SA Journal of Industrial Psychology
ISSN: (Online) 2071-0763, (Print) 0258-5200

Neuromyths in Industrial and Organisational Psychology in South Africa: Prevalence and impact

Authors:
Ingra du Buisson-Narsai[1]
Talia Fisher[2,3]
Andrew Morris[4]
Xander van Lill[3,4]

Affiliations:
[1]NeuroCapital Consulting and Global Institute of Organisational Neuroscience Pty Ltd, Johannesburg, South Africa

[2]Pivotal Consulting, Tel Aviv-Yafo, Israel

[3]Department of Industrial Psychology and People Management, College of Business and Economics, University of Johannesburg, Johannesburg, South Africa

[4]Department of Product and Research, JVR Africa Group, Johannesburg, South Africa

Corresponding author:
Ingra Du Buisson-Narsai,
ingra@neurocapital.co

Dates:
Received: 27 Mar. 2023
Accepted: 23 Nov. 2023
Published: 29 Mar. 2024

How to cite this article:
Du Buisson-Narsai, I., Fisher, T., Morris, A., & Van Lill, X. (2024). Neuromyths in Industrial and Organisational Psychology in South Africa: Prevalence and impact. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde, 50*(0), a2097. https://doi.org/10.4102/sajip.v50i0.2097

Orientation: Industrial Psychologists (IPs) could significantly benefit from integrating neuroscientific evidence into their practices, provided they critically engage with scholarly research rather than rely on unsupported assertions.

Research purpose: The study aimed to assess the prevalence of neuroscientific misconceptions among IPs, student psychologists, and intern psychologists in South Africa as well as advocate for enhanced foundational knowledge in applied organisational neuroscience within industrial psychology.

Motivation for the study: The emerging field of organisational neuroscience, which applies brain science to workplace behaviour, is particularly vulnerable to misconceptions that could hinder its development.

Research approach/design and method: Using a cross-sectional survey, this research evaluated the knowledge of neuro misconceptions at one point in time within a convenience sample of (n = 98), consisting of registered student psychologists (n = 7; 7%), intern psychologists (n = 8; 10%), and IPs (n = 83; 85%).

Main findings: Results indicated that this sample endorses many neuromyth conceptions. There was significant disparity in the endorsement of misconceptions between those with and without neuroscientific training, highlighting a knowledge gap.

Practical/managerial implications: These findings underscore the necessity for improved education in applied organisational neuroscience among IOPs, suggesting integration into training and education programs.

Contribution/value-add: This pioneering study in South Africa emphasises the role of general knowledge, specific training in applied organisational neuroscience, and critical thinking in psychological research as key to combating neuromyths, marking a meaningful contribution to the field.

Keywords: organisational neuroscience; neuromyths; applied neuroscience; neuroeducation; organisational psychology.

Introduction

Industrial psychology is a subfield of psychology that applies psychological theories, principles, and research findings to the workplace. In South Africa, industrial psychology falls under the Health Professions Council of South Africa (HPCSA), which regulates and guides registered healthcare professions and protects the public by setting contextually relevant standards for healthcare training and ethical practice. A new field of interest in industrial psychology is Organisational Neuroscience, which is built on the premise that human cognition, emotion, and behaviour are underpinned by biological processes in the brain and are, therefore, a crucial focal point in expanding our understanding of work-related outcomes based on human effort (Geldenhuys, 2022).

Both empirical organisational neuroscience studies (using neuroscience methods such as functional magnetic resonance imaging) and applied neuroscience studies (using translational approaches by interpreting neuroscience research findings) have benefits in the work context (Boyatzis et al., 2012; Geldenhuys, 2022; Waldman et al., 2011). Empirical and applied neuroscience studies pave the way for organisational scholars and practitioners to advance existing theories of organisational behaviour, thereby increasing the explanatory power of psychological concepts by clarifying the neuroscientific principles that underpin behaviour.

