School of Management Studies

The Relationship Between Perceived Employability, Core Self-Evaluations, and Approach-Avoidance Temperaments in South African University Students

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Abstract

Over the last two decades, traditional perspectives on employability have shifted because of changes in the labour market (e.g., technological advancements, the massification of higher education, and rising unemployment). Employability is now contingent on more factors than qualifications alone, and individuals' perceptions of employability depend on a range of psychosocial factors that relate to their personal identity or self-beliefs. In order to shed light upon how job seekers' core self-evaluations, defined as individuals' general self-perceptions, may impact their self-perceived employability, this study adopts an approach-avoidance framework to identify how individual difference factors may explain individuals' employability perceptions. This cross-sectional study collected survey response data from 303 South African prospective job seekers. Correlation analysis revealed that perceived employability and core self-evaluations were positively related, suggesting that general evaluations of self-worth may affect how individuals perceive their own employability. Likewise, perceived employability was related to job seekers' approach-avoidance temperaments. Mediation analyses suggested that perceived employability may be influenced by approach-avoidance temperaments through core self-evaluations as an intermediary mechanism. This study contributes to theory by identifying antecedents of perceived employability, exploring mechanisms underlying employability perceptions, and highlighting the utility of the approach-avoidance framework in understanding perceived employability. Practical implications and avenues for future research are discussed.

Keywords: approach-avoidance temperaments, core self-evaluations, cross-sectional, perceived employability, South Africa**.**

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Chapter 1: Introduction

Over the last few decades, shifts in the global labour market have made securing a job increasingly more challenging for new entrants (Baluku et al., 2021; Goodman & Tredway, 2016; Rothwell & Rothwell, 2017; Thijssen et al., 2008). Consequently, the topic of graduate employability has grown in significance (Rothwell & Rothwell, 2017; van Harten et al., 2022). Broadly, employability refers to an individual's potential in the labour market and relates to either an individual's strengths, perception of their potential to obtain a job or their realisation of that potential (Rothwell et al., 2008; van Harten et al., 2022).

The 2008 global recession was responsible for many of the shifts in the labour market, with the breakdown of traditional careers and the emergence of boundaryless and protean careers (Judge & Kammeyer-Mueller, 2011; Rothwell & Rothwell, 2017). Moreover, other factors make entering the labour market even more challenging for graduates, such as the growing competitiveness of the labour market, high levels of unemployment, the massification of higher education, unpredictable career paths, the transformative impacts of artificial intelligence (AI), and the COVID-19 pandemic which exacerbated many of these factors (Chesters, 2020; Donald et al., 2024; Kiley, 2020; Ranchhod & Daniels, 2021). Thus, due to these shifts in the labour market, the onus of employability has shifted from the government and organisations to the individual—university students must develop their own strategies to increase their employability (Low et al., 2020). Graduates entering the labour market can no longer depend on their education or qualifications alone to obtain sustainable employment (Goodman & Tredway, 2016).

1.1 Background

In the local context, South African graduate students face unique employability challenges, many rooted in the Apartheid education legacy (Botha, 2021; Fongwa, 2018). Notably, graduates are known to experience employment differently depending on various contextual factors, such as race, socio-economic status (SES), gender, and the university attended (Baldry, 2016; Fongwa et al., 2018). Research shows that race and SES are the strongest predictors of graduate employment in the country, with Black graduates and individuals from lower socio-economic backgrounds experiencing more unemployment than White graduates or those who are better off socio-economically (Baldry, 2016). Gender also influences employment as women are less likely to find jobs than men in South Africa, with only 36.5% of women being employed compared to 45.7% of men, according to Statistics South Africa (Anand et al., 2016; Statistics South Africa [Stats SA], 2023). The intersection of contextual factors like race, SES and gender creates more complex barriers for certain

individuals. For example, Black women may experience more barriers to employment than White women (Tivaringe, 2019). Overall, structural factors strongly influence employability in South Africa and present job seekers with unique employability challenges (Baldry, 2016).

In addition, rising unemployment is an issue of significant concern for South African job seekers (Wakefield et al., 2022). At the end of 2023, there were 7.9 million unemployed people (32.1% of the population) between the ages of 15-65 that were available and actively looking for work (Stats SA, 2023). In the last ten years, the graduate unemployment rate has increased from 5.5% in 2013 to 9.6% at the end of 2023. This may seem low compared to youth unemployment, but considering the extensive governmental and institutional efforts focused on higher education, the increases are concerning. These statistics indicate that having a degree does not guarantee employment in South Africa (Baldry, 2016). Rather, as is being seen globally, they show that employability is a product of complex factors beyond qualifications alone (Fongwa et al., 2018). Therefore, employability is a practical issue of critical significance both globally and in South Africa.

Although employability is a significant issue, much disagreement exists about its conceptualisation and what it means to be more or less employable (Akkermans, Donald, et al., 2024; van Harten et al., 2022). One of the reasons for this disagreement is that new perspectives on employability often emerge in response to changes in the global labour market or economic circumstances (Thijssen et al., 2008; van Harten et al., 2022; Vanhercke et al., 2014). Employability perspectives have evolved during different historical periods, from being considered an issue of government responsibility in the 1950s, to the responsibility of organisations, to present times where it is regarded as an individual's responsibility (Thijssen et al., 2008). Contemporary literature largely focuses on these individual perspectives of employability (e.g., Harari et al., 2021; van Harten et al., 2022; Vanhercke et al., 2014). In addition, a lack of theoretical synthesis has further contributed to the fragmentation of the employability literature (Akkermans, Le Blanc, et al., 2024; van Harten et al., 2022). The literature is criticised as being a-theoretical, with much empirical research being conducted without any theoretical foundation (Akkermans, Donald, et al., 2024). Thus, despite employability's practical and theoretical significance, it remains a 'fuzzy' construct (van Harten et al., 2022).

This disagreement notwithstanding, perceived employability is an approach that has received much attention and has comparatively more agreement among scholars regarding its conceptualisation (Berntson & Marklund, 2007; Coetzee & Engelbrecht, 2020; Harari et al., 2021; Peeters et al., 2020; Rothwell et al., 2008). Perceived employability is a psychological

construct described as an individual's subjective assessment of their possibility of obtaining and maintaining employment based on a subjective evaluation of their context (external factors) and their individual characteristics (internal factors; Rothwell et al., 2008; Rothwell & Rothwell, 2017; Vanhercke et al., 2014). Considering that individuals act on their subjective perceptions rather than objective reality, perceived employability offers significant insights into an individual's employability and future employment outcomes (Vanhercke et al., 2014).

Previous empirical research has established that perceived employability is related to several employment outcomes, including job search behaviours, adaptability, turnover intention, and an individual's career success (Atitsogbe et al., 2019; Coetzee & Engelbrecht, 2020; Onyishi et al., 2015; Vîrga et al., 2017). Job search behaviours, for example, include efforts to gather information about jobs, prepare for active job search (e.g., revising a CV, speaking to people about job leads), and actual job-seeking activities (e.g., applying or interviewing for jobs; Blau, 1993). These behaviours may be critical for employment success (Kanfer et al., 2001). There is a growing body of evidence that identifies perceived employability as an antecedent of these critical behaviours (D. J. Q. Chen & Lim, 2012; Harrison et al., 2021; Onyishi et al., 2015). Considering this evidence, the perceived employability approach is positioned as a valuable resource for individuals entering a challenging labour market (Harari et al., 2021; Schettino et al., 2022; Vîrga et al., 2017).

1.2 Perceived Employability and its Antecedents

Given the relevance of perceived employability for individuals' occupational outcomes, it is important to determine what shapes an individual's employability perceptions. Meta-analytic research indicates that core self-evaluations are one of the most robust predictors of perceived employability (Harari et al., 2021). Core self-evaluations (CSE) are an individual's fundamental evaluations of their own capabilities and self-worth (Chang et al., 2012). CSE is a higher-order construct consisting of four key traits, namely, self-esteem, generalised self-efficacy, locus of control, and emotional stability. Literature suggests that perceived employability is a domain-specific self-evaluation (Berntson et al., 2008; Vanhercke et al., 2014), whereas CSE is inherently broad and generalised (Chang et al., 2012). Therefore, because perceived employability and CSE are both subjective evaluations of the self, a positive relationship between these constructs makes conceptual sense, and empirical research supports this idea (Harari et al., 2021; Onyishi et al., 2015; Vîrga et al., 2017).

Likewise, contextual factors[1] may influence the development of an individual's employability perceptions (Baldry, 2016; Niu et al., 2019; Pitan & Muller, 2019a; Rodrigues et al., 2019). Inherent in its definition, perceived employability is an individual's evaluation of internal and external factors (Rothwell et al., 2008; van Harten et al., 2022; Vanhercke et al., 2014). Given that contextual factors are known to impact employment outcomes, they may be expected to show associations with perceived employability (Anand et al., 2016; Fongwa, 2018). Evidence on the association between perceived employability and contextual factors is mixed (Harari et al., 2021; Pitan & Muller, 2019a; Rodrigues et al., 2019). Nevertheless, the role that context may play in how individuals evaluate their employability must be acknowledged.

1.3 Theoretical Framework

Although evidence suggests that perceived employability is related to CSE, it is unclear why they are related or what mechanisms underlie this relationship (Harari et al., 2021; Onyishi et al., 2015; Vîrga et al., 2017). Scholars have noted that a lack of an organising theoretical framework for employability may have contributed to this (Akkermans, Donald, et al., 2024; van Harten et al., 2022). While some studies have utilised theoretical frameworks in employability research, it is rare and inconsistent (Akkermans, Donald, et al., 2024). One potential theoretical approach to resolving this dilemma may be in the Approach-Avoidance Framework (Elliot & Thrash, 2002). This framework posits that people have a sensitivity to either positive stimuli (i.e., approach temperament) or negative stimuli (i.e., avoidance temperament) and that this sensitivity influences their behaviours and evaluation of information. CSE was recently integrated into an approach-avoidance framework by Ferris et al. (2011). They found that CSE is best conceptualised as "representing both (high) approach tendencies and (low) avoidance tendencies" (Ferris et al., 2011, p. 137). Given its promise to help us understand individuals' general evaluations of the self, approach and avoidance temperaments may shed light on individuals' employability perceptions. Accordingly, an approach-avoidance framework could become a theoretical bridge between CSE and perceived employability. Therefore, this research aims to investigate the relationship between perceived employability and CSE through the lens of an approach-avoidance framework in South African university students.

[1] Contextual factors refer to personal attributes that are contextually relevant within South Africa's historical and socio-economic landscape; for example, race, socio-economic status, and gender.

1.4 Problem Statement

It is imperative to explore how individual difference factors, including individuals' general self-beliefs and approach-avoidance temperaments, and contextual factors influence employability perceptions. The global labour market is increasingly characterised by uncertainty and volatility, with a combination of trends making the possibility of obtaining employment increasingly more difficult for new entrants (World Economic Forum, 2023). In addition to global trends, South African job seekers are faced with local challenges. Given this context, South African university students, as prospective job seekers, need to leverage a range of factors to improve their employability. Perceived employability is one such resource that may improve prospective job seekers' employability. Contextual factors may also shape employability perceptions; hence they were included as control variables and for exploratory purposes in this study. Thus, it may be valuable to explore CSE and approach-avoidance temperaments as individual difference factors that may explain individuals' employability perceptions.

1.5 Study Delimitations

It is important to specify the delimitations of this research. Perceived employability was chosen as the focus of this study. Other approaches to employability were not chosen as many do not comprehensively account for internal and external elements of employability and do not apply to individuals who have not yet entered the labour market permanently. Perceived employability provides a holistic approach, incorporating both internal elements and external labour market factors in individuals' evaluations.

