

# Enhancing scientific credibility: An open science strategy for the *South African Journal of Industrial Psychology*



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**Orientation:** The purpose of this editorial was to provide an introduction and a general overview of the special issue on *Open Science Practices: A Vision for the Future of SAJIP*, as hosted in the 45th edition of the *South African Journal of Industrial Psychology* (SAJIP). Specifically, the aim was to provide a viable, practical and implementable strategy for enhancing the scientific credibility, transparency and international stature of SAJIP.

**Keywords:** Open-science; Replication; Reproducibility; Industrial Psychology; Organizational Psychology; Academic Publishing.

## Introduction

Psychological science is built on an organised system of cyclical scepticism, which is centred around continuously casting doubt on what is already known (Lenoir, 1997). Beliefs about reality and the nature of the human condition should only provisionally be accepted, continuously challenged, purposefully refined and structurally replaced as our understanding of the world develops (Frankenhuis & Nettle, 2018). By its mere definition, the 'science' component within psychological science dictates that we should focus on discovering when and why theories do not work, scrutinising the contexts under which our predictions do not hold up, and be sceptical of our own realities. In effect, science incentivises the scrutiny of theories, ideas and beliefs in order to advance a discipline, refine a theory or to develop new ideas. Paradoxically, Frankenhuis and Nettle (2018) pointed out that within our discipline, scientists are in fact discouraged or even incentivised to de-emphasise doubt and uncertainty in an attempts to get published. Psychological scientists are eager to manipulate data; suppress samples, hypotheses after the results are already known; and employ sophisticated means to find that ever illusive significant *p*-value (Camerer et al., 2018; Murphy, 2019), all in an attempt to please reviewers, confirm own biases or to satisfy the will of journal editors (Bakker, Van Dijk, & Whicherts, 2012).

These 'questionable research practices' (QRPs) are not just contained in a single sub-discipline of psychology but are present in everything ranging from social and positive psychology through to industrial and organisational psychology (IOP) (Banks et al., 2016a). This has resulted in various critiques relating to the methods we employ, the trustworthiness of the results we produce and the validity of the interventions that we design (Aguinis & Solarino, 2019; Banks & O'Boyle, 2013; Banks et al., 2016a, 2016b; Bedeian, Taylor, & Miller, 2010; Bosco et al., 2016). In effect, it has resulted in what is referred to by the media as 'a confidence crisis' in all psychology research domains (Van Zyl, Efendic, Rothmann, & Shankland, 2019; Van Zyl & Junker, 2019). This confidence crisis is the outcome of a dynamic interaction between inherent structural problems within the discipline (Efendic & Van Zyl, 2019), methodological issues present in how we conduct our research (Murphy, 2019), editorial policies of the journals we publish in (Bussin), our own (in)competence and that of our reviewers or editors (Van Zyl & Junker, 2019), academic institutional problems (e.g. research quotas and the tenure system) (Hoole, 2019) and the toxic nature of the environment in which we work (Veldsman, 2019). But are these issues present in the South African IOP context?

In our opinion paper, we attempted to answer this specific question (Efendic & Van Zyl, 2019). We argued that the South African IOP discipline is facing similar challenges associated with its scientific integrity, credibility and trustworthiness (Efendic & Van Zyl, 2019). We used examples from the latest volumes of the *South African Journal of Industrial Psychology* (SAJIP) to show (1) some of the QRPs our researchers employ, (2) that our editorial policies may contribute to QRPs, (3) that the ever-increasing publication demands placed on academics result in QRPs, (4) that publication biases may facilitate QRPs, (5) that methodological and research design issues are

present in SAJIP, (6) that perverse financial incentives for publications may lead to researchers engaging in QRPs and (7) that conscious misconduct of researchers may also play a role. We argued that these matters are aggravated by a lack of transparency on the part of both the researchers and the SAJIP. We substantiated these claims with examples from recent publications within SAJIP and provided suggestions for both authors and the journal on how these could be addressed. Primarily, we argued for the adoption of more open science practices (OSPs) within the journal.

Our opinion paper sparked an interesting debate as to the future of IOP research within South Africa and the role that SAJIP may play in managing this process. Upon its publication, the current editorial board were invited to write scholarly commentaries or rebuttals to the paper in order to develop a strategy for the journal to enhance the credibility, transparency and international stature of IOP research within South Africa. This led to the development of this special section on *Open Science Practices: A Vision for the Future of SAJIP*.

The purpose of this special section of SAJIP was to expand the current debate on the credibility of our discipline and to (Efendic & Van Zyl 2019):

[D]evelop a clear strategy on how [the confidence crisis in IOP] could be managed, what the role of SAJIP is in this process and how SAJIP and its contributors could proactively engage to address these issues. (p. 3)

Our call led to the submission of nine scholarly commentaries by seven prominent editorial board members of SAJIP and two international scholars. Each author provided more detail on critical issues, added additional insights or challenged the reasoning behind or viability of the suggestions we originally presented. Specific, practical suggestions on how to enhance the credibility of the discipline and the journal were also made by each of the corresponding authors. A final rebuttal paper by Van Zyl and Junker (2019) provided a brief summary of each paper and provided a critical reflection on important points of argument in each<sup>1</sup>.

In this final farewell editorial, the author in his editorial role within SAJIP would like to draw from the collective wisdom of the submissions from the editorial board in order to provide a clear and structured strategy for SAJIP to enhance the credibility and transparency of the discipline within South Africa. The author will start off by providing a general overview of the special section, followed by a strategy for the journal and then conclude with a brief personal reflection.

## A general overview of the special section

In total, 11 papers constitute this special section within SAJIP. Firstly, Efendic and Van Zyl (2019) set the scene by highlighting the challenges facing the IOP discipline and

1. A brief, tabulated summary of the submitted commentaries, as well as the practical suggestions made by the corresponding authors, is presented in Appendix 1.

provided suggestions to both authors and SAJIP on how to manage such challenges. Then, nine commentaries were submitted by Bussin (2019), Cilliers (2019), Coetzee (2019), Crous (2019), Hernandez-Bark (2019), Hoole (2019), Maree (2019), Murphy (2019) and Veldsman (2019), highlighting issues ranging from government policy, research quotas, a lack of internationalisation and the world view of the IOP through to an over-reliance on null hypotheses testing and researcher–reviewer competence, which could play a role in the credibility crisis. These authors acknowledged that a confidence crisis exists, but advocated such from different vantage points. Finally, Van Zyl and Junker (2019) supplied a summary and a final reflection on the contributions of the authors.