Organisational neuroscience is a nascent field of study that explores the applications of brain science for workplace behaviours (Becker et al., 2011). Coinciding with the emergence of applied organisational neuroscience, increased media attention has spiked interest in the field. Some opportunistic implications include the pressure to profiteer from so-called 'neuroscience methods' that can optimise human performance in the workplace. Sadly, some of these 'progressive' practices are not evidence-based or take cognisance of the latest research findings in applied neuroscience, which could create scepticism regarding the field of applied organisational neuroscience (Nowack & Radecki, 2018). The problem is that organisational neuroscience, as an emerging field of applied neuroscience, is open to the ubiquity and misconception of knowledge. At worst, applied organisational neuroscience might be abandoned as a fad rather than being incorporated as an important training field and area of practice in industrial psychology.

Concerns have also been raised with regard to the study of organisational neuroscience, perhaps aimed more at the ethos of applied organisational neuroscience than the rigour with which these studies were conducted. Ashkanasy et al. (2014) raise three of these concerns, namely:

1. A fear that the field might be reductionist or reduce complex organisational behaviour to overly simplistic brain functions, even though there continues to be a move away from localising behaviour in specific regions towards an appreciation of the implications of networks operating within the brain.
2. The research findings based on neuroscientific methods to investigate human behaviour in the workplace are built on small research samples, and a lack of replication studies exists even though some technologies such as the EEG (electroencephalogram) and qEEG (quantitative electroencephalography) might make the application of neuroscience to the workplace more accessible.
3. Scepticism regarding the application of neuroscience past the individual level of analysis, even though group-based studies of the effects of social interaction have been conducted from a neuroscientific point of view.

Industrial Psychologists could greatly benefit from drawing on neuroscientific evidence that complements, not supplants, existing theories, evidence, and practices. However, to do so, IPs must engage in meaningful scholarly dialogue and follow practices supported by neuroscientific evidence to ensure they do not promote or espouse falsehoods. This paper aims to reflect on the prevalence of neuromyth conceptions among IPs in South Africa, and offers a roadmap for furthering the state of this new field by making recommendations for training, teaching and education, as well as research and practice.

Methodology

In 2020, the Interest Group for Applied Organisational Neuroscience (IGAON) of the Society for Industrial and Organisational Psychology of South Africa (SIOPSA) embarked on a cross-sectional survey aimed at gaining an impression of IPs knowledge of applied organisational neuroscience. The findings (Van Lill et al., 2022) were presented at the 24th Annual SIOPSA Conference. The study involved a convenience sample (n = 98) of registered student psychologists (n = 7; 7%), intern psychologists (n = 8; 10%), and IPs (n = 83; 85%).

Eight statements were adapted from the work of Dekker et al. (2012), Papadatou-Pastou et al. (2017), and MacDonald et al. (2017) to survey the endorsements of neuro misconceptions among South African IPs. The statements were chosen based on their relevance to industrial psychology. Statements' relevance for inclusion was also scrutinised based on a review of meta-analytical evidence supporting the statements' validity (Briner & Rousseau, 2011). In the absence of meta-analytical studies, convergence was sought on the statements between the identified credible research articles. Evidence either supporting or refuting these statements will be made available upon request from the primary author of this paper. Response categories were adopted from the work of Kagee and Breet (2015). The invitation to participate in the study targeted members of SIOPSA's LinkedIn group (N = 3651 at the time), and included an electronic link to the survey. The inclusion or exclusion criteria for the sample were: (1) individuals needed to have studied in South Africa, and (2) be a registered student, intern, or industrial psychologist with the HPCSA. A total of 98 usable questionnaires were returned; thus, a response rate of 3% (Van Lill et al., 2022). Although this low response rate limits the generalisability of findings, the sample size was comparable to those of previous studies, such as Kagee and Breet in 2013 (n = 103).

Raw total scores were calculated for each participant based on the knowledge survey administered. To examine the differences in mean scores between different biographical groups (date of education, neuroscience training, and level of education), the WRS2 Package Version 1.1-3 in R was utilised. Subsequently, robust t-tests and an analysis of variance (ANOVA) were conducted based on the raw total scores from the knowledge survey. The methodology employed was as described by Mair and Wilcox (2020, 2021).

