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Self-perceived employability, well-being and institutional embeddedness of accounting students

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Purpose: This study investigates the associations between financial accounting students' self-perceived graduate employability, well-being and institutional embeddedness in a higher education institution.

Design/methodology/approach: Financial accounting students (N = 102) participated in a cross-sectional survey. Three measuring instruments were administered: the Self-Perceived Graduate Employability Scale, the Mental Health Continuum – Short Form and the adapted Global Job Embeddedness Scale.

Findings/results: The results highlight the strategic role of employability perceptions – particularly internal perceived employability and university commitment – in promoting key aspects of financial accounting student well-being and embeddedness. Internal perceived employability predicted both psychological and social well-being, while university commitment emerged as a robust predictor of social and emotional well-being and university embeddedness.

Practical implications: Enhancing financial accounting students' perceived internal employability and strengthening their commitment to the university can significantly improve their psychological, social and emotional well-being. These factors also support greater university embeddedness, highlighting their value for individual development and institutional retention strategies.

Originality/value: Initiatives aimed at enhancing students' confidence in their employability and strengthening their commitment to the institution may yield broad individual well-being and institutional benefits. Investing in employability could be vital for universities seeking to foster the well-being and embeddedness of financial accounting students within the institution.

Keywords: financial accounting; student; well-being; institutional embeddedness; self-perceived graduate employability.

Introduction

The World Economic Forum (WEF, 2023) predicts a 30% decrease in bookkeeping activities and severe job losses in classic accounting by 2027. The Fourth Industrial Revolution has influenced the task activities of financial accountants (Han et al., 2023; Slezák, 2023). Technologies are prone to become background assistants to accountants, fulfilling repetitive duties and data checking, allowing them to focus on complex tasks and using technologies to solve 21st-century problems and address cybercrime risks (Han et al., 2023; Slezák, 2023). However, this does not mean that financial accountants will not have jobs in the future. In South Africa (SA), the financial accountant occupation was listed as having a shortage by the Department of Higher Education and Training (DHET, 2020).

Financial accounting (FA) students aware of this labour market shortage perceive ample employment opportunities compared to other qualifications. This perception increases their perceived employability (Walker & Fongwa, 2017). According to Blokker et al. (2019), young professionals' perceived employability is based on the labour market condition from which they seek employment. Information about the nature of South African labour markets is relevant for perceived employability accuracy. However, labour markets differ in different contexts, which makes it difficult to get accurate information about labour markets (Blokker et al., 2019).

Many organisations offering employment to FA graduates are already using automation technologies that have changed the world of work for entry-level jobs. A reduction in leadership

or graduate internships is apparent, as robots can execute these typical routines and repetitive tasks (Gotthardt et al., 2020). This change necessitates a higher-functioning junior financial accountant with more decision-making capabilities. According to Kotb et al. (2019), FA students familiar with modern technological transformation in the workplace before entering the workforce will have better employability dexterity. Schettino et al. (2022) point out that the stress associated with the change towards extensive use of technology negatively impacted students' mental health and decreased their perceived employability.

Financial accounting education is rooted in financial, legal and tax laws (Pitan & Muller, 2020). Additional education will be required to work internationally, curbing labour market entry-level employment opportunities locally (Pitan & Muller, 2020). The latter factors, the unemployment rate and economic uncertainty, can impact students' perceptions of external market demands and valued employment opportunities. Despite this, accounting students have a positive outlook on employment opportunities (Botha, 2021; Walker & Fongwa, 2017). According to Walker and Fongwa (2017), a positive stance regarding employment prospects possibly stems from professional association with a regulatory body.

Financial accounting students can register as professional accountants with the South African Institute of Professional Accountants (SAIPA). Being a professional member of SAIPA encourages students to develop a professional identity embedded in the principles and guidelines laid down by their professional regulatory body (Burleson et al., 2021). However, SAIPA registration is not a prerequisite for working in the financial sector or industry. Those who choose no affiliation with SAIPA or cannot afford annual registration fees to belong to SAIPA can still pursue jobs such as bookkeeper, purchaser and consultant. The FA professional career path paradox is that there is a clear career path and a vague career path simultaneously. However, more career possibilities mean more job opportunities, regardless of SAIPA accreditation. An increased awareness of external labour market opportunities results in higher perceived employability in students (Koloba, 2017; Pitan & Muller, 2020).

A positive outlook of students concerning employment prospects or their perceived employability may relate to their well-being. Research shows that students who experience well-being experience higher perceived employability (Bakari & Hunjra, 2018). However, the relationship between well-being and perceived employability was found to be reciprocal. Students who are well may possess high levels of self-efficacy and perceive themselves as having control over academic stressors (Capone et al., 2020), positively impacting their perceived employability. Conversely, perceptions of employability may also lead to well-being. Students who perceive that they are employable may be more confident about their future, less anxious about the job market and more satisfied with their studies, all of which boost their well-being (Petruzziello et al., 2025; Schettino et al., 2022).

Studying at a reputable university is associated with students' mental health, perceived employability and commitment (Bakari & Hunjra, 2018; Schettino et al., 2022). Pursuing their chosen field of study results in higher perseverance towards qualification achievement because of this sense of belonging, that is, embeddedness (Burleson et al., 2021; Capone et al., 2020; Major et al., 2020). These students will likely be embedded in their university and student community (Győri & Pusztai, 2022; Major et al., 2020; Wangrow et al., 2022). According to Petruzziello et al. (2023), students' perceived employability is positively associated with their psychological well-being and lecturers who aid in improving their readiness for the workforce.