A high-level overview of the commentaries shows an unequivocal support for enhancing the credibility, transparency and trustworthiness of the discipline within the South African context. All but one of the authors ( $n = 8$ ) explicitly supported the implementation of the suggestions made by Efendic and Van Zyl (cf. Bussin, 2019; Cilliers, 2019; Coetzee, 2019; Crous, 2019; Hernandez-Bark, 2019; Maree, 2019; Murphy, 2019; Hoole, 2019); however, some ( $n = 2$ ) called for caution with respect to its adoption within SAJIP (cf. Coetzee, 2019; Hoole, 2019). Only one author fundamentally disagreed with the full adoption of the suggested guidelines, arguing that such could be experienced as yet another hindering demand being placed on the already over-burdened academics (Veldsman, 2019). In addition, the authors made several specific recommendations to enhance the credibility of the discipline and highlighted the role that SAJIP could play in this process (cf. Appendix 1 for a detailed overview). However, some of these suggestions are beyond the sphere of influence of the journal (such as changing government policy and reducing the research quotas placed on academics by universities).

Based on the original suggestions by Efendic and Van Zyl (2019), as well as the opinions shared and suggestions made within the opinion papers, a clear strategy for enhancing the credibility and the transparency of SAJIP can be constructed.

## A strategy for enhancing scientific credibility in the *South African Journal of Industrial Psychology*

As discussed by Efendic and Van Zyl (2019), the introduction of OSP within SAJIP may facilitate an increase in credibility and transparency within the journal. This type of strategy requires not only the support of the editorial board, and publication house, but also the support of its contributing authors, reviewers and readers. Facilitating such a process may pose various challenges as it will fundamentally affect the way in which research is conducted and managed (Allen & Mehler, 2019). Murphy (2019) argued that introducing OSP is appreciable, but SAJIP should actively

**TABLE 1:** Benefits of open science practices for key stakeholders.

Researchers	Research teams	Organisations	Decision makers and funders	Public	Nations	SAJIP
Professional visibility and enhanced credibility	Team visibility	Funding for new ventures	Making informed decisions	Enhances the understanding of the scientific enterprise	Promotion of human rights	Enhanced credibility of contributions
Increased access to funding	Increased access to large-scale funding opportunities	Enhanced quality of solutions or services	Increased impact of research funding	Opportunity to influence science	Informed decisions based on research data	Quality and integrity
Networking opportunities	Cost-effective project management	Cost-effective solutions	Enhanced quality of research outputs	Accessible research	Enhanced GDP in knowledge-intensive economies	Developmental reviews
Professional development	Retaining intellectual property rights	Expedited transfer from scientific developments to practice		Return on investment for the taxes that the public contributes to the advancement of science		Increased readership
Retaining intellectual property rights	Maximising contribution of individual team members	Increased innovation				Increased international contributions
Rapid dissemination of results	Effective use of resources					Increased impact and more citations
Access to scientific resources	Access to crowdsourced research funding					
Increased citations (h-Index)						

Source: Adapted from Allen and Mehler 2019; Open Science Collaboration Consortium 2015; Fang and Casadevall 2015  
GDP, gross domestic product; SAJIP, *South African Journal of Industrial Psychology*.

participate in changing the behaviour of its stakeholders. Unilateral changes in editorial policy, without the appropriate buy-in from key stakeholders, may result in a negative feedback loop, which may impact submissions to the journal (Banks et al., 2019). The *South African Journal of Industrial Psychology* should therefore be cautious in its implementation process. A first step would be to highlight the potential benefits and risks associated with OSP to the stakeholders.

## The benefits and risks relating to open science practices

In the article by Efendic and Van Zyl (2019), we argued that adopting OSP may contribute to the advancement of the discipline and the enhancement of the stature of SAJIP. Adopting OSP within SAJIP provides several benefits for all its stakeholders. Firstly, it enhances the faith, credibility and trust in the academic research (Allen & Mehler, 2019). Secondly, it results in new systems that foster collaboration and professional development, and provide access to tools or services to make the research process easier (Ross-Hellauer, Deppe, & Schmidt, 2017). Thirdly, it promotes access to scientific input and outputs that are usually vaulted behind paywalls (Allen & Mehler, 2019; Open Science Collaboration Consortium, 2015). These can be translated into various positive, tangible outcomes for researchers, organisations, funding institutions, the public and SAJIP. Although not an exhaustive list, Table 1 summarises the benefits of adopting OSP for all those involved.

In spite of these benefits, Ali-Khan, Jean and Gold (2019) mentioned that introducing OSP also poses several threats to the established systems. Firstly, although it eliminates the cost barriers to the public, the costs of conducting and publishing research gets transferred to the authors

(Bahlai et al., 2019). The fact that SAJIP is already an open access journal, where page fees are paid by authors, mitigates this problem to a great extent.<sup>2</sup> Secondly, although intellectual property is kept by the authors, it poses legal questions as to who may utilise the information for commercial gain (Scheliga & Friesike, 2014). Open sciences currently function within a legal grey area, where no case law exists (yet) to aid in demarcating the boundaries of claims to authorship (Banks et al., 2019). Thirdly, questions are raised about data ownership if data are available in the public domain (Van Atteveldt, Strycharz, Trilling, & Welbers, 2019). Although authors could claim ownership based on intellectual property rights, once data are in the public domain, they could be used for a variety of commercial endeavours without the appropriate recognition (Cook et al., 2018; Scheliga & Friesike, 2014). Fourthly, if pre-publication reports are published, it could lead to other scientists, or the public, proverbially stealing research ideas (Scheliga & Friesike, 2014). Fifthly, preregistering papers may lead to researchers presenting erroneous arguments or ideas, which may have a negative effect on their perceptive stature within the academic community (Ali-Khan et al., 2019; Scheliga & Friesike, 2014). Sixthly, researchers may need to invest extra time and effort in the design of their studies and the pre-publication of their ideas (Scheliga & Friesike, 2014; Veldsman, 2019). Seventhly, there is also a lack of legal clarity pertaining to a whole host of matters ranging from intellectual property to authorship of papers. Eighthly, there are also costs associated with sharing information (Bahlai et al., 2019). This pertains to infrastructure costs (such as website hosting), the costs of publishing on online repositories and costs associated with extra research material. However, these can be mitigated if journals employ space for supplementary materials, or if authors use legitimate online open science repositories

<sup>2</sup>See <https://sajip.co.za/index.php/sajip/pages/view/journal-information>

(Scheliga & Friesike, 2014). Finally, authors may also be reluctant to share their data or statistical syntaxes or code, or to publish negative results, fearing criticism from other authors.

