, once you have determined which research activities are most important to you, you need to focus your time and attention on these projects. Setting aside clear time when you will work on these activities, without interruptions from email or other day-to-day tasks, is important. Setting clear deadlines for individual components of the research activity, and importantly sticking to those deadlines, can be very helpful in keeping your focus where you need to.

# What is your best tip for increasing research productivity?

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## Jan Hartvigsen DC, PhD

University of Southern Denmark



### Always work with people who are smarter than you are.

Are you not per definition the smartest in the bunch when you are Professor and have published hundreds of papers? The very well-kept secret is NO – far from! Let me explain: To be successful as an academic you need to possess so many skills that it is not humanly possible for one person to be good at all of them. In my experience, successful researchers are those who can set their own egos aside and recognize that they need help and ask for it. Find the smart people, nurture good professional and personal relationships, and you will be more successful:

- Research design: Depending on your research question and project, there are always difficult choices to be made when you design your study. While it is a good idea to have a general working knowledge of different designs, you need to work with people with specific knowledge about the designs that fit your purpose.
- Getting money: Getting funding for your projects is difficult, the competition is fierce and only getting worse. Find people who are successful at getting money, speak with them, have them

review your grants and learn from them.

- Managing projects: It is impossible to do all tasks in a research project yourself. Sometimes you must even delegate running a project to a project manager with special skills. Take courses, read books, or for larger projects, employ people with special knowledge in project management.

- Analyzing data: Statistics, the word alone causes most people's brains to shut down with 50%. Have an overall working knowledge of statistical principles, keep expanding your knowledge, but work with statisticians or people with specialized knowledge in data management and data analysis in all projects. You will sleep better at night

- Writing papers: Academic writing is a struggle for many, but some have cracked the code and can write a good manuscript in just a few days. Make sure you have people like that in your group, learn from them, have them help you with writing tips and tricks and ask them to review your manuscripts.

- Communicating your research: Being visible on social media and communicating your research via infographics, short videos or in blogs is expected by researchers today. Many introvert academics struggle with this, so have access to people who can help you get better or even better do it for you

- Being a good colleague: Make sure you develop social intelligence and behave like a good colleague. If you struggle with developing and maintaining good relationships, get help from a coach or psychologist. If you are not a good colleague, all these smart people are never going to be there for you when you need them.

So, surround yourself with people who are smarter than you. The bonus is that you learn something new every day. Hey, one day you might even be considered to be one of the smart ones!

# What is your best tip for increasing research productivity?

**Silvano Mior DC, FCCS(C), PhD and Pierre Côté DC, MSc, PhD**

**Canadian Memorial Chiropractic College, OntarioTech University**



## The right mix of people and structure

Several ingredients go into the making of a highly productive and sustainable research program, the exact amount will vary by location or setting. But in the end, it is their mixing that is critically important. And like in the kitchen, it is the Executive Chef whose vision, passion, and commitment to excellence, can energize a diverse group of people into a functioning team.

A successful team must include a diverse mix of humble people with differing skills, expertise, and experience who freely collaborate. As in a highly functioning kitchen, team members assume different roles from sous chefs, commis chefs to trainees. In research, trainees include undergraduate/graduate students and residents who are eager to learn and participate by assisting with important tasks that include literature searching, data collection, and writing manuscripts. Without their dedication, productivity would significantly slow. The next important tier includes commis chefs, the mid-career researchers (post-docs, early career PhD scientists) who are honing their research skills and developing their research program by assisting younger researchers under the mentoring of the other sous chefs, the senior researchers. These senior researchers, often program leads, bring their own research programs and together with the Director, unselfishly merge their talents and ideas to create a research program whose

sum becomes far greater than the individual parts.

Alas, the ingredients cannot come together without a functioning kitchen. Hence the importance of structure, i.e., the infrastructure that allows the team to work and function. It begins with the critical position of the research manager who oversees the day-to-day office functions, preparation of grants and budgets, human resources, IT, and liaisons with institutional administration. Next is identifying a sufficiently equipped kitchen - office space that is suitably outfitted with the necessary equipment to facilitate the work.

And yet despite a functioning team of researchers located in an appropriately equipped office, the final ingredient that allows for their mixing is money. Money comes from various sources, the most important from institutional support. Institutional support ensures the availability of space, administrative assistance (grants office, legal counsel, communication, etc.) and start-up funds. However, most funds come from grants and contracts obtained by researchers, particularly senior and early-career researchers.