Although there are many complex models describing a vast array of employability antecedents (e.g., Álvarez-González et al., 2017; Caballero et al., 2022; Dacre Pool & Sewell, 2007; Forrier et al., 2015), only CSE and approach-avoidance temperaments were included due to their strong theoretical and empirical connections with perceived employability. Other antecedents were excluded to maintain a focused and theoretically grounded study.

Measurement-wise, despite the many perceived employability instruments, Rothwell et al.'s (2008) self-perceived employability scale was chosen for its favourable psychometric properties in the local South African context (Botha, 2021; van Harten et al., 2022). Instruments developed for employed populations (e.g., Berntson & Marklund, 2007; De Cuyper et al., 2008) and those with ambiguous psychometric properties were not considered.

Lastly, although the importance of the South African context is acknowledged, this study focussed on how CSE and approach-avoidance temperaments explain perceived employability. It would be remiss to overlook the impact of context on employment

outcomes; thus, race, SES and gender were included as control variables. By including these socio-demographic variables, the role of context was considered while maintaining the centrality of the individual difference factors in this study.

1.6 Research Objectives

In response to the labour market challenges faced by graduates and the gaps in the literature identified above, this study has three primary objectives. First, this research investigates the extent to which perceived employability and CSE are related in South African university students. Second, the study examines perceived employability through the lens of the approach-avoidance framework to help explain the psychological mechanisms that may underlie perceived employability. Third, this research investigates the role that contextual factors play in individuals' employability perceptions. Finally, the study also explores the study variables as predictors of job search behaviour.

1.7 Research Questions

Against this background, the research questions for this study are:

1. What is the relationship between perceived employability and core self-evaluations in South African university students?
2. What is the relationship between perceived employability and approach and avoidance temperaments in South African university students?
3. What is the relationship between core self-evaluations and approach and avoidance temperaments in South African university students?
4. How is perceived employability predicted by CSE, approach-avoidance temperament, race, and socio-economic status in South African university students?
5. How are job search behaviours predicted by perceived employability, CSE, approach-avoidance temperament, race, and socio-economic status in South African university students?

1.8 Overview of Dissertation

This introductory chapter provided the background, rationale and research objectives of the present study. Chapter 2 reviews the literature on perceived employability, CSE, and approach-avoidance temperaments and the development of the study's conceptual framework and hypotheses. Following this, Chapter 3 outlines the research methodology by describing the research design, participant characteristics, sampling, measurement instruments, procedure, data analysis approach and ethical considerations. Chapter 4 presents the results of the data analyses. The final chapter discusses the results in relation to existing literature and

includes theoretical and practical implications, limitations, and directions for future research based on the study's findings.

Chapter 2: Literature Review

The following chapter presents an overview of the theoretical and empirical literature on perceived employability, core self-evaluations (CSE) and approach-avoidance temperaments. The review begins by discussing prominent theoretical approaches for perceived employability and presents approach-avoidance temperaments as the theoretical framework for this research. Following this, the review provides an analysis of the conceptualisations, measurement and prior empirical research on perceived employability, CSE and approach-avoidance temperaments. Equally, the review provides an argument for the integration of perceived employability and CSE into an approach-avoidance framework based on the hypothesised empirical and theoretical relationships between these variables.

2.1 Theoretical Background

The two main theoretical frameworks found in the perceived employability literature are human capital theory (Becker, 1964) and conservation of resources theory (Hobfoll, 2001); however, an analysis of the literature suggests that an approach-avoidance framework (Elliot & Thrash, 2002) may provide a more appropriate foundation for this research.

Human Capital Theory

This theory postulates that individuals make investments in resources such as education, training and health to develop their employability (Becker, 1964). In relation to perceived employability, this theory suggests that an individual's assessments of their human capital investments would determine their perceptions of their employability (Harari et al., 2021). In other words, how someone evaluates their employability is dependent on what kinds of human capital investments they have made. Although this makes conceptual sense, human capital theory is rarely adopted as a theoretical framework. Instead, elements of human capital (e.g., qualifications) are integrated as variables within perceived employability research (e.g., De Vos et al., 2011; Donald et al., 2019; Fugate et al., 2004). Moreover, human capital theory does not explain what makes some individuals evaluate certain investments (and not others) when making assessments about their employability. For instance, the theory does not explain why some individuals perceive work experience as a relevant factor, and others do not (Jackson & Wilton, 2017; Kasler et al., 2017). For these reasons, other theoretical frameworks were explored.

Conservation of Resources

Hobfoll's (2001) Conservation of Resources (COR) theory describes how individuals gain and lose resources. COR theory is situated in the field of positive psychology and has become one of the most cited theories in organisational research (Halbesleben et al., 2014;

Hobfoll, 2001) and has been the most widely used framework in perceived employability research (e.g., Jabeen et al., 2021; Petruzziello et al., 2023; Schettino et al., 2022; Vanhercke & De Witte, 2016). The theory claims that individuals are motivated by their desire to protect their resources and acquire new resources (Halbesleben et al., 2014). Individuals who already have resources will gain more, and those who have fewer resources or who are suffering resource loss will continue to lose resources (referred to as loss spirals; Hobfoll, 2001). Perceived employability and CSE traits are both recognised as personal resources (Judge & Kammeyer-Mueller, 2011; van Harten et al., 2022). Thus, according to COR theory, if one is present, it is likely that the other would be too.

These principles provide a simple argument for a proposed relationship between perceived employability and CSE, but COR is limited in explaining how they are related. The principle of resource gain may explain why resources are expected to be found together, but it does not explain why particular resources demonstrate stronger relationships than others. For example, meta-analytic research shows that CSE has a strong relationship with life satisfaction (ρ = .54) and intrinsic motivation (ρ = .33; Ferris et al., 2011).[2] These relationships are to be expected according to COR theory, yet COR does not explain why CSE would have a stronger association with life satisfaction than intrinsic motivation. This is where the theoretical framework is found lacking for this research. COR theory cannot comprehensively distinguish why the relationship between perceived employability and CSE would be any different than that between perceived employability/CSE and any other personal resource. In view of this, COR theory was not used as a framework for this research. Alternatively, an approach-avoidance framework could provide a foundational theoretical framework for this research.

Approach-Avoidance Temperaments

Definition. Approach-avoidance temperaments are underlying, biologically based sensitivities towards either positive or negative stimuli (Elliot, 1999; Elliot & Thrash, 2002). Individuals with an approach temperament are more sensitive to positive information, whereas those with an avoidance temperament are more sensitive to negative information (Elliot & Thrash, 2002). According to Elliot and Thrash (2002), these temperaments are expressed through their influence on personality traits. That is, personality traits indicate the presence of latent approach-avoidance temperaments. Broadly, temperaments refer to

[2] Both life satisfaction and intrinsic motivation can be categorised as personal resources, according to Halbesleben et al.'s (2014) broad definition.

biologically based, multidimensional individual differences that are relatively stable over time (Derryberry & Rothbart, 1988; Rothbart, 1981). Moreover, temperaments are postulated to form the foundation for personality (De Pauw & Mervielde, 2010). Across different traditions of temperaments, four common dimensions or tenets emerge, namely, emotionality, sociability versus social inhibition, activity, and effortful control (De Pauw & Mervielde, 2010). Variations in these dimensions shape an individual's temperament. Considering that approach-avoidance temperaments share many of these distinguishing characteristics, they are classified as temperaments (Elliot & Thrash, 2002).

Furthermore, approach-avoidance concepts have a long history—dating back to the ancient Greek philosophy that humans are guided by the pursuit of pleasure and the avoidance of pain, or in other words, the philosophy of ethical hedonism (Elliot, 1999). This philosophy has had a significant impact on behavioural sciences and has influenced many major theorists in psychology, such as Freud, Thorndike, and Lewin (Elliot, 1999). Approach-avoidance principles are fundamental to many concepts in the behavioural sciences. Notably, approach-avoidance principles are foundational for the field of motivation and provide a unifying schema for approaches to personality (Elliot, 1999; Elliot & Thrash, 2002).

Approach-Avoidance Framework. An approach-avoidance framework may provide an organising framework for this research (Elliot & Thrash, 2002, 2010). The framework offers broad explanations for the underlying mechanisms of many human experiences and explains how individuals evaluate information (Chang et al., 2012). Approach-avoidance temperaments indicate what kinds of information individuals choose to evaluate (i.e., are sensitive to) or ignore (insensitive to; Elliot & Thrash, 2002). Given that both perceived employability and CSE are individuals' evaluations of information about their abilities and value, an approach-avoidance framework may clarify the theoretical link between these constructs. Prior work has supported the integration of CSE into this framework (Ferris et al., 2011), but no research has investigated perceived employability and an approach-avoidance framework together. Thus, the adoption of an approach-avoidance framework may provide novel insights into how individuals evaluate employability-related information.

Traditionally, approach-avoidance temperaments were rarely included as standalone variables in studies; rather, approach-avoidance principles are used only to conceptualise other constructs and their relationships (e.g., P. Patel & Cooper, 2014). In this study, not only does an approach-avoidance framework present a possible theoretical framework, but the temperaments themselves also form a part of the study's main variables. This will allow the

relationships between approach-avoidance and the other study variables to be directly examined. Moreover, the relationships between the temperaments and perceived employability may provide more objective evidence for integrating perceived employability within an approach-avoidance framework.

Therefore, an approach-avoidance framework may help identify what information individuals are evaluating and how these evaluations result in different levels of perceived employability and CSE. In this way, this research may clarify the theoretical link between perceived employability and CSE and provide insight into the relationship between these two constructs in South African university students.

2.2 Perceived Employability

The following section discusses perceived employability in depth. It begins by defining perceived employability. Perceived employability is then situated in the literature by exploring the historical development of employability and the different individual employability approaches. Following this, the measurement of perceived employability is presented. The section concludes with an examination of the empirical research on perceived employability.

Defining Perceived Employability

Perceived employability is an individual's perception of their possibility of obtaining and maintaining employment based on a subjective evaluation of their context (external factors) and their individual characteristics (internal factors; Rothwell et al., 2008; van Harten et al., 2022; Vanhercke et al., 2014). For university students, external factors include the state of the labour market, the reputation of their university, and perceptions about their field of study (Rothwell et al., 2008). Internal factors relate to their beliefs about themselves and their abilities. This definition is one of the more recognised conceptualisations of perceived employability. Its strengths lie in that it includes the internal and external features of employability, it has been widely used, and its subjective nature aligns with the purposes of this study (Baluku et al., 2021; Chiesa et al., 2018; Coetzee & Engelbrecht, 2020; Schettino et al., 2022).

Although this conceptualisation of employability is more widely recognised in the literature, perspectives on employability remain fragmented (van Harten et al., 2022). A long history of employability research has produced several theoretical 'strands', yet authors often fail to delineate a conceptual framework for their research. Rather, there seems to be a tendency to selectively combine elements from different strands to formulate new definitions without much justification or acknowledgement that other frameworks exist. It is positive to

see that scholars are increasingly more attentive to these concerns in more recent research (Akkermans, Donald, et al., 2024; Akkermans, Le Blanc, et al., 2024; Peeters et al., 2020). It is beyond the scope of this literature review to outline the many employability conceptualisations in detail; however, a brief introduction of employability's theoretical origins is essential to situate this research within the field. For a more extensive overview of employability, see van Harten et al. (2022).

