




Industrial psychologist intern: Professional purpose, skills and practice confidence



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Orientation: Internships are a practical way for students to operationalise their professional purpose, acquire key occupation-related skills and practise their professional capability in real-world work settings.

Research purpose: This study explored industrial and organisational psychology (IOP) interns' views of their professional purpose and their perceptions of the applied skills they developed as a result of the internship programme, including their confidence about setting up an independent practice.

Motivation for the study: There is currently a dearth of South African research on IOP interns' views about the internship programme.

Research approach/design and method: The study utilised a qualitative research approach. An open-ended question survey was conducted among 17 South Africa-based IOP interns. Thematic analysis was used to analyse the collected data.

Main findings: Data analysis revealed the intrinsic motivational self-determination of the interns as an influencing force for their personal purpose and vision as practising industrial psychologists (IPs). Views about the skills developed were aligned with HPCSA minimum competency requirements as manifested within the digital-era work space. Interns felt more confident about practising within an organisational setting rather than a private practice.

Practical/managerial implications: Understanding the psychological self-determination needs that motivate the IOP intern may help to improve coursework training and supervision support practices for the IOP intern.

Contribution/value-add: The study extends the internship research literature and revealed the dire need for enhancing the confidence of the IOP intern about setting up and successfully managing an independent professional IP practice.

Keywords: industrial and organisational psychology intern; psychologist internship programme; industrial psychologist professional purpose; psychologist intern applied skills; psychologist private practice confidence; self-determination theory.

Introduction

The vocational experiential work experience offered by internships has long been seen to enhance the marketability and employability of students, including their motivation and confidence to pursue a personally valued profession (Ali & Muhammed, 2018; Anjum, 2020; Gault, Leach, & Duey, 2010; Hurst, Thye, & Wise, 2014; Rothmann & Sisman, 2016; Vélez & Giner, 2015). In this regard, professional bodies (e.g. the Health Professions Council of South Africa [HPCSA]) play a vital role in identifying, in collaboration with industry and higher education, work-ready capabilities required to succeed in a vocational profession (Bowles, Ghosh, & Thomas, 2020; HPCSA, 2019a). The industrial and organisational psychology (IOP) internship offers the IOP master's student the opportunity to develop proficiency in specific career-related skills and attributes through a supervised practical work experience programme. The skills and attributes relate to tangible and observable human behaviour-related competencies in diagnosis, design, assessment and intervention applied at individual, group and organisational levels in the workplace (HPCSA, 2019a).

The IOP intern works toward registering as a professional, independent practice psychologist (category: industrial) with the Professional Board for Psychology under the auspices of the HPCSA. After completion of a one year internship and a national board exam, the qualified industrial

psychologist (IP) is deemed competent in setting up a professional practice, including proffering and evaluating professional, psychological-based human behaviour-related services as facets of their professional purpose. Such services strive to facilitate an understanding of and the modification and enhancement of individual, group and organisational behaviour, well-being and effectiveness, amidst the contemporary world of work challenges that employers and employees are dealing with (HPCSA, 2019a). Accordingly, the aim of this study was to explore IOP interns' views about the internship programme in terms of three facets: (1) their views of their professional purpose as IPs, (2) their perceptions of the applied skills they develop as a result of the internship programme, including (3) their confidence about setting up an independent practice after completion of the internship programme.

Students who enrol for vocational, professional, career-focused postgraduate programmes generally exhibit a professional purpose mindset that reflects their commitment to develop a professional future aligned with personal values and professional aspirations to contribute to society in a meaningful manner (Bates, Rixon, Carbone, & Pilgrim, 2019; Gill, 2020). A professional purpose alludes, *inter alia*, to interns' sense of professional calling, including their level of self-awareness and confidence in their employability and ability to successfully pursue and achieve professional goals (Gill, 2020; Peeters et al., 2017). Internships are a practical way for students to operationalise their professional purpose or calling, acquire key occupation-related skills and practise their professional capability in real-world work settings (Bisland, Carter, & Wood, 2019; Gill, 2020). Research has shown positive associations between a strong sense of professional calling and attributes such as self-efficacy, core self-evaluation, objective and perceived ability, career success, employability and professional competence (Chen, May, Schworer, & Augelli, 2018; Dobrow & Heller, 2015; Guo et al., 2014; Lysova, Jansen, Khapova, Plomp, & Tims, 2018; Thompson & Bunderson, 2019).

Although research highlights the importance of internships in facilitating interns' professional calling and work-ready skills and attributes relevant to a specific profession, South African research on the professional purpose identity and usefulness of the IOP internship in this regard is limited (Chinyamurindi, Masha, & Tshabalala, 2021; Graupner, 2021; Van Zyl Nel, Stander, & Rothmann, 2016). Moreover, it is unclear whether the IOP internship programme assists interns in developing the confidence to set up an independent IOP practice after the completion of the internship programme.