As highlighted by Hoole (2019) and clarified by Scheliga and Friesike (2014), there are also various institutional or contextual factors that may negatively impact the adoption of OSP. Most academic institutions do not have effective policies guiding, supporting or rewarding open science initiatives employed by their authors (Cook et al., 2018; Scheliga & Friesike, 2014). This implies that those who engage in these activities may be inadvertently discouraged from doing so by the institutions they work for. Furthermore, there are currently no standard formats for OSP, and therefore the impact (and the valorisation thereof) is not measurable (Cook et al., 2018). As such, attaching rewards and recognition systems to the adoption of OSP is challenging, which hampers individual efforts to become more open and transparent. Another factor hampering the process pertains to ineffective policy guidelines regarding compliance to open science initiatives (Van Atteveldt et al., 2019). Scientists have argued that although the OSP provided means to manage embargos and copyright, no safeguards or policies are in place to actively manage such issues (Banks et al., 2019). This also relates to the lack of commonly accepted standards when it comes to sharing research materials, data and syntaxes (Scheliga & Friesike, 2014).

However, whilst weighing the benefits against the potential risks, it is clear that adopting an open science strategy provides significant benefits for all stakeholders in the long run, as ever increasingly governments, journals and funding institutions are requiring such strategies (Banks et al., 2019). Furthermore, given that within the South African context none of the journals have signed up the transparency and openness promotion (TOP) agreement (Center for Open Sciences, 2019), and no academic institution has yet become part of initiatives such as Plan-S (Coalition, 2019), it provides a major opportunity for SAJIP to be a thought leader in advancing OSP in Africa. The potential international reputation gained as a result would also benefit the status of the journal. Therefore, the following strategy is proposed.

## **A practical strategy for enhancing credibility and transparency within the *South African Journal of Industrial Psychology***

In an attempt to enhance the international stature of the journal, to facilitate an increase in the confidence and credibility in the discipline and to foster a supportive research climate within SAJIP, a number of strategic initiatives are suggested.

*Firstly*, SAJIP should actively *advocate and promote transparency and credible, open science practices*. Here, it should consider

becoming a signatory of the TOP agreement (Center for Open Sciences, 2019). This will allow the journal to have access to various resources (author checklists, disclosure statements, implementation guidelines, best-practice guidelines for sharing analyses codes, step-by-step guidelines for preregistration, etc.) that are currently available in order to empower both the journal and its contributors to promote a culture of open science (Center for Open Sciences, 2019). Furthermore, SAJIP could consider drafting a position statement pertaining to OSP, advocating the value of such a measure to enhance the quality of studies and the impact thereof on enhancing the credibility of the discipline (Banks et al., 2019). It could consider encouraging study preregistration and the registration of research protocols for further transparency. This could be done alongside the initiatives of the *South African Journal of Psychology*, in a joint effort to promote more transparent research practices within the discipline. Another suggestion from Banks et al. (2019) is that the journal could consider hosting a special edition every 3 years on matters pertaining to OSP or to evaluate current trends in open access publishing (e.g. open peer review). These special editions could also be used to 'test' OSP or advancements such as open peer review, or modular publication systems.

*Secondly*, it is suggested that SAJIP *implements the TOP guidelines*. Specifically, SAJIP should incorporate Nosek et al.'s (2016) first tier (or Level 1) suggestions for journals on the promotion of an open research culture. From this perspective, SAJIP should encourage authors to *disclose* whether research materials are available for citation standards, data transparency, research methods transparency, study preregistration and their analysis plan preregistration for all types of research designs. It is also suggested that SAJIP implements the second tier (or Level 2) suggestions of Nosek et al. (2016) for some modules. Level 2 postulates that a *requirement* for publication in SAJIP is that researchers must share certain research materials when possible. Here, it is strongly advised that SAJIP should make it a requirement for researchers to disclose analytical methods or code transparency (i.e. syntaxes, Mplus codes or qualitative taxonomies), which authors need to adhere to when designing transparency standards for both review and publication, and that the journal should actively encourage the submission of replication studies as part of its scope. The suggested guidelines to be implemented are summarised in Table 2. These suggestions are relatively easy to implement, do not require any special intervention from the journal and do not pose a risk to the workload of researchers. It is further suggested that the effect as such has to be tracked on an annual basis.

*Thirdly*, the journal could also *implement reward and recognition systems* for those who advocate or publish papers within the open science framework. As suggested by Efendic and Van Zyl (2019), the journal could incorporate a gamified system centred on active progression towards the full adoption of OSP through rewarding authors with badges for

employing OSP. Badges could be provided for progression along a series of ever-increasing demands for engagement in OSP. Higher levels of engagement in OSP would result in more exclusive and 'rare' badges, which would add to the perceptive 'prestige' of a given author.

*Fourthly*, SAJIP should develop infrastructure to host supplementary materials from open data and analytical syntaxes. If open science initiatives are adopted, a need may arise for the journal to host these supplementary materials in order to ensure that such is paired with the original publication. The *South African Journal of Industrial Psychology* does not need to host all supplementary materials (such as research reports and meta-data) but would be required to have the capacity to store basic information in a repository in order to ensure that it is effectively archived for the next generations.