Historical Overview of Employability Literature

The different perspectives on employability are usually a reflection of the historical periods in which they emerged (Thijssen et al., 2008). There are three historical periods in the employability literature, namely, the macro, meso and micro periods.

The macro period began around the 1950s when employability research first arose (Rothwell & Rothwell, 2017; Thijssen et al., 2008). During this period, employability was seen as a government or policy-level issue. Macro employability literature addressed the need for employment in the aftermath of the Second World War (Vanhercke et al., 2014). Following this, shifts in the labour market in the 1980s/90s resulted in the emergence of the meso period, which was characterised by the centrality of the organisation rather than the government (Rothwell & Rothwell, 2017; Thijssen et al., 2008). Later, changes in the labour market, such as the 'war for talent', the rising knowledge-based economy, and the idea of the psychological contract, led to the meso era (Rothwell & Rothwell, 2017). The concept of the psychological contract was particularly impactful as it became widely accepted that organisations would help increase employees' employability *in exchange* for greater effort and higher skills (Rothwell & Rothwell, 2017; Thijssen et al., 2008). In the micro period, the responsibility of employability shifted once again, this time from the organisation to the individual. This transition was mainly in response to the impact of the 2007/2008 global recession on labour markets. Notably, neoliberalism surfaced in this period, which came with the breakdown of the long-term or lifetime career and the formation of protean and boundaryless careers (Bal & Dóci, 2018; Rothwell & Rothwell, 2017; Vanhercke et al., 2014). Neoliberal ideological assumptions, such as meritocracy and instrumentality (where employees are merely instruments for organisations' achievements), placed further responsibility on individuals for their employability (Bal & Dóci, 2018). Several individual-focused traditions arose out of the micro period of employability, and this is where most contemporary employability literature is situated (Vanhercke et al., 2014).

Individual Employability Approaches

Broadly, there are three clusters of individual-focused employability approaches, namely, person-centred, objective output-based, and self-perceived employability (Harari et al., 2021; van Harten et al., 2022). The perceived employability individual approach is the approach taken by this research. Drawing predominately on the detailed reviews from Harari et al. (2021) and van Harten et al. (2022), the following section provides a brief overview of contemporary employability literature.

Person-centred Approach. Firstly, the person-centred approach considers the personal strengths or characteristics of the individual (Harari et al., 2021; van Harten et al., 2022; Vanhercke et al., 2014). These are often referred to as 'input-based' models since they examine the personal characteristics or competencies that facilitate an individual's success in the labour market (Harari et al., 2021; Thijssen et al., 2008; van Harten et al., 2022). Some of the models include, but are not limited to, Movement Capital (DeFillippi & Arthur, 2016; Fugate et al., 2004), Rewarding, Able, Willing (RAW) model (Hogan et al., 2013), and graduate employability models (Dacre Pool & Sewell, 2007; Knight & Yorke, 2003). These models usually examine things like adaptability, competencies, formal education, social networks and career insights (Harari et al., 2021; van Harten et al., 2022). Person-centred approaches are valuable as they incorporate the characteristics that individuals need to be successful in today's labour market. Nevertheless, the limitation of these models is that they do not always take the internal (within the organisation) and external labour market into consideration. An individual may be employable because they have all the necessary skills for a specific job, but, for example, there may be no demand for that job or no job vacancies (Rothwell & Rothwell, 2017). Therefore, the person-centred approach does not provide a holistic understanding of employability.

Output-based Approach. Secondly, there is the objective, output-based approach. Models within this cluster look at objective employment outcomes such as job transitions and actual employment (in the case of new entrants to the job market; Harari et al., 2021; van Harten et al., 2022). While these objective models may be helpful in providing empirical evidence on employment outcomes, they also fail to provide a comprehensive approach to employability. The main limitation of these models is that they rely on the assumption that an individual's employability always translates directly to employment or unemployment (Harari et al., 2021). For example, the job transition approach suggests that if an individual moves from one job to another, they have higher employability; however, this does not consider other factors like job demands, organisational politics or how favourable this

transition was for the individual (Harari et al., 2021). Things like job mismatches, quality or quantity of employment and personal characteristics need to be considered in addition to the mere attainment of a job. One of the reasons these factors are often not considered is due to the practical challenges of conducting such research. Some output-based studies examine the quality and quantity of actual employment, but the research on this is limited (Kiley, 2020). Therefore, this approach remains underdeveloped and insufficient for comprehensively studying employability.

Perceived Employability Approach. The third approach, perceived employability, is the approach used in this research (Vanhercke et al., 2014). As mentioned before, perceived employability is a psychological construct defined as an individual's subjective perception of their possibility of obtaining and maintaining employment (Berntson & Marklund, 2007; Rothwell & Arnold, 2007; Vanhercke et al., 2014). The theoretical conceptualisations of perceived employability are largely consistent across the literature (van Harten et al., 2022). While perceived employability builds on the other employability approaches, it differs from other approaches in two main ways. Firstly, the subjective nature of perceived employability is the focal point. The approach assumes that individuals make a subjective judgement about their employability based on several factors (Hillage & Pollard, 1998; Rothwell et al., 2008; Vanhercke et al., 2014). The value of the subjective nature of perceived employability is based on the premise that people act on their perceptions and not on objective reality (Vanhercke et al., 2014). Thus, the goal of perceived employability is not to accurately quantify how employable someone might be but, rather, how employable they think they are. For this reason, perceived employability models are often used when examining individuals' self-directed actions, such as job search activities or intention to be an entrepreneur (Koloba, 2017; Onyishi et al., 2015). Secondly, perceived employability models differ from the objective output-based approach as they can be applied to those not employed (unemployed and students), and they consider the quality as well as the quantity of the employment opportunities available (Vanhercke et al., 2014). Consequently, the perceived employability approach is characterised by its subjective nature and its ability to encapsulate employability perceptions of individuals irrespective of their employment status.

Measuring Perceived Employability

The measurement of perceived employability varies considerably (Neroorkar, 2022). The different operationalisations are usually linked to the purpose and context of the research. For instance, if the purpose of a study is to examine perceived employability in different labour market conditions, the researchers might create an employability measure that includes

items on the labour market (e.g., the Employment Outlook Scale; Low et al., 2020). Purpose also extends to whose perception the study aims to investigate, or in other words, whose perspective is important for the purpose of the research (e.g., individual's self-perception, employers, or others). Likewise, the population of interest (students, employed or unemployed individuals) will also impact how perceived employability is measured (Neroorkar, 2022). This approach to measuring perceived employability has created a precedent wherein researchers selectively adopt items, and it has become commonplace for studies to use either single-item measures or a combination of different measures (e.g., Lo Presti et al., 2021; Pitan & Muller, 2019b). The limitation of this incongruity is that the findings of these studies are treated as comparable, yet with such differences in operationalisations, this should be done more critically. Moreover, the psychometric properties of the measures are often not fully disclosed or even considered (e.g., Kasler et al., 2017; Koloba, 2017). As such, the multiple operationalisations of perceived employability make it essential to stipulate what is meant by employability to enhance the generalisability of this research.

Consequently, Rothwell et al.'s (2008) self-perceived employability scale was chosen for this study. The scale was developed to measure university students' perceptions of their ability to obtain sustainable employment appropriate to their qualification level (Rothwell et al., 2008). Hence, the scale is contextually appropriate as this study aimed to investigate employability in university students. Similarly, the instrument has been widely accepted and used in a variety of higher education contexts, including in South Africa (e.g., Botha, 2021; Onyishi et al., 2015; Schettino et al., 2022). Rothwell argues that university students base their employability perceptions on their self-belief, field of study, the university they attend and the state of the external labour market. Thus, items for each of these components are included. The inclusion of multiple components enables respondents to provide a more holistic viewpoint of their employability. The psychometric properties of the self-perceived employability scale are discussed in Chapter 3.

Empirical Research Findings: Perceived Employability

Over the last two decades, a considerable amount of empirical research has been published on perceived employability (e.g., Berntson & Marklund, 2007; Goodman & Tredway, 2016; Peeters et al., 2020). Due to the research being largely correlational, focusing on antecedents, there is minimal research on causal relationships (Harari et al., 2021). Van Harten et al.'s (2022) systematic review of 71 empirical studies shows that a large portion of research incorporates concepts from the personal strengths approach to employability. The

review found that personal strengths, such as job-related skills, adaptability, and protean career attitude, are frequently associated with perceived employability. Most studies demonstrated that personal strength variables were positively associated with perceived employability. However, the correlation coefficients ranged from .08 to .70. Measurement discrepancies within the literature are cited as the likely cause of this wide range of results. Despite this inconsistency, these findings indicate that, in general, when individuals have a higher perception of their ability to obtain or maintain a job, they are likely to have corresponding positive viewpoints about their personal strengths. Similarly, Harari et al. (2021) published a meta-analysis of the predictors of perceived employability, covering 202 studies. They provide a useful organising structure for the predictors of perceived employability by using three models from previous research, namely: Movement Capital (competencies that facilitate adaptation to evolving labour markets); Rewarding, Able and Willing model (RAW; traits sought after by employers); and Circumstances model (individual's contextual factors and labour market conditions).

Movement capital variables are the most robust predictors of perceived employability (Harari et al., 2021). Movement capital refers to the personal characteristics that facilitate an individual's ability to move within the labour market (Forrier et al., 2009). These characteristics usually include dimensions such as human capital (knowledge, skills, and abilities), social capital (networking and mentorship opportunities), self-awareness (a motivational component that drives individuals in their careers), and adaptability (effectively changing in response to environmental demands; Forrier et al., 2009; Fugate et al., 2004; Peeters et al., 2020). Movement capital's broad definition means that many personal strengths are included within this category of perceived employability predictors.

While Harari et al.'s (2021) meta-analysis demonstrated that movement capital variables were the strongest and most consistent predictors of perceived employability, the different variables still showed some variability. Human capital variables such as work-relevant knowledge, skills and abilities (KSA) had consistent medium to large associations with perceived employability (ρ = .45, 95% CI [0.37, 0.54]), yet work experience had a much smaller association (ρ = .02, 95% CI [0.10, 0.14]). Social capital variables showed a similar pattern. For instance, networking had a medium positive relationship (ρ = .32, 95% CI [0.27, 0.38]), whereas mentoring had an inconsistent relationship resulting in a small mean-corrected correlation (ρ = .02, 95% CI [−0.18, 0.22]). Core self-evaluations had one of the strongest associations with perceived employability across the 25 studies included (ρ = .37, 95% CI [0.28, 0.46]). Overall, movement capital variables are relatively consistent and robust

predictors of perceived employability when compared to the other models in the literature (Harari et al., 2021).

By contrast, evidence for relationships between the RAW model and perceived employability is lacking. Within the RAW model, political skill (ρ = .15), extraversion (ρ = .11), agreeableness (ρ = .05), and conscientiousness (ρ = .12) all showed weak relationships with perceived employability. Other research has confirmed that the relationships between perceived employability and personality traits are inconsistent (Neneh, 2020; Udayar et al., 2018). For instance, extraversion and agreeableness had negligible associations with perceived employability, whereas conscientiousness and openness to experience had stronger associations in the same study (Udayar et al., 2018). Likewise, in a South African study, university students with higher perceived employability were likely to score higher on certain personality traits, including agreeableness (r = .32; p < .01), conscientiousness (r = .28; p < .01), and openness to experience (r = .24; p < .01) while other traits showed no relationship with perceived employability (extraversion and emotional stability; Neneh, 2020). The differing results suggest that the RAW model itself, or the way it has been investigated, requires further development and research.

