Mind Pad

Canada's student written, edited, and published psychology newsletter.

Notes d'idées

Le bulletin rédigé, édité et publié par les étudiants de la Société canadienne de la psychologie.

WINTER 2017 – HIVER 2017

CANADIAN PSYCHOLOGICAL ASSOCIATION
SOCIÉTÉ CANADIENNE DE PSYCHOLOGIE

Mind Pad

Canada's student written, edited, and published psychology newsletter.

Notes d'idées

Le bulletin rédigé, édité et publié par les étudiants de la Société canadienne de la psychologie.

Mind Pad has two mandated goals:

1. It aims to provide a professional newsletter that is written and reviewed by students of psychology who are affiliates of the Canadian Psychological Association. The content of the newsletter should be of interest to all who are practicing and studying psychology, but the primary audience of the newsletter is students of psychology.
2. It aims to offer studying psychology researchers and writers an opportunity to experience a formal submission process, including submission, review, and resubmission from the points of view of both submitter and reviewer/editor.

Le mandat de *Notes d'idées* a deux objectifs :

1. Fournir un bulletin professionnel rédigé et évalué par les étudiants en psychologie qui sont membres affiliés de la Société canadienne de psychologie. Le contenu devrait être d'intérêt à tous les praticiens et étudiants en psychologie, mais les étudiants en psychologie sont les lecteurs cibles.
2. Fournir aux étudiants en psychologie l'opportunité de connaitre le processus formel de soumission y compris la soumission, la révision, et la resoumission du point de vue d'auteur et d'évaluateur/redacteur.

Table of contents

CANADIAN PSYCHOLOGICAL ASSOCIATION
SOCIÉTÉ CANADIENNE DE PSYCHOLOGIE

The art and science of research translation: M*ind* P*ad*'s contribution to the process

Zarina A. Giannone, MA, University of British Columbia

A neophyte undergraduate student asked me the other day, "How do students acquire research skills?" My initial reaction was to recommend taking further coursework in research methods and analyses and move on with the conversation. This was the obvious answer. Indeed, I was aware that psychology undergraduate and graduate students are required to take research-related coursework as part of their required curriculum to obtain their respective degrees (Cherry, 2016a; Cherry, 2016b). I thought it would provide comfort for the student to learn that everything you need to know about research could be acquired through one mode of learning: academic coursework. However, I also knew that advice was only partially true. In fact, the more I considered the question, the more I realized that coursework is only one piece of the research puzzle.

This semester, I commenced my PhD program in Counselling Psychology at the University of British Columbia. Upon entering my doctoral program, I was fraught with the notorious "imposter syndrome" (Clance & Imes, 1978). In an effort to counteract my feelings of doubt, I decided to reflect on the foundation of skills that I had accumulated over the years and during the course of completing my previous degrees in psychology. I figured that I had to have done *something right* to get to where I am now. As I critically examined my past research experiences, I began to remember the wide array of learning opportunities that I pursued to acquire diverse and valuable skills and I gradually started to feel more reassured. Interestingly, I noticed that many of my significant learning experiences occurred outside of the classroom and several of the experiences occurred in a combination that was unique to me and my interests, including the opportunities that I pursued and was graciously afforded. In that moment, I realized that there was not a cookie cutter answer that I could have provided to the undergraduate student during our conversation. If I did, I feel that I would have offered a response that may have potentially hindered the student's capacity to explore opportunities to learn and to grow.

Many students are privileged with the opportunity to craft their own development, to pursue opportunities in which they can hone in on and improve their research skills; however, a common barrier experienced by psychology students is not knowing what opportunities will enhance their understanding of research outside of the classroom setting or how to pursue experiences which can build their repertoire of skills. While discussing these concerns with your supervisors and mentors is certainly encouraged, this issue of *Mind Pad* also aims to offer some ideas that may point students in the right direction. Our first article in the Winter 2017 issue of *Mind Pad* is titled, "Getting involved in research during graduate school: A guide for clinical psychology students" (by Danielle Macdonald). While containing insights which are applicable beyond the clinical psychology student population, this article eloquently describes the process of getting involved in research and some common steps to get started. Our next two articles offer novel perspectives in the areas of sport psychology ("Article critique: Development of a cohesion inventory for children's sport teams" by Trista Friedrich & Kevin Spink) and positive psychology ("Frankl's search for meaning and scientific credibility: Implications for positive psychology" by Michael Strating). All three articles represent students' efforts to engage in the peer-review process, to receive and respond to feedback, and, ultimately, to produce manuscripts which advance knowledge and are widely applicable, relevant, and of interest to our readership.

Mind Pad's chief mandate is to offer experiences which encourage students to develop skills specific to the translation and dissemination of research knowledge. The student publication seeks to provide unique peer-learning opportunities for psychology students by enabling structured and novel experiences including the opportunity to serve as an author or peer-reviewer. While the call for submissions is open to all students in psychology and related disciplines, undergraduate and graduate student reviewers are selected through a competitive application process and are assigned reviews in their respective areas of study. We believe that *Mind Pad* provides worthwhile opportunities for both authors and reviewers to develop new skills in the areas of research translation and dissemination, to improve their understanding of the publication process, as well as to enhance their general knowledge of the broad and diverse field of psychology. The Senior Editorial Board (Editor-in-Chief and Associate Editors) recently conducted a program evaluation to assess the degree to which authors and reviewers experience *Mind Pad* as an educational tool which enhances their research training and education in psychology. We look forward to sharing our results with you in a future issue of *Mind Pad* and to improving our ability to function as a learning opportunity for psychology students.

I hope you enjoy this issue and feel inspired to continue learning and engaging in the research process. I would like to extend my gratitude to Mind Pad's 2016-2017 Editorial Board including our Associate Editors (Mariem Boukadi and Sarah Bourdeau), Graduate Student Reviewers (Lillian MacNeill, Nicole Poirier, Sara Holland, Suzanne Chomycz, Lindsay Huska, Elliot Lee, and Maxime Montembeault), and Undergraduate Student Reviewers (Colton Macdonald, Sara Ahmadian, Ratanak Ly, Patryk Siergiej, and Hayley Riel). I would also like to thank the Canadian Psychological Association and Dr. Lisa Votta-Bleeker, CPA's Deputy Chief Executive Officer and Science Director, as this issue would not have been possible without their support.

Please feel free to contact me if you have any questions, comments, or concerns about the current issue or about *Mind Pad* in general at zarina.giannone@gmail.com. If you are interested in submitting a manuscript or would like to get involved as a peer-reviewer, please visit our website for further information: http://www.cpa.ca/students/MindPad. Happy reading!

Warm regards,
Zarina Giannone, M.A.
Editor-in-Chief, *Mind Pad*

References

Cherry, K. (2016a). Bachelor's degrees in psychology. Retrieved from: https://www.verywell.com/bachelors-degree-in-psychology-2795150

Cherry, K. (2016b). Which courses do graduate programs in psychology require? Retrieved from: https://www.verywell.com/courses-required-by-psychology-graduate-programs-2794795

Clance, P. R. & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice, 15*(3), 241-247. http://dx.doi.org/10.1037/h0086006

L'art et la science de l'application de la recherche : le rôle de N*otes d'idées* dans le processus

Zarina A. Giannone, MA, Université de la Colombie-Britannique

L'autre jour, un étudiant de premier cycle néophyte me demande : « Comment les étudiants acquièrent-ils des compétences en recherche? » Ma première réaction a été de lui recommander de suivre d'autres cours sur les méthodes de recherche et d'analyse, puis nous avons continué à discuter. C'était la réponse évidente. Évidemment, je savais que les étudiants de premier cycle et des cycles supérieurs sont tenus, pour obtenir leur diplôme, de suivre des cours liés à la recherche dans le cadre de leur programme d'études obligatoire (Cherry, 2016a; Cherry, 2016b). Je pensais qu'il serait rassurant pour l'étudiant de savoir que tout ce qu'il a à apprendre sur la recherche s'acquiert au moyen d'un seul mode d'apprentissage, à savoir les cours universitaires. Cependant, je savais aussi que le conseil que je lui donnais n'était que partiellement vrai. En fait, plus j'étudiais la question, plus je me rendais compte que les cours ne sont qu'une pièce du casse-tête de la recherche.