Currently, there seems to be a dearth of South African research on interns' views about the IOP internship programme. In this regard, the present study is timely and deemed important for scholars, professionals and employers involved in educating and training South African IPs. South Africa-based research on IOP interns may help to inform

coursework training and internship supervision by focusing on their professional purpose, vision and their perceptions of the applied skills they develop as a result of the internship programme, including their confidence in setting up an independent practice as IP.

The intern industrial psychologist from a self-determination theory perspective

This study draws from the basic premises of self-determination theory (SDT) of human behaviour (Deci & Ryan, 2000) to gain an in-depth understanding of IOP interns' perceptions of their professional purpose as IPs, the applied skills they gained from the internship programme and their confidence about setting up an independent IP practice. The pursuit of an IOP internship programme arises from the intrinsic motivational need and drive to eventually register as a professional independent practising IP with the HPCSA and offer human behaviour-related services for the greater good of workplaces and society (Veldsman, 2020). Self-determination theory (Deci & Ryan, 2000) posits that the psychological need for competence, relatedness and autonomy forms the necessary conditions for autonomous motivation, optimal human psychological functioning, well-being and psychological needs satisfaction. The innate psychological growth-oriented needs imbued in individuals' sense of competence, relatedness and autonomy are part of the adaptive design of people to engage in meaningful, purposeful pursuits that allow for the autonomous (volitional) exercising of capacities and the building of satisfactory connections in social groups (Deci, Olafsen, & Ryan, 2017; Deci & Ryan, 2000).

In SDT (Deci & Ryan, 2000; Tang, Wang, & Guerrien, 2021), competence (effectance) as an innate motivational drive alludes to the propensity for mastery over one's endeavours, to have a positive effect on the environment and to attain valued outcomes within it. The innate psychological need for relatedness or belongingness points to the desire to care for others and to have a secure sense of belonging and connection to others in the social environment while also feeling supported and cared for by others (Deci et al., 2017; Tang et al., 2021). Autonomy reflects the psychological need for self-determination, that is, experiencing freedom, congruency, integration and volition in following personal interests and aspirations (Deci et al., 2017).

It stands to reason that the successful completion of the IOP internship programme and the intern's confidence about setting up an independent professional practice rely on the fulfilment of the intern's psychological needs for feeling competent, being connected to others and having autonomy in fulfilling the professional role of an IP. Aspiring towards registering as a professional IP alludes to interns' sense of self-determined autonomous (extrinsic and intrinsic) motivation. Self-determination theory's notion of extrinsic motivation (Deci & Ryan, 2000; Tang et al., 2021) elucidates that the reason for pursuing a career as a professionally qualified IP is a

volitional (autonomous) decision derived from a belief in the personal importance or perceived value of the role and services in a social context. The notion of intrinsic motivation (Deci & Ryan, 2000; Tang et al., 2021) explains that IOP type of activities, roles and services are autonomously self-regulated and performed with interest, pleasure or satisfaction. Individuals who understand the worth and purpose of their jobs, value intrinsic aspirations, feel autonomy in carrying them out with a sense of competence (effectance) and belongingness in a social setting, seem to exhibit greater autonomous motivation, satisfaction, engagement and optimal functioning (Deci et al., 2017; Tang et al., 2021).

Professional purpose as practising industrial psychologist

Firstly, exploring IOP interns' personal vision as practising professional IPs was of interest. The aim here was to assess the personal goals and motivation for becoming a professional IP. Being a professional IP represents a career-specific form of purpose in life and career identity. It was assumed that interns' personal dream or vision as qualified IPs would reflect attributes of autonomous motivation imbued in a professional purpose mindset. Self-determination theory (Deci & Ryan, 2000; Radel, Pelletier, & Sarrazin, 2013; Tang et al., 2021) explains that autonomous motivation elicits purpose-driven, goal-directed and growth-oriented behaviour towards fulfilling the psychological needs for competence, relatedness and autonomy. Research also shows that a professional purpose mindset and self-regulated autonomous motivation facilitate the curiosity to navigate the world of work in terms of new competence and service demands and challenges, build collaborative networks, and enhance self and social awareness (Bates et al., 2019; Gill, 2020; Rowe & Zegwaard, 2017).

Bates et al. (2019) argue that a clear professional purpose mindset drives the development and pursuit of career-related goals attached to a career identity. Research by Van Zyl et al. (2016, p. 9) shows that the South Africa-based professional fraternity of IPs relates the profession's purpose to the optimisation of individual, group, organisational and societal potential for flourishing and well-being in a work context. The professional IP develops, applies and evaluates scientific theories, processes, methods, paradigms and principles of psychology at work for the purpose of facilitating sustainable human behaviour-related improvements, performance, productivity, well-being and general health that benefit both employers and employees (HPCSA, 2019b; Van Zyl et al., 2016). As a specialised field of professional practice, the purpose is to diagnose, understand and predict human behaviour and build healthy connections with people to facilitate their integration into the world of work through effective human resource processes and practices in an ethical manner (Van Zyl et al., 2016, p. 9).