Similarly, research has failed to provide convincing evidence for the Circumstances model. Notably, Harari et al.'s (2021) meta-analysis found negligible evidence for the relationship between perceived employability and gender (ρ = -.03, 95% CI [−0.05, −0.02]). This result has been consistently observed from early on in employability research (Rothwell & Arnold, 2007). Correspondingly, a recent study on South African graduate students confirmed that there was no significant difference between males' and females' average perceived employability (Botha, 2021). The one exception to the lack of evidence for the Circumstances model is age, which had a small negative relationship with perceived employability (ρ = −0.21, 95% CI [−0.24, −0.19]). However, even the evidence on age is inconclusive, as the literature provides mixed findings (Harari et al., 2021). For instance, Botha (2021) found no association between age and perceived employability in South African graduate students, contradicting Rothwell et al.'s (2008) original research that identified age as a unique predictor of perceived employability. Overall, the meta-analytic research establishes that the Circumstances model is not consistently related to perceived employability.

The literature demonstrates the interconnectedness of perceived employability with many concepts in organisational research. In addition to the variables in these three models, perceived employability has also been linked to variables such as self-efficacy (Berntson et

al., 2008), health and well-being (Lo Presti & Pluviano, 2016; Low et al., 2020; Ugwu et al., 2021), psychological capital (Baluku et al., 2021; Chiesa et al., 2018), and volunteering activities in students (Goodman & Tredway, 2016). Moreover, employment outcome variables are also associated with perceived employability (Atitsogbe et al., 2019; Onyishi et al., 2015; Vîrga et al., 2017). Notably, both preparatory ($r = .32$; $p < .01$, D. J. Q. Chen & Lim, 2012; $r = .20$; $p < .01$, Onyishi et al., 2015) and active ($r = .25$; $p < .01$, D. J. Q. Chen & Lim, 2012; $r = .16$, $p < .01$, Onyishi et al., 2015) job search behaviours have been shown to be related to perceived employability. Therefore, perceived employability's relationship with concepts from the literature emphasises that it is a resource that individuals draw on to be successful in a turbulent labour market (Coetzee & Engelbrecht, 2020).

2.3 Core Self-Evaluations

Defining Core Self-Evaluations

Core self-evaluations (CSE) are the fundamental evaluations that individuals make about their capabilities and self-worth (Chang et al., 2012; Judge et al., 1997, 1998, 2003). CSE is a higher-order construct consisting of four traits, namely, self-esteem, generalised self-efficacy, locus of control, and emotional stability. According to Judge et al. (1998), CSE are the most fundamental evaluations individuals hold, and they are characterised by three criteria: evaluation focus, fundamentality, and scope. Evaluation focus refers to the evaluations being focused on the self. Fundamentality is the extent to which the traits are central to an individual's self-concept. Lastly, scope refers to how broad or narrow the trait is, with CSE being broad in nature. Therefore, CSE refers to broad evaluations individuals make about the self that are central to their self-concept.

The four traits constituting CSE were initially developed individually and later combined into the unidimensional personality trait (Judge et al., 2003). The combined construct measures the commonality among the four traits rather than the specific factor variance attributable to the individual traits. For this reason, the focus of this research is not on the individual traits but rather on the composite construct.

Nevertheless, it is essential to provide a background on the four traits for a more comprehensive understanding of CSE. Firstly, self-esteem broadly refers to the belief in one's own value based on basic appraisals that one makes about oneself (Jabeen et al., 2021; Judge et al., 1998; Rosenberg, 1965). Generalised self-efficacy is an individual's belief in their capability to perform and cope with various situational demands (Chang et al., 2012; G. Chen et al., 2001). It may involve an individual's assessment of their ability to mobilise the necessary motivation, behaviours or cognitive resources required for various events in their

life (Judge et al., 1998). Thirdly, emotional stability is an individual's inclination to feel calm and secure (Chang et al., 2012; Eysenck, 1990). Neuroticism, or the tendency to focus on the negative aspects of the self, is antithetical to emotional stability (Judge et al., 2003). Finally, locus of control is the extent to which one believes that events in their life are dependent on their own behaviour rather than external factors or 'fate' (Ng et al., 2006; Rotter, 1966).

Although initially conceptualised as individual traits, previous studies have shown that the traits are interrelated and correlate in a similar manner with other constructs in organisational research (Chang et al., 2012). Seminal work by Judge et al. (1997) found that these dimensions loaded onto a single factor. Subsequent studies have confirmed CSE as a higher-order construct (e.g., Arya et al., 2019; Debicki et al., 2016). Thus, the commonality among these traits forms the composite construct CSE (Chang et al., 2012).

Judge et al. (1997) described several processes through which the composite construct, CSE, may influence outcomes, namely, emotional generalisation, indirect effects through cognitive appraisals and actions, and moderation. Emotional generalisation refers to the idea that positive evaluations of the self may 'spill over' and affect other outcomes (Chang et al., 2012). Furthermore, CSE might indirectly influence outcomes by shaping one's thoughts and evaluations about other variables or influencing the actions one takes. Lastly, they proposed that CSE may moderate the relationship between variables such that one's evaluation of oneself may impact how one perceives certain outcomes. However, these processes have been critiqued as they are merely descriptive and fail to provide a parsimonious theoretical framework (Chang et al., 2012).

Addressing this gap, Ferris et al. (2011) integrated CSE into an approach-avoidance framework. Previously, Elliot and Thrash (2002) found that approach-avoidance temperaments can be used as a foundation for certain constructs such as personality and motivation. Building on this, Ferris et al. (2011) integrated CSE into this framework. They found that individuals scoring high in CSE had approach temperaments (Ferris et al., 2016). Correspondingly, those scoring low in CSE had avoidance temperaments. In other words, they found that those who demonstrated more positive evaluations of their capabilities and self-worth were more likely to have underlying approach tendencies, and those with more negative perceptions of their capabilities and self-worth were more likely to have underlying avoidance tendencies. The theoretical implications of this research go beyond explaining CSE because the original processes put forward by Judge et al. (1997) align with these findings, organising the various processes into an integrated framework. Approach-avoidance, therefore, may provide a framework for explaining how other variables might be related to

one another, for instance, why certain antecedents are related to CSE and not others (Chang et al., 2012). The development of this framework has added significantly to the CSE literature and paved the way for future research in this area.

Measuring Core Self-Evaluations

Another significant advancement was the development of a direct measure for the composite construct of CSE, the Core Self-Evaluation Scale (CSES; Judge et al., 2003). Previously, CSE was measured indirectly by first measuring the individual traits before establishing the underlying construct. What is more, some studies erroneously measured only select individual traits or used a variety of scales for these traits. Given that CSE represents the shared variance between the four individual traits, the development of the CSES means the construct can be measured more accurately and consistently. A more detailed description of the CSES and its psychometric properties is included in the Methods chapter.

Relevance of Core Self-Evaluations

A large body of literature has been published linking CSE to work-related variables (e.g., da Motta Veiga et al., 2021; Lo Presti & Pluviano, 2016; Wang et al., 2022). Chang et al.'s (2012) meta-analysis offers an overview of past CSE research. More recent research continues to support CSE's relevance in organisational research. CSE has also been shown to predict job search outcomes in graduates (H. Chen et al., 2023). For example, in a study on new labour market entrants, CSE was positively associated with the number of interviews ($r = .14$, $p < .05$) and job offers ($r = .12$, $p < .05$) that participants received in an 8-week period (da Motta Veiga et al., 2021). In South African student samples, CSE was found to moderate the relationship between socio-economic status and students' earning potential (Weaver, 2021). Within employed individuals, CSE continues to be associated with variables such as pay satisfaction (Arya et al., 2019), organisational citizenship behaviour (Spanouli & Hofmans, 2021), and work creativity (Zhang et al., 2020). This large body of research notwithstanding, the study focuses on the link between perceived employability and CSE, which will be discussed next.

2.4 Prior Research Findings: Perceived Employability and Core Self-Evaluations

Empirical research has established a link between perceived employability and CSE (Harari et al., 2021; Onyishi et al., 2015; Vîrga et al., 2017). Not only have prior studies consistently found a relationship between the variables, but meta-analytic research indicates that CSE is one of the most robust predictors of perceived employability (Harari et al., 2021). Given that CSE is an individual's evaluation of their value and capabilities in general, it is likely that CSE will correspond with more specific evaluations related to an individual's

employability. This assumption has been consistently supported with positive relationships ranging from small to medium according to Cohen's (1988) guidelines (where correlation coefficients of .10-.29 were deemed small, .30-.49 were medium, and .50-1.0 were large; Lo Presti et al., 2021; Onyishi et al., 2015; Rodrigues et al., 2019; Vîrga et al., 2017). Although there have been instances where CSE was negatively related to perceived employability (r = -.36, p < .001; Ugwu et al., 2021), this is a rare exception. Instead, published research typically reports significant positive correlations between CSE and perceived employability (Harari et al., 2021).

To date, no studies have been published on the link between perceived employability and CSE in South Africa; however, the positive relationship between these variables has been validated in a range of countries such as the United Kingdom (Rodrigues et al., 2019), Italy (Lo Presti et al., 2021), Romania (Vîrga et al., 2017), Nigeria (Onyishi et al., 2015), and China (Ma & Chen, 2022). For instance, a study on university students in the United Kingdom found that students with positive views of their capabilities and self-worth had corresponding positive perceptions of their ability to obtain or maintain employment (Rodrigues et al., 2019). Studies have also reported this association between general self-appraisals and beliefs about employability across different populations, including employed and unemployed individuals and students (Ugwu et al., 2021; Vîrga et al., 2017). Although there is no evidence of the relationship between CSE and perceived employability in South Africa, perceived employability and CSE have been examined separately in South African student populations (e.g., Arya et al., 2019; Botha, 2021; Goodman & Tredway, 2016; Pitan & Muller, 2019b; Weaver, 2021). Moreover, the positive relationship between these variables has been validated in African contexts. Notably, Onyishi et al. (2015) found that Nigerian graduate students with higher CSE were more likely to have higher perceived employability (r = .15, p < .05). Hence, in line with prior research findings, it is postulated that perceived employability and CSE will be related in this sample. This study hypothesises that:

H_1: Self-perceived employability is positively related to core self-evaluations in South African university students.[3]

[3] All hypotheses in this study will be tested in a sample of South African university students as indicated here.

2.5 Integrating Perceived Employability Within an Approach-Avoidance Framework

Approach and Avoidance Temperaments

In addition to the conceptual distinctiveness of approach and avoidance temperaments, the empirical relationship between the two constructs is unclear. Conceptually, the temperaments are presumed to be negatively associated with each other, yet the evidence for this has been inconsistent. Elliot and Thrash (2010) found a medium negative association (r = -.27, p < .01) in their first study, yet the remainder of their studies (two through six) revealed non-significant intercorrelations between the temperaments. The first study focused on directly assessing approach and avoidance temperaments as internally consistent and relatively independent personality dimensions; however, studies two through six introduced additional variables (e.g., response biases, motivational components) to demonstrate discriminant validity, test-retest stability, and the temperaments' relationship with like-valenced variables. It is possible that the inclusion of additional variables and the shift in focus in these subsequent studies may have caused these non-significant results (Elliot & Thrash, 2010). Similarly, a study using a Dutch translation of the approach-avoidance scale found non-significant intercorrelations between the temperaments (Bipp et al., 2017). Despite these non-significant results, other studies have found significant negative associations between approach and avoidance temperaments, supporting the assumption that they are opposites (Ferris et al., 2011, 2013). The independence of the two temperament dimensions and possible methodological issues (e.g., translated scales) may explain why the association is inconsistent.