Mental health increases students' capacity to counter the effects of academic burnout, while increasing their perceived employability (Capone et al., 2021). While mental health and perceived employability are explored among students, research on FA students is lacking. Furthermore, perceived employability precedes different career orientations affected by the embeddedness of social networks (Rodrigues et al., 2019). University embeddedness predicts student retention (Heritage et al., 2022), while employees with organisational embeddedness experience increased well-being (Singh et al., 2021). It is unclear whether students embedded in their institution will also have better mental health. Research is, furthermore, needed regarding the relationships between self-perceived graduate employability, well-being and institutional embeddedness (IE).

Self-perceived graduate employability

Self-perceived graduate employability refers to the capacity of students to perceive their qualification, their institution and aspects within themselves as key indicators of acquiring prospective sustainable employment (Rothwell et al., 2008). The model of Rothwell et al. (2008) includes four interrelated dimensions of self-perceived graduate employability: internal labour demand factors, external labour demand factors, student ambition, and university commitment (UC).

External perceived employability refers to students' perception of FA as a sought-after elite qualification with a strong market demand. Such perceptions stem from their views that their university is highly regarded and favoured by potential employers as sourcing grounds for graduate recruitment (Pitan & Muller, 2019; Rothwell et al., 2008). Internal perceived employability entails students' perceptions that what they have acquired will enable them to achieve the desired professional career (Rothwell et al., 2008). They are confident in their abilities and knowledgeable in finding valued job opportunities. Furthermore, they feel confident and capable in their subject field of FA. They also prioritise their academic performance and perceive that this effort will lead them to succeed in acquiring the job they value (Rothwell et al., 2008). Botha (2021) found that South African students believed in their internal employability but did not perceive the external market as having sufficient opportunities.

Ambition is defined as an internal drive of students to set goals for themselves to achieve in life. They perceive themselves as ambitious and choose to pursue a career they value, which advances further career development (Rothwell et al., 2008). Finally, students commit to their university when they admire being a part of it and find that the university's values align with theirs (Rothwell et al., 2008). Students who cherish their university express their pride and commitment openly towards friends and family in support of the future and reputation of the institution. These students will also value being an alumnus of the university that inspired them to be the best they could be (Rothwell et al., 2008).

Well-being

Students who feel and function well exhibit more self-compassion, psychological and social capital, and less academic stress (Poots & Cassidy, 2020). Moreover, self-compassion, social support and psychological capital predict student well-being (Poots & Cassidy, 2020). According to Abdullah et al. (2022), the academic performance of final-year students is only sustained if they are happy and mentally healthy. Flourishing students will exhibit emotional, psychological and social well-being (Keyes et al., 2008).

Firstly, emotional well-being relates to students' positive affect and life satisfaction (Keyes, 2002). Students with a high level of emotional well-being demonstrate positive emotions, such as happiness, and seek to eliminate negative emotions (Keyes, 2002, 2024). Such students accept changes as positive challenges to elicit desired outcomes (Di Fabio et al., 2023). Furthermore, they experience positive affect because of perceived social support during the change cycle. Schettino et al. (2022) found that stress associated with the change towards extensive use of technology negatively impacted students' mental health. Students who use positive emotion strategies and control can regain their mental health during challenges (Basson & Rothmann, 2018; Capone et al., 2020).

Secondly, psychological and social well-being are related to students' overall functioning (Keyes, 2002). Yang and Chen (2020) established a positive association between psychological and social well-being and career calling for nurses. Students inclined towards psychological and social well-being exhibit positive affect and increased academic performance (Chen & Zeng, 2022). Psychological well-being is characterised by the autonomous behaviour of students seeking growth opportunities and a meaningful life (Keyes, 2002). Students who are psychologically well show positive energy and demonstrate a desire to learn new knowledge to reach their goals (Boyd et al., 2022).

Moreover, these students have a strong sense of community, feel satisfied with their educational experience and express a desire to complete their qualification at their institution. Socially well students integrate and participate in relationships and events (Keyes, 2002, 2024). They seek to accept and find common ground while striving towards self-actualisation.

Institutional embeddedness

Embeddedness represents push and pull factors that keep people in their jobs (Hom et al., 2020; Mitchell et al., 2001) or students registered at their current higher education institution. These factors can be categorised as fit (i.e. the student feels comfortable and compatible with the university), links (i.e. the student feels tied or connected to the university and relationships with peers, lecturers and family) and sacrifice (i.e. the perceived loss and cost if the student were to leave the university), and pertain to both the institution and their surroundings (Crossley et al., 2007; Mitchell et al., 2001). Recently, embeddedness research has been attracting attention in different domains. People can be embedded in their job (Mitchell et al., 2001; Tews et al., 2015), organisation (Ng & Feldman, 2007), occupation (Ng & Feldman, 2007; Yang & Chen, 2020), community (Boyd et al., 2022; Singh et al., 2021), relationships (Győri & Pusztai, 2022), family (Hahn et al., 2020), academic subject major (Burleson et al., 2021; Major et al., 2020), college (Wangrow et al., 2022) and university or institution (Győri & Pusztai, 2022; Major et al., 2020).

In the educational context, students embedded in their institution are overall more satisfied with their studies and the university and can withstand high-strung challenges that will otherwise result in dropout (Wangrow et al., 2022). University-embedded students integrate with peers more often and are more present in student societies (Győri & Pusztai, 2022). These findings show the influence of significant relationships between students and their peers, lecturers and parents. When students feel pressured to stay by significant others, their IE increases (Wangrow et al., 2022).

Embeddedness might spill over, through relationships, from employees' workplace to their community (Singh et al., 2021). Employees' psychological well-being mediates relationships with others, displaying behaviours of great civic virtue in both organisation and community. According to Singh et al. (2021), employees' well-being increased when they were embedded in their organisation and community. Embeddedness of employees and students ought to converge, but not be considered identical. Students embedded in their institution will be embedded in their student community (Győri & Pusztai, 2022; Wangrow et al., 2022).

