

# Advancing the Career Prospects of Postdoctoral Research Fellows: An Organisational Justice Perspective

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## Abstract

Postdoctoral research fellows (PDRFs) play an invaluable role in the academic realm, but little distinctive research attention has been paid to this cohort relating to their future career prospects. In response to this lacuna and the career uncertainty faced by PDRFs, the current study adopted a qualitative interpretive case study approach to examine the career prospects of PDRFs from an organisational justice perspective in one South African public university. The main purpose is to remind universities of the significance of supportable career pathways. Thirteen purposefully selected PDRFs participated in in-depth online interviews. The study employed analytical content analysis supported by the Coding Analysis Toolkit (CAT). The findings revealed that the supply of PDRFs has not led to them being absorbed into academia, leaving the current model questionable. The findings further revealed that PDRFs are confronted with an overabundance of institutional challenges which are mainly perpetuated by their hosts, with the “publish or perish” condition weaponised to instil fear. Without a clear national policy shift that gives PDRFs an authentic route into the academic profession they will remain stagnant without any sustainable career progression. We recommend that the careers of PDRFs can be advanced through a customised programme of intent to absorb them into academia. The findings are of great significance to the South African Department of Higher Education and Training to realign the current postdoc model to advance PDRFs’ career prospects.

**Keywords:** career prospects; model structure; organisational justice; postdoctoral research fellows



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## Introduction

The South African *National Plan for Higher Education* (Republic of South Africa 2001) advocates for rigorous postdoctoral training that needs to improve on the quality and output of its postdoctoral research fellows (PDRFs) to support national research. However, the current South African PDRF system does not advance PDRFs' career prospects. Instead, PDRFs are turned into cost-effective income generators for South African public universities (Kerr 2023; Prozesky and van Schalkwyk 2024). This happens within a climate of uncertainty when it comes to meaningful job security or even a supportable career pathway. To date, there are no clear statistics of PDRFs that have transitioned to permanent academic employment after completing the programme, a predicament experienced also in the United States, despite their well-structured statistics system (Joo and Hwang 2022). As Khan and Ginther (2017) report, "During the past two decades, official bodies from the United States (National Postdoctoral Association, National Academy of Science, and the National Research Council) have raised alarms about the working conditions, long hours, lack of benefits, and forced geographic mobility faced by PDRFs." Regrettably, little has been done to change the plight of PDRFs, and they remain the most vulnerable cohort in academia (Kerr 2022; Moyo 2022). To illustrate their frustrations, many academics in Finland and particularly the PDRFs are increasingly looking for careers outside academia (Aarnikoivu et al. 2019; Kuoppakangas et al. 2019). This is despite the literature revealing that the precarity of PDRFs' research careers is not a new problem (Jones 2020).

The data available in South Africa do not provide a comprehensive account of the functions, numbers, contributions, challenges and career pathways of PDRFs, and the problem is not peculiar to South Africa (Prozesky and van Schalkwyk 2024; Van Schalkwyk 2022). Similarly, a report by the Organisation for Economic Cooperation and Development (OECD 2021) on PDRFs' academic research careers revealed that countries often do not have a good understanding of the number of PDRFs, their working conditions, and their career trajectories. It is notable that PDRFs play an invaluable role within the academic realm, but little distinctive research attention has been paid to this cohort relating to their future career prospects. The growing but limited number of publications that deal overtly with the career prospects of PDRFs emerged from Europe and America (McConnell et al. 2018; Nowell et al. 2020; OECD 2021; Schaller et al. 2017; Share and Loxley 2023; Simmonds and Bitzer 2018; Teelken and Weijden 2018; Van der Weijden and Teelken 2023; Van der Weijden et al. 2015; Woolston 2020). Although PDRFs are still overlooked in Africa (Kumwenda et al. 2017; Moyo 2022; Shinkafi 2020), in the past decade, studies on PDRFs have started receiving attention from South African scholars (Drennan and Morris 2021; Holley et al. 2018; Schutte et al. 2013; Vranas and Hendry 2013) but there is still a dearth of research on their career prospects, with few scholars attempting to make contributions (Kerr 2023; Mothapo 2021; Prozesky and van Schalkwyk 2024; Van Schalkwyk 2022). The results of a systematic review of research into PDRFs by Moyo (2022) further

confirm the lack of knowledge production on the PDRFs, let alone their career prospects.

Accordingly, Moyo (2022) underscores that the use of more qualitative empirical research may enhance in-depth understanding of the dynamics of PDRFs, including their career prospects. In response to the gap in the literature and the career uncertainty faced by PDRFs, the current study adopted a qualitative interpretive case study approach to examine the career prospects of PDRFs from an organisational justice perspective in one South African public university. The main purpose of the study is to remind universities of the significance of supportable career pathways. Significantly, the scant literature focuses on PDRFs in South Africa (Council on Higher Education 2021; Prozesky and van Schalkwyk 2024). Hence, Moyo (2022) stresses that topics like funding, development of skills, career prospects, and barriers need to be studied in-depth to guide institutions on how PDRFs can be used to enhance knowledge production.

A lack of clear career stability makes the current PDRF model incapable of leading to improved employability and career prospects inside and outside academia. Therefore, this study aimed to contribute to the improvement of the current PDRF model to one that will advance the career prospects of PDRFs and improve their working conditions. The study expands and builds on limited current findings on the career prospects of PDRFs and is of great significance to the South African Department of Higher Education and Training (DHET). Without a clear national policy shift that gives PDRFs an authentic route into the academic profession (Jones 2020), they will remain stagnant without any sustainable career progression.

Clearly defining the position of PDRFs within the university should be the first step, since doing so will inform the nature of training and support that will address their career needs as future academics, not students. Accordingly, our definition of a PDRF is drawn from Joo and Hwang (2022) who characterise a PDRF as “an individual who has received a doctoral degree and is engaged in a defined period of mentored advanced training to enhance the professional skills necessary to pursue his or her career path.” Furthermore, the constant labelling of experienced academics hosting PDRFs in universities as “supervisors” engenders the latter being called students. Therefore, we contend that experienced academics hosting PDRFs must be denoted as hosts or mentors; in our view, this will negate the misguided categorisation of PDRFs as students.