Having a clear vision of one's professional purpose as an IP complements a pure skills-based (competence) approach

to the intern's employability (Bates et al., 2019). The career identity of the professional IP reflects certain aspirations and values that are deemed important by the IOP fraternity. It was assumed that interns' visions for their futures as professional IPs would reflect the professional purpose aspirations and values associated with the professional fraternity of IPs. These aspirations and values are seen to drive the need to develop personal resources such as skills and relationships that enable the intern to successfully pursue their professional goals in a changing post-pandemic digital-era work context.

Scope of practice and minimum industrial psychologist competencies

Secondly, also of interest in this study was identifying the applied skills that IOP interns gained from the internship programme and how these compared with the HPCSA (2019a, 2019b) specified range of minimum competencies across the various internship domains. Self-determination theory research by Radel et al. (2013) highlights perceived competence for a task as a precursor for the extent to which individuals engage personal resources to enhance their autonomous motivation and restore their sense of autonomy in pursuing personal goals and aspirations. The HPCSA (2019b) outlines specific minimum competencies for the training of students and interns in IOP. Table 1 summarises the HPCSA (2019b) scope-of-practice-aligned minimum competencies for professional IPs.

The HPCSA (2019a) further denotes specific domain areas for the IOP internship programme and activities that IOP interns must engage in. The minimum competencies are assumed to equip the intern with the requisite knowledge and skills they need to apply in the internship domain activities. The internship domain areas include the following (HPCSA, 2019a, pp. 5–13):

- **Organisational psychology:** organisational psychology interventions on individual, group and organisational level (e.g. organisation design and structure, organisational culture and climate, organisational development, change and effectiveness, group functioning and managerial psychology)
- **Human resource (personnel) psychology:** human resource staffing (e.g. competency-based job analysis systems and assessment, recruitment, selection, competency-based employment and selection interviews); performance management and appraisal; assessment and development centre technology for potential assessment, talent management and succession and career planning; employee compensation; human resource development; employment relations; legislative frameworks; contemporary issues in human resource psychology
- **Career psychology and employee wellness and well-being:** diagnosis of and referral procedures pertaining to workplace-related psychopathology (e.g. stress and burnout) and general psychopathology (e.g. depression and psychological trauma); stress, trauma and crisis

TABLE 1: Minimum competencies for industrial psychologists.

Competencies	Descriptions
Problem diagnostics and intervention planning in work settings	<p>Conceptualisation and application</p> <ul style="list-style-type: none"> • Needs and risk analyses • Individual, group or organisational behaviour, well-being and effectiveness enhancement • Intervention goals and outcomes in world of work context
Intervention design	<p>Applied knowledge and insight</p> <ul style="list-style-type: none"> • South African population work context • Fair, unbiased psychological measurement design theories, techniques and research • Evidence-based models (> 3) of psychological therapy • Assessment best practices • Client satisfaction and cost–benefits evaluation
Psychological assessment	<p>Application of:</p> <ul style="list-style-type: none"> • Theory and techniques of psychology and psychometrics • Range of psychometric and other assessment tools for training • Development and employment in occupational settings • Individual assessment instruments, techniques, methods (personality, workplace-related psychopathology [i.e. stress, trauma and burnout], competence, motivation and performance) • Group assessments (attitudes, behaviour regarding careers and people management) • Organisation-level assessments (perceptions, attitudes, behaviours regarding structure, culture, management) • Workforce assessment for organisational design, job analysis and behavioural success criteria • Procedural referrals
Professional practice	<p>Identify, implement, facilitate and evaluate interventions</p> <ul style="list-style-type: none"> • Comprehensive interventions project plans for optimising individual, group and organisational functioning • Networking and collaboration with other health professionals (multidisciplinary intervention design) • Interventions for optimising person–organisation fit (selection, jobs), leadership training, conflict resolution, mediation, career counselling and team development • Change management • Advice, coaching, training, support and consultation services • Principles of psychology in consulting processes in business settings • Use of instruments, techniques and methods for optimising work conditions (e.g. ergonomics, compensation, performance management and employment relations) • Employee mental health, productivity and capability • Research and policies based on psychological theory, research, services in a variety of sectors
Research	<p>Plan, design, apply and evaluate</p> <ul style="list-style-type: none"> • Knowledge, theories, methods and scientific techniques to enhance practices and insight into human and organisational behaviour • Programme and intervention measurement criteria and evaluation, as well as impact studies that extend psychological theory and practice • Feasibility studies of research interventions • Research reports, including conclusions and recommendations on study outcomes • Consideration of ethical and legislative parameters
Communication and reporting	<p>Abilities</p> <ul style="list-style-type: none"> • Apply knowledge, theories, methods and techniques to communicate intervention and research results to a wide range of audiences • Communicate and report assessment and intervention results: verbal and written feedback • Report writing: outcomes of assessments and interventions • Implementation of research outcomes into policy and practice
Continuous professional development	<p>Enhancing:</p> <ul style="list-style-type: none"> • Professional credibility, personal development and effective practice management • Strategies for dealing with scope of practices challenges • Client services agreements or contracts within appropriate legislative framework, professional standards, codes of ethics and conduct • New knowledge production, techniques, methods and services that fulfil current or future clients' needs • Upskilling of primary and enabling competences, knowledge and skills in accordance with changes in field, new standards and requirements of profession of psychology, national and local regulations • Networking and collaboration with other professionals and relevant organisations • Cultivate and maintain professional relationships: clients, stakeholders and other professionals • Manage and quality assure professional practice • Professional supervision: conduct and receive
Ethics	<p>Demonstrate:</p> <ul style="list-style-type: none"> • Professional conduct and competence within scope of I–O psychology practice, regulatory framework, professional standards, codes of ethics and conduct
Legislation	<p>Acquire and apply</p> <ul style="list-style-type: none"> • Knowledge of relevant legislation frameworks influencing psychological practice and research
Generic attributes	<p>Systems thinking, analytical and problem-solving skills, creative and critical evaluative thinking skills, verbal and written communication capabilities, continuous self-assessment and life-long learning, teamwork, cultural and aesthetic sensitivity, personal and professional skills in service delivery, self-confidence in self-presentation, openness, flexibility and resilience</p>