Due to these inconsistencies, it is critical to investigate the intercorrelation between the temperaments. Furthermore, no published research has been available on this issue in the South African context. Therefore, the following is hypothesised:

H_2: Approach temperaments will be negatively related to avoidance temperaments.

Core Self-Evaluations and Approach-Avoidance Temperaments

Studies have demonstrated that CSE is associated with both approach and avoidance temperaments (Chang et al., 2012; Ferris et al., 2011, 2013). Pioneer research by Ferris et al. (2011) found that CSE is associated with indicators of approach and avoidance temperaments such as extraversion/neuroticism and behavioural activation system/behavioural inhibition system. They demonstrated that high CSE tends to correspond with strong approach and weak avoidance temperaments, while low CSE is more typical in individuals with weak approach and strong avoidance temperaments. This means that individuals with positive evaluations of their capabilities and self-worth are more likely to be sensitive to positive

information and insensitive to negative information, and the opposite is true for those with negative evaluations of their capabilities and self-worth (Chang et al., 2012).

In a later study, Ferris et al. (2013) investigated the individual dimensions of CSE and found that approach-avoidance temperaments were significantly related to the dimensions of CSE. Only one exception emerged, as approach temperament was not significantly related to locus of control. This exception does not impact the assumption that approach-avoidance temperaments may influence CSE in this study, as the composite construct of CSE will be measured, focusing on the shared variance of the dimensions of CSE. Furthermore, it was noted that avoidance temperaments were very strongly associated with emotional stability (i.e., neuroticism), a dimension of CSE (Ferris et al., 2013). An early criticism of CSE was that it may simply be a measure of emotional stability or neuroticism; however, Judge et al. (2003) addressed this concern in their paper, arguing that while emotional stability is closely associated with CSE, emotional stability measures are too narrow to capture self-evaluations holistically. Hence, CSE and approach-avoidance temperaments are related yet distinct constructs.

Therefore, it is proposed that because approach-avoidance temperaments influence the kinds of information individuals evaluate, an individual's underlying temperament may explain why they have different perceptions about their capabilities and self-worth. Although prior research supports this idea, there is a paucity of empirical research on approach-avoidance temperaments, particularly in the South African context. To confirm these findings in this context, it is hypothesised that:

H_{3a}: An approach temperament is positively related to core self-evaluations.

H_{3b}: An avoidance temperament is negatively related to core self-evaluations.

Approach-Avoidance Temperaments and Perceived Employability

Likewise, an individual's approach-avoidance temperaments may co-vary with their beliefs about employability. When considering their employability, individuals actively consider information about their assets (knowledge, skills, and abilities), the way these assets may present to employers, and their context (e.g., availability of jobs and personal circumstances; Botha, 2021; Hillage & Pollard, 1998; Rothwell et al., 2008). As such, self-beliefs about employability may depend on individuals' sensitivity to employability-relevant positive and negative stimuli. For instance, someone with an approach temperament may be sensitive to positive stimuli, such as promising employment opportunities, and insensitive to negative stimuli, like high unemployment rates. Conversely, someone with an avoidance temperament is more likely to be sensitive to negative stimuli, like high unemployment rates,

and discount the prospect of employment opportunities. This attention or inattention to different employability information may help explain differences in perceived employability levels. Hence, it is hypothesised that:

H_{4a}: An approach temperament is positively related to self-perceived employability.

H_{4b}: An avoidance temperament is negatively related to self-perceived employability.

Core Self-Evaluations as a Mediator

In addition to these direct effects, individuals' CSE may partially explain the relationship between approach and avoidance temperaments and perceived employability (Chang et al., 2012). As Judge et al.(1997) suggested, CSE may influence outcomes by shaping individuals' thoughts and evaluations. Accordingly, the relationship between approach-avoidance temperaments and perceived employability might be explained by the indirect influence of CSE. It is proposed that, given that approach-avoidance temperaments play an important role in shaping individuals' self-worth and the way they assess their capabilities (Chang et al., 2012), and considering that CSE robustly predicts perceived employability, CSE may mediate the relationship between approach-avoidance temperaments and perceived employability. This proposed relationship may explain the mechanisms underlying the development of perceived employability. At the time this research was conducted, no prior studies had examined the mediation relationships between these variables. Consequently, it is hypothesised that:

H_{5a}: The relationship between approach temperaments and self-perceived employability will be mediated by core self-evaluations.

H_{5b}: The relationship between avoidance temperaments and self-perceived employability will be mediated by core self-evaluations.

2.6 Job Search Behaviours: Exploratory Research

Job search behaviours were included in this research as an outcome variable to explore their relationships with the key study variables. Job search behaviours are defined as the specific activities that individuals spend effort and time on in order to look for a job (Blau, 1993). These behaviours are the practical implementation of their job-seeking choices. Blau (1993) argues that job search behaviours have two components or phases, namely preparatory job search and active job search. Preparatory job search behaviours refer to individuals' efforts to gather job search information (Blau, 1993, 1994). For example, reading job advertisements or speaking to others about possible job leads. Active job search refers to an individual's commitment to job search and their actual job-seeking behaviours (Blau,

1993, 1994). These could include completing job applications, contacting recruitment agencies or going for interviews.

Job search behaviours are commonly measured using Blau's (1994) two-dimensional measure of job search behaviour, or using a slightly adjusted version of the scale (e.g., Chen & Lim, 2012; Onyishi et al., 2015; van Hooft et al., 2004). Blau's (1994) scale includes both preparatory and active job search behaviours. Further discussion on the scale and its psychometric properties are included in the Methods and Results chapters.

Given that job search behaviours are an outcome variable for perceived employability, a behavioural measure for job search behaviours was included in the survey for exploratory purposes (D. J. Q. Chen & Lim, 2012; Onyishi et al., 2015). More specifically, there is evidence to suggest that individuals with higher perceived employability are more likely to engage in preparatory job search behaviours, but not necessarily in active job search behaviours (Onyishi et al., 2015). Perceived employability may also mediate the relationship between core self-evaluations and job search behaviours, indicating that there may also be more complex mediating relationships between these variables (Onyishi et al., 2015). However, the lack of research in this area means that the nature of these relationships remains unclear.

Nevertheless, in the broader employability literature, job search behaviours are significantly related to job search success or job attainment, emphasising their importance in employment outcomes (Kanfer et al., 2001; van Hooft et al., 2004). For this reason, it was deemed appropriate to include job search behaviours as an exploratory variable to further understand their association with perceived employability and other elements of this study.

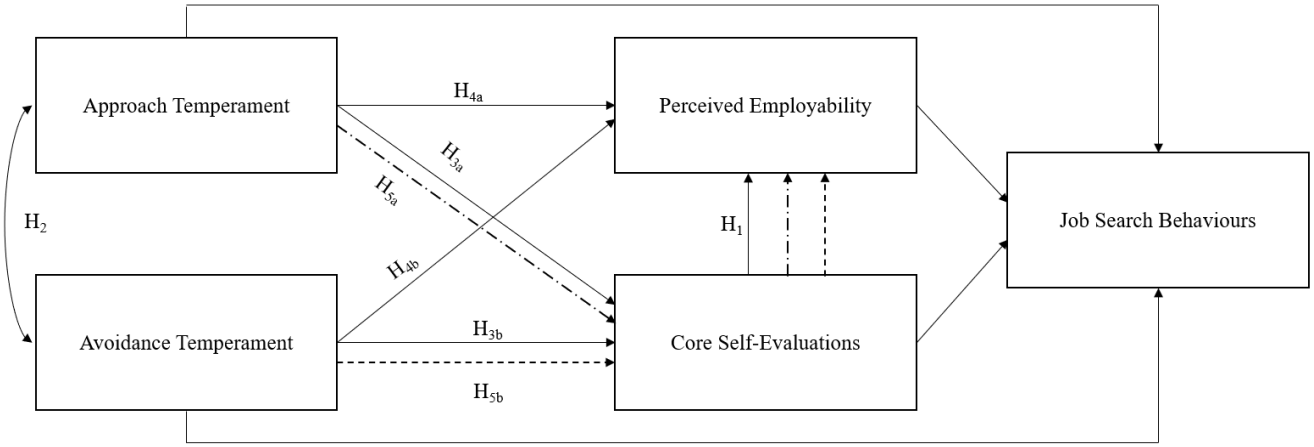
2.7 Conceptual Framework

In light of the review of the literature and the hypothesised relationships between perceived employability, CSE and approach-avoidance temperaments, Figure 1 presents the conceptual framework of this research.[4] The correlational hypotheses (*H1 – H4*) are represented, indicating the direct relationships between the study's variables. The mediation hypotheses (*H5a-b*) are represented by the dotted lines, demonstrating the indirect effects of approach-avoidance temperaments on perceived employability through CSE.

[4] This is conceptual rather than a proposed statistical model.

Figure 1

Conceptual Framework



Note. Dotted lines indicate proposed mediation.

Chapter 3: Method

This chapter outlines the methodology used in this study. The chosen research design is described in alignment with the study's objectives (Aguinis et al., 2021). Data collection methods, such as the type of data, the time frame, and the sampling procedure, are reported in line with guidelines for methodological best practice and reproducibility (Aguinis et al., 2021; Appelbaum et al., 2018). Moreover, the chapter includes justifications for the selected instruments and the inclusion of control or contextual variables. An overall description of the procedure followed is included for enhanced transparency. Finally, the chapter concludes with a brief description of the statistical analyses and ethical considerations.

3.1 Research Design

This research is positioned in the logical positivist paradigm and makes use of the hypothetico-deductive method to make and test predictions about the variables of interest (American Psychological Association [APA], n.d.; O'Neil & Koekemoer, 2016). The aim was to empirically observe and confirm what the manifest relationships between the variables were at a given point in time (APA, n.d.). Consequently, a quantitative, correlational, and cross-sectional research design was selected (Gravetter & Forzano, 2018; Rosenthal & Rosnow, 2008). The quantitative approach facilitated the collection of numeric data to achieve the aim of this research. At the same time, the correlational design enabled the researcher to determine the presence and nature of the relationships between the study variables at a specific point in time (i.e., students' perceived employability, core self-evaluations, and approach-avoidance temperaments).

3.2 Participant Characteristics

The target population was South African university students, given the study's emphasis on perceived employability within this specific context. The final sample consisted of 303 participants. The only inclusion criterion was registration with a South African tertiary institution. To help describe the sample, participants were asked to specify particular demographic variables (e.g., age, gender, race). These were non-compulsory. Participants' ages ranged from 17 to 66 years old, with 63.36% being between the ages of 17 and 22 years old (n = 192). The majority of the participants were female (65.7%). Regarding race, the largest group was White (40.9%), followed by African (31%) and Coloured (14.9). Approximately 40% of the participants were in their first or second year of study, 40% were in third or fourth year, and the remaining 20% were in fifth year or above. In terms of work experience, 56.4% reported having no work experience. Lastly, the majority of participants

came from the Humanities (33.7%), Commerce (20.8%) and Health Sciences (14.9%) faculties. Demographic details of the sample are provided in Table 1 below.

Table 1

Socio-demographic Characteristics of Participants

Socio-demographic Characteristic	Frequency	%
Age		
17-22	192	63.36
23-29	87	28.71
30-39	20	6.6
40-66	4	1.3
Gender		
Female	199	65.7
Male	94	31.0
Other [a]	10	3.3
Race		
Africa	94	31.0
Coloured	45	14.9
Indian	27	8.9
White	124	40.9
Asian	2	0.7
Prefer not to answer	11	3.6

Note. $N = 303$

[a] Includes gender non-conforming, transgender and prefer not to answer responses.