This study pursued answers to the following questions:

- (1) How is the current PDRF model advancing the career prospects of postdoctoral fellows?
- (2) What types of institutional challenges are experienced by postdoctoral fellows in an endeavour to advance their careers?

- (3) What specific forms of support are essential for postdoctoral fellows to advance their career prospects?

## Literature Review

### Current PDRF Model and Career Prospects

There is little difference in how the South African PDRF model is structured compared with other countries across the globe. The models are universally characterised by the lack of a standard scale for PDRFs as incentives, intermission in the continuance of their fellowship, a lack of recognition, and exclusion from universities' affairs. In the South African model, PDRFs are not offered staff contracts, and do not receive additional benefits such as pension or health insurance. Most of their time (92%) is dedicated to research (Council on Higher Education 2022), with little emphasis on forms of support essential for their career prospects. The United States hosts the largest postdoctoral researcher population (Joo and Hwang 2022), and in the African continent, South Africa does the same. However, with postdoctoral fellowship being a transitional phase, accurate statistics are not easily maintained, hence estimates are relied upon (Schaller et al. 2017). In the South African milieu, the regulations underpinning the PDRFs programme vary to some extent according to specific universities, since they are autonomous institutions with individualised processes. To elucidate, Mouton et al. (2021) showed that PDRFs are contracted for a period of between two and four years. The extension is essentially reliant on the production of two accredited research outputs within the first year (Holley et al. 2018; Kerr 2022, 2023; Prozesky and van Schalkwyk 2024; Simmonds and Bitzer 2018). Whether or not the set targets are accomplished, PDRFs' positions rely on the availability of sufficient funding, and are increasingly unlikely to lead to permanent academic or other work opportunities in South Africa (Kerr 2022; Prozesky and van Schalkwyk 2024; Van Schalkwyk 2022). This uncertainty also abounds internationally, for example, in Nigeria (Shinkafi 2020), Finland (Kuoppakangas et al. 2019), the Netherlands (Teelken and van der Weijden 2018), and the United Kingdom (Jones 2020). This uncertainty is having damaging effects on PDRFs' well-being (Jones 2020; Van der Weijden and Teelken 2023), signalling an urgent need for the PDRFs model to be rethought (Jones 2020) across the sector and not just by individual universities to respond to the career uncertainty faced by PDRFs.

It is, however, worth noting that there are glimpses of hope in shaping the career prospects of postdoctoral researchers. Some European and Asian countries are taking the lead in advancing the career prospects of PDRFs; see, for example, OECD (2021), the Menza-Menta programme at Ghent University (2018–19) in Belgium, and in the Netherlands, van der Weijden et al. (2015). Furthermore, in the United Kingdom, Jones (2020), advocates for the model to change, a view which we align with because it is through this configuration that fellowship research programmes will maximise PDRFs' research experience, and advance and accelerate the transition into a permanent career not limited to academia. Hlatshwayo and Ngcobo (2023) agree and further advocate for a more organised programme that will guarantee that imminent PDRFs will enter a more

coherent programme that will consider their career needs and the level of support that they require.

Previous research has revealed that the South African National Research Foundation (NRF) has made little progress in shaping the career pathways of PDRFs in the past 15 years through its forums. To revive the NRF forums, the annual “Next Generation and Emerging Researcher Symposium” was created, with the first symposium having taking place in October 2024 (National Research Foundation 2024). To close the hiatus left by the NRF, in 2022 and 2023 Stellenbosch University hosted national forums for postdoctoral researchers in South Africa to discuss challenges and to share opportunities and job prospects, an initiative which we view as a step in a right direction and which can be improved by reinforcing their advertising strategies to reach all 26 public universities (Stellenbosch University 2022, 2023).

Furthermore, during the performance of this study, the University of South Africa (UNISA) held a National Postdoctoral Research Forum to enhance PDRFs’ support in South African research institutions (UNISA 2024). These recent developments bring a glimmer of hope regarding the future of PDRFs. It is also worth noting that on the international mobility front, the NRF implemented the Global Knowledge Partnership Programme (NRF 2022) in the 2024 academic year. Regrettably, the partnership caters for NRF-funded students and PDRFs only. An inclusive national approach that will cater for all PDRFs regardless of their source of funding is required. Such a wide-ranging approach will hone the skills of all PDRFs to make substantial influences on the knowledge economy for world-wide impact. However, it remains the responsibility of all 26 South African public universities to come up with a revised and uniform model that will advance the research career prospects of PDRFs.

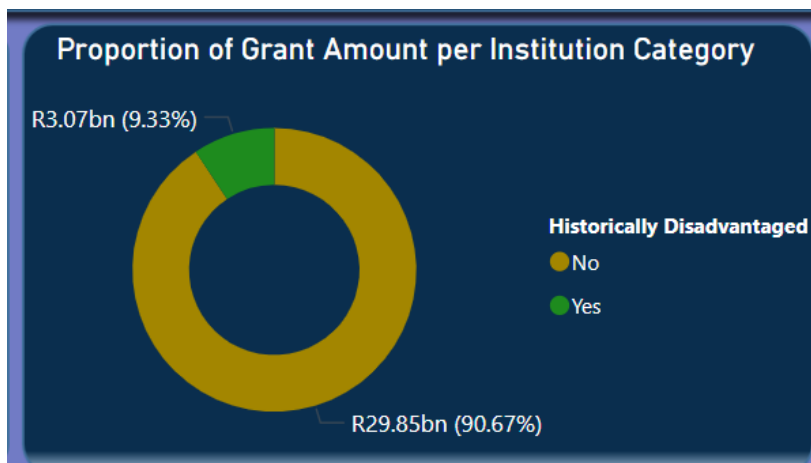
### **Institutional Challenges Experienced by Postdoctoral Fellows in an Endeavour to Advance Their Careers**