Ce semestre, j'ai commencé mon programme de doctorat en psychologie du counseling à l'Université de la Colombie-Britannique. En entrant au programme de doctorat, j'étais habitée par le fameux « syndrome de l'imposteur » (Clance et Imes, 1978). Afin de contrer mon sentiment de doute, j'ai décidé de réfléchir sur le fondement des compétences que j'ai accumulées au fil des ans et pendant mes études précédentes en psychologie. Je me suis dit que j'avais sûrement fait *les bonnes choses* pour me rendre où je suis maintenant. Alors que j'examinais d'un œil critique mes expériences de recherche passées, je me suis rappelé peu à peu le vaste éventail de possibilités d'apprentissage que j'ai saisies pour acquérir des compétences précieuses et variées, et, progressivement, mes doutes se sont dissipés. Curieusement, j'ai remarqué que beaucoup des expériences d'apprentissage enrichissantes que j'ai vécues l'avaient été en dehors de la classe et que, dans une grande mesure, mon apprentissage a été façonné autant par ce que je suis que par mes intérêts, notamment par les possibilités dont j'ai tiré parti et qui m'ont été aimablement offertes. À ce moment-là, je me suis rendu compte qu'il n'y avait pas réponse toute faite à donner à cet étudiant de premier cycle. Si cela avait été le cas, je crois que ma réponse aurait pu nuire à la capacité de l'étudiant d'explorer les possibilités d'apprentissage et de développement des compétences qui s'offrent à lui tout au long de son parcours.

Plusieurs étudiants ont la possibilité de modeler leur propre développement, de saisir les occasions de parfaire leurs connaissances et d'améliorer leurs compétences en recherche; toutefois, dans plusieurs cas, les étudiants en psychologie ne savent pas ce qui améliorera leur compréhension de la recherche ailleurs qu'en classe, ni comment choisir les expériences qui sont susceptibles d'enrichir leur répertoire de compétences, ce qui constitue un obstacle à leur apprentissage. Même s'il est fortement encouragé de discuter de ces préoccupations avec vos superviseurs et vos mentors, le présent numéro de *Notes d'idées* vise également à donner des idées, qui sont à même d'aiguiller les étudiants dans la bonne direction. Le premier article du numéro d'hiver 2017 de *Notes d'idées* est intitulé « Getting involved in research during graduate school: A guide for clinical psychology students » (par Danielle Macdonald). Même s'il contient des observations qui ne s'appliquent pas exclusivement à la population étudiante en psychologie clinique, cet article décrit de manière éloquente le processus qui amène l'étudiant à faire de la recherche et certaines étapes communes pour s'y mettre. Les deux articles qui suivent offrent des perspectives nouvelles dans le domaine de la psychologie du sport (« Article critique: Development of a cohesion inventory for children's sport teams » par Trista Friedrich et Kevin Spink) et de la psychologie positive (« Frankl's search for meaning and scientific credibility: Implications for positive psychology » par Michael Strating). Ces trois articles décrivent la démarche à suivre par les étudiants pour participer au processus d'examen par les pairs, pour recevoir et répondre aux commentaires, et, finalement, pour produire des manuscrits qui font progresser les connaissances et sont largement applicables, pertinents et intéressants pour nos lecteurs.

Le mandat principal de *Notes d'idées* est d'offrir des expériences qui encouragent les étudiants à développer des compétences liées à l'application et à la diffusion des connaissances issues de la recherche. Notre publication étudiante vise à fournir des occasions d'apprentissage par les pairs uniques aux étudiants en psychologie en rendant possibles des expériences structurées et originales, y compris la possibilité de jouer le rôle d'auteur ou d'évaluateur. Tandis que l'appel d'articles s'adresse à tous les étudiants en psychologie et dans des disciplines connexes, les évaluateurs du premier cycle et des cycles supérieurs sont choisis au moyen d'un processus de sélection compétitif, et les personnes sélectionnées se voient confier l'évaluation d'articles liés à leur domaine d'études respectif. Selon nous, *Notes d'idées* offre des possibilités intéressantes, autant aux auteurs qu'aux évaluateurs, de développer de nouvelles compétences dans le domaine de l'application et de la diffusion de la recherche, d'améliorer leur compréhension du processus de publication et d'enrichir leur connaissance générale du domaine vaste et diversifié de la psychologie. Le comité de rédaction principal (la rédactrice en chef et les rédacteurs en chef adjoints) a effectué récemment une évaluation de programme afin de déterminer dans quelle mesure les auteurs et les évaluateurs d'articles voient *Note d'idées* comme un outil pédagogique, qui améliore leur formation en recherche et en psychologie. Nous sommes impatients de partager avec vous les résultats de cette évaluation dans un prochain numéro de *Notes d'idées* et avons hâte d'améliorer notre publication pour en faire une occasion d'apprentissage encore plus intéressante pour les étudiants en psychologie.

J'espère que vous apprécierez ce numéro et que celui-ci vous donnera envie de continuer à apprendre et à vous intéresser au processus de recherche. Je tiens à exprimer ma gratitude au comité de rédaction de *Notes d'idées*, y compris les rédacteurs en chef adjoints (Mariem Boukadi et Sarah Bourdeau), les évaluateurs du premier cycle (Lillian MacNeill, Nicole Poirier, Sara Holland, Suzanne Chomycz, Lindsay Huska, Elliot Lee et Maxime Montembeault) et les évaluateurs des cycles supérieurs (Colton Macdonald, Sara Ahmadian, Ratanak Ly, Patryk Siergiej et Hayley Riel). J'aimerais également remercier la Société canadienne de psychologie (SCP) et la Dre Lisa Votta-Bleeker, directrice générale associée et directrice de la Direction générale de la science de la SCP car, sans son soutien, le présent numéro n'aurait pu voir le jour.

N'hésitez pas à communiquer avec moi si vous avez des questions, des commentaires ou des préoccupations au sujet du présent numéro ou de *Notes d'idées* en général, à zarina.giannone@gmail.com. Si vous voulez proposer un manuscrit ou désirez vous impliquer en tant qu'évaluateur d'articles, veuillez visiter notre site Web pour de plus amples renseignements : http://www.cpa.ca/etudiants/MindPadfr/. Bonne lecture!

Sincères salutations,
Zarina Giannone, M.A.
Rédactrice en chef, *Notes d'idées*

Références

Cherry, K. (2016a). « Bachelor's degrees in psychology ». Article publié sur Internet : https://www.verywell.com/bachelors-degree-in-psychology-2795150.

Cherry, K. (2016b). « Which courses do graduate programs in psychology require? ». Article publié sur Internet : https://www.verywell.com/courses-required-by-psychology-graduate-programs-2794795.

Clance, P.R. et S.A. Imes (1978). « The imposter phenomenon in high achieving women: Dynamics and therapeutic intervention ». *Psychotherapy: Theory, Research & Practice, volume 15*(3), 241-247. http://dx.doi.org/10.1037/h0086006

Getting involved in research during graduate school: A guide for psychology students

Danielle E. MacDonald, PhD, Ryerson University

Abstract

Getting involved in research activities, publishing, and presenting can be daunting for graduate students. This brief paper outlines some of the reasons to get involved in research during graduate school, and suggests that, in order to get started, students should consider a few principles. This includes: taking initiative and discussing concerns with a supervisor or mentor, forming professional collaborations, setting short-term and long-term research goals, and taking the research process one step at a time. Although not an exhaustive list or inclusive of all possibilities, a number of potential avenues for getting involved in research during graduate school are also suggested. These may help graduate students become aware of and consider a range of possible research opportunities.