Research aim and hypotheses

This study addressed two important gaps: insufficient research concerning FA students and being the first study to investigate the relationships between students' self-perceived graduate employability, well-being and embeddedness in a higher education institution. Financial accounting students with a strong sense of perceived graduate employability will have good mental health and be embedded in their higher educational institutions. The following hypotheses were set: Hypothesis 1 (H1): perceived employability of FA students predicts their well-being. Hypothesis 2 (H2): FA students' perceived employability predicts their IE (Figure 1).

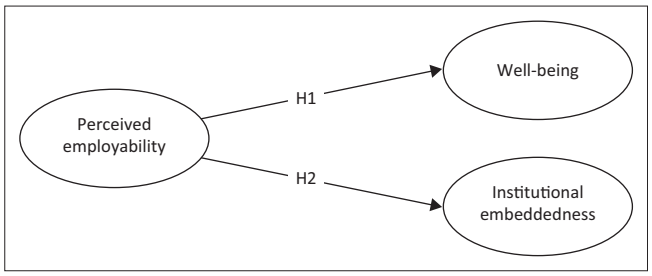


FIGURE 1: Hypothesised model of perceived employability, well-being and institutional embeddedness.

Method

Participants

This study included FA students registered at the same university across multiple campuses and provinces. Participants were busy with their second, third or final year of study. Thirty-eight students discontinued the survey after completing only the biographical information and were excluded as a result. The characteristics and demographic information of participants are recorded in Table 1.

Participation of females surpassed that of males by two-thirds. Participants differed in age, which ranged between 19 and 26 years, and their ethnicity, which included five ethnic groups in SA, with African people (57.8%) as the strongest representation. Academic performance in their core module of financial accountancy ranged from high to low, with 17.7% of participants achieving above 70% and 11.8% of these acquiring distinctions. In comparison, 6.9% failed the same module at the sampling time. Most participants achieved grades ranging between 50% and 69% for the FA module (75.5%) and the average of all other modules (75.4%). Most participants were registered for their final year of study (74.5%), planned on registering with the SAIPA professional association (92.2%) and had not procured employment yet (86.3%).

TABLE 1: Characteristics of participants (N = 102).

Demographic	Grouping	*n*	%
Gender	Male	36	35.3
	Female	66	64.7
Age group (years)	19–21	58	56.9
	22–26	44	43.1
Ethnicity	African people	59	57.8
	White people	38	37.3
	Indian, Asian and Coloured people	5	4.9
Home province (not university)	Western Cape, Northern Cape and KwaZulu-Natal	3	3.0
	North West	28	27.5
	Mpumalanga	5	4.9
	Limpopo	8	7.8
	Gauteng	48	47.1
	Free State	8	7.8
	Eastern Cape	2	2.0
Desired work province	Western Cape	25	24.5
	North West	11	10.8
	Northern Cape	3	2.9
	Limpopo	3	2.9
	KwaZulu-Natal and Eastern Cape	2	2.0
	Gauteng	55	53.9
	Free State	3	2.9
Academic performance: FA (%)	≤ 49	7	6.9
	50–59	47	46.1
	60–69	30	29.4
	70–74	6	5.9
	≥ 75	12	11.8
Academic performance: Other	≤ 49%	6	5.9
	50% – 59%	42	41.1
	60% – 69%	35	34.3
	70% – 74%	11	10.8
	≥ 75%	8	7.8
Year of study	Second-year	26	25.5
	Third or final-year	76	74.5
Employment prospects	Procured employment	14	13.7
	Job seekers	88	86.3
Professional body association	SAIPA	94	92.2
	Other	8	7.8

SAIPA, South African Institute of Professional Accountants; FA, Financial accounting.

Measuring instruments

The *Self-Perceived Graduate Employability Scale* (SPGE) (Rothwell & Arnold, 2007; Rothwell et al., 2008) was used to measure the perceived employability of students. The internal and external dimensions of perceived employability measure three dimensions. The employability subscale consisted of 16 items, with example items being 'The status of this university is a significant asset to me in job seeking' and 'The skills and abilities that I possess are what employers are looking for'. The ambition subscale comprised six items, and an example item was 'I have clear goals for what I want to achieve in life'. The UC subscale contained eight items, with 'I am proud to tell others that I am at this university' as an example item. Students rated the 30 items on a five-point Likert scale, selecting between the following options: *strongly disagree*, *disagree*, *neutral*, *agree* or *strongly agree*. The scale was validated on SA students by Goodman and Tredway (2016) and had an acceptable reliability of alpha coefficient 0.75 on students (Rothwell et al., 2008). Vargas et al. (2018) established Cronbach's alpha reliability for internal perceived employability (α = 0.81) and external perceived employability (α = 0.64) among students in Spain.

Student well-being was measured with the *Mental Health Continuum – Short Form* (MHC-SF) (Keyes, 2002; Keyes et al., 2008). Flourishing was indicative of optimal functioning and combined emotional well-being and psychological and social well-being. Underlying factors had a maximum of six subcategories. For example, psychological well-being was measured with questions that related to growth, life purpose, autonomous behaviour, self-acceptance and environmental factors (Keyes, 2002). Participants evaluated the 14 items based on their feelings over the past 30 days. An example item was 'that you had experiences that challenged you to grow and become a better person'. If they felt the statement to be true *daily*, it received a rating of '6', while *never* was indicated as '1'. Acceptable omega reliabilities for the instrument (MHC-SF = 0.89) and each construct of well-being

(psychological = 0.79; social = 0.77; emotional = 0.76) were obtained for South African students (Żemojtel–Piotrowska et al., 2018).