The challenges experienced by PDRFs are vast and well recognised within the literature, for example, better rewards and benefits (Hlatshwayo and Ngcobo 2023; Khan and Ginther 2015; Schaller et al 2017), job security (Kerr 2022, 2023), geographic mobility (Khan and Ginther 2017), career instability (Holley et al. 2018), career guidance (Shinkafi 2020; Van Der Weijden and Teelken 2023), and exclusion (Pithouse-Morgan et al. 2016). The current study investigated some of the key challenges to see how they affect PDRFs’ endeavours to advance their careers. The challenges experienced by PDRFs are difficult to separate from each other because they are intertwined and interconnected. Hence, in reviewing the literature, where possible the challenges were subdivided even though they remain related to some extent.

#### *Poor Working Conditions*

A recent survey of 569 PDRFs in German universities by Rusel et al. (2023) identified the need to better their working conditions regardless of their backgrounds. The fact that

PDRFs in some parts of the world are taking strike action is an indication of how bad things have become (“Postdocs in Crisis” 2020). We assert that PDRFs remain the most exploited cohort in the knowledge economy, even though they contribute immensely to the creation of quality research outputs for their host universities which, in turn, attract income via the South African DHET policy of recognising research outputs from universities by means of providing subsidy funding (Van Schalkwyk 2022). According to the DHET’s sector report evaluating universities’ research outputs in 2022, the University of Johannesburg, with a total of 3143.7 units, was the highest producer of accredited research outputs in South Africa (DHET 2024). As shown in Figure 1, between the 2014 and 2022 financial years the proportion of grant amount per institution category varies immensely, with the better-resourced and more selective universities receiving a massive R29.85 billion, while the historically disadvantaged universities received R3.07 billion. The total amount received by all universities was R32.92 billion, resulting in a growth of 97.62% (NRF and DHET, n.d.). The precise contribution of PDRFs is not featured anywhere in the reports (DHET 2024; NRF and DHET, n.d.). This is a global trend, where postdocs produce research outputs for universities more cheaply than employees, and in a way which makes universities score better on various metrics that only count permanently employed academics (Teelken and Van der Weijden 2018). However, as staff on fixed contracts, PDRFs do not receive additional benefits (Hlatshwayo and Majozi 2024; Khan and Ginther 2017). PDRFs remain peripheral figures with no identity or recognition who are subjected to exploitation in the knowledge economy. These poor working conditions often lead to mental health challenges because the anxiety and uncertainty this creates can be immense (“Postdocs in Crisis” 2020; Wellcome 2020), even when the qualification they hold (a doctoral degree) is regarded as the highest degree awarded in academia.



**Figure 1:** Grant amount per institution (Source: National Research Foundation 2024)

### *Lack of Job Satisfaction*

Job satisfaction in the workplace may refer to facets such as mental well-being which incorporates health issues and welfare, and most significantly remuneration. Deplorably, indigent compensation, and an unsure path to a permanent post (OECD 2021; Woolston 2020) characterise the organisational injustice experienced by PDRFs. They discharge their responsibilities within a climate of career uncertainty which reduces their job satisfaction (Van der Weijden et al. 2015). Another reason for their dissatisfaction is the excessive work pressure, specifically the pressure to obtain grants and produce (high impact) publications (Van der Weijden and Teelken 2023). This has impelled many PDRFs to pursue careers outside of academia, indicating a growing need to provide opportunities on campus to develop broader skill sets to ensure success in various career streams (Nowell et al. 2020; Shinkafi 2020). However, this will only be possible when PDRFs are accorded the necessary support that will turn them into flexible and resourceful researchers. Schaller et al. (2017) argue that academic research institutions should standardise the categorisation and treatment of PDRFs. This will make it easier to ensure that researchers at the postdoc career stage will receive comparable salaries.

### **The Specific Forms of Support Essential for Postdoctoral Fellows to Advance Their Career Prospects**

#### *Mentoring*

The reviewed literature showed that mentoring is the primary form of support needed to advance the career prospects of PDRFs (Kerr 2022; Richards et al. 2019; Van der Weijden and Teelken 2023). This form of support is typically provided by the host department under the leadership of the assigned host, and it is necessary primarily after a PDRF transitions from being a student. A host is a significant figure who needs to develop and provide guidance to the PDRF to manage the transition period and ultimately forge a clear career path into academia. Hence Richards et al. (2019) argue that, for mentorship to have an important effect, mentees should be matched with suitable mentors, aligned with academic job descriptions, and financed appropriately. This is against the backdrop of the finding by Shinkafi (2020), who established that in Nigeria most PDRFs do not get the obligatory training, mentorship, and guidance from experienced scholars in their organisation upon assumption of duty. Similarly, a study in Malawi with participants from numerous African countries reported that lack of mentorship from senior academics was the major challenge encountered by the continent's PDRFs (Kumwenda et al. 2017). It is important to shape mentor and mentee relationships because without appropriate mentorship, future academics will be lost to other fields (Richards et al. 2019), or suffer the loss of identity as researchers and their reputation in their chosen field (Share and Loxley 2023). Such an ending can result in what Herschberg et al. (2018) termed "scattered research line" that can affect PDRFs' employment prospects.

The 2019 South African *White Paper on Science, Technology and Innovation* (DST 2019) gives no attention to the form of support needed by PDRFs who are in turn expected to co-supervise postgraduate students. This is despite warnings by Richards et al. (2021) and Kerr (2022) that meaningful mentorship serves as a deterrent to PDRFs leaving academia. Hence, to keep DRFs in academia, their mentorship must be prioritised, since doing so will afford them a genuine path into their academic profession (Jones 2020). Moreover, a topical study by Hlatshwayo and Majozi (2024) on newly appointed academics in one South African university confirmed the importance of support and mentoring.