Source: Authors' own creation based on HPCSA. (2019b). *Minimum standards for the training of industrial psychology*. Pretoria: The Professional Board for Psychology, Health Professions Council of South Africa.

counselling; performance counselling; individual and group career assessment, guidance and counselling; career management interventions across life and career stages; personal development plans guidance; well-being and wellness counselling and referral (i.e. job loss, workplace ergonomics, health and safety)

- **Testing and assessment:** individual and group psychometric and psychological testing and assessments across the value chain; assessment and development centres; other assessments (e.g. organisational surveys and diagnostic tools [e.g. culture and climate]); impact studies
- **Elective:** consumer psychology, ergonomics, diagnostic and intervention-based research projects, psychology of employment relations, coaching psychology, consulting psychology, occupational stress management; deviant and counterproductive organisational behaviour; organisational ethics; humanitarian psychology
- **Ethics:** Across all domain areas, application of code of professional ethics of HPCSA and Professional Board for Psychology; organisational and business ethics; legislative frameworks
- **Professional development activities and research:** Across all domains, professional development activities in the form of additional training activities and workshops, conference attendance.

Research by Coetzee and Veldsman (2022) among South Africa-based employers who adopted hybrid and digital-driven workplace models indicates employers' needs for IOP digitally dextrous services across the various HPCSA (2019a) internship domains. Employers of the post-pandemic, digital-era workplace now express the dire need to juxtaposition the IOP internship domain services in the context of virtuality. There now seems an increasing need for IPs to develop, coach and guide leaders, employees and workplaces towards digital dexterity in the adoption of new tools, processes and methods that optimise leadership, organisational functioning, human behaviour and well-being and performance in the rapidly changing workplace (Coetzee & Veldsman, 2022).

Confidence about setting up a professional industrial psychologist practice

The third sub-aim of the study was to explore IOP interns' perceived confidence in setting up an independent IP practice after completion of the internship programme. In the employability context, setting up an independent professional IP practice represents a form of self-determined employment. As such, the notion of confidence was treated from a situational and not a trait perspective (Beaumont, Gedye, & Richardson, 2016; Dacre Pool & Sewell, 2007). That is, the extent to which interns felt comfortable or sure about being able to set up and successfully manage an independent professional IP practice after completion of the internship programme was studied. The situational perspective alludes to the motivational reasons why interns may believe that

they are able or not able to set up an independent practice. Dacre Pool and Sewell (2007) argue that self-confidence about a matter is an external projection of individuals' self-efficacy or belief in their capability in a specific situation. Self-confidence impacts individuals' autonomous motivation to undertake projects and persevere in the pursuit of personal goals and aspirations despite various setbacks and situational challenges (Beaumont et al., 2016; Benabou & Tirole, 2002). Scholars generally found a lack of confidence as a barrier to self-determined employability (Beaumont et al., 2016; Dacre Pool & Sewell, 2007; Yorke & Knight, 2007). Research also signals work experience and self-regulatory motivation as factors that increase employability confidence (Beaumont et al., 2016; Qenani, MacDougall, & Sexton, 2014).

Self-determination theory (Deci et al., 2017) highlights the importance of a strong sense of autonomy (volition) in personal goal and aspiration pursuits. Individuals feel more confident and satisfied in situations where they experience support for autonomy, which then increases their sense of belongingness and competence or effectance (Deci et al., 2017). It stands to reason that interns may assess the extent to which the situational context of a private practice helps fulfil the psychological needs for autonomy, competence and relatedness for their personal well-being, confidence and satisfaction. That is, they may weigh the benefits of setting up an independent professional IP practice versus attaching them to a specific organisation to function as an internal IP or employee, and they may consider the extent to which their psychological needs will be fulfilled.