Résumé

Faire de la recherche, publier et présenter ses travaux peut être intimidant pour les étudiants des cycles supérieurs. Le présent article décrit quelques-unes des raisons qui devraient encourager les étudiants à faire de la recherche au cours de leurs études supérieures, et recommande aux étudiants certains principes à respecter, avant de s'y mettre. Les auteurs conseillent, entre autres, de prendre l'initiative et de discuter de leurs préoccupations avec un superviseur ou un mentor, de former des collaborations professionnelles, d'établir des objectifs de recherche à court et à long terme et de suivre le processus de recherche, une étape à la fois. Bien que cette liste ne soit pas exhaustive ou qu'elle n'englobe pas toutes les possibilités, un certain nombre d'avenues pour s'impliquer dans la recherche pendant ses études supérieures sont également suggérées. Cela aidera peut-être les étudiants des cycles supérieurs à prendre conscience de l'éventail de possibilités de recherche et à en profiter.

There are so many competing responsibilities in applied psychology graduate programs – coursework, thesis or dissertation, clinical placements, and teaching responsibilities. Getting involved in research can seem like a challenge (and sometimes even impossible!). However, there are many reasons to get involved in research beyond your thesis or dissertation during graduate school. Although this article is targeted toward psychology graduate students in applied professional programs (e.g., clinical, counselling, school, industrial-organizational), students in other streams of psychology may also find these suggestions helpful.

Getting involved in research, including publishing in peer reviewed journals and presenting at professional conferences, can help you begin to build a professional CV that will benefit you when it comes time to applying for scholarships, clinical practica, internships, and jobs. Even if you are more interested in a career as a clinician, many academic teaching hospitals and other clinical settings value involvement in research. It will also help you build important professional skills, complement evidence-based clinical work, and form professional relationships and collaborations that can open doors to your career.

How Do I Get Started?

Many psychology graduate students in applied streams feel like they couldn't possibly add another thing to their plate. While some students in applied programs certainly prefer research over clinical work, many students in these streams may perceive research to consume a lot of time and energy. Although getting involved in research can seem daunting, there are a few guiding principles that can help to make the process more approachable.

Take initiative and discuss your concerns. One of the best ways to get involved in research is to talk to your supervisor or another potential mentor about ways of getting more involved. Most mentors are happy to support a project when a student has shown initiative. Discuss with your supervisor both your goals and ideas as well as any concerns you might have about balancing research with other responsibilities, and talk about creative ways that you might be able to get involved without feeling overwhelmed. Part of their job as your mentor is to help you navigate your various professional roles as a psychologist-to-be. Regardless of what you decide to do, taking initiative is a surefire way to open the door to the next steps.

Get collaborative. Collaboration is the spice of life in research. Not only are two (or three, four, or five) heads better than one in terms of coming up with ideas and solving problems in research, collaborating with others allows you to distribute the workload, and potentially be involved with multiple projects. This can also open doors to you for future research opportunities and for professional networking. Despite its benefits, collaboration may also introduce new challenges. Tasks may take longer than anticipated if it is difficult to coordinate between collaborators, and tensions can arise from professional differences of opinion.

Set goals. Graduate school is busy, and research can seem like an arduous process. It is true that it takes time to conduct a study or get a paper through the publication process. However, one way to increase your research productivity is to make time for your research just like you make time for your dissertation or your clinical work. This might mean setting aside dedicated time in your schedule for research. It is easier to make time for things if it is built into your calendar as a commitment rather than something expendable. It also might mean breaking a big task into smaller, more manageable goals (e.g., prepare ethics application; recruit a volunteer research assistant; import data into a database). Smaller goals are more digestible than the large and nonspecific goal of "get a publication". However, goal setting on a larger scale can also help to keep you engaged and focused, such as setting a goal to submit a poster to at least one peer-reviewed conference each year. This larger goal can then be broken down into smaller tasks.

One step at a time. Sometimes it can feel like academia is a "publish or perish" environment. That mentality can make the prospect of publishing even more stressful and overwhelming. It is important to try to counter that mindset with a "one step at a time" approach. That is, in addition to actually breaking your tasks down, it is important to cognitively reframe that "publish or perish" attitude into one in which you remember that every step you take is helping you learn and integrate new skills and work towards your larger targets.

Where Can I Get Involved?

You might be thinking that it will be hard to get involved in research beyond your thesis or dissertation, particularly if you aren't aware of other potential research opportunities that might be out there. However, there are lots of opportunities available that you might not have considered and which can help you start building your research experience and your publication record. Whether these avenues lead to an authorship-level contribution on a publication or presentation will depend on the specific situation and your level of contribution to the project. Regardless of publications, it is important to remember that you are gaining valuable skills and experiences by being involved in research. Also remember that at the graduate level you may be in a position to contribute as an author to projects, for example through study conceptualization and design, study coordination, data analyses, and preparation of papers or abstracts.

The most obvious way is getting involved in research taking place in your lab. For example, your supervisor may have an existing dataset. You could take initiative to ask your supervisor what kind of data she or he has, and whether you could take the lead on a secondary research question from within this dataset. This is a good way of getting started on presentations and publications, without having to collect a whole new set of data, and supervisors are often happy to facilitate a student's productivity in this way. There may also be more senior graduate students in your lab who are running studies of their own, which you might be able to become involved with. This could vary from running participants, to helping with data analyses, to preparing manuscripts for publication. Senior graduate students are often happy to mentor more junior students and help them get involved. Then when you become the senior student, you will have the opportunity to pay it forward!

You might also have an idea for a new study that could be run in your lab. This might seem like a lot of work on top of your thesis or dissertation, but there are lots of ways to reduce the workload even for a new study. As the study lead, you would have to come up with the study idea, submit the ethics application, and potentially manage the study coordination. However, survey studies can often be administered online, which greatly reduces the workload around data collection. You may also be able to recruit competent 4th year undergraduate volunteers to collect laboratory data for the study, which can make collecting a new dataset much more manageable. Of course, you will also need to consider funding sources. There may be small grants that you can apply for through your university or professional organizations, or your supervisor may agree to cover the costs of your study from their own funds. However, some studies may be possible to run with minimal funding. For example, your university may subscribe to an electronic survey website, which will permit you to conduct a survey study without needing study-specific funding.

You can also consider volunteering as a research assistant in another lab in your department or at a teaching hospital in your city. Many labs and academic clinics are happy to have competent graduate students involved in their research. This would help you to gain valuable and diverse research experience, form collaborative relationships, and depending on your contributions, potentially be involved in publication and presentation activities.

You may also consider whether you can find a part-time opportunity as a paid research assistant or research coordinator in an academic hospital or university setting. If you have already gained teaching assistant experience and you are not required by your program to continue as a teaching assistant, you might decide to put your part-time work hours towards a paid research position instead. You will gain valuable research experience, form important collaborations, and particularly at the research coordinator level, may be able to start building up your publication record. If you are interested in a later postdoctoral research fellowship and/or academic career, these types of roles in graduate school can be particularly valuable.

For students in applied programs, there may also be opportunities to get involved in research while you are on clinical practica or your predoctoral internship. Many practicum and internship supervisors are involved in clinical research and may welcome research involvement as part of your placement, particularly if you have a specific skillset that you can contribute to the project, or if your own research area overlaps with your supervisor's in some way.

Don't overlook the possibility that you might be able to submit papers that you have written as part of your degree requirements for publication. For example, if any part of your degree requirements (e.g., comprehensive examination; coursework) involves writing a meta-analysis, systematic review, or narrative paper, particularly if it fills a gap in the literature, you might consider revising this paper for publication in a peer-reviewed journal.