### *Orientation*

Edwards and Roy (2017) call for institutions to have a dedicated postdoc support office to offer services such as orientation sessions, courses, career counselling, mentoring, and coaching to help postdocs to develop their own career within or beyond academia. Shinkafi (2020) also identified orientation as a fundamental programme for young academics to assist them to produce credible research outputs in accredited journals. However, we contend that orientation must precede mentoring, whereby the PDRFs are familiarised with their new roles and responsibilities that are not limited to job descriptions, institutional policies and procedures, and departmental and grants expectations.

### *Recognition of Postdocs as a Form of Support*

The current study has shown that universities fail to recognise PDRFs as part of their academic staff and instead classify them as students. This dichotomous recognition across all domains has created hostile and destructive working conditions (OECD 2021). To change that, Teelken and van der Weijden (2018) maintain that, for universities to consider PDRFs more seriously, the following approach must be adopted. A simple starting point is more visibility through the recognition of PDRFs as an autonomous staff classification. Second, universities should foster greater support for PDRFs by developing appropriate and realistic human resource management policies. The lack of such policies in South African public universities has resulted in the unstructured recruitment of PDRFs, hence we propose that this function must be placed within the HR system to preclude exploitation right from the commencement of the programme.

## **Theoretical Perspective**

Teelken and van der Weijden (2018) observed that most studies lack a more detailed and coherent framework to investigate the career prospects of PDRFs. However, a few theoretical approaches have been applied (Kerr 2020). For example, Prozesky and van Schalkwyk (2024) adopted the human capital theory, Moyo (2022) and Hlatshwayo and Ngcobo (2023) embraced Fraser's social justice framework, and Teelken and van der



Weijden (2018) used the model proposed by Gläser and Laudel (2015) to close the gap between research on academic careers and theory.

In this study, we drew on Greenberg's (1987) organisational justice theory (OJT) as the roadmap to respond to how the career prospects of PDRFs can be advanced and find solutions to research problems (Bezuidenhout and Cronje 2021). This theory is one of the dimensions of social justice (Choudhry et al. 2012) which seeks to eliminate injustice in the workplace and describes employees' fairness perceptions regarding their work and conditions of employment. The theory is deemed relevant given the unfair working conditions that PDRFs operate under. It includes the following dimensions: distributive justice, procedural justice, and interactional justice. These dimensions were used to guide the collection and analysis of data. How the three dimensions of OJT are positioned in the context of PDRFs is discussed below.

### *Distributive Justice*

Organ (1988, 246) declared that “distributive justice [includes] arguments on status, seniority, effort, needs and determination of payments.” There is no universally accepted definition of what constitute a PDRF (CHE 2022) and their status has not yet been clearly defined—they are neither students nor employees. This contrast, in our view, has contributed to PDRFs' distributive injustice, where, for example, their remuneration, in the form of a “stipends,” is not disbursed timeously. Against this backdrop, the distributive dimension of the organisational justice framework (OJF) seeks to give expression to the challenges faced by PDRFs by first clearly defining their status.

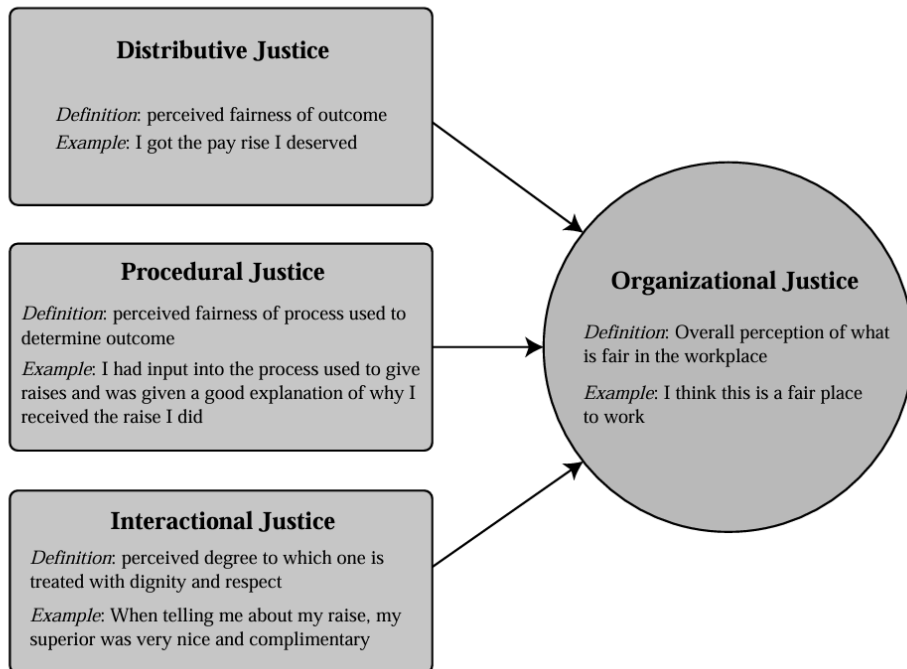
### *Procedural Justice*

The concept of procedural justice hinges on an individual's assessment of the rightness or wrongness of procedures and methods in decision-making relevant to them or others (Choudhry et al. 2012). With reference to the OJF, PDRFs are disenfranchised with respect to the procedures used to determine, for example, the length of their stay in the programme, and their working conditions. PDRFs are voiceless, and as contract “staff,” with “staff cards,” they do not receive additional benefits such as a pension or health insurance (CHE 2022). PDRFs' voices and views need to be heard and considered by universities' leadership when decisions affecting them are taken. It is for this reason that research to understand the dynamics of procedural justice has focused on the related concepts of voice (Folger and Cropanzano 1998) and process control (Thibaut and Walker, 1975). Voice—or participation—allows those affected to exercise some degree of process control or personal influence in the process of reaching a decision (Greenberg and Folger 1983; Thibaut and Walker 1978).