Ethical considerations

Ethical clearance to conduct this study was obtained from the Research Ethics Committee of the Department of Industrial Psychology and People Management at the University of Johannesburg (No. IPPM-2021-589).

Results

At a cursory level, similar to the findings of Kagee and Breet (2015), statements such as 'We use only 10% of our brains' and 'Left- and right-brain dominance explain behavioural differences in humans' are still endorsed by many of IPs – 44% and 58% respectively by the respondents in the present study. Interestingly, the neuro misconception that obtained overall majority endorsement was 'Individuals learn better when they receive information in their preferred learning style', with 91% of the IPs endorsing this misconception. Table 1 provides a breakdown of the frequency of endorsement for the different items reported in the survey.

To determine whether pertinent biographical variables might influence the endorsement of myths, robust *t*-tests and an ANOVA were conducted to inspect group differences in performance on the knowledge survey related to the endorsement of neuromyths. The averages (*M*), standard deviations (SD), and explanatory measures of the effect sizes were calculated. The explanatory measure of the effect size does not require equal variances between the groups tested and can be generalised to multiple group settings. Values of 0.10, 0.30, and 0.50 correspond to small, medium, and large effects (Mair & Wilcox, 2021). The analyses yielded the following results (Van Lill et al., 2022):

1. The mean difference in the results of the knowledge survey for respondents who studied before 2020 ($M = 23.40$; SD = 3.47) and after 2020 ($M = 23.36$; SD = 2.67) was statistically non-significant – t (56.93) = 0.43; $p = 0.67$; explanatory effect size = 0.06. Neuroscience research proliferated in the 21st century, which the researchers initially thought might have an impact on IPs receiving their training after 2020.
2. The mean difference in the results of the knowledge survey for respondents who underwent no post-qualification training in neuroscience ($M = 22.28$; SD = 2.78) or some post-qualification neuroscience training ($M = 24.27$; SD = 3.38) was statistically significant – t (41.00) = 2.35; $p = 0.02$; explanatory effect size = 0.37.
3. The mean differences in the results of the knowledge survey for professionals with an honours degree ($M = 23.07$; SD = 2.96), a master's degree ($M = 23.33$; SD = 3.11), and a doctoral degree ($M = 23.85$; SD = 3.29) were statistically non-significant – F (14.50) = 0.14; $p = 0.87$; explanatory effect size = 0.29.

Recommendations for furthering the field of applied organisational neuroscience

Based on the evidence of the endorsement of neuromyths among IPs, education in psychology is important but insufficient to ensure that IPs can distinguish neuroscientific facts from fiction. The results further suggest that a collaborative effort by several institutions is crucial for providing them with the knowledge and skills to be able to critically evaluate and uncover neuroscientific fact from fiction.

More work is therefore required to strengthen IPs' knowledge in applied organisational neuroscience (Nowack & Radecki, 2018), which will require a joint effort between stakeholders like educational and research institutions, lead bodies, and proponents of organisational neuroscience in the workplace.

Taking this into account, we recommend the following three avenues to strengthen IPs' knowledge and understanding of applied organisational neuroscience: training, teaching and education, and, lastly, research and practice.

Training

Training programmes, seminars, and workshops centred around applied organisational neuroscience can offer IPs the opportunity to enhance their knowledge and understanding of organisational theories and practice from an applied neuroscience standpoint. Kagee and Breet (2015) highlight the need to adopt a scientist-practitioner model in training programmes. This means that organisational neuroscience training programmes would have to offer both knowledge on the theory related to human behaviour and supporting empirical evidence. Additionally, these programmes should encourage practitioners to have a healthy level of scepticism regarding fashionable ideas and to critically evaluate the evidence for initiatives based on the convergence of findings across different studies or meta-reviews (Briner & Rousseau, 2011). Furthermore, independent organisations outside of universities (including professional societies), verified through credible institutions, could potentially help maintain an up-to-date knowledge base for applied organisational neuroscience among South African IPs.