So, when we sit to enjoy an amazing meal in a Michelin-star restaurant whose menu and positive reviews grow annually, we forget that behind a wall is a mix of people working collaboratively in a functioning kitchen. And so increasing research productivity requires the right mix of people of varying experiences working in a collegial environment, supported by leaders committed to excellence. And although the leader(s) are often invited to present and speak, they are held up by the selfless work, commitment, and dedication of each member of the team. In our successful program of research, there is no 'hierarchy' but a highly functioning team of colleagues.

# What is your best tip for increasing research productivity?

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## Simon French PhD, MPH, BAppSc(Chiro)

Macquarie University



### Research is a team game

In life, you won't always be the best, nor will you be the one with many options. But you have to adapt to every situation and use whatever fair means and an awful lot of hard work and dedication to make it. Amine El Amri, writing in *The Guardian* about Morocco's success in the 2022 Men's World Cup

To increase your research productivity, you want to love your job, work hard, be surrounded by a team who are supportive and strong researchers themselves, and expect the unexpected. The best football players in the world work extremely hard, are dedicated to success and have strong teams around them. As I watched the World Cup in 2022, I was struck by the comparisons between success in this game of football/soccer, and the ingredients for a successful career in research.

Footballers dribbling the ball down the field can be distracted by the noise of the crowd, the opposition wanting to take the ball from them, and insecure thoughts in their head. To be a productive researcher, stay focussed and remember the goal (pun intended).

Sometimes you get unexpected results in research. At the time of writing this, Morocco was the first African team to advance to a semi-final at the men's football World Cup (maybe they won the whole tournament by the time you read this!). In an article in *The Conversation* ([theconversation.com/](https://theconversation.com/)) Prof Simiyu from the University of Texas at Tyler put Morocco's success down to: Team spirit; Driven by history; Defensive discipline and efficient execution at scoring; Fans are the 12th player; Star performers, and; Local coaching. In a research team, substitute this for: A collective team goal; Driven by history (your's, and your research area); Efficient execution at writing grants/papers; Support from your family/friends (your fans); Star performers in your team; and, Strong mentoring.

In my research career, at times I have felt like Lionel Messi or Harry Kane, the penalty takers who missed their shot at goal. Sometimes you apply for a grant, or a job promotion, or a research award, but you are not successful. The most successful researchers are disappointed when they miss their "penalty", but pick themselves up, keep on working, and apply for the next opportunity after improving their application.

Research, like football, is a team game. To be more productive, it is critical that you work with people you like and you enjoy working with, and with people who will help you in your research goals, not hold you back.



# What is your best tip for increasing research productivity?

**Søren O'Neill Bsc(Chiro), MRehab, PhD**

University of Southern Denmark



## Facilitate easy and accurate reproducibility

I am not actually entirely sure that a Reproducible Research workflow makes you more productive in the short run, but it does provide for a more streamlined and organized process with fewer errors. The practice and principles are laid out very clearly in the book “Reproducible Research with R and RStudio” by Christopher Gandrup, which I highly recommend. The idea is to make all steps in the process from the raw data to the final publication-ready output completely scripted and well-documented, and thus reproducible.

The ‘Methods’ section of a manuscript represents the bare minimum of Reproducible Research. Everything that comes after data collection should also be documented and preferably scripted: data wrangling and cleaning, analyses, variable naming, the file/folder structure, etc. For instance, if you discover an error in the raw data (perhaps a simple typo), the way to deal with it is *not* to correct the raw data, but rather to document it as an error (as a comment in your code) and script the correction into your data wrangling code. The raw data should be treated as ‘read only’.

It is possible to work within the Reproducible Research

concept using any software you prefer, including Stata, SPSS, Word and WordPerfect. But as mentioned by Steen Harsted here, the R ecosystem is particularly well suited for it: if a project is built correctly using R and the Reproducible Research workflow, you simply run your R script which you have coded to start by loading the raw data, clean it, wrangle it into shape, perform the required analyses, create results, figures and tables etc, and finally merge these directly into the manuscript text you have authored. The output will be a publication-ready manuscript in e.g. pdf or word format. When you need to make changes to any of the steps (and you will), you simply make those changes and re-run the script thus updating everything. That way, your code, your comments and your manuscript text are all integrated. Need a box plot in your Results section? Write the necessary code right there mixed in with your text.