### *Interactional Justice*

Colquitt (2001) proposed that interactional justice consists of two elements, interpersonal and informational justice. Interpersonal justice refers to perception of

respect in one's treatment (i.e., whether employees are treated with courtesy and respect by management) while informational justice refers to perceptions about whether an employer is providing timely and adequate information and explanation (i.e., the willingness of management to share relevant information with employees). In the context of the OJF, the literature revealed that PDRFs are treated as cost-effective income generators for South African universities (Kerr 2023; Prozesky and Van Schalkwyk 2024), clearly highlighting the disrespectful treatment that PDRFs receive in their journey to advance their career prospects.



**Figure 2:** Conceptualisation of the organisational justice framework (Source: Mhlolo 2014)

## Research Methodology

The current study is a qualitative interpretive case study of one South African university in the province of Gauteng, South Africa. This approach was deemed appropriate because it attempts to understand phenomena in their natural context, rather than the more controlled environment favoured in quantitative research (Bless et al. 2013). Spanning the nation, the selected university occupies nine campuses and seven faculties and hosts a population of about 81 PDRFs, most of whom hailed from other African countries, such as Somalia, Ghana, Rwanda, and Burundi, with Nigeria dominating the numbers. South Africans constitute only 26% of the population and the overall

composition is male dominated. Purposive sampling does not pretend to represent the wider population (Creswell and Creswell 2018). Hence, from the target population, 13 participants from various disciplines who had already spent six months or more in the programme were purposively selected and agreed to take part in the study. In-depth online interviews were used to explore their lived experiences and the challenges they faced in advancing their career prospects. The choice of 13 participants was influenced by the fact that, in qualitative research, the question of sample size does not matter (Mahome 2021). As a result, when saturation was reached, the interviews ceased. Moreover, the PDRF cohort constitute lower numbers in most of the South African public universities. We purposefully used the six months minimum criteria since the PDRF programme runs for a year with the possibility of an extension, as previously discussed.

Before data were collected, the university's research ethics committee granted permission for the study to proceed. The participants were formally informed of the purpose of the study and subsequently consented to voluntary participation by signing the necessary forms. The participants were assured that their identities would remain secret and that letters and numbers (Participant 1–13) would be used to identify them. To eliminate the element of reprisal given the sensitivity of the topic, the names of the faculties and respective departments hosting the participants were also excluded. Ethical researchers protect such information as a matter of principle (Louw 2021).

A semi-structured interview schedule was created for data collection, utilising the Microsoft Teams online platform. We opted for semi-structured interviews because we were able to draw up questions ahead of time to help steer the PDRFs' career prospects conversation and retain the participants on the topic. The online platform recorded the interviews after the participants' granted permission, with the transcription occurring during the process. Each interview lasted between 15 and 30 minutes after we established a sense of rapport and reciprocal relations owing to the conversational nature which facilitates follow-up and clarification (Rutledge and Hogg 2020). During the follow-up process, certain words and phrases were verified with some of the non-native English speakers who participated in the study to ensure the accuracy of the transcripts. The collection of data was also combined with an analysis of the institutional PDRF policy to establish how the current PDRF model is advancing the career prospects of postdoctoral fellows.

We employed the qualitative content analysis process suggested by Bezuidenhout and Cronje (2021) supported by the Coding Analysis Toolkit (CAT). Data were grouped together into chunks for close reading and subsequently assigned to broader categories of related meanings. In this way, we structured the data into codes and four main themes which were then applied to all the texts. Having given the data some sense of order, we then assessed the phrases and words to catch intonations and inferences, which led to the emergence of seven sub-themes. The analysis and interpretation processes were

influenced by the researchers' theoretical awareness of the organisational justice framework.

## Findings, Analysis, and Discussion

Based on the analysis of the interview responses, the study confirmed a lack of interest in advancing PDRFs' career prospects, leaving the current model questionable. The findings are presented and discussed along the following four main themes that emerged from the qualitative dataset: (1) Inconsistencies in managing the career prospects of PDRFs; (2) PDRFs experience a plethora of challenges in their quest to advance their careers; (3) Recognition of PDRFs as part of staff; and (4) Improved host strategy and good mentorship. The sub-themes that centre on the significance and scope of the central topic are also covered, and reference is also made to the analysed institutional policy documents regarding PDRFs to solidify the findings and discussion.

### Theme 1: Inconsistencies in Managing the Career Prospects of PDRFs

Participants from various faculties and departments divulged opposing views and their lived experiences varied when probed about the advancement of their career prospects based on the current PDRF model. A few participants viewed the programme as beneficial, whereas most were sceptical about its objectives and viewed it as a vehicle to enrich the university without any intention of advancing their career prospects. Participant 11 expressed the following:

In a way the programme has advanced my career prospects because at my previous university where I completed my PhD, we did not do qualitative research. So, my host department organised a training workshop on qualitative research, and I benefited a lot.

The above was supported by another participant who appreciated the programme, though with some concerns pertaining to its lack of a holistic development approach:

I am fortunate to have a host who believes in the power of mentorship; hence he had guided me by connecting me to individuals that groom me in the academic space. Personally, I only got the opportunity to publish a journal article which is just one of the three pillars of academics. This is the only contribution that the programme has made to my career prospects. In the other two areas I am lacking. (Participant 4)

Other participants were critical of the current PDRF model and lambasted it for its lack of support in moulding them into future academics. They stated that the current PDRF model is structured without any intent to absorb the postdocs into academia. There is currently no official university policy in the country which advocates absorbing PDRFs as a way of supporting their career advancement. The focus is on publication at the expense of key areas of comprehensive development such as teaching and supervision. Instead, the universities concentrate on profit rather than their welfare. As Participant 12 contended:

I have been a serial postdoc at three South African universities. At the first university I learnt the ins and outs of academia. A reversal experience occurred at the other two universities where I was not allowed to teach or supervise. The South African model of postdocs is all about research outputs. Institutions don't care about us, they are focusing on making money through this model, and it needs to be revisited. I have had enough of being a postdoc. The extension of the programme for two more years in a so-called "senior postdoc fellowship" is another form of slavery. The model is a mess, and the reason given that it is dominated by foreign persons is questionable. I even doubt if it speaks to the needs of South Africans.