Access to an interactive online portal of articles on organisational neuroscience that present an accurate summary of the latest research findings relevant to the

TABLE 1: Respondents' endorsement of neuro myth-conceptions.

Item	Definitely false		Probably false		Probably true		Definitely true	
	n	%	*n*	%	*n*	%	*n*	%
*Individuals learn better when they receive information in their preferred learning style.	5	5	4	4	27	28	62	63
General mental ability is related to job and training performance.	15	15	23	23	28	29	32	33
Intentional practice can change the structure of some parts of the brain.	0	0	1	1	32	33	65	66
New connections in the brain can occur in old age.	0	0	8	8	31	32	59	60
*Left and right brain dominance explain behavioural differences in humans.	13	13	28	29	40	41	17	17
*We only use 10% of our brains.	30	31	26	27	40	41	17	17
*Mental capacity is genetic and cannot be changed by environmental factors.	54	55	39	40	3	3	2	2
Vigorous physical exercise can improve mental function.	3	3	10	10	41	42	44	45

*, indicates neuro myth-conceptions.

workplace could further strengthen a scientific ethos with regard to applied neuroscience among IPs (Briner & Rousseau, 2011). In addition, IPs could be introduced and directed to websites with valid information on the brain. Apart from relaying information, seminars or colloquia must be held around literature. These should promote a critical evaluation of the existing literature to help practitioners infer meaningful and practical implications from scientific findings.

Teaching and education

Research on myths in psychology has shown that one of the most effective evidence-based ways to confront scientific myths is by directly refuting misconceptions in introductory classes (Guzzetti et al., 1993; Kowalski & Taylor, 2009, 2011). Introductory modules should emphasise the debunking of widely supported neuromyths, and students should be trained to view neuroscientific findings critically. Considering the above findings, and to reduce the current misconceptions, the neuroscience literacy of prospective IPs could be enhanced by incorporating neuroscience courses into their initial tertiary education. This aligns with several other authors and organisations who suggested including neuroscience in undergraduate education and professional development (Busso & Pollack, 2014; Rato et al., 2013).

It was confirmed by the various heads of department at South African universities that only the University of South Africa provides neuroscientific teaching to students enrolled in industrial psychology qualifications, specifically in certain second-year, honours, and master's-level modules. It might be meaningful for industrial psychology departments in South Africa to initially form cross-disciplinary educational teams from various faculties to train IPs in fields such as neuroscience (Han et al., 2019).

Research and practice

Neuroscience is a potentially powerful tool in organisational behaviour practices and holds great potential in advancing organisational theories (Cropanzano & Becker, 2013). However, integrating neuroscience research with industrial psychology is a challenging endeavour. Feiler and Stabio (2018) provided foundational pillars in educational neuroscience, which can be extended to research in organisational neuroscience. According to these authors, three core research themes form the pillars of applied neuroscience: (1) application, (2) interdisciplinary collaboration, and (3) translation of technical language. These themes have also been deployed in research in organisational settings in the following manner.

1. **Application:** Applied neuroscience studies focus on applying discoveries about the brain to organisational settings and using neuroscience to inform innovations in organisational behaviour. For example, Garnett et al. (2022) explored participants' responses to emergent change (unplanned and complex phenomena that unfold in systems) from an applied neuroscience perspective. They found that emergent change impacts individuals on a physiological, emotional, and interpersonal level. Geldenhuys (2020), as an alternative example, found that neuro-psychotherapy could serve as a valuable foundation in an appreciative inquiry into enhancing well-being in the workplace. In yet another example, Dahl et al. (2020) integrated research from cognitive and affective neuroscience and organisational and clinical psychology to create a framework of well-being and human flourishing. As a final example, DeYoung's (2015) work on personality demonstrates that cross-disciplinary application from a neuroscience perspective is meaningful. DeYoung (2015) integrated personality, neuroscience, evolutionary biology, and information technology perspectives to develop the Cybernetic Big Five Theory (CB5T) of personality. This theory is currently playing a vital role in providing a deeper understanding of the subcomponents of the Big Five personalities, namely the 10 personality aspects. These examples are aligned with the suggestion by Healey and Hodgkinson (2014) to use translational research or theory adaptation to transfer insights from neuroscience to new applications in a manner that fits the needs of the application domain.