*Fifthly*, SAJIP should develop new publication guidelines and editorial policies for reporting on quantitative, qualitative, mixed-method and basic research designs. The journal needs to align its publication policies to the latest reporting standards advocated by the Publications and Communications Task Force of the American Psychological Association for quantitative (cf. Appelbaum et al., 2018), quantitative, mixed-method and meta-analytic designs (cf. Levitt et al., 2018). These guidelines set standards as to what should be included in manuscripts in order to not only standardise reporting but also enable more transparent and credible research practices. These guidelines are neatly summarised within the referred texts and can easily be implemented within SAJIP. It is further imperative to ensure that these guidelines are actively communicated to all stakeholders of SAJIP and that section

editors or reviewers are appropriately trained in such matters.

*Sixthly*, the review process needs to be optimised and the competence of reviewers needs to be increased. Efendic and Van Zyl (2019) argued for the experimentation of an open, collaborative peer-review process, where reviews become a collaborative dialogue between two anonymous reviewers and authors on how to enhance the submitted papers. After acceptance of a paper, both reviewers' names are published alongside the paper, and review reports could also be made available. This review process not only eliminates reviewer bias and fosters a review culture based on development, transparency and upliftment, but also provides formal recognition of reviewers' contribution to the manuscript (Dobele, 2015; Kriegeskorte, 2012). Given such, it is also imperative to not only ensure that reviewers are competent but also to ensure that only reviewers of the highest quality are permitted to review for the journal. The *South African Journal of Industrial Psychology* should position itself as a reviewer of its manuscripts is a prestigious function, which only the most competent researchers or practitioners in the field are permitted to do. Therefore, minimum standards for reviewers should be set (as suggested by Hoole, 2019). Van Zyl and Junker (2019) suggest that reviewers of academic manuscripts should either hold a PhD or an equivalent degree or show that they are progressing towards the completion of a doctoral degree. For local academic reviewers, there should be evidence that they have published at least one manuscript within SAJIP. For international reviewers, there should be evidence for at least one publication within the discipline of IOP. Similarly, those who review practice-orientated papers should at least hold a master's degree and demonstrate 'adequate' experience in the domain in which they have been requested to act as a reviewer.

**TABLE 2:** Promised level of transparency and openness promotion guidelines to be implemented in the *South African Journal of Industrial Psychology*.

Guideline	Level 1: Disclosure	Level 2: Requirement
Citation standards	Journal describes citation of data in guidelines to authors with clear rules and examples.	-
Data transparency	Article states whether data are available, and, if so, where to access them.	-
Analytic methods (code) transparency	-	Codes must be posted to a trusted repository. Exceptions must be identified at article submission.
Research materials transparency	Article states whether materials are available, and, if so, where to access them.	-
Design and analysis transparency	-	Journal requires adherence to design transparency standards for review and publication.
Study preregistration	Article states whether preregistration of study exists, and, if so, where to access it.	-
Analysis plan preregistration	Article states whether preregistration of study with analysis plan exists, and, if so, where to access it.	-
Replication	-	Journal encourages submission of replication studies and conducts results blind review.

Source: Nosek et al. 2016

The competence of reviewers could also be increased through a structured training intervention coupled with an active mentorship programme (Adamson, 2012; Houry, Green, & Callahan, 2012). Although the methodological competence of reviewers cannot directly be developed by the journal, the dialogue between reviewer, author and editor can be developed. It is suggested that reviewers should first be trained in the editorial and review guidelines of the journal. Here the focus should be placed on the level of constructiveness, the appropriate length and the quality of the reviews. Then, specific attention needs to be placed on enhancing the level of specificity, the tone of the response and the level of helpfulness of review reports. Within the formal training process, the purpose of the peer review needs to be discussed, information needs to be shared regarding the expectations of reviewers and the review process, and reviewers should be exposed to both good and bad feedback reports (Adamson, 2012; Wu, Nassau, & Drotar, 2010).

Reviewers could hereafter be paired with either a section editor or a senior member of the IOP community with similar research interests. The editor-in-chief would then

assign the same article for review to both the senior member and the mentee. After the review, mentees could discuss the review reports with the senior member and get feedback from them on what went well, what could be different and provide feedback on their professional development. Such a programme has shown to significantly increase the competence of reviewers in a relatively short period of time, which subsequently enhanced the quality of their own manuscripts (Adamson, 2012; Houry et al., 2012; Wu et al., 2010).

*Seventhly*, a more structured *rewards and recognition system for reviewers or section editors* need to be introduced. Given the relatively small reviewer pool within SAJIP, it is important to ensure that the efforts of such resources are formally recognised (in more than just a brief 'acknowledgment' in the back pages of each volume). As mentioned above, reviewers' and section editors' names could be published on the articles that they contributed to (similar to the *Frontiers in Psychology* model). Furthermore, public statistics as to the number of articles edited and/or reviewed need to be made available. Although this information is present in the back-end of the SAJIP system, it would add significant professional value for the section editors and reviewers to make such data public. Other reviewer incentive programmes that have proven to enhance the quality of reviews and motivate reviewers have been suggested in the literature. Hauser and Fehr (2007) argued that reviewers' articles could be placed in a priority queue for publication or to implement a more timely peer-review process for them. Jan et al. (2018) further argued that 'awards' for best peer review should be issued each year as a means to enhance the reputation of a given reviewer. Furthermore, given the hefty page fees charged by AOSIS (Pty) Ltd for publication in SAJIP, it is suggested that reviewers get a significant discount if they provide quality reviews. Given that reviewers invest a significant amount of professional time in providing reviews, and that these same reviewers as authors have to pay significant page fees, it would only be fair to acknowledge their contribution through a discounting system. In contrast, Squazzoni, Bravo and Takács (2013) found that providing reviewers with monetary rewards as a means of recognition has dire consequences for the quality and reputation of the journal. This should be avoided at all costs. It is also important to note that SAJIP has already implemented other incentive schemes for reviewers, which is mentioned in Van Zyl and Junker (2019).