Another participant shared these views and raised the following concerns:

The current model does not advance our career prospects because our universities don't care about us, they are just about papers. The reason I am saying that is, there is another postdoc who is a leading publisher in their department, but they have never been absorbed into a permanent position, no recognition, nothing whatsoever. There must be a certain level of dignity shown toward us, but unfortunately there is none. There is even no plan after the completion of the programme because we are treated like students. (Participant 8)

The opposing views expressed by the participants are indicative that the various host departments within the university under study operate in silos regarding the management and administration of PDRFs. For example, all the willing PDRFs should be allowed to do some teaching and supervision of postgraduate students so that they are holistically developed to advance their career prospects. The current PDRF policy makes provision for such. Regrettably, for some participants, there is little to no focus pertaining to all the areas that speak to their career development, let alone their career prospects. Host departments have a major role to play in ensuring that all the stipulated needs of the PDRFs are catered for, there has to be uniformity on how the host universities treat this cohort of academics. However, based on the participants' accounts, we hold a strong view that some of the problems are created by host departments and the assigned hosts, not university systems. The findings further revealed a concerning phenomenon of turning PDRFs into paper-generating machines, leaving the PDRFs with inadequate knowledge when they exit the programme. These findings resonate with previous studies by van der Weijden and Teelken (2023) and Kerr (2023).

## **Theme 2: PDRFs Experience a Plethora of Challenges in Their Quest to Advance Their Careers**

The participants were unanimous in articulating the plethora of challenges they encounter in their quest to advance their careers. This theme is discussed along the following sub-themes that emerged during the interviews: (1) Poor host strategy without any clear-cut mentorship; (2) Constant disregard and undermining of PDRFs; (3) Unsustainable demands to publish under perpetual conditions of precarity; and (4) Lack of job and financial security. The findings are discussed against the backdrop that

PDRFs are not covered by the Basic Conditions of Employment Act (75 of 1997) which intends to give effect to the right to fair labour practices. The reason for this exclusion is that PDRFs are not regarded as employees, and that in itself creates room for uncertainty and exploitation. Therefore, the PDRFs' perceptions of fairness regarding "working" conditions are elucidated against that background and aligned to the framework sustaining the current study, which seeks to eliminate injustice in the workplace environment (Greenberg 1987).

### *Poor Host Strategy Without Any Clear-Cut Mentorship*

A common point raised by the participants was the presence of inexperienced mentors which results in poor host strategy and the absence of any clear-cut mentorship. During the interviews it became clear that the participants were not content with how they were being nurtured by their hosts to manage the transitional space between student and completely developed academic. The participants felt ostracised and not supported. Participant 8 pointed out the following:

I have observed a lack of support or credible mentorship from my host. I am being alienated as if I do not form part of the institution; for example, I am not engaged in decision making processes, yet I am expected to implement or abide by the outcomes of the decisions agreed upon. I am being denied my rightful duties, such as supervision, teaching, and attending conferences, although it is stated in my MOU. Instead, I was told that I am not qualified to teach certain modules, although I am a qualified PhD holder. These are some of the challenges I have encountered.

Similar views were echoed by another participant:

I have never been given an opportunity to supervise. Permanent employees will group themselves to supervise students with the exclusion of PDRFs, we already know this is a tag-team, I will call it gatekeeping. It is really difficult, and you cannot complain because they will even remind you that you are not a permanent staff member, but just a mere postdoc. (Participant 9)

Participant 3 affirmed the above assertions:

My host is just a general manager, so this far I am not impressed, mostly with him, and not my institution. He just wants papers, he doesn't care about the quality, none whatsoever. Imagine my host told me, "If you don't publish by month end, you might not get paid your stipend."

The above findings exposed a worrying development around some of the hosts with regard to the management of PDRFs. Seemingly, some of the hosts are not familiar with how postdocs should be supported, or they purposely neglect them. That being the case, the outcomes are not surprising since similar findings have previously been reported. Shinkafi (2020) and Kumwenda et al. (2017) established that most PDRFs do not get the obligatory training, mentorship, and guidance from experienced scholars in their

organisation upon assumption of duty. The findings further revealed a lack of consultation with PDRFs, particularly from those in charge, resulting in the former working in isolation without any meaningful monitoring. Excluding PDRFs in decision making further demonstrates a lack of fairness and respect and is aligned with the interactional justice dimension of the framework adopted because the treatment that PDRFs receive as a result of unilateral managerial decisions may negatively affect not only the career of the individual PDRF but also jeopardise the advancement of the institution.

### *Constant Disregard and Undermining of PDRFs*

This sub-theme is aligned with the third dimension of the current study's adopted framework. Several participants voiced their displeasure at being viewed as students. This is despite the interactional justice dimension, which embodies treatment characterised by respect and dignity. The participants felt disregarded and undermined, since they perceive themselves as budding academics trying to establish their research careers. This treatment has deprived them of a privilege and a sense of being part of the permanent staff. For example, one participant expressed the following:

You are always reminded that you are a student ... you are not entitled for this and that, as if you are learning anything from them. You are supposed to learn but instead the hosts are learning from you. (Participant 10)

Other concerned participants stated the following:

Postdocs are not treated as part of the university community by the majority of the staff; hence you hardly maximise the opportunity available. (Participant 4)

It is difficult for me to attend the social gatherings organised by my department and the university because I am made to feel like an outcast. I don't want to feel out of place; hence I just remain in my corner. (Participant 13)

These comments confirmed what was established in the literature, for example, Schaller et al. (2017) urged academic research institutions to standardise the categorisation and characterisation of PDRFs' position. Based on the findings, we purport that the lack of a universal classification has led to PDRFs being constantly disregarded. Kerr (2023, 3) puts the blame squarely on the South African PDRF model and described it as "de-professionalising academic work by constituting PDRFs as students." The employee–student dichotomy must be eliminated and there should be a clear distinction when PDRFs are labelled. In the absence of that, the divisive culture will prevail and the career prospects of PDRFs will remain suppressed and dormant.