An adapted version of the *Global Job Embeddedness Scale* (Crossley et al., 2007) was used to measure the students' embeddedness in his or her institution. In each of the seven items, 'organisation' was replaced with 'university', and an example item was 'I feel tied to this university'. Answers reflected the level of agreement on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Crossley et al. (2007) confirmed acceptable scale reliability (α = 0.89), also substantiated by Yang and Chen (2020) (α = 0.86) in a different context, deeming it acceptable for different contexts.

Finally, student biographical information (gender, ethnicity and age), educational information, professional body registration intentions and employment preferences were obtained via a self-report questionnaire.

Data analysis

The Statistical Package for the Social Sciences (SPSS) version 27 (IBM Corp., 2020) and Mplus 8.8 statistical software (Muthén & Muthén, 1998–2022) were used to analyse the data. The full information maximum likelihood (FIML) statistic was used to manage missing data. The FIML is known for its good statistical power and allowed computation of structural model equations by applying unbiased parameter estimates (Cham et al., 2017).

This study combined exploratory factor analyses with theory to enhance informed decision-making for optimal factor retention (Finch, 2020). Different approaches considered eigenvalues, a scree plot, Kaiser–Meyer–Olkin (KMO) and Bartlett's test of sphericity as approximate Chi-square (χ^2) statistic, measures of sampling adequacy (MSA) and principal component analysis (PCA). Finally, factor loadings were determined by principal axis factoring (PAF) and direct oblimin with the Kaiser normalisation rotation method (Tabachnick & Fidell, 2014). Factor loadings were interpreted based on cut-off guidelines explaining overlapping variance (Comrey & Lee, 2013). A cut-off value of 0.32 explains 10%; lower values were only kept if justified.

Confirmatory factor analysis (CFA) was used to test measurement models of mental health to determine the best fit for the data. The weighted least squares mean and variance (WLSMV) estimator was used because all variables were considered categorial (Asparouhov & Muthén, 2018). Model fit was determined by the following goodness-of-fit indices: the lowest Chi-square statistic (χ^2) value (Haslam & McGarty, 2019), higher than 0.90 for the comparative fit index (CFI) and the Tucker-Lewis index (TLI) and lower than 0.08 for standardised root mean square residual (SRMR) (Wang & Wang, 2020). The same value (0.08) is recommended for the root mean square error of approximation (RMSEA).

The researchers used omega (ω) reliability, as it reflected precise population estimates (Dunn et al., 2014). Cut-off values for scale reliability were set at $\omega \geq 0.70$ (Nunnally & Bernstein, 1994). Pearson correlations (r) were computed to analyse the associations between the variables. This study followed Cohen's (2013) guidelines by setting cut-off values as follows: statistical significance at a confidence interval of 95% ($p \leq 0.05$), and effect sizes of practical significance at large ($r \geq 0.50$), medium ($r \geq 0.30$) and small ($r \geq 0.10$). Finally, multiple regression analyses were used to predict mental health and IE through self-perceived graduate employability.

Ethical considerations

Ethical clearance to conduct this study was obtained from the Economic and Management Sciences Research Ethics Committee at North-West University (reference no.: EMS-REC; NWU-00750-20-A4). Data collection began after receiving approval from both the North-West University Economic and Management Sciences Research Ethics Committee (EMS-REC; NWU-00750-20-A4) and the gatekeeper committee of the participating university. A mediator in the School of Accounting allowed access to an independent person to circulate information sheets and marketing materials via electronic internal noticeboards only visible to FA students in second-year and third-year modules and during class presentations at the start of the new semester. Participation was voluntary, and interested prospective participants were invited to access a research information page via a QR code or online link. Informed consent was obtained by the researcher from participants confirming their voluntary participation option electronically before gaining access to the survey. A lucky draw was offered as an optional incentive for those who participated. If a participant provided a cell phone number to enter the lucky draw, the number was saved separately and not linked to any responses. All numbers in the draw were deleted after the winners received their prizes. Data were collected during coronavirus disease 2019 (COVID-19) lockdown regulations, and directly after returning to campus, so some percentage of the low participation could be ascribed to COVID-19 effects.

Results

Factor analyses

Exploratory factor analyses: Self-Perceived Graduate Employability Scale

Exploratory factor analyses with PCA extraction were carried out on the 30 items of the SPGE. Goodness-of-fit indices showed acceptable fit with a KMO value = 0.75, $\chi^2 = 1\,237.739$ (degrees of freedom [df] = 435, $p < 0.001$). Nine factors had eigenvalues above one, with an accumulative variance of 69% explained. Eigenvalues were 7.991 (27%), 2.461 (8%), 2.201 (7%), 1.790 (6%), 1.554 (5%), 1.331 (4%), 1.230 (4%), 1.177 (4%) and 1.096 (4%). The scree plot showed one strong component and three additional differentiated components. Principal axis factor analysis with a direct oblimin rotation was used to analyse the factor structure. Four factors that explained 48% of the total variance were extracted: external self-perceived graduate employability (ESPGE), internal self-perceived graduate employability (ISPGE), ambition and

UC. Factor loadings were as follows: ESPGE: six items, λ = 0.30 to 0.69, mean = 0.50; ISPGE: eight items, λ = 0.33 to 0.70, mean = 0.52; ambition: four items, λ = 0.30 to 0.84, mean = 0.57; and UC: eight items, λ = 0.29 to 0.81, mean = 0.55.