Following the SDT-based arguments of Radel et al. (2013), the challenges of setting up and managing an independent professional IP practice may potentially be an autonomy deprivation experience. Self-determination theory research by Radel et al. (2013) shows a dynamic interplay between individuals' sense of autonomy and competence. Perception of low competence in executing a task seemingly results in turning away from autonomy-related concerns, especially when one doubts one's capacity to perform because of a lack of self-confidence or other autonomy-threatening factors (Radel et al., 2013). Relinquishing one's autonomy (volition) in setting up an independent professional IP practice may lead to adaptive or autonomous help seeking in the form of pursuing employment as an internal IP within an organisation. Individuals are generally more satisfied in a social situation where they feel a secure sense of belonging and connection to others and where they can autonomously pursue the intrinsic aspirations of personal development support, meaningful relationships and community contributions (Deci et al., 2017; Tang et al., 2021).

Research method

Research design

To achieve the study aim, we used a qualitative research approach in a specific academic case setting that allowed us

to inductively gain insights into intern IPs' subjective views regarding the following three research questions that are aligned with the study's research aim:

1. What is your personal dream or vision as a practicing professional IP in the South African digital-era world of work?
2. What specific IOP applied skills did you develop as a result of the internship programme?
3. What are the reasons for feeling confident or not in setting up your personal independent IP practice? (Research aim 3)

Based on the guidelines of Züll (2016), an open-ended questionnaire was used to obtain intern participants' subjective opinions on the three research questions. The anonymous open-ended questionnaire enabled respondents to express their views freely and in their own words, thus allowing for possible rich descriptive data generated from the participants.

Sampling and research participants

A purposive sample of the 2020–2021 master's students' intern IOP cohort ($n = 33$) of the case academic institution was selected to voluntarily participate in the study. The inclusion criteria were as follows: participants who had completed their coursework year of the master's programme and had either completed or were in the final stages of completing the internship programme.

The final sample of participants ($n = 17$; response rate = 51.51%) comprised interns from the black African ($n = 9$; 53%), Indian ($n = 3$; 18%) and white ($n = 5$; 29%) population groups. The sample of participants were represented by predominantly female interns ($n = 13$; 77%), including male interns ($n = 4$; 23%). The mean age of the sample was 36 years (standard deviation [SD] = 7.09). Eighty-eight percent ($n = 15$) of the interns were in employment, one participant was self-employed and one participant was unemployed. Because the survey was anonymous and group-based, no individual participant could be linked to a specific internship site. The group of participants ($n = 17$) occupied HPCSA-approved internships at reputable South African organisations in the services industry.

Most of the participants ($n = 12$; 71%) felt that they gained important IOP skills and experience that enhanced their employability as professional IP through the internship programme. Based on the guidelines of Creswell (2013), the sample size of $n = 17$ was deemed adequate for data analysis because of the following: firstly, the sample had relative homogeneous characteristics (i.e. active IOP interns on HPCSA-approved internship programmes in South African organisations). Secondly, thematic saturation was independently confirmed by the three researchers after a second round of re-analysis of the data.

Data collection and data recording

Participants were recruited via a personal email sent by the case department internship coordinator who had a record of

the department's IOP interns and their progress towards completing the approved internship programme. The department internship coordinator had no personal involvement with the interns, which helped to facilitate voluntary participation. Participants received a URL link to the open-ended online survey questionnaire. The participants' responses were anonymous and automatically captured as group-based data on an Excel spreadsheet.

Strategies to ensure data integrity

The guidelines of Nowell, Norris, White and Moules (2017) informed our strategy to ensure the trustworthiness (i.e. credibility, transferability, dependability and confirmability) of the study. Data integrity was upheld by keeping a record of the research process, the data coding, labelling and derivation of categories and themes.

Data analysis

The qualitative responses were independently reviewed and re-reviewed to highlight the key themes that were relevant to the objectives and literature review of the study. The guidelines of Al-Asfour, Tlaiss and Shield (2021) informed our approach to the coding and identification of important categories. We then independently scrutinised the categories to identify subthemes and their frequency from the data. Frequency labels for themes were appointed as follows: general (found in all participants), typical (found in half or more but all participants) or variant (found in less than half but more than one or two participants).

Ethical considerations

Ethical clearance for this study was obtained from the university research ethics committee (reference number: 2021_CREC_018 [FA]). Participation was anonymous and voluntary, with informed consent. The group-based responses could not be traced back to an individual respondent, and as such, their privacy and confidentiality were ensured.

Findings

The findings of the study are reported in terms of each research aim.

Interns' personal vision as a practising professional industrial psychologist

This section highlights the most important findings as identified from our analysis of the data. The professional purpose vision themes relate to a general IP profession purpose-aligned vision, including a field of specialisation vision in an IOP domain. Generally, the themes reflect a passion for the human behaviour-related and psychological services that can be provided by the IP for the betterment of individuals, groups, organisations and communities.