### *Unsustainable Demands to Publish Under Perpetual Conditions of Precarity*

The publish or perish debate is well documented within the early career academics and PDRF literature. Several participants voiced concerns about the demands made by their

hosts regarding research outputs. Although the policy requires two research outputs per year, some hosts were demanding more while neglecting other significant pillars designed to propel the PDRFs' career development. Based on the procedural justice dimension which speaks to the fairness of process used to determine the increased number of research outputs expected, the participants perceived unfairness regarding their work and conditions of the contract. Participant 5 raised the following concerns: "There is no career development strategy; instead, PDRFs are subjected to producing papers within unreasonable timelines." Participant 4 shared a similar view:

My challenge is in the area of focusing on one pillar of academia. Most employers want well-rounded academics with the three pillars, but my fellowship only gives me the opportunity of one. I am constantly reminded to publish or perish.

Participant 13 added: "I am doing research only; my resume is dying because I am not building it. I am getting afraid, and I have been looking for answers but getting none."

The literature is in agreement that a substantial percentage of research outputs, vital for retaining or increasing universities' ratings, emanate from the effort of PDRFs. Research outputs form part of the PDRFs' functions, and when Participant 3 was probed to share his lived experiences on the expected publications, he made an alarming revelation:

No career development here, I am turned into a papermaking machine. ... Instead I was instructed to publish 12 journal articles per year. If that was not enough, I am being forced to include people who are not contributing to my work as co-authors. Opportunity of abuse is very high here. ... Hence I have applied elsewhere.

The above findings confirmed the exploitation that some PDRFs go through in the quest to advance their academic research careers. They are systematically denied an opportunity for growth by some of the experienced academics who are assigned to nurture their development. Share and Loxley (2023) and Niang et al. (2021) reported similar findings, declaring that career development was a major concern in postdoctoral experience. The unsustainable demands and refusal of hosts to holistically develop PDRFs escalates their precarity. Demanding to be included in a research output in which made no contribution suggests a lack of academic integrity. Hosts should strive for the quality of work instead of turning scholarship into a "numbers game."

#### *Lack of Job and Financial Security*

One aspect which was emphasised during the interviews was the lack of job and financial security. The low value of the fellowship itself creates an environment of insecurity. A postdoctoral fellowship remains a transitional phase in which PDRFs are paid stipends since they are not classified as employees. Even though they are entitled to do an extra 12 hours of work within the university, there is no specific rate at which they are to be remunerated. Participant 10 expressed the following displeasure:



What I am earning is too little and there is nothing to invest because we are living from pay cheque to pay cheque. This thing of being used as a staff member is another form of exploitation because at the end of the contract you are not entitled to any benefits.

Participant 9 averred:

No job security because every year conditions change; if the powers that be no longer want you, they can easily remove you because there is no automatic extension of contracts. Sometimes when the extension is impending, there is usually a delay in the renewal.

Participant 1 claimed: “All staff members are paid on time. Why are we not paid on time as well? They don’t even care about the repercussions of not being paid on time.”

Several participants complained about the lack of financial benefits that manifest in financial insecurity, a challenge that has also been emphasised by past research (Khan and Ginther 2017). The complaints happen against the backdrop of it being emphatically stated in the MOU that the fellowship is granted without any fringe benefits. Owing to the lack of prospective research career positions, PDRFs find themselves being part of the fellowship with the hope of advancing the very scarce job prospects. Given the diminutive amount of the stipend that is in some cases not paid timeously, only one participant indicated that they were looking for a job outside academia, whereas the reviewed literature established that PDRFs are increasingly looking outside of academia for careers (Aarnikoivu et al. 2019; Kuoppakangas et al. 2019). This contrast, in our view, may indicate the lack of job opportunities for PDRFs inside and outside academia in South Africa, leaving them in an uncertain career trajectory despite playing an essential role in the knowledge economy.

### **Theme 3: Recognition of PDRFs as Part of Staff**

A significant number of the participants agreed that the first form of support is better treatment and recognition. They maintain that the university has to change the way it classifies them and should regard them as part of staff by allowing them to play a role in other university activities. To demonstrate interest in addressing PDRFs’ employment issues, recognising them as an autonomous staff classification has to be prioritised, resonating with the findings by Teelken and van der Weijden (2018). We therefore assert that discernible capacity has to be built for PDRFs to become active participants in their respective departments, to gain certain skill sets, thrive and build successful careers. Participant 11 said the following:

Host universities should accommodate postdocs as part of their staff and not as students. Some departments are still identifying postdocs as students, others call them postdoctoral students. ... They need to change that.

Participant 6 agreed: “Postdocs should engage in all activities of the institution, for example lecturing, supervising, and mentoring as this will prepare them for future job opportunities.”

It has to be stated that during the performance of this study there was still no consensus worldwide on the labelling of PDRFs; however, universities as autonomous institutions have the leverage to accommodate and treat PDRFs as staff. This may be operationalised by setting individual developmental plans that are supported by the institutional ones.

#### **Theme 4: Improved Host Strategy and Good Mentorship**

The fourth theme that emerged from the interviews strives to establish support systems that will advance the career prospects of PDRFs. A better organised strategy that is PDRF-centred and mentorship were identified as vital for PDRFS career progression, consistent with the appraised literature. Through that holistic approach, several participants concurred that their aspirations of becoming fully fledged research academics may be attained. Their propositions were brought forward and discussed below under the following sub-themes.