Getting involved in the peer review process is another way to become more involved in research. Although not *conducting* research, the peer review is a vital part of the research process and there is much to be learned about the research process by reviewing papers (e.g., the evolution of paper from initial submission to publication form; research design considerations that you may not have considered; and what sets apart a publishable from an unpublishable paper). You can start by asking your supervisor if you can complete "mentored reviews" of papers that they are invited to review in order to start building experience as a peer reviewer. As you begin to publish as a first author, you may be invited to review papers in a similar area independently. Additionally, student journals (such as Mind Pad!) offer opportunities for students to serve as editors, associate editors and reviewers – another great way to get involved.

Helpful Hints if you Run into Difficulty

Even with all of these suggestions, you might run into difficulties with this process. Most research projects do not run completely smoothly. First and foremost, do not get discouraged! This is the process – some bumps in the road are par for the course. Also consider turning to sources of support, such as talking to your supervisor, academic advisor or mentor, a psychology students group, or your classmates or labmates, about the challenges you have run into. Your university library likely offers assistance as well, such as workshops for writing and researching skills, and librarian assistance for tasks such doing an exhaustive search of previous literature. Many professional organizations and conferences offer resources for graduate students as well, such as mentor-mentee pairings and workshops aimed specifically at developing research skills at the graduate or early career level.

Conclusions

Getting involved in research can seem daunting, particularly on top of your thesis or dissertation, coursework, practicum placements, and teaching assistantships. However, by taking initiative, forming collaborations, setting goals, and taking it one step at a time, research activities can be more manageable than they initially appear. Furthermore, there may be lots of opportunities within your department and the community for getting more involved in research, if you are creative with where you are looking. At the end of the day, research is an important part of most applied psychology graduate programs, and the goal of this article is to help you think creatively about how to integrate research into your graduate career in ways that will work for you.

Acknowledgements

Thanks to Lauren David, MA, and Katey Park, BA (Ryerson University) for your feedback and ideas.

Frankl's Search for Meaning and Scientific Credibility: Implications for Positive Psychology

Michael A. Strating, BA University of Windsor

Abstract

In claiming that positive psychology is a *new*, scientific approach to psychology, Seligman and Csikszentmihalyi (2000) have denounced earlier contributions of positive psychology based on claims that these earlier approaches were anti-scientific and failed to generate research. Taking a historical perspective, the aim of the present review is to examine the influence of Viktor Frankl (an existential psychologist) on the scientific community with regard to his work on the role of meaning in life and human persistence. In contrast to Seligman and colleagues' claims, an assessment of citation trends using the Social Science Citation Index and PSYCNET database revealed that Frankl's work has seen a steadily increasing presence within the field of psychology in recent decades, supporting the scientific credibility of Frankl's work. Future research in positive psychology would benefit from seeking out and building upon such earlier foundations.

Résumé

En soutenant que la psychologie positive est une approche scientifique nouvelle de la psychologie, Seligman et Csikszentmihalyi (2000) dénoncent les contributions antérieures en psychologie positive en déclarant que cette approche est anti-scientifique et a échoué à produire des travaux de recherche. D'un point de vue historique, l'objectif de la présente étude est d'examiner l'influence qu'ont eue, dans le milieu scientifique, les travaux de Viktor Frankl (un psychologue existentiel) sur le rôle du sens de la vie et de la persévérance humaine. Contrairement à ce qu'affirment Seligman et ses collègues, une évaluation des tendances des citations d'articles scientifiques à l'aide du Social Science Citation Index et de la base de données de PsycNET révèle que la présence des travaux de Frankl dans le domaine de la psychologie n'a cessé d'augmenter au cours des dernières décennies, ce qui appuie la crédibilité scientifique des recherches de Frankl. Pour la recherche future en psychologie positive, il serait donc utile d'étudier les fondements scientifiques antérieurs et de s'appuyer sur les traditions de recherche dans lesquelles s'inscrit la psychologie positive.

The Search for Meaning & Logotherapy

Austrian neurologist and psychiatrist, Viktor Frankl, sought to better understand the capacity of humans to persist in the face of suffering (a concept referred to as *resilience* today). He believed that the fundamental driving force underlying such persistence was the ability to find meaning in life (Frankl, 1966a). According to Frankl, pathology results from the inability to live a personally meaningful life and by an accompanying and pervasive sense of frustration, futility, and emptiness (Frankl, 1966a).

This theoretical framework laid the foundation for the subsequent development of a therapeutic approach known as *logotherapy* (Frankl, 1975). Although the primary aim of logotherapy is to assist the client in finding meaning and purpose in life, it makes use of two therapeutic techniques which are unique to logotherapy, namely, dereflection and paradoxical intention. Dereflection aims to eliminate or reduce problems related to excessive self-expectations. For example, clients seeking help for sexual dysfunction may be advised to abstain from all sexual activity. Frankl found that by removing expectations for sex, libido often returned and clients were able to engage in sexual activity once again. Paradoxical intention, on the other hand, reduces anticipatory anxiety by requesting the client "to do, or wish to happen, the very things he fears." This technique is derived from observations made by Frankl and other clinicians that the expectation of a feared event often (paradoxically) causes the event itself to occur. For instance, clients are typically unable to induce feelings of intense panic when asked to do so intentionally, thereby disconfirming beliefs regarding the imminence of a panic attack, reducing anticipatory anxiety, and preventing episodes of panic (Frankl, 1975).

Seligman and Csikszentmihalyi (2000) have rejected contributions of earlier humanistic and existential psychologies (such as Frankl's) to positive psychology for two main reasons: first, because they have not generated empirical data and second, because they have not been influential within the scientific community. The aim of the current paper is to explore and challenge these claims, not with the intent of discrediting recent advances in positive psychology, but to continue advancing the field by encouraging researchers to draw upon, rework, and extend valuable contributions from the past.

Logotherapy and the Scientific Community

Contrary to Seligman and Csikszentmihalyi's (2000) claims that humanistic and related approaches lack scientific credibility, empirical support for logotherapy has been provided by clinical case reports (e.g., Frankl, 1958, 1975), validation of theory-derived psychometric measures (Chang & Dodder, 1983), and outcome studies employing logotherapy in the treatment of a variety of issues including insomnia, sexual dysfunction, and depression (Weeks & L'Abate, 1978). Nevertheless, logotherapy has never achieved the popularity of other psychotherapies such as psychodynamic, behavioural, and cognitive therapies in the scientific or public communities. Examining the work of Frankl from a historical perspective, the influence of logotherapy may have been limited by at least three factors: 1) its close association with philosophical thought, 2) Frankl's general reliance on rational argument rather than empirical research, and 3) the fact that Frankl's theoretical framework is unnecessary for the clinical use of logotherapy techniques.

The first factor contributing to the potential underappreciation of logotherapy is the spiritual and philosophical tone of much of Frankl's work (Hutzell, 2006). Indeed, Frankl's writings often revolve around topics of spirituality (Frankl, 1959), self-transcendence (Frankl, 1966b), phenomenology and subjective experience (Frankl, 1966a), and conscience (Frankl, 1972). This was during a time when psychology was becoming more mechanistic and increasingly disillusioned with metaphysical concepts (cf. the rise of cognitive-behavioural models around this time). With the memory of harsh dictatorships still fresh in the collective memory, the period following World War II was also marked by increasing resistance to the study of moral norms and values in the scientific community (Ward, 1969). Furthermore, existentialism was also predominantly tied to philosophical thought during the 1950's and 1960's and, though psychology had distinguished itself from philosophy by this time, psychologists were likely hesitant to renew ties with its "non-scientific" roots.

Similarly, Frankl's lack of influence may also be a result of his dialectical approach to developing his theoretical framework. Distinctions have been made between *demonstrative* and *dialectical* approaches to science, where the former is characterized by value-free experimentation and systematic testing, and the latter by rational argument (Rychlak, 1968). With its ties to the natural sciences, the demonstrative approach was clearly preferred over the dialectical approach by researchers at this time. Although Frankl does cite the empirical research of other scholars in support of logotherapy, his own writings typically employ rational discourse.