Also, everything right up to the final step of generating a publication-ready manuscript, is written in plain text files using R code, bibTeX bibliography, quarto markdown text, etc. Sounds fancy, but they are all just simple text files. This means files can be shared easily across platforms, hardware, operating systems and user applications. Yes, I’m looking at you, WordPerfect.

It does have a bit of a learning curve, but it is quite easy to get to the point where a project is fully ‘automated’ in the sense, that a single R script will handle everything from the raw data to the publication-ready manuscript. If you want to take Reproducible Research the final step and become a real superhero, your project folder will also include snapshots of the R ecosystem that was used to produce it, and a git repository (an online distributed versioning system) to document all changes over time and who made them. But that is probably a bit overkill for a simple research manuscript.

# What is your best tip for increasing research productivity? >>>

## Steen Harsted BSc (Health Science), MCB, PhD

University of Southern Denmark



### R-evolutionize Your Research: Why Learning R is a Smart Move for Researchers

R is a programming language and software environment for statistical computing and graphics. It is widely used among researchers, and its popularity is rising. Learning R can be highly productive for researchers for several reasons.

First, R is free and open-source software, so researchers can easily download and use it without incurring any costs. This makes it a cost-effective option for researchers, especially those working on tight budgets. It also secures your ability to reproduce your analysis and results if you are between jobs and don't have access to university-paid proprietary software (read Stata, SAS, Matlab, etc.)

Second, R has a large and active user community, so researchers can easily find help and support when needed. There are many online forums and communities where R users share their knowledge and experience and offer help and support to others. This can be particularly useful for researchers new to R and looking for guidance

and support as they learn the language. The web is full of high-quality videos, blogs, and books that can help you get started with R, and most of these resources are free.

Third, R has a wide range of packages and libraries that provide a wealth of functions and tools for various data analysis and statistical tasks. Researchers can, therefore, easily access and use specialized tools and functions for their specific research needs. For example, there are packages for machine learning, natural language processing, data visualization, and many other research areas.

Fourth, R is a powerful and flexible language that allows researchers to manipulate and analyze data quickly and easily. Especially the collection of packages called the Tidyverse has a wide range of functions and operators that make it easy to perform data manipulation and analysis tasks with a clean and intuitive syntax.

Fifth, R is very strong on reproducible research and has a number of packages, features, and guides that help researchers secure the reproducibility of their analysis.

In conclusion, learning R can be highly productive for researchers for many reasons. It is free and open-source software supported by a large and active user community. A wide range of specialized packages and libraries, combined with a powerful and flexible language in a setup that secures reproducibility, makes it an ideal tool for researchers at all levels.

# What is your best tip for increasing research productivity?

## Steven Passmore DC, PhD

University of Manitoba



### Collaboration

Very few meaningful publications have a single author. My CV would have no publications or conference presentations, and very few grants without collaborators. Collaboration is a means of sharing, debating, discussing, and building ideas before they are released for wider consumption. Collaboration can occur between a supervisor and trainee, between a mentor and mentee, between colleagues with complimentary skillsets and aligned interests, between researchers and clinicians, associations, industry, government, communities and patient populations. Collaboration allows for a balancing and rounding out of abilities, experience, and knowledge. It builds research capacity. The cliché regarding most work is that many hands lighten the load, and for collaboration that is absolutely true. It frees up time and distributes workload to areas where the individual team members can all shine. Beyond the deliverable itself there is also a learning opportunity. The novice or junior collaborator can learn about how to be a contributing team member and observe what it takes to create and sustain a meaningful and productive collaboration. They can learn to identify which opportunities to jump

at, and which to politely pass on when even your capacity to collaborate is exceeded.

But you may ask yourself, how does collaboration start? Well, my return question is why go to a conference? It is not a vacation, it is an opportunity to network, to revisit familiar colleagues and meet new ones. Collaboration can start with an e-mail, or a text message, or anytime an idea manifests itself in your mind. You may say to yourself, I would love to do that if I had more time, or I would love to do that if I only had the right skill set, or access to the right infrastructure or equipment. That is where the collaborators come in. They can help you make your dream a shared dream, and an eventual reality. Everyone has a skillset and access to different resources. You might see yourself as an “idea person”, or a “grant writer”, or a “project manager”, or a “methodologist”, or a “statistical expert”, or a “manuscript writer”, or another “worker bee” of some sort ready to help. Very few people can wear all of the aforementioned hats, or have the time, training or interest to be able to. The key to successful collaboration is knowing which hats fit you well, and which hats other people enjoy and thrive wearing. Some of the greatest journeys in our professional lives are shared. When the opportunity to collaborate arises, explore it. You will learn something new, meet a broader array of colleagues, be inspired by someone, and perhaps be a role model for someone else. You have little to lose, and both personally and professionally, much to gain.