3.3 Sampling

Non-probability sampling techniques, namely, purposive, convenience, and snowball sampling, were used for this study (Gravetter & Forzano, 2018). The study focused specifically on South African tertiary institution students; therefore, purposive sampling was used (Durrheim & Painter, 2006). To achieve this, the researcher sent out invitations to students at a South African university using the university's research mailing list and course platforms. Secondly, convenience sampling was utilised as the researcher used her personal networks to access participants. Finally, snowball sampling was achieved by requesting students to send the survey to other tertiary students. Through these last two techniques, students from other South African tertiary institutions could be accessed. Participants were offered the opportunity to enter into a raffle to win one of two vouchers for an online store. Winners were randomly selected by the researcher. While the vouchers were sufficient to encourage participation, they were not considered inappropriate. A total of 405 responses were collected. The data were cleaned, and respondents were removed if they did not give

informed consent (5), were not students (5) or had incomplete responses (86). Outliers and careless responding were also identified and removed (5), resulting in a final sample of 303 participants.

3.4 Measures

Perceived Employability

Perceived employability was measured using Rothwell et al.'s (2008) Self-Perceived Employability Scale (see Appendix A, Table A1). It is a 16-item scale that measures students' self-evaluations of their employability. The scale was developed for university students, and studies have shown its applicability for this population (e.g., Baluku et al., 2021; Botha, 2021; Schettino et al., 2022). The authors claim the scale can be used across contexts as it has no culturally specific items; however, in this study, two items (items 2b and 5b) were reworded for clarity (see Appendix A, Table 1A). Botha (2021) completed an exploratory factor analysis on data from a sample of South African graduate students and found evidence of a four-factor solution. Responses were measured on a 6-point Likert scale whereby participants indicated the extent to which they agreed with the statements. Responses ranged from 1 (*Strongly disagree*) to 6 (*Strongly agree*). There were no negatively worded items, and a higher score indicates a higher level of perceived employability. It has shown internal consistency reliability in student samples ($\alpha = .75$) and has been validated in both undergraduates and postgraduates (Rothwell et al., 2008, 2009).

Job Search Behaviour

Job search behaviours were measured using Blau's (1993) scale (see Appendix A, Table A2). It is a 14-item scale, with six items measuring preparatory job search and eight items measuring active job search. The scale measures two components of job search behaviour: preparatory job search (individuals' effort to gather job information) and active job search (commitment and actual job-seeking behaviours); however, this research used the composite measure of job search. The wording of some of the scale items was amended based on prior research and for the South African student context (e.g., "resume" to "CV"; D. J. Q. Chen & Lim, 2012; Onyishi et al., 2015). Similarly, many students use internet platforms as opposed to print media to find jobs; hence, items were amended accordingly. Examples of items include "In the last three months I…" "…prepared/ revised my CV" and "…attended career exhibitions or job fairs". Responses ranged from 1 (*Strongly disagree*) to 6 (*Strongly agree*). The higher the score for a subscale, the greater the presence of the associated job

search behaviour. The scale has good internal consistency with $\alpha = .86$ for preparatory job search and $\alpha = .88$ for active job search (Onyishi et al., 2015).

Core Self-Evaluations

Core self-evaluations were measured using Judge et al.'s (2003) Core Self-Evaluation Scale (CSES; see Appendix A, Table A3). It is a 12-item scale that directly measures the underlying construct of CSE rather than the individual traits (Judge et al., 2003). Given that CSE represents the shared variance of the traits and that the goal of this study was to measure CSE as a whole, this scale was deemed appropriate (Chang et al., 2012). Examples of items include "I am confident I get the success I deserve in life" and "I complete tasks successfully". Participants indicated their agreement with each item on a 5-point Likert scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Items 2, 4, 6, 8, 10 and 12 are reverse-coded. A higher score indicates a higher CSE. The CSES has been rigorously tested in a series of studies with a range of sample populations, including employees, managers, and students, demonstrating that the scale is reliable ($\alpha = .84$) and valid (with convergent and discriminant validity; Judge et al., 2003). Similar findings have been reproduced in South African university student populations (Arya et al., 2019; Dodd & Snelgar, 2013; Weaver, 2021).

Approach-Avoidance Temperament

The Approach-Avoidance Temperament Questionnaire (ATQ) was used to measure approach-avoidance temperaments (see Appendix A, Table A4; Elliot & Thrash, 2010). It is a 12-item scale, with six items measuring each of the factors (i.e., approach temperament and avoidance temperament). The ATQ is related but distinct from other constructs usually used to test approach temperaments (e.g., extraversion, positive emotionality, and behavioural activation system) and avoidance temperament (neuroticism, negative emotionality, and behavioural inhibition system; Elliot & Thrash, 2010). Examples of items include "Thinking about the things I want really energises me" (approach) and "I react very strongly to bad experiences" (avoidance). Responses range from 1 (*Strongly disagree*) to 6 (*Strongly agree*). A high score for a subscale indicates the presence of the associated temperament. The ATQ has good internal consistency (approach temperament $\alpha = .80$ and avoidance temperament $\alpha = .79$; Elliot & Thrash, 2010), with consistent findings in student samples (Bipp et al., 2017; Cecchini et al., 2019).

Contextual Factors

Several demographic variables were measured (see Appendix A, Table A5). The purpose of the demographic variables was to describe the sample and assess its representativeness (Landers & Behrend, 2015). In addition, prior research shows that particular contextual variables may influence perceived employability, such as gender (Niu et al., 2019), field of study (Pitan & Muller, 2019a) and work experience (Jackson & Wilton, 2017). Two additional contextual factors were included in this study, namely, race and socio-economic status. Though not the focus of this study, prior research suggests that it may be valuable to acknowledge these variables as possible contextual features or control variables that may impact the results of this study (Kiley, 2020; Onyishi et al., 2015; Pitan & Muller, 2019a). According to Aguinis et al. (2021), because these control variables have theoretically meaningful relationships with the outcome variable, they should be included as control variables in this study. The control variables were explored under exploratory analyses.

Race. Race was measured by requesting participants to indicate their race from a drop-down list (incl. African, Asian, Coloured, Indian, White, Prefer not to Answer). The results were grouped into "Designated" (African, Asian, Coloured, and Indian) and "Non-designated" (White, Prefer not to Answer) groups as defined by South African legislation. The relationship between race and perceived employability is yet to be confirmed. Nevertheless, the link between race and unemployment in South Africa prompted the researcher to include this variable in the study (Baldry, 2016; Pitan & Muller, 2019a).

Socio-Economic Status. Socio-economic status (SES) was measured using a combination of objective and subjective measures, as no universal measure of SES currently exists (see Appendix A, Table A6; Tan et al., 2020). Objective SES was measured using two items: source of funding (Study Funder) and parental education (Primary Caregiver Education). For Study Funder, participants reported who funds their studies (bursary, parent/caregiver or self-funded) as an indicator of financial capital (Kiley, 2020). National Student Financial Aid Scheme (NSFAS) only provides funding to students whose combined household income is less than R350 000 per annum (NSFAS, 2022). Consequently, self-funded students (e.g., parents/caregivers) usually have higher financial capital than those whom the NSFAS funds. Study Funder was scored such that NSFAS and bursaries were '0' and self-funded was '1'. Primary Caregiver Education was measured as a second objective indicator of SES (Adler et al., 2000; Taylor & Yu, 2009). Primary Caregiver Education was scored such that the lowest level of education (grade 9) was '0' and the highest level of education (postgraduate) was '4'. Subjective SES was measured using the MacArthur Scale

of Subjective Socioeconomic Status (Adler et al., 2000). Participants were given a picture of a 10-rung ladder. Participants report their perceived SES by placing themselves on the ladder. The top rung represented the highest SES, while the bottom rung denoted the lowest SES. This scale has been shown to be reliable across several contexts (Tan et al., 2020). The ladder is scored on a scale of 1-10, with the lowest prong being the lowest score of 1. In combination, these measures provide a more comprehensive measure of SES than the measures in isolation.

3.5 Procedure

The study began once ethics approval was obtained from the University of Cape Town's (UCT) Faculty of Commerce Ethics in Research Committee (ERiC). Following this, the researcher received permission to access UCT students through official communication platforms such as their research mailing list and e-learning platform. Data were collected using a survey on the online data collection software Qualtrics. The survey was posted on several platforms, namely, social media (e.g., Instagram, LinkedIn, WhatsApp) and the university's research mailing list and e-learning platform. The researcher also went to three face-to-face classes to ask students to complete the survey, and she put up posters with a QR code on campus and in her place of residence. The invitations included a brief motivation and the study's aim, participation incentive, the researcher's contact details, estimated completion time, and appreciation for participation. The research participation incentive was a raffle to win one of two vouchers for an online store (250 ZAR; 15 USD). If participants chose to enter, they were asked to give their phone number at the end of the survey.

The survey had an introductory page that outlined the information about the study and requested informed consent from the participants. Informed consent was gained by asking participants to read the first page before selecting "I understand the above information, and I agree to participate". Next, respondents were asked screening questions to establish if they met the inclusion criteria and to record their year of study. In the survey, the scales for the primary study variables (perceived employability, CSE, and approach-avoidance temperaments) were placed first. Contextual variables (SES and race), job search behaviours and demographic details were asked last to prioritise the collection of the data required for the primary hypotheses. Data collection took place over two months, from 12 July to 16 September 2022.

3.6 Data Analysis

After data collection, responses were imported into Microsoft Excel for data cleaning. Following preliminary cleaning, the data were imported into the IBM software Statistical

Package for the Social Sciences (SPSS), version 29, for further data cleaning, assessment of the measurement properties, and statistical tests of hypotheses (IBM, 2022). Pearson product-moment correlation analysis was used to test the bivariate hypotheses of the study (Tabachnick & Fidell, 2018). A multiple regression analysis was used to ascertain whether the covariates predict perceived employability in addition to the study variables. PROCESS (model 4) was used to test the mediation effect (Hayes, 2022). Finally, relative weights analyses (RWA) were performed (using the online software RWA-Web; Tonidandel, 2023) to combat multicollinearity and complement the multiple regression (Tonidandel & LeBreton, 2011, 2014).

3.7 Ethical Considerations

This research did not cause any physical or psychological harm or distress to participants. Institutional approval and permission to access UCT students were received before carrying out the research. The informed consent request included information outlined by the APA (e.g., the purpose of the research, expected duration, incentives for participation, and right to decline/withdraw; APA, 2017). The monetary incentives were not deemed to be excessive or inappropriate for this research (APA, 2017). The responses were anonymous and confidential. Participants' phone numbers were the only personally identifiable information gathered. Phone numbers were separated from the responses, placed in a password-protected document, and deleted immediately after the raffle. Participants also had the option to select "Prefer not to say" for potentially sensitive information (e.g., race). Responses were stored on password-protected cloud storage software. The researcher and research supervisor's contact details were provided for the participants should they have had any questions.

Chapter 4: Results

The following chapter outlines the results of the data analyses. The data preparation process will be briefly described. Following this, the construct validity and internal consistency of the scales will be presented. Next, the chapter will describe the results of the analyses. The chapter ends by presenting the additional exploratory analyses that were conducted.