   The newly launched *Journal of Applied Neurosciences* (JAN) serves as a vehicle for the scientific translation and application of neuroscience and other biological underpinnings of human behaviour in the contexts of psychology, clinical practice, business, education, spirituality and religion, and sport (Geldenhuys, 2022). Ongoing research in applied organisational neuroscience would undoubtedly also add to the existing literature and build on the knowledge of the current evidence base.
2. **Interdisciplinary collaboration:** The second theme is that of interdisciplinary or even multidisciplinary collaboration, in which the whole is greater than the sum of its parts. This would encourage smooth interaction and understanding between the fields of neuroscience and industrial psychology. Waldman et al. (2019) highlight both individual-level (emotional intelligence, mood, cognitive abilities, organisational justice) and team-level (emotional contagion, shared mental models, and leadership) constructs that could be fruitful areas for interdisciplinary collaboration between industrial psychology and neuroscience.
   A starting point for such interdisciplinary collaboration could be training in neuroscientific methods. Industrial Psychologists are not trained in neuroscientific methods such as qEEG. These methods are becoming more user-friendly, affordable, and practical, and organisational scholars and practitioners are encouraged to undergo the necessary training to contribute to applied organisational neuroscience. These methods can be used to complement self-report inventories with which organisational scholars

and practitioners are familiar (Waldman et al., 2019). Organisational scholars and practitioners can thus benefit from applying neuroscientific findings to transform the functioning of individuals, teams, and organisations. Industrial Psychologists should, therefore, be encouraged to engage in neuroscientific research and practice (using proven measures of intervention) to contribute to the development of the field of applied organisational neuroscience.

3. **Translation of language:** A third theme is the translation of the languages, thought paradigms, and methods that have historically belonged to different disciplines. The field of neuroscience involves technical jargon and complex methods, and therefore the field of applied organisational neuroscience can act as the 'professional interpreter' to help make this technical research more accessible and understandable to organisational scholars and practitioners.

In summary, operationalising neuroscience along these three avenues could contribute to promoting, networking, collaborating, and mobilising research in applied organisational neuroscience. This should enable IPs to hone their sceptical and critical thinking skills in order to be able to discern neuroscientific fact from fiction.

Conclusion

The results of the present study raise concerns regarding the prevalence of neuromyths subscribed to by South African IPS. Organisational neuroscience, or the application of neuroscientific research findings in the workplace, is an emerging field in industrial psychology and, therefore, susceptible to misunderstandings and is compromised by neuromyths. The risk is that organisational scholars and practitioners might prematurely seek definitive statements about the nature of the brain. Basing psychological practices on false information or unverified beliefs can lead to ineffective strategies, harm client well-being, and undermine the credibility and ethical standards of the profession.

In conclusion, we recommend that proactive and deliberate changes be made, with the aim to contribute to the advancement of the field of applied organisational neuroscience through three avenues: training, teaching and education, and research and practice. Independent institutions have a crucial role to play by assisting IPs in staying abreast of state-of-the-art organisational neuroscience findings throughout their professional journeys. We recommend that training institutions provide both the theory and empirical findings on neuroscience to help organisational scholars and practitioners develop their critical thinking skills. Although institutions can play this facilitative role, practitioners still bear the primary individual responsibility for staying abreast of developments within their field.

We further suggest that undergraduate and postgraduate industrial psychology qualifications include modules on applied organisational neuroscience theory, and that educational institutions encourage cross-disciplinary collaboration. Finally, IPs may need to begin collaborating with neuroscientists and other related professionals to grasp neuroscientific methodology, and they should start experimenting with research in this domain. Given the historical inequalities and abuses of psychological insights within South Africa, there is an understandable level of mistrust in psychological science. This underscores the importance of receiving proper training and will likely bolster the credibility and effectiveness of the field as the gap is bridged between scientific advancements and societal needs in a culturally sensitive and equitable manner.