*Eighthly*, there is a need to develop *best-practice guidelines for quantitative, quantitative, meta-analytic and systematic literature review data processing techniques*. Although Efendic and Van Zyl (2019) mentioned that such guidelines should be developed, Cilliers (2019) and Coetzee (2019) rightfully pointed out that the argument should also include other designs. We therefore suggest that senior methodological experts within the IOP research community should be invited to write brief practice-orientated or 'tutorial' papers on how to design, analyse and report on the latest research methods. This would not only advance the

discipline but also provide authors and reviewers with a means to self-develop in these domains. Based on the latest national and international methodological trends (cf. Aguinis, Cummings, Ramani, & Cummings, 2019; Coetzee, 2019), it is suggested that step-by-step guidelines on the topics covered in Table 3 should be developed in the short term. Suggestions are also made regarding the most appropriate members of the IOP community who could possibly draft such guidelines.

*Ninthly*, SAJIP should *provide training in open science methods and tools*. The journal could provide online MOOCs, Podcasts, guidelines or yearly workshops at the conferences hosted by professional societies to aid researchers and students to effectively employ OSP. This could result in more early adopters and solicit further support for its initiatives.

*Tenthly*, there is a need to *increase the international appeal of SAJIP*. Another factor Hernandez-Bark (2019) and Bussin (2019) pointed out is that SAJIP needs to enhance its international stature to solicit more contributions from top global scholars. Although implementing some of the aforementioned suggestions could lead to more international exposure of the journal, the fact that SAJIP is not listed in the main Thomas Reuter Web-of-Science (WoS) index actively reduces its international appeal. The factors associated with such a scenario were discussed by Van Zyl and Junker (2019). In spite of this, there are a number of initiatives that the journal could employ to gain more exposure and benefit from internationalisation. The journal could consider redefining its focus and scope in order to appeal to a larger audience. The editorial board needs to consider the niche area in which SAJIP wants to position itself for the next decade and refine the scope in such a way to actively reflect such an intention (Veldsman, 2019). The current focus and scope of the journal is too broad, and it does not actively cover many of the publications within SAJIP over the last decade (Van Zyl & Junker, 2019). The new focus and scope should be not only wide enough to capture all of the current and future IOP-related research domains but also specific enough to carve

**TABLE 3:** Suggestions for step-by-step guidelines and possible authors.

Methodologist	Research design	Topic
Prof. Kevin Murphy	Quantitative	Alternatives to null hypothesis testing
Prof. Pieter Schaap	Quantitative	Bayesian analysis
Prof. Leon T. De Beer	Quantitative	Exploratory structural equation modelling
Prof. Sebastiaan Rothmann	Quantitative	Measurement invariance
Prof. Llewellyn Van Zyl	Quantitative	Bi-factor analysis or latent growth modelling
Dr Nina M. Junker	Quantitative	Latent profile or class analysis
Prof. Dirk Geldenhuys	Qualitative	Interpretative phenomenological analysis
Prof. Vera Roos	Qualitative	The Mmogo visual projective method
Prof. Freddie Crous	Qualitative	Appreciative inquiry
Prof. Saskia Kelders	Qualitative	Meta-analyses
Prof. Michelle S. May	Qualitative	Hermeneutic phenomenological analysis
Prof. Sumari O'Neil	Qualitative	Ethnography
Prof. Matt Cole	Qualitative	SOAR

SOAR, strengths, opportunities, aspirations and results.

out its position within the publication market. The *South African Journal of Industrial Psychology* should aim to move its focus and scope away from just the South African context in order to enhance its international appeal (Van Zyl & Junker, 2019). Furthermore, the journal should also consider adopting a subscript or a slogan based on the newly defined niche area, which clearly demarcates its position.

Another suggestion would be to partner with international journals such as the *European Journal of Work and Organisational Psychology* (hosted by the European Association of Work and Organizational Psychology) and *Industrial and Organizational Psychology: Perspectives on Science and Practice* (hosted by the Society for Industrial and Organizational Psychology) (Hernandez-Bark, 2019) in order to stimulate cross-pollination. This would increase the exposure of the journal within these markets and provide an extra layer of perceptive professional credibility. In effect, members of the editorial boards of both these journals could be invited to serve on SAJIP and vice versa. Furthermore, the editors of these journals could nominate members to host special editions on pertinent topics in IOP within SAJIP. It is suggested that the incoming editorial board actively investigates this option and discusses the possibilities for collaboration.

Other initiatives could include conscious marketing initiatives at international conferences, creating SAJIP's own social media profiles, inviting prominent international scholars to its editorial board, hosting special editions on current hot topics within the discipline, publishing critique papers that challenge convention, ensuring that editorial board members place their involvement in their email signatures, publishing papers in international journals with SAJIP as an affiliation and the like. Many other initiatives are possible but will require a communication and marketing strategy to ensure that initiatives are aligned with the vision of the journal.

Finally, like other high-impact IOP journals, SAJIP should consider experimenting with a modular-based publication system (Hartgerink, 2019; Hartgerink & Van Zelst, 2018; Van Dijk & Van Zelst, 2019). This system advocates the publication of a series of sequential pieces of research outputs (or 'modules') that systematically advances the current knowledge base (Van Dijk & Van Zelst, 2019). These modules could represent the cyclical components of the traditional research cycle (e.g. the literature review and hypotheses or the methods and results section), or take the form of the publication of a research protocol, followed by draft reports and then the final manuscript (Van Dijk & Van Zelst, 2019). Here, open peer review is encouraged, where virtually anyone within the IOP community could potentially provide feedback on different modules in order to sequentially enhance the eventual quality of a manuscript (Hartgerink, 2019). This piecemeal approach to the publication process reduces the eventual review and publication time and significantly enhances the quality of the final product (Aguinis et al., 2019; Byington & Felps, 2017). Such a publication system addresses the concerns raised by Bussin

(2019) and Hoole (2019) in their respective commentaries. Furthermore, it addresses the need for rapid responses to current challenges as raised by Veldsman (2019).

## Conclusion

For nearly half a century, SAJIP has been a custodian for the advancement of the IOP discipline within South Africa. Through times of great uncertainty, where knowledge was vaulted behind international embargos, SAJIP managed to create a climate that not only valued but also celebrated scientific advancement. The *South African Journal of Industrial Psychology* has empowered researchers to share ideas, created a platform for the creation of communities of practice and enhanced science through its commitment to rigorous and relevant research practices. In spite of numerous changes and various challenges, these fundamental values have always been central to the editorial ethos of SAJIP. These values should be fostered and cherished, in whichever direction the journal decides to progress.