4.1 Data Preparation

Prior to analysis, the data were examined to ascertain whether there were any issues with data entry using the process outlined by Tabachnick and Fidell (2018; see Appendix B). The descriptive statistics and graphical representations of the variables demonstrated that there were no out-of-range variables or missing data for the completed responses. The data were inspected for univariate outliers using boxplots (see Appendix C, Figures C1-C4). There were a few possible outliers but no extreme scores for the primary study variables.[5] Each of these possible outliers was examined individually to determine if there were any clear causes for concern. Three out of eleven responses were noted as possible outliers for investigation (see Appendix D for outliers later removed). Next, the incomplete responses were evaluated using an independent samples t-test to establish whether the incomplete responses were missing completely at random (MCAR; Hair et al., 2010). There were no significant differences between the complete and incomplete cases that were cause for concern. There was a marginally significant difference on the approach scale; however, the groups were unbalanced (n = 308 and n = 15), so this result was not indicative of a meaningful difference between groups. Subsequently, the incomplete responses were removed from the dataset, resulting in a sample of 308 complete responses.

Based on the scatterplot of standardised residuals, the data appear to be linear (see Appendix E, Figure E1-E2). Pairwise scatterplots revealed possible heteroscedasticity for the job search variables, but these variables were not used in the core analyses. Heteroscedasticity for job search behaviours was also expected, given that many students (e.g., first years) would not have engaged in job search activities. To check normality, the probability plots, histograms, skewness, and kurtosis of all the variables were inspected. The P-P plot and histogram of the standardised residuals appear to meet the assumption of normality (see Appendix E, Figure E3-E4). The skewness and kurtosis of the primary

[5] IBM SPSS calculates extreme scores as scores in the following ranges: 3rd quartile + 3*IQR or 1st quartile – 3*IQR.

variables were all between -1 and +1; only the approach scores were slightly negatively skewed (-.47).

Continuing with the process outlined in Appendix B, Mahalanobis' distance was used to identify multivariate outliers using a criterion of $p < .001$ (Tabachnick & Fidell, 2018). Based on the number of predictors, any Mahalanobis distance greater than 16.266 would indicate a multivariate outlier ($\chi^2_3 = 16.266$). Only one case emerged as a multivariate outlier ($\chi^2_3 = 21.093$). This outlier was later removed as it may have unduly influenced the outcome of the multivariate analyses (Hair et al., 2010).

To further inspect the responses, the data were checked to identify possible careless responding, dishonest responses (e.g., not discriminating between items), and severe outliers using long-string analyses, outliers, and response times (Curran, 2016; Huang et al., 2012). Based on this examination, five responses were removed from the dataset (see Appendix D for a detailed description of the process followed). After the data screening process, a total of 303 responses were retained for analysis.

4.2 Measurement Properties: Validity

The construct validity and internal consistency of the scales were evaluated before testing the study's hypotheses.

Exploratory Factor Analysis (EFA) was used to establish the construct validity of the measurement instruments, namely, the self-perceived employability scale, core self-evaluation scale (CSES), and approach-avoidance temperament questionnaire (ATQ). EFA was selected as it reveals the shared variance and underlying factor structures of scales (Costello & Osborne, 2005). Principal axis factoring (PAF) was chosen to extract factors as it produces stable loadings when revealing the latent constructs (Costello & Osborne, 2005). Theoretically, the factors in the scales were expected to correlate; hence, oblique (direct oblimin) rotation was selected (Field, 2018).

Before completing the EFA, the Kaiser-Meyer-Olkin (KMO) value and Bartlett's Test of Sphericity were examined to ensure sampling adequacy for an EFA. A KMO value greater than .50 is acceptable, and Bartlett's Test of Sphericity must be significant ($p < .05$; Field, 2018). Furthermore, Kaiser's (1960) criterion was used to determine which factors to retain. All factors with eigenvalues greater than one were retained. Regarding item reduction, Hair et al.'s (2010) recommendations for interpreting factor loadings were followed.

Self-Perceived Employability Scale

According to the original conceptualisation of the employability scale, the scale is a four-dimensional model (Rothwell et al., 2008). Initially, the factor analysis revealed a four-

dimensional model; however, the reliability analysis identified that one item (item 1) correlated poorly with the overall scale. The item's item-total correlation was well below the recommended value of .3 (= .09); hence, the item was dropped (Field, 2018). After this, an additional round of PAF was done to establish whether the scale was valid with the unreliable item removed. The reliability analysis is discussed fully in a later section. The following section describes the PAF rounds.

In the first round of the PAF, the KMO value was acceptable (= .81), and Bartlett's Test of Sphericity was significant ($\chi^2_{120} = 1264.5$, $p < .001$), suggesting that PAF would be suitable for the scale in this study (Field, 2018). A total of five factors were extracted (see Appendix F, Table F1). Item 7 did not load significantly (> .35) onto any of the five factors; thus, it was removed from the scale (Hair et al., 2010). The removal of item 7 produced a four-factor structure (KMO = .82; $\chi^2_{105} = 1222.79$, $p < .001$). Similar to round one, one item (item 2) did not load significantly (>.35) onto any factor (see Appendix F, Table F2). Moreover, the item had a low communality value of .13; consequently, it was excluded from further analyses. Round three again produced a four-factor solution (KMO = .84; $\chi^2_{105} = 1163.22$, $p < .001$). All the items' loadings were significant (>.35), with two or more items per factor and no cross-loading, suggesting that the reduced scale was valid for this sample (see Appendix F, Table F3). Later, a fourth round of PAF was completed following the removal of item 1 as a result of the reliability analysis (discussed later). It revealed a three-factor solution (KMO = .85; $\chi^2_{78} = 1117.64$, $p < .001$; see Table 2) and eliminated the "self-belief" subscale as conceptualised by Rothwell et al. (2008). The remaining three factors were labelled according to the items with the highest factor loadings and according to the theoretical conceptualisation of employability (Hair et al., 2010). The first factor was labelled "Labour Market". It primarily consisted of items relating to the external labour market, but it also had some items related to student's confidence and belief in their ability to obtain employment. The second factor was labelled "University", and it contained all four items from the original subscale of the same name. Lastly, the third factor was labelled "Field of Study", as both items were from the original subscale and related to the student's subjects and degrees.

Table 2

Factor Loadings for the 13-Item Perceived Employability Scale

Item No.	Item	1	2	3
9	People in the career I am aiming for are in high demand in the external labour market.	.663		
15	I am generally confident of success in job interviews and selection events.	.643		
13	I can easily find out about opportunities in my chosen field.	.580		
16	I feel I could get any job so long as my skills and experience are reasonably relevant.	.580		
12	There are plenty of job vacancies in the geographical area where I am looking.	.550		
11	There is generally a strong demand for graduates at the present time.	.544		
14	The skills and abilities that I possess are what employers are looking for.	.532		
3	Employers are eager to employ graduates from my university.		.647	
6	My university has an outstanding reputation in my field(s) of study.		.599	
4	The status of my university is a significant asset to me in job seeking.		.564	
5	Employers specifically target my university in order to recruit individuals from my subject area(s).		.556	
8	My chosen subject(s) rank(s) highly in terms of social status.			-.746
10	My degree is seen as leading to a specific career that is generally perceived as highly desirable.			-.576
Eigenvalue		4.49	1.49	1.15
Explained Variance (%)		34.59	11.53	8.88

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation with Kaiser Normalisation; Rotation converged in 6 iterations.

For the purposes of this study, it was necessary to establish if perceived employability can be represented by a global score, indicating the presence of an underlying global construct. In order to establish a global score, a final EFA was run using PAF and forcing a single-factor solution. The analysis revealed that there is an underlying higher-order construct given that all the subscales loaded significantly onto one factor (KMO = .85; $\chi^2_{78} = 1112.64$, $p < .001$).

Core Self-Evaluation Scale

Judge et al.'s (2003) scale is conceptualised as a unidimensional construct. Prior research has supported a one-dimensional scale (e.g., Weaver, 2021). The initial round of PAF produced a two-factor model (KMO = .88; $\chi^2_{66} = 1093.27$, $p < .001$). However, one factor had low significance levels and contributed much less to the model (see Appendix F, Table F5). Furthermore, the scree plot provides further evidence that a one-factor model is more appropriate for the scale, with the point of inflexion at one factor (see Appendix F, Figure F1; Cattell, 1966). Based on these results and the theoretical justification for a one-factor model, the analysis was rerun using a fixed number (1) of factors. This produced a unidimensional model with all items loading significantly onto one factor (KMO = .88; $\chi^2_{66} = 1093.27$, $p < .001$; see Table 3).

Table 3

Factor Loadings for the 12-Item Core Self-Evaluations Scale

Item No.	Item	1
1	I am confident I get the success I deserve in life.	.522
2*	Sometimes I feel depressed.	.608
3	When I try, I generally succeed.	.425
4	Sometimes when I fail I feel worthless.	.549
5	I complete tasks successfully.	.518
6*	Sometimes, I do not feel in control of my work.	.633
7	Overall, I am satisfied with myself.	.683
8	I am filled with doubts about my competence.	.722
9	I determine what will happen in my life.	.399
10*	I do not feel in control of my success in my career.	.642
11	I am capable of coping with most of my problems.	.568
12*	There are times when things look pretty bleak and hopeless to me.	.537
Eigenvalue		4.60
Explained Variance (%)		38.35

Note. The extraction method was Principal Axis Factoring; 1 factor extracted; 4 iterations required.

* Reverse coded items.

Approach-Avoidance Temperament Questionnaire

Elliot and Thrash (2010) propose that the 12-item approach-avoidance scale has two factors, approach and avoidance, each consisting of six items. The factor analysis corroborated this structure for this study (KMO = .84; $\chi^2_{66} = 1152.81$, $p < .001$). All the items

loaded significantly onto one of the two factors as conceptualised (see Table 4; Elliot & Thrash, 2010). Factor 1 was labelled “Avoidance”, and factor 2 “Approach”.

Table 4

Factor Loadings for the 12-Item Approach-Avoidance Scale

Item No.	Item	1	2
3	It doesn’t take much to make me worry.	.478	
9	When it looks like something bad could happen, I have a strong urge to escape.	.579	
7	I react very strongly to bad experiences.	.689	
12	It is easy for me to imagine bad things that might happen to me.	.702	
1	By nature, I am a very nervous person.	.759	
6	I feel anxiety and fear very deeply.	.797	
2	Thinking about the things I want really energizes me.		.722
4	When I see an opportunity for something I like, I immediately get excited.		.669
5	It doesn’t take a lot to get me excited and motivated.		.566
8	I’m always on the lookout for positive opportunities and experiences.		.550
10	When good things happen to me, it affects me very strongly.		.486
11	When I want something, I feel a strong desire to go after it.		.661
Eigenvalue		3.85	2.45
Explained Variance (%)		32.10	20.48

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation with Kaiser Normalisation; 5 iterations required.

Socio-Economic Status

A combination of objective and subjective socio-economic status (SES) measures was used, as no universal measure of SES could be found at the time of data collection (Tan et al., 2020). Objective SES was measured using two items: one item requesting participants to specify who funds their studies as a proxy for financial capital (Study Funder) and one item indicating parental/caregiver education level (Primary Caregiver Education). Secondly, subjective SES was measured using the MacArthur Scale of Subjective Socioeconomic Status, otherwise known as the ‘Ladder’ (Adler et al., 2000). Study Funder was coded such that NSFAS and bursaries were ‘0’ and self-funded was ‘1’; likewise, Primary Caregiver Education was coded such that the lowest level of education (grade 9) was ‘0’ and the highest level of education (postgraduate) was ‘4’. The ladder was scored according to the ‘rung’

selected (e.g., rung 1 = a score of 1). A total SES score was calculated using the scores from each item. An EFA was conducted and found that the items loaded onto a single factor, suggesting that the items may be measuring the same latent variable (KMO = .64; χ^2_3 = 89.39, p <.001).