Acknowledgements

We would like to thank every member of Society for Industrial and Organisational Psychology of South Africa (SIOPSA) who was willing to participate in this study.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

I.d.B.-N., T.F., A.M. and X.v.L. were all involved in conceptualisation, writing the original draft, and reviewing and editing the final draft. I.d.B.-N. and T.F. further performed the investigation, project administration, and data curation. A.M. was involved in methodology, investigation, visualisation, and data curation, while X.v.L. was involved in methodology and formal analysis.

Funding information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Data availability

A breakdown of scores on all the items from the knowledge test are available upon reasonable request from the corresponding author, I.d.B.-N.

Disclaimer

The views and opinions expressed in this article are those of the authors and are the product of professional research. It does not necessarily reflect the official policy or position of any affiliated institution, funder, agency, or that of the publisher. The authors are responsible for this article's results, findings, and content.

References

Ashkanasy, N.M., Becker, W.J., & Waldman, D.A. (2014). Neuroscience and organisational behavior: Avoiding both neuro-euphoria and neuro-phobia. *Journal of Organizational Behavior*, *35*(7), 909–919. https://doi.org/10.1002/job.1952

Becker, W.J., Cropanzano, R., & Sanfey, A.G. (2011). Organisational neuroscience: Taking organisational theory inside the neural black box. *Journal of Management*, *37*(4), 933–961. https://doi.org/10.1177/0149206311398955

Boyatzis, R.E., Good, D., & Massa, R. (2012). Emotional, social, and cognitive intelligence and personality as predictors of sales leadership performance. *Journal of Leadership & Organizational Studies*, *19*(2), 191–201. https://doi.org/10.1177/1548051811435793

Briner, R.B., & Rousseau, D.M. (2011). Evidence-based I-O psychology: Not there yet. *Industrial and Organisational Psychology: Perspectives on Science and Practice*, *4*(1), 3–22. https://doi.org/10.1111/j.1754-9434.2010.01287.x

Busso, D.S., & Pollack, C. (2014). No brains left behind: Consequences of neuroscience discourse for education. *Neuroscience and Education*, *40*(2), 168–186. https://doi.org/10.1080/17439884.2014.908908

Cropanzano, R., & Becker, W.J. (2013). The promise and peril of organisational neuroscience: Today and tomorrow. *Journal of Management Inquiry*, *22*(3), 306–310. https://doi.org/10.1177/1056492613478518

Dahl, C.J., Wilson-Mendenhall, C.D., & Davidson, R.J. (2020). The plasticity of well-being: A training-based framework for the cultivation of human flourishing. *Proceedings of the National Academy of Sciences (PNAS)*, *117*(51), 32197–32206. https://doi.org/10.1073/pnas.2014859117

Dekker, S., Lee, N.C., Howard-Jones, P., & Jolles, J. (2012). Neuromyths in education: Prevalence and predictors of misconceptions among teachers. *Frontiers in Psychology*, *3*, 1–8. https://doi.org/10.3389/fpsyg.2012.00429

DeYoung, C.G. (2015). Cybernetic Big Five theory. *Journal of Research in Personality*, *56*, 33–58. https://doi.org/10.1016/j.jrp.2014.07.004

Feiler, J.B., & Stabio, M.E. (2018). Three pillars of educational neuroscience from three decades of literature. *Trends in Neuroscience and Education*, *13*, 17–25. https://doi.org/10.1016/j.tine.2018.11.001

Garnett, G., Venter, J.M., & Geldenhuys, D.J. (2022). Experiences of emergent change from an applied neuroscience perspective. *Journal of Applied Neuroscience*, *1*(1), a2. https://doi.org/10.4102/jan.v1i1.2

Geldenhuys, D.J. (2020). Valuing and adapting appreciative inquiry to enhance well-being using a neuro psychotherapeutic framework. *SA Journal of Industrial Psychology*, *46*(1), 1–12. https://doi.org/10.4102/SAJIP.V46I0.1823