General professional purpose

Participants' expressions regarding their personal dream or vision as a practising IP alluded to aspirations aligned with the professional identity associated with the general purpose of the IOP profession (HPCSA, 2019a, 2019b; Van Zyl et al., 2016). Examples of these expressions are stated in the following:

'Be an award-winning IP who contributes meaningfully and positively to the individuals, groups, organisations and our communities.' (Participant 3)

'My dream is to facilitate positive growth and change wherever I am planted. As an IP, I aim to bring about ethically and legally sound work that promotes the well-being of individuals in the working context.' (Participant 5)

Specialised professional purpose

The specialised professional purpose expressions seemed to denote aspirations associated with an IOP domain that the participant had a strong interest in. The post-pandemic and digital-era world of work context seemed to have activated an interest in change management and career and well-being counselling. The unique social context of youth unemployment (and employability guidance) also emerged as an aspirational service domain. Recruitment and employee motivation support were further highlighted as an area of a specialised service calling. Examples of responses are stated below:

'I would like to consult to large organisations, in either change management, organisational design or optimisation.' (Participant 7)

'My dream is to specialise in organisational development; the pandemic has opened minds in terms of issues experienced not only in the world of work but [*also*] in the communities at large. I enjoy engaging with people to identify challenges and work to devise solutions to such challenges.' (Participant 10)

'I have an interest in guiding and assisting employees at all stages of their careers to develop a greater self-awareness regarding their potential aptitudes and interests. I have a passion for developing people of all ages and their underlying potential in order to assist them to achieve career successes. My dream is to provide a career counselling service to the public and help clients that feel lost in the world of work to find their way.' (Participant 15)

'I would like to use my profession to drive psychological well-being. The digital- and COVID-era showed us we need to focus on psychological safety, as everything flows from our psyche.' (Participant 6)

'South Africa has the highest Gini coefficient in the world and one of the highest youth unemployment rates in the world. I would like to work on providing access to unemployed youth to work opportunities, increasing employability and access to resources to participate in the economy.' (Participant 4)

'I will enjoy providing a private service to organisations by using my insight into human behaviour to help organisations to solve work-related problems such as identifying the most suitable individuals for critical positions in a recruitment context. I would also like to focus on how organisations' practices influence the employees' motivational levels, their ability to cope with their jobs and their commitment level with the current organisation that they are working in.' (Participant 12)

Applied skills that industrial psychologist interns gained from the internship programme

In Table 2, we compared the themes on applied skills gained from the internship programme with the HPCSA (2019b) minimum IOP competencies. Although the frequency of applied skills in the various internship domains varied for the participants, it is evident that the full range of HPCSA (2019b) IOP competencies were addressed in the internship programme. There also appeared to be a good balance between applied skills in assessment and interventions as required by HPCSA (2019a). Internship domain themes that emerged for all participants involved skills in facilitating individual and group interventions for effective organisational functioning (organisational psychology), the full spectrum of the human resource (personnel psychology) staffing domain, testing and assessment across the value chain and the application of ethics and legislative frameworks across all IOP domains.

For applied skills, typical themes that emerged from half or more (but not all) participants related to the internship domains of organisational psychology (change management, strategic organisational strategy, organisational culture and climate, managerial coaching and leadership development), performance management, talent or succession planning and management (human resource [personnel] psychology), career psychology and employee wellness and well-being, and assessment or development centres (testing and assessment domain).

Variant applied skills themes (i.e. found in less than half but more than one or two participants) related to themes such as personnel administration, human resources policies and procedures, compensation, training and development, employment relations, ergonomics and risk assessment and professional development.

Interns' perceived confidence about setting up an independent industrial psychologist practice after completion of the internship programme

This section highlights the most important themes as identified from the analysis of the data. Seven of the 17 participants (41%) expressed confidence in setting up their own independent practice for delivering IOP services. Most of the participants ($n = 10$; 59%) did not feel confident in setting up an independent private professional practice but rather felt that they prefer to deliver IOP services in the capacity of an employee in an organisation. The reasons for feeling confident or not confident are briefly reported in this section.

Expressions of confidence

Reasons for feeling confident in setting up one's own independent professional IP practice seem to involve participants' master's coursework training, including the internship experience, spectrum and years of practical

TABLE 2: Intern industrial psychologists applied skills themes.