# What is your best tip for increasing research productivity? >>>

## Keith Charlton DC MPhil MPainMed PhD

Guest



### Understanding research productivity

Many years ago (40!), startled to realize the lack of real research in our craft, and even more startled that it seemed to bother nobody but me, I set off to see whether there were markers of high-productivity research environments. I had assumed, as did many at the time, that our poor showing was because we were politically denied access to money and facilities enjoyed by medicine over the last two centuries. We did not get the moolah, the machines or the muscle for research.

What I found startled me even more. The key markers of high-productivity research environments were not material. They were social! And when I looked at the environments in chiropractic institutions, none of them showed more than one or two attributes my research said were necessary. In short, to grow Wizards, we needed Caves.

Highly productive researchers generally display the following attributes:

1. They have mastered basic research skills but have gone further, mastering advanced

research skills in the area of their focus, having detailed familiarity of that research topic.

2. They have become highly socialized to the academic profession, which necessarily involves the taking on of values and attitudes of a relevant peer group via an apprenticeship. (When I was Visiting Fellow at Griffith University, there was a jocular, but pertinent piece doing the rounds of postgrads called “Getting a PhD is called Sit By Ethel”. It came from the Industrial Revolution in the Cotton Mills of North Yorkshire. If you needed to learn to operate the machine you had to sit by Ethel as Ethel knew how it all worked).

3. They have had specific help prior, during and after research skill acquisition from suitable mentors prominent in the field.

4. They have established worthy work habits early on: if an investigator is not productive in the first five years of their research career, they are unlikely ever to be productive.

5. They can inhabit the Cave: it provides other productive workers about them; it allows specific and sufficient allocated time for the unhurried pursuit of issues in the field of interest; and most importantly, a Cave is a supportive environment.

Notably, investigators who come to a new, productive research environment are more productive than before their arrival, and their productivity declines when they leave.

We need Caves!

The foregoing topic is discussed in Charlton KH. “Caves, Wizards and the State of the Petunia Patch” J Manipulative Physiol Ther 1990; 30:343-5

# What is your best tip for increasing research productivity?

**Michael Azari PhD, BAsC(Chiro), FRCC(UK)**

Guest



## A positive outlook

Here are some ideas for my research colleagues to consider: To come up with a research question/field of study: Choose an area of interest to you that is also an important public health problem. Low back pain, Neck pain, Headache, and Concussion/whiplash injury are some examples. Only in this way, your research will be taken seriously and will make a meaningful impact. It is also more likely to attract support both in terms of funding and collaboration. There may be scope for researching the possible effects of SMT/MOB in MSK sports performance at the elite sports levels which is relatively untapped at the moment. Geriatrics, particularly healthy aging, is another important field that may be relevant to the tools in our toolbox including postural rehabilitation, balance-enhancing exercises, and pain management enabling physical activity.

To generate/access data for analysis and publication: Work collaboratively with other researchers across the nation and overseas on conducting research and publishing papers. Plug into ongoing research efforts in your institution as well as elsewhere. This includes everything from nesting your study

in the trial to doing secondary analyses on their data. The local clinical trials network ANZMUSC is pertinent here. Explore the possibility of a semi-formal collaborative arrangement between your research group and others that possess areas of expertise that are complementary to yours. This could allow each group to increase their productivity and the quality of their research work. Access Workers' compensation, DVA, and similar databases for analysis of useful information in terms of return-to-work statistics and the like. Use a network of properly inducted/educated clinicians to carry out data generation for clinical studies. Use online surveys of clinicians and patients to investigate appropriate research questions since they are relatively straight forward.

To raise research funds: Develop, and advocate for, a national mechanism for substantial and continuous research funding by the profession, Medicare (through EPC fees), NHMRC, Departments of Health, etc to support MSK research by chiropractors. Use crowdfunding mechanisms that can be easily accessed globally by philanthropists and others. Attract bequests and other such large donations to a reputable research funding agency (meaning CARF in our part of the world).

Patient perspective: Carry out focus group studies to discover what the perspectives of patients are in terms of what they prioritise. These studies may lead to better research questions and designs as well as more fundable, more impactful, and more meaningful outcomes for everyone concerned.

And finally, maintain a positive outlook despite all the challenges that will come your way.