Four problem items were deleted: three items showed unacceptable low communalities (h^2 < 0.12: EMPLOY1, EMPLOY7 and EMPLOY22), and one item (EMPLOY10) showed similar loadings on most factors. The EMPLOY18 item was relocated from ambition (λ = 0.17) to ISPGE (λ = 0.59) for a better fit. Four items were slightly below the cut-off value of 0.32 but were kept for their theoretical significance: EMPLOY8, EMPLOY4, EMPLOY17 and EMPLOY24. Three items with multifactor loadings were assigned to the most applicable theoretical description (EMPLOY4, EMPLOY9 and EMPLOY14). Other factor loadings were above the cut-off value and accepted (see Table 2).

Confirmatory factor analysis: Mental Health Continuum – Short Form

Three models were tested to determine the data's best structural fit for well-being.

Model 1: The three-factor model comprised emotional well-being (three items), social well-being (five items) and psychological well-being (six items). The item loadings were emotional well-being (λ = 0.75 to 0.91, mean = 0.83), psychological well-being (λ = 0.38 to 0.77, mean = 0.58) and social well-being (λ = 0.42 to 0.71, mean = 0.57). The fit statistics were χ^2 = 144.12 (*df* = 74, *p* < 0.000); RMSEA = 0.10 (0.075, 0.123), *p* < 0.001; CFI = 0.94; TLI = 0.93; SRMR = 0.07.

Model 2: The two-factor model comprised feeling well (three items: emotional well-being) and functioning well (11 items: psychological and social well-being). The item loadings were feeling well (λ = 0.75 to 0.91, mean = 0.83) and functioning well (λ = 0.37 to 0.76, mean = 0.57). The fit statistics were χ^2 = 179.87 (*df* = 76, *p* < 0.000); RMSEA = 0.12 [0.097, 0.142], *p* < 0.000; CFI = 0.91; TLI = 0.90; SRMR = 0.08.

Model 3: The one-factor model comprised flourishing (14 items: emotional, psychological and social well-being) with item loadings (λ = 0.36 to 0.82, mean = 0.59). The fit statistics were χ^2 = 230.12 (*df* = 77, *p* < 0.001); RMSEA = 0.14 [0.123, 0.166], *p* < 0.000; CFI = 0.87; TLI = 0.85; SRMR = 0.08.

TABLE 2: Factor analysis of self-perceived graduate employability.

Item no.	Item description	Factor loadings			
		1	2	3	4
External self-perceived employability (factor loading 4)					
EMPLOY3	Employers are eager to employ graduates from my university	0.31	-0.10	0.05	**-0.60**
EMPLOY4	The status of this university is a significant asset to me in job seeking	0.45	0.02	0.14	**-0.31**
EMPLOY5	Employers specifically target this university in order to recruit individuals from my subject(s) area	0.29	-0.16	0.13	**-0.69**
EMPLOY6	My university has an outstanding reputation in my field(s) of study	-0.05	0.20	0.19	**-0.52**
EMPLOY8	My chosen subject(s) rank(s) highly in terms of social status	-0.06	0.26	0.09	**-0.30**
EMPLOY9	People in the career I am aiming for are in high demand in the external labour market	-0.03	0.21	0.49	**-0.33**
Internal self-perceived employability (factor loading 3)					
EMPLOY2	I regard my academic work as a top priority	-0.08	0.07	**0.33**	-0.05
EMPLOY11	There is generally a strong demand for graduates at the present time	0.07	-0.12	**0.70**	-0.10
EMPLOY12	There are plenty of job vacancies in the geographical area where I am looking	0.17	-0.10	**0.64**	0.04
EMPLOY13	I can easily find out about opportunities in my chosen field	0.04	-0.15	**0.60**	-0.19
EMPLOY14	The skills and abilities that I possess are what employers are looking for	0.21	0.42	**0.42**	-0.12
EMPLOY15	I am generally confident of success in job interviews and selection events	0.15	0.28	**0.35**	0.01
EMPLOY16	I feel I could get any job so long as my skills and experience are reasonably relevant	0.17	0.20	**0.47**	-0.23
EMPLOY18	I am satisfied with the progress I have made in meeting my goals for the development of new skills	0.19	0.17	**0.59**	0.25
Ambition (factor loading 2)					
EMPLOY17	I want to be in a position to do most of the work which I really like	0.14	**0.30**	0.25	-0.10
EMPLOY19	I have clear goals for what I want to achieve in life	0.03	**0.79**	0.02	0.11
EMPLOY20	I regard myself as highly ambitious	-0.01	**0.84**	0.06	0.12
EMPLOY21	I feel it is urgent that I get on with my career development	0.14	**0.46**	-0.00	-0.04
University commitment (factor loading 1)					
EMPLOY23	I talk up this university to my friends as a great university to be at	**0.48**	-0.00	0.12	0.05
EMPLOY24	I would have accepted almost any type of course offer in order to come to this university	**0.29**	-0.29	0.15	0.14
EMPLOY25	I find that my values and this university's values are very similar	**0.39**	0.22	0.12	-0.04
EMPLOY26	I am proud to tell others that I am at this university	**0.66**	0.13	-0.06	-0.05
EMPLOY27	Being at this university really inspires the best in me in the way of study performance	**0.76**	0.12	-0.11	0.09
EMPLOY28	I am extremely glad I chose this university over others I was considering at the time I joined	**0.70**	-0.02	0.01	-0.04
EMPLOY29	I really care about this university and its future	**0.72**	0.01	-0.01	-0.14
EMPLOY30	For me, this is the best of all universities to be a member of	**0.81**	-0.16	0.11	-0.07
Deleted items					
EMPLOY1	I achieve high grades in relation to my studies	0.05	0.09	0.23	0.23
EMPLOY7	A lot more people apply for my degree than there are places available	0.16	0.14	-0.21	-0.09
EMPLOY10	My degree is seen as leading to a specific career that is generally perceived as highly desirable	0.18	0.33	0.31	-0.28
EMPLOY22	What I do in the future is not really important	-0.15	-0.15	0.06	0.06

Note: Loadings in bold indicate statistically significant primary loadings on the corresponding factor.