IOP internship domains (HPCSA, 2019a)	Themes: intern IOP applied skills gained from internship	Frequency	HPCSA minimum competencies for industrial psychologists													
			Problem diagnostic & intervention planning	Intervention design	Psychological assessment	Professional practice	Research	Communication and reporting	Continuous professional development	Ethics	Legislation	Generic attributes				
Organisational psychology	Facilitating individual and group interventions for effective organisational functioning	General	x	x	-	x	-	x	-	-	-	-	-	-	-	
	Change management consulting skills; strategic thinking skills; developing HR strategy with an organisational culture, climate or effectiveness lens; facilitate HR strategy planning sessions	Typical	x	x	-	x	-	x	-	-	-	-	-	-	-	
HR (personnel) psychology	Managerial coaching and leadership development	Typical	x	x	-	x	-	x	-	-	-	-	-	-	-	
	Human resource staffing: promoting fairness in recruitment and selection; virtual recruitment; compile competency profiles and interview guidelines; conduct employment or selection interviews; job evaluation, job analysis, job grading skills, job profile development; onboarding of new employees	General	x	x	x	x	x	x	x	-	-	-	-	-	-	-
	Design, recommend and facilitate implementation of performance management system	Typical	x	-	-	x	-	x	-	-	-	-	-	-	-	-
	HR data analysis; personnel administration; HR audit; develop and implement HR policies and procedures	Variant	x	-	-	x	-	x	-	-	-	-	-	-	-	-
	Review and analyse effectiveness of organisational compensation structure, remuneration benchmarking and design remuneration package	Variant	x	-	-	x	-	x	-	-	-	-	-	-	-	-
	Design, present and evaluate training and development intervention	Variant	x	-	-	x	-	-	-	-	-	-	-	-	-	-
	Employment relations: facilitate disciplinary hearings	Variant	x	-	-	-	-	-	-	-	-	-	-	-	-	-
	Develop talent management and succession planning strategy	Typical	x	-	-	x	-	-	-	-	-	-	-	-	-	-

Table 2 continues on the next page →

TABLE 2 (Continues...): Intern industrial psychologists applied skills themes.

IOP internship domains (HPCSA, 2019a)	Themes: intern IOP applied skills gained from internship		HPCSA minimum competencies for industrial psychologists									
	Frequency	Problem diagnostic & intervention planning	Intervention design	Psychological assessment	Professional practice	Research	Communication and reporting	Continuous professional development	Ethics	Legislation	Generic attributes	
Career psychology and employee wellness and well-being	Typical	x	x		x		x					
Promoting wellness in the workplace; support employees with issues of bereavement; trauma debriefing; bereavement counselling; assist with guidelines on retrenchment process; design interventions for support and coping mechanisms as staff transition back to work; referrals												
Individual coaching; career assessment; counselling and guidance	Typical	x	x	x	x		x					
Administrative, battery compilation, interpretation, report writing and feedback skills regarding psychometric assessments (selection, assessment centres, team-building)	General	x	x	x	x		x					
Develop, set up and facilitate assessment and development centres	Typical	x	x	x	x		x					
Conduct organisational surveys; evaluate organisational climate and make recommendations; assessment of psychological safety in the organisation	Typical	x	x	x	x		x					
Ergonomics and workplace design in times of COVID-19; develop and facilitate implementation of COVID-19 action plan; risk assessments for office environment	Variant	x			x		x					
Ethical application of assessment; knowledge of application of law and ethics	General	x	x	x	x		x					
Emotional intelligence; problem solving and solution creation; multidisciplinary networking	Variant	x	-	-	-		-					

IOP, industrial psychologist HPCSA, Health Professions Council of South Africa.

work-based experience in the IOP field. Professional network collaboration was highlighted as another important factor that enhanced the participants' confidence about setting an independent professional IP practice. In the following, some of the responses are presented:

'I have 20 years of IOP-related work experience coupled with one undergraduate degree, two postgraduate degrees and am in the process of completing the dissertation for the master's degree. Additionally, I have amassed a solid portfolio of relational IP through various industry and non-profit networks. I strongly believe that this combination of proven successful work experience, diverse life experience and academic competence will augur well for me as an independent practitioner.' (Participant 7)

'I am confident that the master's course work (theory and internship) fully prepared me to set up an independent practice.' (Participant 2)

'I am confident. I have gained sufficient experience over the years to start my own practice in 3 years' time.' (Participant 10)

Expressions of lack of confidence

As reflected in examples of responses below, the predominant factors that contributed to a lack of confidence about setting up a private, independent professional IP practice confirm considerations of practical work-based experience in the IOP field. The need for developing additional specialised skills and funding, including networking and practice management skills, seem to be strong contributing factors to feelings of lack of confidence:

'I believe I need more experience in order to provide my clients with a quality service, and this comes with experience.' (Participant 8)

'I need to gain more experience in psychometrics and improve my skill before setting up my independent IP practice.' (Participant 5)

'Lack of skills and funding.' (Participant 1)

'The success of the IP practice would be supported by a network of clients and associates to ensure the sustainability of the business. The additional skills required would be on how to run a practice as a business, forecasting and financial management of the business.' (Participant 9)

Discussion

This study explored a case cohort of South Africa-based IOP interns' views of their professional purpose and their perceptions of the applied skills they developed as a result of the internship programme, including their confidence about setting up an independent practice as IP. The study findings provided valuable insights into the extent to which the professional purpose and identity of the IP (HPCSA, 2019a, 2019b) directed the case intern cohort's personal vision and motivation as practising IPs. The professional purpose visions elucidate the IOP profession as an expression of self-determined autonomous (volitional) motivational activity chosen for the potential to fulfil individuals' basic psychological needs for autonomy (volition), competence (making a positive

difference) and meaningful relatedness. More specifically, the general and specialised professional IP purpose visions of the interns reflected the SDT-related autonomous (volitional) intrinsic and extrinsic motivational aspiration (Deci & Ryan, 2000; Tang et al., 2021) towards human behaviour-related activities and services that meaningfully contribute to the well-being, motivation and performance of individuals, groups, organisations and communities.