# What is your best tip for increasing research productivity?

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## Peter Tuchin DC, PhD

Guest



### Publish a case report

As a clinical researcher and an academic clinician, I have always had the view that a great method to increase research productivity is to encourage and support clinicians to publish case reports.

By beginning the process of writing a case report, clinicians gain an understanding of the research and publication process. Clinicians will probably choose an issue or subject matter which they are very interested in, and wish to understand better.

The first step is to find literature on a topic, and assess the potential quality of sites to find the right research. For example, how to find good quality information, through good databases with links to journals with reasonable impact factors.

Once a clinician has started reviewing the initial literature, it would then be recommended to contact an academic or established researcher with their ideas and their initial findings. Academics or researchers will be far more receptive to helping early career researchers if they can see evidence of commitment to the task.

Writing a case report is also a great start to develop a literature review on a topic and summarize what is already known on the subject. Clinicians may have many preconceived ideas or biases to a topic which may then be dramatically changed once they commence a proper literature review.

As the clinician or early researcher reviews the literature, they will also gain some understanding of research types and methods used in understanding an issue. This may be significant if they progress to conducting clinical trials, cohort studies or systematic literature reviews.

As they progress in reviewing the existing literature, they will also gain some insights into potential gaps in the research, and what research questions may need to be answered.

Whilst case reports are low levels of research, they can be the beginning of developing research skills, a publication history, and excite the new researcher in progressing into a research career.

Case reports also provide valuable information for clinicians that have to diagnose and treat a massive variety of conditions. Case reports can highlight significant issues for clinicians and alert them to potential new treatments or problems. These case reports can include very rare conditions, complex or catastrophic problems, and responses to treatment that were unpredictable.

Writing a good case report is a relatively painless way to start a research career, and develop research knowledge and skills, which may progress to becoming an acknowledged expert in a field.

# What is your best tip for increasing research productivity?

## Rod Bonello BSc DO DC MHA

Guest



### Teamwork!

I hope that I will be forgiven for making a case for the obvious. Whilst there are many attributes one can possess, and many goals to target in the objective of increasing one's research productivity, I believe that the most important is teamwork. The creation and management of an effective team will make all the difference in maximising the quality and volume of your research.

Atlassian, the hugely successful Australian software corporation has defined ten benefits that flow on from teamwork, and these benefits apply to research output as strongly as they do to other activities.

<https://www.atlassian.com/blog/teamwork/the-importance-of-teamwork#:~:text=Research%20shows%20that%20collaborative%20problem,job%20satisfaction%2C%20and%20reduces%20stress.> (accessed 1/12/2022)

They identify better problem-solving, potential for innovation, happier team members, enhanced personal growth, less burnout, more opportunity for growth, boosted productivity, smarter risk-taking, fewer mistakes and expanded creativity as

the ten benefits of teamwork.

But great care must be exercised when forming a team. Being in the wrong kind of team will have the opposite effect, bringing with it poor outcomes and mediocre productivity. So here are my recommendations for excellent research team formation and activity.

1. Each team needs a leader, if not in general, then a leader for each project. Working with others will mean that several projects will be active at any one time. By having different leaders for different projects individual stress can be minimised and the special interest areas of the individuals can be fostered, bringing greater work satisfaction.
2. Review your personal strengths and identify the characteristics other team members will need to possess to cover your team's needs. At least one of your team members will need to be skilled at statistics while another must have fine written language skills. You will need good problem solvers, they all must be able to work together. Together, your team must have a variety of skills, not repetition of a limited skill set.
3. Prioritise communication on team projects. Regularly schedule a team meeting, perhaps over coffee or lunch. At each of these meetings review progress, troubleshoot any difficulties, and investigate new opportunities.

# What is your best tip for increasing research productivity?

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## Stephen Perle DC, MS

Guest



### Reflection on Retirement – Lessons from an underachiever

Having recently retired from a 31-year academic career at the University of Bridgeport, I have thought about what I have and have not done over that time. I see no reason to enumerate, however, in the counting one could have a magnanimous or an uncharitable assessment.

#### Magnanimous

The more magnanimous view is that over 31 years I've been at UB I have mostly taught an overload with 20-30 contact hours/week in lecture, lab and/or clinic, committee assignments and service to the profession. There really was no time to do research and yet I did. Ultimately, I published more scholarly works than the entire chiropractic department. Thus, begging the question how? There are three ways:

**Collaboration:** UB did not have a culture of scholarship despite an emphasis on evidence-based practice. A former dean saw no clinical value to research. He only wanted research done to appease accreditors. So mostly I collaborated with chiropractic colleagues around the world.