The model that presented the best fit to the data was Model 1 because it had the lowest RMSEA, Chi-square statistic, and highest TLI and CFI values of the competing models. Table 3 shows the goodness-of-fit indices for the different models.

Exploratory factor analysis: Global Job Embeddedness Scale

Exploratory factor analyses with PCA extraction were carried out on the IE scale of seven items. The goodness-of-fit indices were acceptable with a KMO value = 0.86, $\chi^2 = 330.96$ ($df = 21$, $p < 0.001$) and factor loadings $\lambda = 0.73$ to 0.87, mean = 0.80. The scree plot showed one component above 1, with the remaining flatlined; the eigenvalue of 4.13 explained 60% variance. Thus, this scale was accepted as one variable, and no items were removed.

Descriptive statistics, reliabilities and correlations

Table 4 reports the means, standard deviations, omega reliabilities and Pearson correlations of variables. Omega coefficients of all variables met the reliability requirements of being above 0.70 (Dunn et al., 2014; Nunnally & Bernstein, 1994). All subscales of perceived employability showed statistical significance ($p < 0.01$). There were moderate associations between internal perceived employability with ambition ($r = 0.40$), external perceived employability ($r = 0.46$) and UC ($r = 0.47$). External perceived employability had moderate associations with UC ($r = 0.46$) and ambition ($r = 0.36$). Finally, ambition and UC ($r = 0.28$) correlated with a smaller effect size.

Emotional well-being had small association with internal self-perceived employability ($r = 0.28$) and a moderate association with UC ($r = 0.34$). Psychological well-being was moderately associated with internal self-perceived employability ($r = 0.38$) and ambition ($r = 0.32$) as well as a smaller association with UC ($r = 0.24$). Social well-being had moderate associations with internal self-perceived employability ($r = 0.41$), UC ($r = 0.39$) and IE ($r = 0.30$).

Institutional embeddedness had moderate correlations with internal self-perceived employability ($r = 0.30$), external perceived employability ($r = 0.31$), ambition ($r = 0.30$), UC ($r = 0.45$) and social well-being ($r = 0.30$).

Table 5 shows that psychological well-being is predicted by employability ($F = 4.78$, $p = 0.002$, $R^2 = 0.18$). The standardised regression coefficient of internal perceived employability ($\beta = 0.30$) is statistically significant ($p = 0.014$). Social well-being is also predicted by employability ($F = 6.62$, $p < 0.001$, $R^2 = 0.24$). The regression coefficients of both internal perceived employability ($\beta = 0.36$, $p = 0.003$) and UC ($\beta = 0.29$, $p = 0.014$) are statistically significant.

In the regression model for emotional well-being, one of the four dimensions of employability was excluded. The bivariate correlation of external perceived employability was negligible and not statistically significant, suggesting limited direct relevance to emotional well-being. However, when this dimension was included in the regression model, it exhibited an unexpectedly large and negative regression coefficient, diverging from its zero-order correlation and theoretical expectations. This pattern indicates a suppressor effect, which can obscure rather than clarify the relationships among constructs (Paulhus et al., 2004). Given the lack of theoretical justification for such a suppressive role – and to maintain both parsimony and interpretability – the variable was excluded from the final model.

Table 6 shows that emotional well-being is predicted by employability ($F = 4.33$, $p < 0.007$, $R^2 = 0.13$). The standardised regression coefficient of UC ($\beta = 0.27$, $p = 0.023$) is statistically significant. Finally, embeddedness is predicted by one dimension of employability ($F = 5.94$, $p < 0.001$, $R^2 = 0.22$). The standardised regression coefficient of UC ($\beta = 0.37$) is statistically significant ($p = 0.002$).

Hypothesis testing results

Both hypotheses were accepted. Financial accounting students' perceived employability significantly predicted their well-being (Hypothesis 1) and IE (Hypothesis 2) as substantiated by multiple regression analyses (Figure 2).

TABLE 3: Results of goodness-of-fit indices.

Model	Factors	χ^2	*df*	TLI	CFI	RMSEA	SRMR
Model 1	3-factor	144.12*	74	0.93	0.94	0.10 [0.075, 0.123]	0.07
Model 2	2-factor	179.87*	76	0.90	0.91	0.12 [0.097, 0.142]	0.08
Model 3	1-factor	230.12*	77	0.85	0.87	0.14 [0.123, 0.166]	0.08

Notes: *, values significant at $p < 0.01$ level (two-tailed).

χ^2, Chi-square; *df*, degrees of freedom; TLI, Tucker-Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual.

TABLE 4: Descriptive statistics, reliabilities and correlations.

Variable	ω	Mean	SD	1	2	3	4	5	6	7
Internal self-perceived employability	0.81	3.60	0.60	-	-	-	-	-	-	-
External self-perceived employability	0.76	3.85	0.54	0.46**	-	-	-	-	-	-
Ambition	0.72	4.13	0.60	0.40**	0.36**	-	-	-	-	-
University commitment	0.81	3.70	0.56	0.47**	0.46**	0.28**	-	-	-	-
Emotional well-being	0.85	4.00	1.12	0.28**	-0.03	0.12	0.34**	-	-	-
Psychological well-being	0.74	4.18	0.90	0.38**	0.17	0.32**	0.24*	0.61**	-	-
Social well-being	0.77	2.98	1.08	0.41**	0.19	0.05	0.39**	0.45**	0.61**	-
Institutional embeddedness	0.87	3.04	0.85	0.30**	0.31**	0.30**	0.45**	0.20	0.20	0.30**

SD, standard deviation.