In conclusion, I would like to reiterate and extend the original set of core operational and survival guidelines established by the founding editor of SAJIP, Prof. Naas Raubenheimer (1994), as a reminder to those who come after us. That SAJIP should always:

1. be hosted by a university to ensure consistency, congruence and longevity
2. maintain an ethos of action and efficiency
3. embody a non-ideological stance in the discipline
4. be a totally independent and neutral entity and finally
5. act as a custodian for the advancement of credibility, transparency and scientific integrity.

## Postscriptum

Throughout my tenure on the editorial board, I have been privileged to witness how SAJIP has grown and developed under the visionary leadership of both Prof. Melinde Coetzee and Prof. Gert Roodt. Both have contributed significantly to not only the journal but also to my professional development as a scholar – a matter for which I will always be truly grateful. Throughout the past 6 years in my editorial role, I have seen the amount of hard work and dedication, which Prof. Coetzee invested in the management of the journal. Her initiatives have led to significant increases in the journal's scientific stature, which has resulted in its inclusion into the Scopus, the Web of Science's Emerging Sources Citation and the IBSS indexers. Although this may sound like Greek to most of the readers, these inclusions mean that SAJIP has complied to the highest of internationally recognised quality standards – a level of recognition most journals do not achieve.

As I step down as associate editor of SAJIP, I would like to extend my heartfelt appreciation to the editorial team for their contribution to the advancement of our discipline, to the authors who supported our initiatives, to Trudie Retief

from AOSIS (Pty) Ltd for her efforts in supporting the journal (and for being instrumental in the evaluation process the various indexers are subjected SAJIP to), to our reviewers who always invested their precious time and expertise into each submitted article and to Prof. Coetzee for her friendship, guidance and continued support in all my initiatives and ideas. I would also like to show my appreciation to Prof. Gert Roodt for nominating me for this role and for all the opportunities that he has created for me during the past decade. His mentorship, support, guidance and commitment to the advancement of the IOP discipline continue to inspire me. For me and many others, he will always be a role model. Furthermore, to my ex-promoter, my mentor and my friend, Prof. Sebastiaan Rothmann, I am thankful for shaping me into the academic that I am today, and for his continued drive to advance the methodological expertise of those within our discipline. Finally, I thank Prof. Leon De beer for his continued guidance, mentorship and philosophical insights for advancing the discipline and the well-being of academics. I further wish the incoming editorial board well on the next stretch of the journal's journey and believe that it would continue to grow as a custodian of excellence.

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## Competing interests

The author declares that he has no financial or personal relationships that may have inappropriately influenced him in writing this article.

## Author's contributions

L.E.v.Z. is the sole author of this research article.

## Ethical considerations

This article followed all ethical standards for a research without direct contact with human or animal subjects.

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## Data availability statement

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

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## Appendix 1

**APPENDIX 1:** General overview of commentators, main points of argument and additional suggestions to improve credibility.

No.	Author	Title of paper (article number)	Main points of argument	Additional suggestions for SAJIP	Support for implementation of Efendic and Van Zyl (2019)
1	Bussin (2019)	A reply from a 'pracademic': It is not all mischief and there is scope to educate budding authors. (a1726)	<ul style="list-style-type: none"> <li>Journal/organisational politics negatively impacts publication process.</li> <li>(In)competence of researchers remains a challenge.</li> <li>No clear guidelines on requirements as to what constitutes a 'good paper' or how to get it published.</li> <li>SAJIP lacks international contributors.</li> <li>Reviewer bias is an issue.</li> <li>Review process is deconstructive and demotivating.</li> </ul>	<ul style="list-style-type: none"> <li>Podcast explaining publication guidelines and best practices.</li> <li>Detailed checklists for manuscripts.</li> <li>Creation of a 'developmental' subsection within SAJIP to provide opportunities for practitioners and junior researchers.</li> <li>SAJIP to host workshops on preparing manuscripts.</li> <li>Reviewers to be trained in reviewing process and editorial guidelines.</li> <li>Structured guidelines for reviewers on manuscript evaluations.</li> <li>Enhance transparency in the review process.</li> <li>Publish reviewer names on articles.</li> <li>Reviewers to adopt a developmental approach to reviews.</li> </ul>	Yes
2	Cilliers (2019)	On the future of SAJIP. (a1732)	<ul style="list-style-type: none"> <li>Competence development of researchers is key to the advancement of the science.</li> <li>Overemphasis on quantitative papers (statistical analyses), which provides less opportunities for fundamental research questions.</li> <li>SAJIP seems to value quantitative- more than qualitative/mixed method designs. The latter is seen as inferior.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage a balance between different methodological designs.</li> <li>Host special editions on the development of new methods in quantitative, qualitative and mixed-method designs.</li> <li>SAJIP should be unbiased.</li> </ul>	Yes
3	Coetzee (2019)	SA Journal of Industrial Psychology: Annual editorial overview 2019. (a1741)	<ul style="list-style-type: none"> <li>Rejections from SAJIP mostly relates to a lack in methodological rigour, lack in theoretical contextualisation and misalignment to the scope of the journal.</li> <li>Statistical methods and analytics should not drive the research process to the extent where the methods become the contribution.</li> <li>The research question should be central, and the analytical methods employed to support such.</li> <li>Researchers need to become competent in the ever-increasing complexities of statistical methods in order to understand how these could be used.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure a balance between different methodological designs.</li> <li>Appreciate the contribution of specific methodologies in the knowledge generation process.</li> <li>Manuscripts need to clearly define, conceptualise and contextualise constructs.</li> <li>SAJIP should avoid the Jingle-Jangle Fallacy: discourage to dress up old ideas in new 'jackets'.</li> <li>The relationships between constructs need to be clearly articulated and aligned with theoretical expositions in every manuscript.</li> <li>Studies need to explain how existing theoretical insights fit into the current context, or how and why it may differ.</li> <li>Specific limitations of each design need to be clearly articulated. Researchers need to stop providing the 'standard' limitations in each paper.</li> </ul>	Yes, with caution
4	Crous (2019)	Indeterminateness in industrial and organisation psychological research: A root metaphor analysis. (a1756)	<ul style="list-style-type: none"> <li>The confidence crisis relates to a lack of precision in IOP science.</li> <li>The crisis stems from researchers' world view, and not just systemic issues.</li> <li>IOP in SA and SAJIP wrongly believes its approach is mechanistic (focussed on precision), but in reality, it is based on Formism (focus on flexibility, and broad scope), which lacks precision and accuracy.</li> <li>SAJIP draws manuscripts that stem from a need to understand factors within an individual (personality, well-being, cognitive traits, etc.) in order to explain how such affects external outcomes (performance, intention to leave, etc.).</li> <li>SAJIP and its stakeholders need to understand that there are different paradigms that explain behaviour and appreciate such more actively.</li> </ul>	<ul style="list-style-type: none"> <li>Focus should be on enhancing reliability, construct validity and adequate sampling in order to strengthen the Formism paradigm.</li> </ul>	Yes
5	Hernandez-Bark (2019)	The replicability crisis as chance for psychological research and SAJIP. (a1724)	<ul style="list-style-type: none"> <li>Paywalls reduce access to science.</li> <li>Page fees for open access journals are high.</li> <li>SAJIP stakeholders to become competent in open science practices.</li> <li>Collaboration between journals is important to enhance spill over.</li> </ul>	<ul style="list-style-type: none"> <li>Invited special issues from international scholars.</li> <li>Provide links to funding opportunities for researchers to manage page fees.</li> <li>Page fee discount process based on demographic location or affiliation.</li> <li>Discounts on page fees for reviewers.</li> <li>Collaboration between SAJIP and EAWOP Journal/SIOP.</li> <li>Editorial board members attending open science meetings or conferences.</li> </ul>	Yes