Finally, the use of logotherapeutic techniques (i.e., dereflection and paradoxical intention) does not necessitate the acceptance of Frankl's theoretical framework (outlined earlier). In his review, Frankl (1966a) himself suggested that logotherapy could be used as a supplement to other methods. As such, many clinicians incorporated logotherapeutic techniques into various theoretical approaches, including psychoanalysis, family therapy, behavioural therapy, hypnosis, and others (Weeks & L'Abate, 1978). However, Frankl found that clinicians often reinterpreted the underlying mechanisms of dereflection and paradoxical intention in a way that fit their particular theoretical framework. For example, psychoanalysts pointed to the strengthening of defense mechanisms and cognitive psychologists suggested that these techniques are a form of cognitive reappraisal. In attributing the success of these techniques to existing principles, Frankl's theoretical framework became redundant and logotherapy seemingly disappeared.

Frankl in the Scientific Community: An Examination of Citation Trends

Despite the preceding consideration of factors which may have limited its popularity, questions still remain with regard to whether or not logotherapy is scientifically credible and the degree to which it has influenced the scientific community. In order to as-

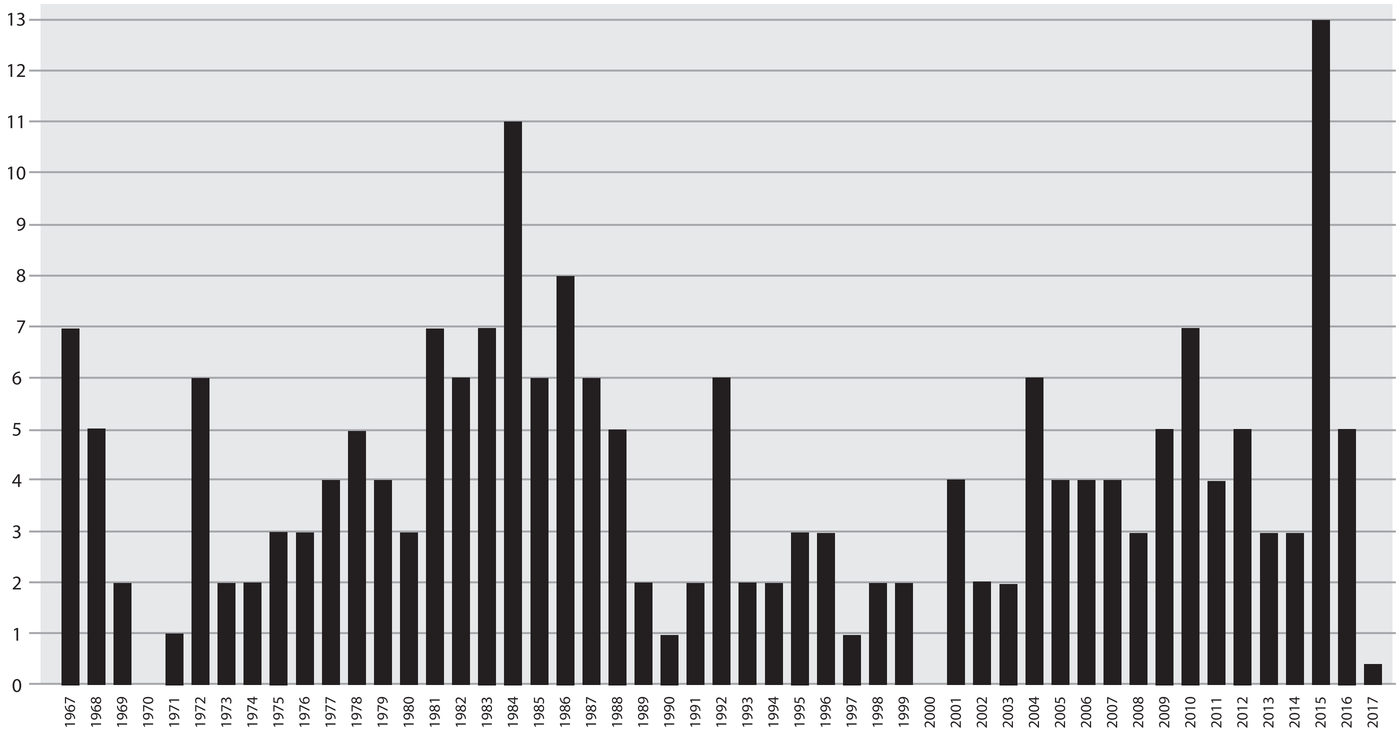

Figure 1. A graphical representation of the number of works citing Frankl's works each year between 1951 and 2016 (Study 1).

sess the presence of Frankl's work in the field of psychology over time, two searches were conducted to identify recent trends in publications citing his work between 1951 and 2016. These searches examined the number of times Frankl's writings have been cited in other works, giving the number of citations in each year to show a general trend over time. The first citation search was conducted using the Social Science Citation Index, accessed through Web of Science. The second citation search involved works citing Frankl's most popular work, *Man's Search for Meaning* (1963). It should be noted that many articles citing Frankl's

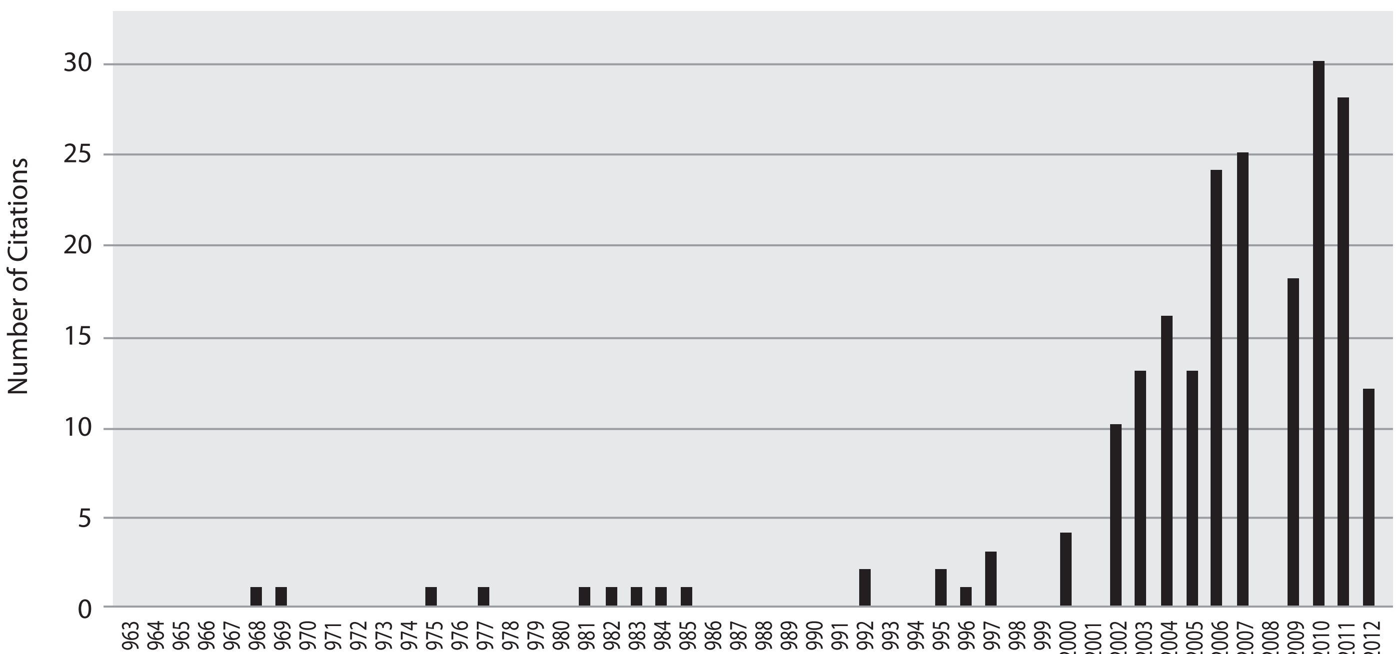

Figure 2. A graphical representation of the number of works citing Frankl's Man's Search for Meaning (1963) between 1963 and 2012 (Study 2).

works were found to be original empirical studies.