*, $p < 0.05$; **, $p < 0.01$.

TABLE 5: Multiple regression analyses of psychological and social well-being and graduate perceived employability.

Variable	Psychological well-being (PWB)							Social well-being (SWB)						
	Beta	SE	β	p	R^2	F	p	Beta	SE	β	p	R^2	F	p
Model 1					0.19	4.78	0.002**	-	-	-	-	0.24	6.62	0.001**
Internal perceived employability	0.46	0.18	0.30	0.014**	-	-	-	0.64	0.21	0.36	0.003**	-	-	-
External perceived employability	-0.14	0.20	-0.08	0.485	-	-	-	-0.10	0.23	-0.05	0.657	-	-	-
Ambition	0.30	0.17	0.20	0.071	-	-	-	-0.28	0.19	-0.16	0.140	-	-	-
University commitment	0.13	0.19	0.08	0.488	-	-	-	0.54	0.22	0.29	0.014**	-	-	-

SE, standard error.
*, $p < 0.05$; **, $p < 0.01$.

TABLE 6: Multiple regression analyses of emotional well-being, institutional embeddedness and graduate perceived employability.

Variable	Emotional well-being (EWB)							Institutional embeddedness						
	Beta	SE	β	p	R^2	F	p	Beta	SE	β	p	R^2	F	p
Model 1	-	-	-	-	0.13	4.33	0.007**	-	-	-	-	0.22	5.94	0.001**
Internal perceived employability	0.31	0.23	0.16	0.176	-	-	-	0.12	0.17	0.08	0.505	-	-	-
External perceived employability	-	-	-	-	-	-	-	0.16	0.19	0.10	0.391	-	-	-
Ambition	-0.05	0.21	-0.03	0.820	-	-	-	0.01	0.15	0.00	0.971	-	-	-
University commitment	0.55	0.24	0.27	0.023*	-	-	-	0.57	0.18	0.37	0.002**	-	-	-

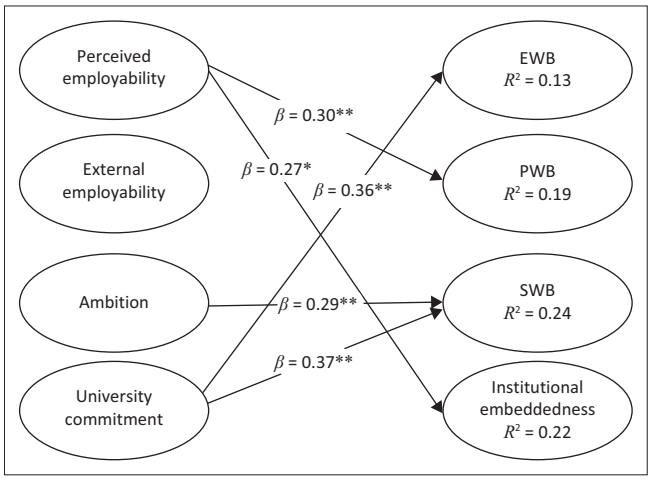
SE, standard error.
*, $p < 0.05$; **, $p < 0.01$.

Discussion

This study aimed to establish FA students' self-perceived graduate employability, well-being and embeddedness in a higher education institution. Perceived graduate employability comprised four contributing factors positively associated with one another: internal perceived employability, external perceived employability, ambition and UC. Financial accounting students' emotional, psychological and social well-being (mental health) were related. Furthermore, their well-being was associated with internal perceived employability and UC. In addition, institutionally embedded students were socially well and experienced perceived employability. Finally, their perceived employability predicted FA students' mental health and IE.

This study established self-perceived employability as a four-factor construct partially aligned with the development of the original scale (Rothwell and Arnold, 2007). In the study of Atitsogbe et al. (2019), the model fit of four factors improved with added covariance links, while Vargas et al. (2018) and Botha (2021) found four factors with a few item differences from Rothwell et al. (2008), resembling this study. The factors of internal perceived employability, external perceived employability, ambition and UC related to one another significantly.

The results showed a positive association between the self-perceived employability of FA students and their IE. When students perceived themselves as employable (internally and externally), ambitious and committed to the university, they became embedded in the institution and were well (Petruzziello et al., 2023). This study expanded on the findings of Győri and Pusztai (2023) and Wangrow et al. (2022), where student experiences of embeddedness increased social presence and participation in student societies and related to social well-being.



EWB, emotional well-being; PWB, psychological well-being; SWB, social well-being.
*, $p < 0.05$; **, $p < 0.01$.

FIGURE 2: Testing the model of perceived employability.

Perceived internal employability significantly impacted both psychological and social well-being among FA students. Perceived internal employability – defined as confidence in one's career readiness and perceived alignment with labour market expectations – appears to serve as a key psychological resource. Perceived internal employability includes factors such as prioritisation of academic work, awareness of job opportunities, belief in relevant skills and optimism about employment outcomes. According to Keyes' (2024) well-being conceptualisation, psychological and social well-being are critical indicators of individuals' overall functioning. In this context, psychological well-being may be enhanced by a student's sense of purpose, perceived competence and forward-looking confidence in their future career trajectory (Bowman, 2010). When students believe their efforts are meaningful and likely to result in employment, they may experience higher levels of self-acceptance, personal growth and autonomy – dimensions central to psychological functioning (Keyes, 2002, 2024). Research by Petruzziello

et al. (2023) and Schettino et al. (2022) confirmed that perceived employability impacts students' well-being.