##### *Forging Good Relationships Between the Mentor and PDRFs*

Several participants shared that good and healthy relationships characterised by clear communication and regular meetings have the ability to create a caring and supportive environment. Participant 12 said:

If you have a host that you don't have a relationship with, it is not easy for you to get support, because there should be a clear and transparent communication between what the postdoc needs and what the host is expecting. If there is no clear relationship between the two, including the host department, there will always be conflict. As PDRFs we need a type of support whereby our needs are going to be heard, for example, when I tell my host that I need to do teaching and learning, my host should support me. A safe space must be created for us to raise our concerns without intimidation of the non-renewal of my contract. Sadly, there is no safe space in academia.

Participant 7 asserted:

Have regular meetings with the host, to trace our progress and also to attend to our challenges. Pay for our editing fees timeously. Allow us to collaborate with other stakeholders who will be of most relevance to our research projects.

Good mentorship diminishes developmental challenges and career stagnancy. Hence, we maintain that there is a need to inculcate a tradition of mentorship amongst experienced and inexperienced academics. Many young promising academics fall by the wayside because of institutional dynamics. Mentorship is a powerful way to break this conundrum. We need to mentor and produce formidable PDRFs who will in turn move their respective fields forward.

### *Continuous Developmental Support*

A postdoctoral research fellowship is not a career, but a developmental programme; therefore, the development of PDRFs has to be prioritised right at the start. Consequently, this sub-theme reports on PDRFs' perspectives on how support and development should be carried out to advance their career prospects. Quite a few participants appreciated the support given by their hosts, whereas many found it inadequate and suggested that it should be consolidated by incorporating orientation and induction. As Participant 1 pointed out:

I believe the support should be continuous, so that the PDRF is able to learn and advance their career. Although, most hosts are busy, they should avail themselves as per the policy. I get all the support from my host; we are writing together.

Participant 9 added:

My department is supportive, they arrange writing retreats where we spend some days honing our writing skills, where experienced scholars take us through aspects like how to structure your writing and different methodologies.

Participant 4 also suggested the inclusion of PDRFs in the university's staff developmental plans, such as orientation. He thought it would be beneficial for PDRFs to form part of such programmes. Probing further on developmental plans, another participant complained about the lack of proper induction and highlighted the following:

There was no formal induction. There was a meeting, of course, in which the administrator addressed us about expectations, such as the publication of two journal articles per annum. Maybe that is their induction, but I expected it to be more professional and organised. (Participant 9)

Development has to be continuous for it to be effective. Organising writing retreats and workshops for PDRFs is considered a step in the right direction given that some of the PDRFs may not have adequate skills to craft publishable material. We further assert that such training should be organised at the institutional level, and filter down to all the respective departments, leaving no one behind, with the role of the hosts clearly defined. However, it may be argued that orientating and inducting all the PDRFs at the same time may be a difficult task given that they are appointed on a continuous basis and at different times.

### *Regular Attendance at Academic Conferences*

Another aspect which was highlighted by several participants during the interviews was regular attendance at academic conferences because they viewed that as part of their personal development, as well as an opportunity for networking. As Participant 2 pointed out, "We must be allowed to attend numerous conferences locally and internationally to increase networking opportunities."

Participant 11 felt aggrieved: “We even struggle to attend conferences; I only attended one after my mentor intervened.”

However, a participant sounded a note of caution regarding the eligibility of attending conferences:

My academic conferences are being funded by the department even though it comes with some strict conditions like publishing a particular number of journal articles.  
(Participant 9)

The analysis of the PDRF policy indicated that there is no clear institutional policy on how many conferences a PDRF must attend in a calendar year. Instead, financial support for conference attendance is treated in the same manner as for employees and postgraduate students. Once again, the dichotomy leaves room for abuse. Deserving PDRFs may miss the opportunity to improve their resumes and establish themselves as specialists in their discipline through presentations and journal article productions.

## Conclusion and Recommendations

Based on the findings, we conclude that the supply of PDRFs has not led to their absorption into the academic profession, placing the knowledge economy ecosystem into a state of disproportion. Hence, the study recommends that the current PDRF model be rethought since it does not advance PDRFs’ career prospects. Hosts should play their role and refrain from focusing only on the production of journal articles without thinking about the needs of the PDRFs on how to advance their careers. The pervasiveness of such treatment equates to exploitation and unfair treatment in terms of the developmental aspirations of PDRFs. We recommend that the PDRFs’ careers can be advanced through a customised programme of intent to absorb them into academia, for example, by replacing every retiring position with a PDRF. However, this transition to succession can only be feasible when there is a correct matching of the outgoing person and the postdoc, bearing in mind that the matching process can be very challenging. As it stands, the current PDRF model needs to be reevaluated to thwart unintended impediments on the career prospects of PDRFs.

The study revealed that PDRFs are confronted with an overabundance of institutional challenges which are perpetuated by their hosts, with the publish or perish condition weaponised to instil fear. To curtail those challenges, the recruitment and selection of PDRFs should be improved by absorbing them as professionals, and this will only be possible when universities invest in their own systems to make PDRFs part of staff. University staff are covered by the current labour laws from which PDRFs are excluded; therefore, having a specially designed platform on which their challenges are addressed will go a long way in making them feel appreciated, and put a stop to them being classified as students. To this end, PDRFs are living in constant fear of what follows after the fellowship since it is a temporary position, characterised by a meagre stipend

and without any financial perks. Universities should strive to expose PDRFs to training and academic conferences as they are part of development during their period of stay. Universities should establish an inclusive support system customised to address the developmental needs of this cohort. A dedicated and mandatory mentorship programme that holistically prepares the PDRFs for absorption into a permanent research career should be urgently established. This is despite the confirmation of the lack of proper training, where some hosts appeared to be less experienced and incapable of providing the relevant mentorship. That said, the study calls for the less experienced hosts to undergo training themselves to guide the PDRFs accordingly.

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