Study 1: Social Science Citation Index Search. A search in the Social Science Citation Index (SSCI) within the Web of Science Core Collection identified 19 journal articles published by Viktor Frankl between 1966 and 1999 (note that the SSCI only identified articles published after 1965, though his first published work dates to 1925). The search revealed that these 19 articles were cited a total of 203 times, with an average of 4.06 citations per year and an h-index of 6 (i.e., meaning six articles were cited six or more times). Figure 1 shows that the number of citations generally peaked during the 1980's, decreased during the 1990's, and increased again between 2001 and 2016.

Study 2: Man's Search for Meaning Citation Search. The first citation search did not include *Man's Search for Meaning*, the work for which Frankl is best known (Hutzell, 2006). A search of academic articles citing this book was conducted using PSYCNET. This PSYCNET search identified a total of 251 citations of *Man's Search for Meaning* between 1968 and 2012 (as of October 2016, the number of citations has climbed to 401). Figure 2 reveals that very few articles cite *Man's Search for Meaning* prior to 2000, but that there was a substantial jump in citations between the year 2000 and 2012, with 93% of the total number of citations occurring during this period. Examples of research citing *Man's Search for Meaning* include studies of topics such as the role of meaning-making in grieving processes, social development, and responses to physical illness.

Discussion of Findings and Implications for Positive Psychology

These two citation searches have revealed that although logotherapy never became a dominant psychotherapy, Frankl's work has maintained at least some influence and credibility in the scientific community from the early 1960's until present. Furthermore, citation patterns of *Man's Search for Meaning* suggest that there may have been a dramatic rediscovery of Frankl's ideas within mainstream psychology since 2000. These findings support speculations that there has been renewed interest in Frankl's philosophy in recent decades, which may be due to greater acceptance of topics related to spirituality and values in the scientific community (Hutzell, 2006).

The results presented here provide further evidence that Seligman & Csikszentmihalyi's (2000) rejection of earlier humanistic and existential contributions to positive psychology on the basis of scientific credibility is unfounded. Their argument rests on two presuppositions: first, that these traditions have not generated empirical data and second, that these traditions have had influence primarily within the public (e.g., as self-help), but not within the scientific community. Contrary to their first claim, the current review suggests that psychologists have indeed generated empirical data in support of the use of logotherapy. Regarding the second claim, although Frankl's *Man's Search for Meaning* has indeed achieved status as a self-help resource in the public community, the citation searches above suggest that Frankl's work has maintained at least some presence within the scientific community and that this presence has perhaps even increased in recent decades.

In conclusion, it seems that the rush to promote positive psychology as a *new*, scientific field of study has lead to the premature rejection of closely-related traditions in psychology – a concern that has been raised by others as well (e.g., Taylor, 2001). Rather than striving to assert itself as a revolutionary subdiscipline, future research in positive psychology should aim to rediscover, reorganize, and build upon such earlier traditions towards developing a richer understanding of human strengths, resilience, and flourishing.

References

Chang, R. H., & Dodder, R. A. (1983). The modified Purpose in Life Scale: A cross-national validity study. *International Journal of Aging and Human Development*, 18(3), 207-217.

Frankl, V. E. (1958). On logotherapy and existential analysis. *American Journal of Psychoanalysis*, 18(1), 28-37.

Frankl, V. E. (1959). The spiritual dimension in existential analysis and logotherapy. *Journal of Individual Psychology*, 15(2), 157-165.

Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York, NY: Simon and Schuster.

Frankl, V. E. (1966a). Logotherapy and existential analysis – A review. *American Journal of Psychotherapy*, 20, 252-260.

Frankl, V. E. (1966b). Self-transcendence as a human phenomenon. *Journal of Humanistic Psychology*, 6(2), 97-106. doi: 10.1177/002216786600600201

Frankl, V. E. (1972). The feeling of meaninglessness: A challenge to psychotherapy. *American Journal of Psychoanalysis*, 32(1), 85-89.

Frankl, V. E. (1975). Paradoxical intention and dereflection. *Psychotherapy: Theory, Research and Practice*, 12(3), 226-237.

Hoeller, K. (1979). Phenomenology, Psychology, and Science. *Review of Existential Psychology & Psychiatry*, 16(1-3), 147-175.
Hoeller, K. (1985). Phenomenology, Psychology, and Science, II. *Review of Existential Psychology & Psychiatry*, 18(3), 143-154.
Hutzell, R. R. (2006). The continued relevance of Man's Search for Meaning. *PsycCRITIQUES*, 51(5). doi: 10.1037/63000112
Rychlak, J. F. (1968). *A philosophy of science for personality theory*. doi: 10.1037/10535-000
Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14. doi: 10.1037//0003-006X.55.1.5
Taylor, E. (2001). Positive psychology and humanistic psychology: A reply to Seligman. *Journal of Humanistic Psychology*, 41(1), 13-29.
Ward, L. (1969). Challenges on moral norms. *Proceedings of the American Catholic Philosophical Association*, 43, 15-23.
Weeks, G., & L'Abate, L. (1978). A bibliography of paradoxical methods in psychotherapy of family systems. *Family Process*, 17(1), 95-98.

Students should attend the CPA National Convention

CPA-SCP 2017 TORONTO

because it's specifically designed to provide countless opportunities for personal and professional growth, and it's a unique opportunity to connect - in person, with a myriad of diverse aspects within the field of psychology. Here are just a few of the ways that attending the CPA National Convention would be beneficial to you:

- **Access to experts in the field.** You get the chance to meet and rub shoulders with the scholars and professionals who inspire you.

- **Meet future colleagues face to face.** We all make connections and share information relatively quickly and easily using digital technology today – there's no denying it. However, there's also no denying that there's definitely something more powerful about meeting your online contacts face to face. And it's something that will serve you well in future dealings and collaborations.

- **We make networking easy!** Covering over 34 different areas of psychology, you'll hear from both established experts in the field and from our next and emerging generation of psychologists. The CPA makes sure that you will have the opportunity to connect with psychologists and students from across the country, via a variety of sessions and social activities.

- **Feed your excitement about being part of the profession!** Although there's a ton of info available online and numerous ways to create/consume content, nothing compares to getting out and hearing from other psychologists and colleagues from across Canada, in person. Or being there when the CPA celebrates the accomplishments of psychologists and peers at the CPA Awards Ceremony and various Section-recognitions (including the Students Section).

- **Share your research findings.** Our convention gives you the chance to shine as a student/scholar, especially if you're presenting. Presenting, which you can then list on your CV, gives you the opportunity to obtain feedback on your research.

- **Learn how your field fits into the landscape of Canadian psychology.** Our convention will provide you with an opportunity to see how your particular area of psychological interest cross-cuts other areas that you may have not previously considered.

- **Discover what activities the CPA undertakes on behalf of the profession in Canada.** Learn how your membership dollars are being used to advance the science, practice and education of psychology in Canada, through a number of activities undertaken throughout the year and by meeting with MPs and employers, conversing with Chairs of Psychology Departments, and liaising with the funders – to name a few...

Article Critique: Development of a Cohesion Inventory for Children's Sport Teams

Trista E. Friedrich, BA (Hons), University of Saskatchewan
Kevin S. Spink, PhD, University of Saskatchewan

Abstract

A number of inventories have been developed to assess cohesion in sport settings. The Child Sport Cohesion Questionnaire (CSCQ) was developed to measure cohesion in children's sport teams, and has been used to assess whether cohesion increases child participation and adherence to sport. Although an appropriate inventory to assess cohesion in children is important, the contribution of this inventory to the group literature may be limited. A number of concerns regarding the development of the inventory are outlined. The authors did not use an overarching conceptual model to guide the development of the measure, limited novel items were generated, common concerns for using Likert scales with children were not addressed, and a CFA to evaluate the factor model was prematurely used. As researchers continue to utilize the CSCQ to assess group cohesion in children, the psychometrics of the inventory and the appropriateness of its underlying two-dimension structure should be examined.