Geldenhuys, D.J. (2022). Strengthening applied neuroscience networks: A quest for interdisciplinarity. *Journal of Applied Neurosciences*, *1*(1), 1. https://doi.org/10.4102/jan.v1i1.1

Guzzetti, B., Snyder, T., Glass, G., & Gamas, W. (1993). Promoting conceptual change in science: A comparative meta-analysis of instructional interventions from reading education and science education. *Reading Research Quarterly*, *28*(2), 117–159. https://doi.org/10.2307/747886

Han, H., Soylu, F., & Anchan, D.M. (2019). Connecting levels of analysis in educational neuroscience: A review of multi-level structure of educational neuroscience with concrete examples. *Trends in Neuroscience and Education*, *17*, 100113. https://doi.org/10.1016/j.tine.2019.100113

Healey, M.P., & Hodgkinson, G.P. (2014). Rethinking the philosophical and theoretical foundations of organisational neuroscience: A critical realist alternative. *Human Relations*, *67*(7), 765–792. https://doi.org/10.1177/0018726714530014

Kagee, A., & Breet, E. (2015). Psychologists endorsement of empirically unsupported statements in psychology: *Noch einmal*. *South African Journal of Psychology*, *45*(3), 397–409. https://doi.org/10.1177/0081246315581345

Kowalski, P., & Taylor, A.K. (2009). The effect of refuting misconceptions in the introductory psychology class. *Teaching of Psychology*, *36*(3), 153–159. https://doi.org/10.1080/00986280902959986

Kowalski, P., & Taylor, A.K. (2011). Effectiveness of refutational teaching for high- and low-achieving students. *Journal of the Scholarship of Teaching and Learning*, *11*(1), 79–90. https://scholarworks.iu.edu/journals/index.php/josotl/article/view/1805

MacDonald, K., Germine, L., Anderson, A., Christodoulou, J., & McGrath, L.M. (2017). Dispelling the myth: Training in education or neuroscience decreases but does not eliminate beliefs in neuromyths. *Frontiers in Psychology*, *8*, 1–16. https://doi.org/10.3389/fpsyg.2017.01314

Mair, P., & Wilcox, R. (2020). Robust statistical methods in R using the WRS2 package. *Behavior Research Methods, 52*(2), 464–488. https://doi.org/10.3758/s13428-019-01246-w

Mair, P., & Wilcox, R. (2021). *A collection of robust statistical methods*. Retrieved from https://cran.r-project.org/web/packages/WRS2/WRS2.pdf

Nowack, K., & Radecki, D. (2018). Introduction to the special issue: Neuro-myth conceptions in consulting psychology – Between a rock and a hard place. *Consulting Psychology Journal: Practice and Research*, *70*(1), 1. https://doi.org/10.1037/cpb0000108

Papadatou-Pastou, M., Haliou, E., & Vlachos, F. (2017). Brain knowledge and the prevalence of neuromyths among prospective teachers in Greece. *Frontiers in Psychology*, *8*, 1–13. https://doi.org/10.3389/fpsyg.2017.00804

Rato, J.R., Abreu, A.M., & Castro-Caldas, A. (2013). Neuromyths in education: What is fact and what is fiction for Portuguese teachers? *Educational Research*, *55*(4), 441–453. https://doi.org/10.1080/00131881.2013.844947

Van Lill, X., Fisher, T., Morris, A., & Du Buisson-Narsai, I. (2022). *The prevalence of neuro-myth conceptions and its implications for industrial psychology in South Africa*. Presented at the 24th Annual SIOPSA conference.

Waldman, D.A., Balthazard, P.A., & Peterson, S.J. (2011). Leadership and neuroscience: Can we revolutionise the way that inspirational leaders are identified and developed? *Academy of Management Perspectives*, *25*(1), 60–74. https://doi.org/10.5465/AMP.2011.59198450

Waldman, D.A., Wang, D., & Fenters, V. (2019). The added value of neuroscience methods in organisational research. *Organisational Research Methods*, *22*(1), 223–249. https://doi.org/10.1177/1094428116642013