The internship programme seems to offer opportunities for the autonomous (volitional) exercising of capacities and the building of satisfactory connections in social groups, all of which are aligned with the professional purpose of the IOP profession (HPCSA, 2019a, 2019b; Van Zyl et al., 2016). The study findings revealed that the sample of interns felt positive about the applied skills they developed in the various primary internship domains. The range of applied skills developed by the sample of interns further seemed aligned with the minimum competency requirements for IPs (HPCSA, 2019b). The applied skills allude to the SDT (Deci & Ryan, 2000) notion of competence or effectance, that is, having a positive effect through one's skills on others and the environment. The findings suggest that the intrinsic and extrinsic autonomous motivation to complete an IOP internship generally alludes to the need to develop the necessary practical or applied skills that enable the fulfilment of one's personal professional purpose vision as an IP.

The skills developed across the internship domain areas further seem relevant for the post-pandemic digital-era work setting. Employability research shows that employers who hire psychologists to work in organisational settings value skills in the development, application and interpretation of specific measurement tools (González, Espinoza, Sandoval, McGinn, & Castillo, 2020). This trend is echoed in nascent research on employers' views of the digital-era IP that highlights a dire need for the IOP range of services and skills across the various internship domains summarised in Table 2. The applied skills across the internship domains are deemed essential to help employers and employees develop the digital dexterity, tools, skills and resilience needed to adapt to new forms of working, leading and managing, motivating, communicating and collaboration in virtual and hybrid workplace settings (Coetzee & Veldsman, 2022; Oosthuizen, 2022; Stark, 2021). Research by Chinyamurindi et al. (2021) among South Africa-based professionally registered IPs also reiterated the growing importance and relevance of career and well-being championing skills and services in post-pandemic digital-era times.

Generally, the findings suggest that the range of applied skills developed across the internship domains may contribute to the fulfilment of the IOP intern's innate psychological need for autonomy, competence (effectance) and relatedness in a social setting. The psychological needs fulfilment premise of the SDT (Deci & Ryan, 2000; Tang et al., 2021) seems to offer deeper insight into the need for extensive

practical experience and development or honing of specialised and business practice management and networking skills to build the confidence for setting up a private independent IP professional practice. The case cohort interns' preference to be employed in an organisational setting as an IP may also be attributed to the likelihood for opportunities to exercise and further develop one's competence (effectance) and build satisfying social connections within an organisational setting. As private, externally practising IP, these opportunities apparently may not always be readily available. Research shows in this regard that individuals who experience their work as purposeful and meaningful would also like opportunities to fully employ their skills and abilities to contribute to the greater good of a specific social setting (Allan, Rolniak, & Bouchard, 2020).

Practically, the study findings are a helpful resource to inform the participating academic institution's department chair, intern programme coordinator and supervisors, including academic lecturing staff of the IOP coursework master's programme about the value of the coursework training and structured internship programme across the IOP competency domain areas. The study also elucidates the psychological self-determination needs that motivate the IOP intern which may help to improve supervision support practices for the IOP intern. The study further highlights the need to enhance the confidence of the IOP intern about setting up and successfully managing independent professional IP practices to help stimulate opportunities for self-determined employment in this uncertain work context. In this regard, the coursework and internship programme may seek ways of building the networking, practice and business management skills of the IOP intern.

Limitations and future research

The findings of this study should be interpreted in the context of the academic institution's sample of IOP interns relevant to the present study. Generalisations to intern cohorts of other universities may not be appropriate. The qualitative study also entailed eliciting subjective views of a small number of interns and may not necessarily apply to broader intern cohorts. Future replication studies involving broader groups of IOP intern cohorts are recommended in order to capture common and unique themes and patterns that may inform coursework and intern programme training. Future research could also consider the impact of years of work experience and unemployment on the interns' views regarding the three research questions.

Conclusion

Despite the limitations of the study design, the findings revealed deeper insight into IOP interns' views and experiences of the internship programme and their rationale for working towards registering as a professional IP. The study findings extend knowledge regarding the self-determination needs of the IOP intern that underpin a

clear IP professional purpose and the building of applied occupation-specific IOP purpose-aligned skills during a structured internship programme.

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Competing interests

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

Authors' contributions

M.C., R.M.O. and A.v.N. all contributed to the conceptualisation, methodology, formal analysis and investigation. M.C. was responsible for resources and writing the original draft. M.C., R.M.O. and A.v.N. all contributed in the reviewing and editing of the final draft.

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Data availability

Data for this study are available from the corresponding author's research institution's research ethics committee upon formal reasonable request to corresponding author.

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