Résumé

Plusieurs inventaires ont été élaborés pour évaluer la cohésion dans le contexte sportif. Le Child Sport Cohesion Questionnaire (CSCQ) a été élaboré dans le but de mesurer la cohésion au sein d'équipes sportives composées d'enfants, et a été utilisé pour évaluer si la cohésion augmente la participation de l'enfant aux activités sportives et si elle incite celui-ci à continuer à faire du sport. Bien qu'il soit important de disposer d'un inventaire adéquat pour évaluer la cohésion, la contribution de cet inventaire à la littérature sur le sujet semble limitée. Un certain nombre de préoccupations concernant l'élaboration de l'inventaire sont décrites. Les auteurs n'ont pas utilisé de modèle conceptuel global pour orienter l'élaboration de la mesure; peu de questions nouvelles ont été générées; les préoccupations communes relatives à l'utilisation des échelles de Likert auprès d'enfants n'ont pas été prises en compte; et enfin, l'analyse factorielle confirmatoire pour évaluer le modèle factoriel a été utilisée prématurément. Comme les chercheurs continuent d'utiliser le CSCQ pour évaluer la cohésion de groupe chez les enfants, la psychométrie de l'inventaire et la pertinence de la structure bidimensionnelle qui le sous-tend devraient être examinées.

Cohesion, a group's tendency to remain united in pursuit of its objectives and/or for satisfaction of individual member's affective needs (Carron, Brawley, & Widmeyer, 1998), has been identified as one of the most researched topics in group dynamics (Dion, 2000). In the sport setting, a number of inventories have been developed to assess cohesion, with the most extensively used being the Group Environment Questionnaire (GEQ, Carron, Widmeyer, & Brawley, 1985). This inventory was developed for use with adults and the authors cautioned against using it with different populations (Carron, Brawley, & Widmeyer, 2002). In terms of population specificity, Martin and colleagues (2012) recognized that a developmentally appropriate cohesion measure for children was absent. They aimed to bridge this gap by developing a measure to assess cohesion in children's (age 9-12) sports teams. Their rationale for the need for such a measure was pragmatic. Sport provides numerous physiological and psychological benefits, thus it is important to understand how to increase children's participation and adherence to sport. Adherence and participation rates have been influenced by the perception of belonging and affiliation (Eys & Spink, 2016), which are measured as cohesion in the group literature. Furthermore, while another measure existed to assess cohesion in youth (age 13-18, YSEQ, Eys, Loughead, Bray, & Carron, 2009), Martin et al. (2012) argued that it was inappropriate for use with children, as the measure does not reflect children's cognitive abilities (e.g., reading level, comprehension, response scales), reducing the reliability and validity of the scale. Accordingly, a child cohesion inventory was needed to assess whether cohesion increases child participation and adherence to sport.

In developing this new measure, the authors followed previous measure development protocols outlined by Carron et al. (1985) and Eys et al. (2009) to create cohesion inventories. Phase one involved eliciting children's understanding and description of cohesion in sport teams through the use of focus groups and open-ended questionnaires (Martin, Carron, Eys, & Longhead, 2011), complemented with a literature search of research examining children sports. This resulted in the generation of 172 potential items for the inventory. Phase two categorized and trimmed the items, which resulted in a 16-item cohesion inventory assessing task and social cohesion (CSCQ). Eleven of the 16 items were identical to those found in the youth cohesion measure (YSEQ), three of the items were obtained from Phase one, and two negatively-worded items were added to minimize acquiescence bias. Phase two ended with an assessment of the content validity of the items, which indicated that all of the items were appropriate. Phase three assessed the factorial validity of the inventory using a confirmatory factor analysis (CFA), which revealed a strong fit for a two-factor model (task and social cohesion). The authors concluded that the inventory is a psychometrically sound measure to use with children and that the measure can help foster and promote cohesion in sport teams, as well as identify benefits children receive from cohesive environments.

Critique

The critique of the inventory will follow the sequential order of the article in which the inventory is presented, beginning with the theoretical rationale. The authors claim that the theoretical rationale for the development of the inventory is based on the GEQ, which flows from a four-dimensional model of cohesion (Carron et al., 1985). As this four-dimensional model was developed for adults, it may not be appropriate for use with children. Further, the authors also claimed to use the Carron et al. (1985) and Eys et al. (2009) method for measure development, psychometrically-sound principles, and a conceptual model of cohesion to develop the inventory. However, support for all of these claims is not obvious. Specifically, reliance on an existing conceptual model is laudable, but use of the model becomes more tenuous when only two of the four original scales were used. A two-factor model is identified during Phase two of the inventory development, and is a product of the results rather than an overarching guiding model. Although Martin et al. (2012) attempted to understand children's definition of cohesion through focus groups, they failed to operationalize the construct following the constitutive definition, as was done in the development of the GEQ. The introduction also would have benefitted from the inclusion of Eys and colleagues (2009) proposition of a two-factor model of cohesion for youth, or other possible models that are more appropriate for children, for additional support.

Phase two involved a quantitative design that consisted of multiple steps to reduce 172 potential items to 64. The trimming process to obtain 16 items was not clearly described, and the majority of the items (11) already reside in the currently existing youth measure of cohesion (YSEQ). Inclusion of a flow chart outlining the trimming process to describe how the authors reached their final 16 items, and the determination of how each item was related to either task or social cohesion (i.e., the two-factor model) would have been beneficial for the reader. With respect to the latter, the items "as a team, we are united" and "in games, we get along well" were identified by the authors as task questions. However, from a face validity perspective, these could just as easily be categorized as social in nature. In addition, only three of the 16 items in the inventory are novel leaving the reader to question the unique contribution of the inventory to the group literature.

Unlike Eys and colleagues (2009), the authors chose to use a 5-point Likert scale rather than a 9-point scale to rate the items. Martin and colleagues (2012) justify this decision by stating that 1) the scale is more practical for children, 2) 5-point scales have demonstrated high reliability scores, and 3) most scales use 5 to 7 points. These reasons fail to consider the target population's cognitive capacity and ability to respond in a way that accurately reflects young children's judgments. Likert scales are commonly used to elicit responses on a number of self-report questionnaires. However, assuming that Likert ratings are appropriate for use by children and the ratings provided are valid may not be tenable as some children have difficulty using these scales due to their limited cognitive abilities (Benson & Hocevar, 1985; Chambers & Johnston, 2002; Marsh, 1986; Mellor & Moore, 2014).

Young children aged 7-11 in the concrete operational stage of development have the capacity to reason about objects physically present, but experience difficulty when asked to reason about abstract concepts (e.g., internal feelings), and tend to engage in dichotomous thinking (Piaget, 1954). Likewise, younger children have poor discriminating capacity and respond to more extreme scores on Likert-scales than older children when asked to rate social objective and subjective items, which questions their ability to use rating scales appropriately (Chambers & Johnston, 2002; Mellor & Moore, 2014). The inventory also includes negative items, and research has shown that young children are unable to respond appropriately to negative items (i.e., disagree with a negative statement), thus biasing the interpretation of the children's responses (Marsh, 1986). For example, elementary students do not appear to understand negation and respond inappropriately resulting in positive and negative forms of items having different factor structures (Benson & Hocevar, 1985; Marsh, 1986). Research suggests that children may not understand that they can indicate agreement by disagreeing with a negative statement and vice versa (Marsh, 1986). Further, most children have difficulty providing responses on Likert formats and the degree of consistency varies depending on the response format (e.g., low (10%) consistency when using a number response format to moderate (70%) consistency when using words to represent responses). The gold-standard scale format that offers the most consistency and provides the least amount of ambiguity for young participants is a yes/no response (Mellor & Moore, 2014). Children also respond more reliably on Likert responses that reflect the frequency of behaviours or thoughts (Mellor & Moore, 2014), which would be helpful for Martin and colleagues' (2012) inventory items that sometimes use a vague term such as "a lot". Thus, in addition to the readability of the items and the practicality of a 5-point Likert scale for children, Martin and colleagues (2012) need to consider cognitive development factors.