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**APPENDIX 1 (Continues...):** General overview of commentators, main points of argument and additional suggestions to improve credibility.

No.	Author	Title of paper (article number)	Main points of argument	Additional suggestions for SAJIP	Support for implementation of Efendic and Van Zyl (2019)
6	Hoole (2019)	Avoiding the elephant in the room: The real reasons behind our research crisis. (a1723)	<ul style="list-style-type: none"> <li>Confidence crisis is a function of systemic or institutional issues and research methodology, policies and ethics.</li> <li>Academic systems are under financial pressure, increased pressure to produce PhD students, with ever-decreasing financial resources.</li> <li>Capitalising on financial incentives for research is the only way for academic institutions to supplement income, which results in academics engaging in questionable research practices.</li> <li>Research quotas for academics relate to questionable research practices.</li> <li>The skills–age gap is increasing. Most senior researchers are retiring with no one to take their proverbial place.</li> <li>Academia is not drawing skills because of poor salaries.</li> <li>Researchers lack proper training and competence remains an issue.</li> <li>SAJIP does not have rigorous selection criteria for reviewers and also does not provide adequate recognition. This leads to poor-quality reviews.</li> <li>Solving crisis is not just the responsibility of the journal.</li> <li>Reviewers cannot be expected to review a paper, and all the meta-data attached to it.</li> </ul>	<ul style="list-style-type: none"> <li>Institutions to reduce academic demands for researchers.</li> <li>Institutions to employ retired academics in mentorship and supervision roles and relax retirement age.</li> <li>Institutions and SAJIP to employ a zero-tolerance approach to academic dishonesty.</li> <li>Institutions to incentivise cross-, multi- or inter-disciplinary collaboration.</li> <li>Researchers need to focus more on the quality of their studies and less on the amount being published.</li> <li>Ethical clearance should become a requirement for publication in SAJIP.</li> <li>Open science practices to be promoted in SAJIP.</li> <li>SAJIP to educate reviewers on latest developments in the field, and best practices.</li> <li>SAJIP to provide training for reviewers.</li> <li>SAJIP to set minimum criteria for reviewers.</li> <li>Review editorial guidelines and adapt such appropriately (e.g. increase word limits, be specific on what is expected in appendixes).</li> <li>Starting communities of practice between universities, journals and professional societies.</li> </ul>	Yes, with caution
7	Maree (2019)	Burning the straw man: What exactly is psychological science? (a1731)	<ul style="list-style-type: none"> <li>Problem in psychological science lies in people's understanding of what constitutes 'science'.</li> <li>The replication crisis happened against a particular view of what we believe science is and should be.</li> <li>Replication is a poor criterion of scientific character.</li> <li>In South Africa, there is a shared belief that 'Quantitative Research' equates 'Science'.</li> <li>Psychologists are trained in the science-practitioner model, resulting in individuals seeing themselves as either the one or the other.</li> <li>A thorough integration between the psychologist as a scientist and the psychologist as a practitioner will result in quality and sustainability of psychology as a science.</li> <li>Integrating science into practice is seen as an 'ideal', but a perception exists that it is not possible in real-world scenarios.</li> <li>Practitioners are trained to believe that measurement and empirical justification for the effectiveness of an intervention is what constitutes 'science'. Coupled with (in) competence, this further splits science and practice.</li> <li>Psychologists have a pathological obsession with measurement, but measurement does not equate to something being a 'science'.</li> <li>Certain things are measurable, whilst others are not, depending on the level of analysis.</li> <li>Major differences exist between views of quantitative and qualitative research realities, where proponents of the one lambast supporters of the other. There is yet another divide, which further splits the scientist from the practitioner.</li> <li>If it can and should be measured, then by all means, but if it should be talked to and talked about in a process of claim-counter-claim, then even dialogical, interpretative or reconstructive processes can be utilised to describe and explain realities.</li> <li>Whenever the scientist claims something about reality, natural, psychosocial or otherwise, the ensuing debate between people and reality, and people and people, constitutes science.</li> </ul>	<ul style="list-style-type: none"> <li>No additional substantiate suggestions are mentioned.</li> </ul>	Yes

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**APPENDIX 1 (Continues...):** General overview of commentators, main points of argument and additional suggestions to improve credibility.