Perceived internal employability may bolster social well-being by fostering a stronger sense of social integration and societal contribution (Keyes, 2024). Students who perceive themselves as employable may be more inclined to engage meaningfully in academic and professional networks, perceive themselves as future contributors to society, and feel a greater sense of belonging within their peer and institutional communities. These findings support the view that career-related self-perceptions are relevant for vocational outcomes and serve as important determinants of student well-being (Bubic, 2017). As such, efforts to enhance students' internal perceived employability may yield dual benefits, improving their mental health and readiness for transition into the workforce.

The findings indicate that UC significantly influenced students' social well-being and sense of university embeddedness. University commitment, conceptualised as the emotional and value-based attachment a student feels towards their institution, encompasses pride in being a member of the university community, alignment with institutional values, and a strong sense of loyalty and satisfaction with their choice of university. This form of commitment is a meaningful contributor to students' broader social functioning and integration within the academic environment (Hennicks et al., 2024; Keyes, 2024).

Regarding social well-being, students who feel emotionally invested in their university are more likely to experience social acceptance, coherence, integration, actualisation and contribution (Keyes, 2002; Keyes et al., 2008). Such students may be more inclined to form interpersonal connections, participate in campus life and view themselves as meaningful contributors to their institution's academic and social fabric. This sense of belonging and shared identity likely enhances their perception of social support and purpose, which are fundamental to social well-being (Jaiswal et al., 2022).

University commitment predicted university embeddedness – a construct reflecting the extent to which individuals feel attached, connected and tied to their university in a way that makes them stay (Crossley et al., 2007). The emotional investment in UC may lead students to participate more actively in university-related activities, foster closer relationships with peers and faculty, and perceive the institution as central to their identity and development. This relationship suggests that commitment to the institution shapes FA students' intentions to stay at their university (Hom et al., 2020). These findings reinforce the notion that fostering students' commitment to their university may serve as a strategic avenue for enhancing individual well-being and institutional retention outcomes. Supporting students in building a positive emotional connection to their university may have implications beyond satisfaction, influencing deeper engagement patterns, persistence and psychological health.

The study revealed that UC significantly predicted emotional well-being (as indicated by life satisfaction and positive affect) among FA students. This finding suggests that when students feel emotionally invested in their institution – expressing pride, loyalty and alignment with the university's values – it contributes meaningfully to their overall emotional well-being. University commitment, as an affective bond with the institution, may serve as a stabilising psychological resource, particularly in high-pressure disciplines like FA. Students who feel a strong sense of belonging and satisfaction with their university choice may experience greater day-to-day positivity and a broader sense of life satisfaction, likely due to the perceived coherence between their academic identity and their institutional environment. For FA students – who often face rigorous curricula, high expectations and a competitive career path – this emotional connection to the university may buffer against academic stress and foster a sense of purpose and security. In this way, the institution becomes more than just a site of academic performance; it becomes a valued part of the student's identity and emotional support system. This finding highlights the potential value of fostering institutional commitment to academic persistence and enhancing emotional resilience and well-being, particularly in cognitively demanding fields.

This study addressed two pressing research focus areas related to sustainable development (Van Zyl & Rothmann, 2022) and sustainable careers (De Vos et al., 2020). On the one hand, sustainable development is focussed on building flourishing institutions through the enhancement of well-being based on an understanding of individual functioning within the university environment and South African context (Van Zyl & Rothmann, 2022). The associations show the functioning of FA students' interaction with their university and perceptions of the external labour market. It provides the institution with scientific evidence on what structures to consider for sustainable development. On the other hand, fundamental markers of a long-lasting career are people with physical and mental health who function efficiently. A sustainable career is influenced by time, context and individual factors (De Vos et al., 2020). The associations provide insight into, and specialised focus on, FA, recent changes to job descriptions and how the functioning of students can assist in developing a sustainable career in uncertain times.

Career adaptability may prove paramount to advancing self-perceived employability (Atitsogbe et al., 2019). According to SAIPA (2023):

> The small, medium, and micro enterprises (SMME) sector is undoubtedly the engine room of economic growth. It has the greatest potential to do the things necessary to drive economic growth, foster innovation, and enhance societal well-being. (p. 33)

Perceived employability begets an openness to entrepreneurial opportunities and is predicted by career adaptability (Atitsogbe et al., 2019). Therefore, higher

education institutions can encourage FA students to explore what career adaptability looks like in their profession and what development they need to acquire this capability to grow.

Limitations and recommendations for future research

The limited sample size prevented robust statistical analysis and demographic or gender comparisons. The results of this study cannot be generalised to all FA students. Furthermore, complex analyses were not possible because of the limited sample size. Bifactor exploratory structural equation modelling might provide greater clarity between factors closely related in the SPGE Scale. Also, future studies can benefit from using Major et al.'s (2020) embeddedness and latent profile analysis. This will provide insight into FA students who chose this field on purpose, and those who lacked access to other accounting fields or other profiles related to career guidance, economic rewards or family influences.

Conclusion

The focus of this study was on the self-reported graduate employability, well-being and IE of FA students. Students with perceived graduate employability will be embedded in their institution and experience increased mental health. Institutional embeddedness can potentially conquer difficulties resulting from a lack of wealth or rural backgrounds and enable students with ambition and psychological well-being to build a better life with their qualifications. Financial accounting students' perceived employability predicted their IE and well-being, validating Hypotheses H1 and H2. The return on investment of higher education institutions will be significant if they advance directives towards enabling and achieving the perceived graduate employability of FA students.

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Authors' contributions

E.v.d.B. collected the data and wrote the article. S.R. assisted with statistical analysis and editing.

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Data availability

The data that support the findings of this study are available from the corresponding author, S.R., upon reasonable request.

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