**Vitamin N Deficiency:** Frequent collaborators Drs. Donald Murphy and Michael Schneider and I collectively coined the term "Vitamin N Deficiency" for how we worked. Vitamin N is the vitamin one needs to say

no. Basically, I said yes to almost any interesting and reasonable idea. Just ask.

**Energizer Bunny™:** I do not know how far-reaching the marketing mascot of Energizer batteries from North America has been around the world, but... Simply, I worked longer hours than most people. Family came first, work second, and sleep last. Ever get a 2 am email from me?

#### Uncharitable

**Dunning and Kruger's research** on metacognition found people judged themselves by different criterion standards. While some have lauded my productivity, my criterion is based on the most productive members of our chiropractic research community. Using that standard, I'm an underachiever. What did I do wrong?

**Mentors:** I had collaborators but no mentors. UB hired someone to mentor us in getting NIH grants. I met with this person, told them my idea and their mentorship was, "do it." That's not mentorship.

**Vitamin N:** I needed this because despite my energy level I really needed time. Instead, the college, the university and the profession took advantage of my energy giving me many diverse projects, which while interesting did not advance my research.

**Focus:** I needed to focus. Almost everything interests me and so I never focused on a personal research plan. If I had established a productive research lab, I would have had mentees who could have helped expand the breadth of what I did.

In closing, I am comfortable with what I have done during my career – the magnanimous and uncharitable assessments co-exist in harmony. I retired from UB so I could focus on what I love to do travel with my wife, photography and research.

Life is about balance and underachievement might actually be balance.



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## Letters of the Chiropractic Academy

# Topical. Uncensored. Rapid. Collegial.

### Why Letters?

#### **We love a good discussion...**

One of the most stimulating activities in research is scientific debate. When colleagues get together and discuss matters of methodology, inference or clinical application, sparks fly. However, time and opportunity for scientific debate is limited, especially with researchers outside our immediate teams.

#### **But how?**

You might counter and say that we have many ways to communicate. What about Letters to the Editor (LTE). While a classic avenue for discussion, LTEs occur at a snail's pace and always with the approval of the editor. Not the best way to have an important conversation on a rapidly evolving topic. What about conferences? Well, the magic of hallway conversations evaporates quickly and

they seldom benefit more than a few. Panel discussions tend to be on topics set by others and are limited to just a few questions before the session goes overtime. And don't forget, you need the time and resources to attend in the first place (and wait a few years in the meantime).

#### **Finally, a place for us.**

What we lack is a place where we can discuss topics of our own choosing, to do so in a timely manner, without censorship, and to let the resulting dialogue be available to anyone. But we used to have that. Previously, scientists exchanged handwritten letters with each other. The resulting exchanges created deep relationships that then formed a research community centred on debate, discussion and decorum. Somewhere along the way, we've skipped this step.

ed.



**A new take on a traditional concept**

This initiative intends to take that step and resurrect, yet modernize, this scientific tradition by creating an international forum, open to researchers, where different points of view can be shared openly and responded to, in a scholarly way. No pressure. No censorship. Just the opportunity to engage in topics that are relevant to our community.

**How it works**

Each quarter, *Letters of the Chiropractic Academy* will post a discussion topic which will always, always, always, originate from inside our own community. Then, unlike any other forum, we will publish submissions from all eligible contributors. Long overdue, the result will be a mosaic of opinions, perspectives and viewpoints.

Because that is what a research community does. Create a place where its people have a voice. Not only a home, but an academy.

**Here we go!**

We hope you like the sound of this. We are sure you'll think it is fun, stimulating and a pleasure to take part in. Welcome to *Letters of the Chiropractic Academy*.

## OUR NEXT TOPIC

We all face challenges in our work.

A choice to make.

A skill to learn.

A position to fill.

Advice required.

Whatever it is, there are probably others experiencing similar challenges or those with possible solutions.

**Describe a major challenge in your research and how you overcame it – or not.**

## Submission due

March 15, 2023

## Topic ideas

Have an idea for a topic? Just send it to one of the members of the advisory panel (last page).

# LETTERS

of the Chiropractic Academy

## Advisory panel (alphabetical)

Iben Axen

Pierre Côté

Martin Descarreaux

Simon French

Jan Hartvigsen

Greg Kawchuk

Charlotte Lebeouf-Yde

Silvano Mior

Soren O'Neill