Following the development of the 16-item questionnaire, a CFA was conducted in Phase three. The authors reported that a CFA was used instead of an exploratory factor analysis (EFA) because of the authors' previous qualitative analysis (Martin et al., 2011) and the existence of the two-factor model proposed by Eys et al. (2009) for youth. However, conducting a CFA may have been premature as the inventory being analyzed was new. CFA is typically conducted when researchers have clear expectations about which variables will load on a specified number of factors (Tabachnick & Fidell, 2013). The number of underlying components and possible cross-loadings of items are unclear as this was the first time the inventory has been used; therefore, the use of an EFA would likely have been more informative at this stage. For example, of the seven task cohesion items, two were "I" items and five were "we" items, whereas the social items consisted of five "I" and two "we" items. Given this split, other models, such as a two-factor model comprised of Attraction to the Group and Group Integration dimensions (i.e., factors found in the original GEQ), could also be appropriate. A CFA prevents items from loading freely without constraints, and thus prevents identification of an alternative model, such as a potential one or three-factor model, or a model with different categorization. For example, it is possible that younger children view cohesion as one entity rather than as split into task and social factors. As support for this speculation, Smith, Smoll, and Barnett (1995) found a unitary measure of sport anxiety held up better in younger participants than the multivariate measure (physical and cognitive symptoms of anxiety) typically found with adults. Following the EFA, a CFA could have been run to validate the factor structure in a new sample (e.g., Phase 4).

In the discussion, the authors conclude that the inventory is a novel addition to the cohesion literature that has practical and theoretical implications. Although a new inventory was developed, the novelty of the contribution appears to be limited as the inventory is strikingly similar to an existing youth measure of cohesion

(YSEQ). Numerous strengths of the inventory were noted throughout the discussion by the authors, but limitations were neglected. As one example, Martin and colleagues (2012) failed to acknowledge that the inventory frames cohesion in a positive perspective, which limits researchers to identifying the positive benefits of cohesion with the inventory, while minimizing the effects of the personal costs of group cohesion (Hardy, Eys & Carron, 2005).

Conclusion

In support of Martin and colleagues' (2012) initial rationale for developing a child cohesion inventory, the CSCQ has been used by researchers to assess group cohesion in children. Specifically, researchers have used the inventory to determine whether perceptions of cohesion mediate the relationship between social acceptance and commitment and enjoyment in children's sports (Donkers, Martin, Paradis & Anderson, 2014), as well as to examine the relationship between peer-initiated motivational climate and perceptions of task and social cohesion (McLaren, Newland, Eys & Newton, 2016). The inventory was also adapted for another setting to examine the effect of movement synchrony in facilitating social bonds in an intergroup context (Tuncgenc & Cohen, 2016).

Although an appropriate inventory to assess cohesion in children is important, the contribution of this inventory to the group dynamics literature at this time may be limited, as the authors did not use an overarching conceptual model to guide the development of the measure, generated a limited number of novel items, failed to address the common concerns for using Likert scales with young children, prematurely used a CFA to evaluate the factor model, and neglected to address the limitations of the inventory. At the least, future researchers should continue to examine the psychometrics of the inventory and the appropriateness of its underlying two-dimension structure.

References

Benson, J., & Hocevar, D. (1985). The impact of item phrasing on the validity of attitude scales for elementary school children. *Journal of Educational Measurement*, *22*, 231-240. doi:10.1111/j.1745-3984.1985.tb01061.x

Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1998). The measurement of cohesiveness in sport groups. *Advances in sport and exercise psychology measurement* (pp. 213-226). Morgantown, WV: Fitness Information Technology.

Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (2002). *The Group Environment Questionnaire: Test manual.* Morgantown, WV: Fitness Information Technology.

Carron, A. V., Colman, M.M., Wheeler, J., & Stevens, D. (2002). Cohesion and performance in sport: A meta-analysis. *Journal of Sport & Exercise Psychology, 24,* 168-188.

Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of Sport Psychology*, *7*, 244-266. Retrieved from http://journals.humankinetics.com/AcuCustom/Sitename/Documents/DocumentItem/8793.pdf

Chambers, C. T., & Johnston, C. (2002). Developmental differences in children's use of rating scales. *Journal of Pediatric Psychology*, *27*, 27-36. doi:10.1093/jpepsy/27.1.27

Dion, K. (2000). Group cohesion: From "field of forces" to multidimensional construct. *Group Dynamics: Theory, Research and Practice, 4,* 7-20. doi:http://dx.doi.org/10.1037/1089-2699.4.1.7

Donkers, J. L., Martin, L., Paradis, K. F., & Anderson, S. (2014). The social environment in children's sport. *International Journal of Sport Psychology*, *45*, 1-20. doi:10.7352/IJSP

Eys, M. A., Loughead, T. M., Bray, S. R., & Carron, A. V. (2009). Development of a cohesion questionnaire for youth: The Youth Sport Environment Questionnaire. *Journal of Sport & Exercise Psychology, 31,* 390–408. doi:http://scholars.wlu.ca/kppe_faculty/3

Eys, M.A., & Spink, K.S. (2016). Forecasts to the future: Group dynamics. In R. Schinke, K. McGannon, & B. Smith (Eds.), *Routledge International Handbook of Sport Psychology* (pp. 572-580). London: Routledge.

Hardy, J., Eys, M. A., & Carron, A. V. (2005). Exploring the potential disadvantages of high cohesion in sports teams. *Small Group Research*, *36*, 166-187. doi: 10.1177/1046496404266715

McLaren, C. D., Newland, A., Eys, M., & Newton, M. (2016). Peer-initiated motivational climate and group cohesion in youth sport. *Journal of Applied Sport Psychology*, *(online only)*, 1-13. doi:http://dx.doi.org/10.1080/10413200.2016.1190423

Marsh, H. W. (1986). Negative item bias in ratings scales for preadolescent children: A cognitive-developmental phenomenon. *Developmental Psychology*, *22*, 37-49. doi:http://dx.doi.org/10.1037/0012-1649.22.1.37

Martin, L. J., Carron, A. V., Eys, M. A., & Loughead,T. M. (2011). Children's perceptions of cohesion. *Sport and Exercise Psychology Review, 7,* 11–25. doi:http://scholars.wlu.ca/kppe_faculty/28

Martin, L. J., Carron, A. V., Eys, M. A., & Loughead, T. M. (2012). Development of a cohesion inventory for children's sport teams. *Group Dynamics: Theory, Research,* *and Practice*, *16*, 68-79. doi:http://dx.doi.org/10.1037/a0024691

Mellor, D., & Moore, K. A. (2014). The use of Likert scales with children. *Journal of Pediatric psychology*, *39*, 369-379. doi:10.1093/jpepsy/jst079

Piaget, J. (1954). *The construction of reality in the child*. New York, NY: Basic Books.

Smith, R.E., Smoll, F.L., & Barnett, N.P. (1995). Reduction of children's sport performance anxiety through social support and stress-reduction training for coaches. *Journal of Applied Developmental Psychology, 16,* 125–142. doi:10.1016/0193-3973(95)90020-9

Tabachnick, B., & Fidell, L. (2013). *Using multivariate statistics (6th ed.)*. Boston, MA: Pearson Education, Inc.

Tunçgenç, B., & Cohen, E. (2016). Movement synchrony forges social bonds across group divides. *Frontiers in Psychology*, *7*, 782. doi:http://dx.doi.org/10.3389/fpsyg.2016.00782