No.	Author	Title of paper (article number)	Main points of argument	Additional suggestions for SAJIP	Support for implementation of Efendic and Van Zyl (2019)
8	Murphy (2019)	Reducing our dependence on null hypothesis testing: A key to enhance the reproducibility and credibility of our science. (a1717)	<ul style="list-style-type: none"> <li>Implementing Efendic and Van Zyl's (2019) suggestions is imperative but difficult. It will require a fundamental shift in the way authors, reviewers and editors think and work.</li> <li>A major additional issue in the confidence crisis is an over-reliance on null hypotheses testing (NHT), which should be curbed.</li> <li>Two issues are highlighted: (1) the inadequate power of studies and (2) the strong temptation to engage in questionable research practices 'in search for the significant <i>p</i>-value'.</li> <li>NHT dominates psychological research with more than 95% of papers in psychology employing such as a criterion for the evaluation of results (Bakker et al., 2012).</li> <li>This results in many issues like authors abandoning studies where they find non-significant results, reviewers and editors rejecting non-significant studies or telling authors to increase their sample or test other hypotheses, etc.</li> <li>Two issues with NHT are highlighted: firstly, it does not test things that people actually believe to be credible or real (e.g. that interventions have NO effects or that things are completely uncorrelated). Treatments can have an effect, but so small that it is not measurable, for example. Secondly, the outcomes of an NHT are mostly misinterpreted. If one fails to reject the null hypotheses, researchers conclude that the intervention did not work. The null hypotheses are therefore believed to physically explain a phenomenon relating to your results, which is fundamentally incorrect. All that it does is explain that the research design was not sufficiently powered.</li> </ul>	<ul style="list-style-type: none"> <li>Do not do away with NHT as it serves a purpose. However, it is critical to empower researchers and readers to utilise other alternatives.</li> <li>Researchers could move away from an arbitrary significant/non-significant classification of results, through describing the range of plausible values for key parameters needed to give evidence of an effect.</li> <li>Researchers need to change their collective scientific language. He argues that people interpret 'the results are statistically significant' as 'it is important'. This is not the case!</li> <li>Accept that uncertainty exists, explain such in an adequate manner, and keep it in mind when we interpret our results.</li> <li>Data analysis techniques and tools are only there to aid researchers to understand what the data mean. Researchers still need to engage in thoughtful analyses. They need to apply their own logic in understanding what the results mean.</li> <li>Researchers need to clearly articulate, justify and defend the criteria for evaluating our data rather than falling back on familiar and meaningless rules of thumb or guidelines.</li> <li>Employ the ATOM principle: Accept that uncertainty is always present, and be thoughtful, open minded and modest.</li> </ul>	Yes
9	Veldsman (2019)	Examining the strings on our violins whilst Rome is burning: A rebuttal. (a1725)	<ul style="list-style-type: none"> <li>Issues in IOP science stretch far beyond the matters mentioned by Efendic and Van Zyl (2019).</li> <li>He argues that the 'recommendations may even worsen the mounting pressures on academics by imposing even more, burdensome, self-serving, research processes and standards, having being already captured by trivial statistical minutiae'.</li> <li>The replication crisis is merely a symptom of a dynamic interaction between three meta-crises: the growing irrelevance of the discipline; an obsolete, constricting research paradigm; and toxic dynamics within the academic system.</li> <li><b>Growing irrelevance:</b> <ul style="list-style-type: none"> <li>IOP research needs to adapt to contemporary changes in the world-of-work in order to stay relevant as a discipline.</li> <li>The relevance of the 'evidence-based practices', which IOP sciences supply, is under threat. Primarily because scientists cannot produce such in a timely manner.</li> <li>Practice is driving innovation in the discipline, where science is in an ever-increasing race to catch-up.</li> </ul> </li> <li><b>Outdated research paradigm</b> <ul style="list-style-type: none"> <li>Methods are based on an obsolete world view framing, thinking and research.</li> <li>Researchers view the world in a linear, mechanistic manner (cause-effect).</li> <li>A more realistic view would be to see the world as a complex, chaotic and inter-related system.</li> <li>The role of research is to understand, explain and predict to make sense of the chaos.</li> <li>Researchers employ an inadequate research design paradigm, given the pace of change. An obsession with testing and verifying claims does not address contemporary topics that are currently relevant.</li> <li>Adopt a falsification research design paradigm – 'Accept that a theory is true and use it in practice, until evidence to the contrary surfaces during its application, requiring its adaptation'.</li> <li>Researchers have a fetish and fanaticism to quantify reality: <ul style="list-style-type: none"> <li>Not everything that matters can be measured.</li> </ul> </li> </ul> </li> <li><b>Toxic research community</b> <ul style="list-style-type: none"> <li>The academic system is flawed and creates toxicity.</li> <li>Academics are pressured to publish and become specialists in topics that are or have become irrelevant to mainstream practice.</li> <li>They pursue safe, low-risk topics in order to get published.</li> <li>Manipulate results or drop hypotheses to get published.</li> <li>Ever-increasing unethical publication practices.</li> <li>Undermining the well-being of academics and students.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The IOP and the scope of SAJIP need to be re-thought and re-imagined.</li> <li>Ensure that the editorial board is composed of both academics and leading practitioners.</li> <li>Editorial board should meet annually for debate on the direction, focus and policy of the journal.</li> <li>SAJIP needs to choose a niche in which the journal wants to become the source of research evidence.</li> <li>Identify research topics that are practice-related and that address challenges or burning issues. SAJIP could commission, sponsor or invite manuscripts in these areas.</li> <li>SAJIP needs to encourage and accept a diversity of research paradigms and designs: meta-theoretical (including underlying ideologies), as well as scientific and practice-orientated research, using both verification and falsification research process designs, seeking explanation and understanding, exploration and confirmation, all reflective of the total IOP science-practitioner spectrum.</li> <li>SAJIP needs to set minimum acceptable research quality requirements and standards.</li> <li>Transform the article review process into a three-way, iterative learning process from the research proposal through to the final article between stakeholders.</li> </ul>	No

SAJIP, *South African Journal of Industrial Psychology*; EAWOP, European Association for Work and Organisational Psychology; SIOP, Society for Industrial and Organisational Psychology; ATOM, Accept that uncertainty is always present, and be thoughtful, open minded and modest.