Table 5

Results of the SES Measure Exploratory Factor Analysis

Item No.	Item	1
1	Subjective SES (Ladder)	.572
2	Study Funder (Objective SES 1)	.572
3	Primary Caregiver Education	.584
Eigenvalue		1.66
Explained Variance (%)		55.46

Note. The extraction method was Principal Axis Factoring; 1 factor extracted; 6 iterations required.

Job Search Behaviour

According to Blau (1993), the Job Search Behaviour scale is a 14-item scale, with six items measuring preparatory job search and eight items measuring active job search. An EFA, forcing a two-factor solution, was run to establish the construct validity of the scale (KMO = .87; χ^2_{91} = 2035.89, p <.001; see Table 6). There was some minor cross-loading and item 5 from the preparatory job search subscale loaded onto active job search. Moreover, an examination of the eigenvalues and scree plot suggested that a unidimensional scale was more appropriate for this sample. An additional EFA forcing a single-factor solution was run, demonstrating that the items loaded significantly onto an overall job search factor.

Table 6

Results of the Job Search Behaviours Scale Exploratory Factor Analysis

Item No.	Item	1
1	… read job ads in newspapers, professional magazines, or online.	.593
2	…prepared/ revised my CV.	.724
3	…read books or articles about getting a job.	.443
4	…talked to friends or relatives about possible job leads.	.498
5	…spoke with previous employers or business acquaintances about possible job leads.	.513
6	…used the internet to locate job openings.	.670
7	...posted my CV on recruitment websites.	.703
8	…sent my CV to potential employers.	.830
9	… filled out a job application.	.827
10	… had an interview with a prospective employer.	.621
11	…contacted an employment agency or an executive search firm.	.565
12	…telephoned, emailed or messaged a prospective employer.	.702
13	…attended company recruitment talks.	.514
14	…attended career exhibitions or job fairs.	.371
Eigenvalue		6.04
Explained Variance (%)		43.17

Note. The extraction method was Principal Axis Factoring; 1 factor extracted; 4 iterations required; Items 1-6 are original preparatory job search variables; items 7-14 are original active job search items.

4.3 Measurement Properties: Internal Consistency

After the validity analysis, the internal consistency of the reduced scales was examined using alpha and omega (see Table 7). Given that alpha assumes unidimensionality and that the hypotheses in this study do not utilise constructs at the facet level, alpha was not appropriate for all of the scales. Moreover, some scholars advocate for the use of omega instead of alpha because it is less susceptible to bias than alpha (e.g., less biased by varying factor loadings; Flora, 2020; Revelle & Zinbarg, 2009). Consequently, alpha and omega were examined to establish the internal consistency reliability of the scales. Alpha was calculated in SPSS, and Omega was calculated in both SPSS and R (Flora, 2020; IBM, 2022). Values greater than .70 were considered acceptable (Nunnally & Bernstein, 1994). The results of the analyses are reported in Table 7 below.

Table 7

Internal Consistency Reliability

Scale [a]	Alpha	Omega
1. Self-Perceived Employability		$\omega_h = .78$; $\omega_{ho} = .71$
4. Core Self-Evaluation Scale	.85	.78
2. Approach Temperament	.77	.78
3. Avoidance Temperament	.83	.83
4. Socio-economic Status	.52	.56
5. Job Search	.89	.89

Note. Unless otherwise indicated, McDonald's omega in SPSS was used to calculate omega.

[a] Results are for the revised scales.

Perceived Employability Scale

As mentioned before, an initial reliability analysis of the perceived employability scale revealed that item 1 had a low corrected item-total correlation (.09), indicating that the item did not correlate well with the overall scale. Following Field's (2018) recommendations, this item was removed. The removal of this item resulted in changes in the factor structure of the scale. Therefore, it was necessary to re-run the EFA before continuing with the reliability analysis. After the final round of EFA, a second reliability analysis was done. This analysis was run in R following Flora's (2020) guidelines for reliability estimates for multidimensional scales, as perceived employability is a multidimensional scale. Both omega-hierarchical (ω_h) and omega-higher-order (ω_{ho}) were calculated (see Table 7). ω_h can be used irrespective of whether the construct is multidimensional or not and demonstrates the proportion of total-score variance of the general construct (Flora, 2020). The second omega estimate, ω_{ho}, was used as it considers the fact that the subfactors, and not only the overall construct, may influence the items—providing further evidence of the scale's reliability. The results of this analysis showed that the reduced scale had acceptable reliability.

Core Self-Evaluation Scale

Unlike perceived employability, the CSES scale is unidimensional. Alpha is more appropriate for unidimensional scales than multidimensional ones, yet omega was examined as it is considered a more accurate measure of reliability (Flora, 2020). Omega was calculated in SPSS using McDonald's Omega estimate for the two final scales. The results suggest that

the CSES has acceptable reliability. The alpha and omega values are reported in Table 7 above.

Approach-Avoidance Temperament Questionnaire

Similarly, the reliability analysis of the ATQ showed that the scale had acceptable reliability (see Table 7). The ATQ is conceptualised as having two factors, with each factor representing one of the temperaments (approach/avoidance); however, these temperaments are also conceptualised as opposites of each other. As a result, omega for the scale as a whole could not be calculated in SPSS because the items have negative covariances. Consistent with the original validation study of the ATQ, only the omega values for the subscales could be calculated to demonstrate the internal consistency of the scale (Elliot & Thrash, 2002, 2010).

Socio-Economic Status

The internal consistency reliability of the combined SES measure was low, suggesting that though the items may measure the same underlying construct of SES, the items may not do so consistently. Moreover, the inter-item correlations for the three items were between r = .33 and .34, indicating that the scale may not consistently measure the same underlying construct.

Job Search Behaviour

Consistent with prior research, the internal consistency reliability for the job search scale was acceptable (see Table 7; Blau, 1993).

4.4 Preliminary Analyses

Prior to the hypothesis testing, the assumptions for the relational hypotheses were tested (Tabachnick & Fidell 2018). Although some of these were tested during the initial data cleaning, it was deemed necessary to confirm whether or not there were any violations of these assumptions after the data reduction in the validity and reliability analyses.

Linearity

The scatterplot of standardised residuals (see Appendix G, Figure G1) demonstrates that the data appear to be linear. Therefore, the assumption of linearity is met.

Normality

The assumption of normality was evaluated by examining the skewness and kurtosis values, the normal probability plots and a histogram of the residuals (Field, 2018). The distribution of the approach scores appeared slightly negatively skewed, and the avoidance scores were slightly platykurtic (see Appendix G, Table G1); however, they were still normal (between -1 and +1; Field, 2018). The P-P plots and histogram further supported that the assumption of normality was met (see Appendix G, Figures G2-G7).

Homoscedasticity

Based on the residual scatter plot (see Appendix G, Figure G1), it appears that the spread of the residuals is evenly distributed. Consequently, the data are homoscedastic, and the assumption is met. Although Levene's test can be used to estimate if the variances are significantly different, Field (2018) advises that it should not be utilised in large samples as even minor differences will seem significant.

Independence of Observations

To test whether or not the errors are independent of each other, the Durbin-Watson statistic was used (Field, 2018). The Durbin-Watson statistic was 2.134; therefore, using the rule of thumb that the statistic should be between 1 and 3, the assumption was met.

Level of Measurement

The assumption of the level of measurement was met as all the data were measured on a continuous scale.

4.5 Descriptive Statistics

The descriptive statistics represented in Table 8 show the spread of the scores in the study. All the primary scales had mean scores higher than their mid-points, indicating that, on average, participants reported high levels of the primary constructs. The job search scales were atypical, as expected, with skewed and platykurtic distributions. An inspection of the primary scales showed that perceived employability had a minimum score that was close to the scale's mid-point, as well as a low standard deviation, indicating that participants reported similar levels of perceived employability. A similar pattern emerged with the approach scores. Participants' responses varied the most on the avoidance scale, as indicated by the high standard deviation and large range. The CSE scores were the most moderate as the mean score was the closest to the mid-point of the scale, and there was a low standard deviation. As discussed earlier, the skewness and kurtosis values revealed that the data were generally symmetrical and mesokurtic; only the approach scores were slightly negatively skewed (Field, 2018).

Table 8

Descriptive Statistics

					Skewness		Kurtosis	
	Min	Max	*M*	*SD*	Statistic	SE	Statistic	SE
Self-Perceived Employability [a]	1.92	6	4.25	0.70	.02	.14	-.17	.27
University	1.5	6	4.66	.81	-.67	.14	1	.27
Labour Market	1.6	6	3.9	.91	-.24	.14	-.16	.27
Field of Study	1	6	4.25	1.12	-.42	.14	-.21	.27
Job Search Behaviours [b]	1	5	2.7	.99	.08	.14	-.89	.27
Core Self-Evaluations [c]	1.50	4.83	3.16	.61	-.05	.14	-.01	.27
Approach Temperament [b]	2.33	6	4.6	.71	-.41	.14	.12	.27
Avoidance Temperament [b]	1.17	6	4	1.03	-.25	.14	-.33	.27
SES [d]	.67	5	3.12	.85	-.39	.14	-.29	.27
Study Funder	0	1	.58	.49	-.34	.14	-1.89	.27
Caregiver Education	0	4	2.51	1.26	-.34	.14	-1.14	.27
Subjective SES	1	10	6.28	1.56	-.45	.14	.37	.27

Note. $N = 303$.

[a] Self-Perceived Employability score using reduced scale. Subscales are included below composite constructs (indented). [b] Value range = 0-6. [c] Value range = 0-5. [d] Value ranges: SES = 1-5; Study Funder = 0 (funded) or 1 (self-funded); Caregiver Education = Grade 9 (0) to Postgraduate (4); Subjective SES = 1-10.

4.6 Hypothesis testing

The hypotheses of this study are stated below for the reader's convenience:

H_1: Self-perceived employability is positively related to core self-evaluations in South African university students.[6]

H_2: Approach temperaments will be negatively related to avoidance temperaments.

H_{3a}: An approach temperament is positively related to core self-evaluations.

H_{3b}: An avoidance temperament is negatively related to core self-evaluations.

H_{4a}: An approach temperament is positively related to self-perceived employability.

H_{4b}: An avoidance temperament is negatively related to self-perceived employability.

H_{5a}: The relationship between approach temperaments and self-perceived employability will be mediated by core self-evaluations.

H_{5b}: The relationship between avoidance temperaments and self-perceived employability will be mediated by core self-evaluations.

Correlation Analysis

The results of the correlation analysis supported all the bivariate hypotheses. The bivariate hypotheses (H1-H4) were analysed using the Pearson product-moment correlation coefficient, revealing the strength and direction of the relationships between the variables in the study (see Table 9). The strength of the relationships was determined using Cohen's (1988) guidelines. Accordingly, a correlation coefficient (r) of .1 to .3 indicates a small relationship, .3 to .5 indicates a medium relationship, and .5 and above indicates a large relationship (Cohen, 1988). The correlation coefficients for the hypotheses ranged from small to large.

The first hypothesis stated that perceived employability would be positively related to CSE in South African university students. The correlation analysis revealed a medium, positive relationship between perceived employability and CSE ($r = .36$, $p < .01$). Therefore, H_1 was supported.

Following this, the second hypothesis investigated whether approach temperaments would be negatively related to avoidance temperaments to establish whether there is empirical evidence for their antithetical relationship with each other (Elliot & Thrash, 2010). As expected, the results indicated that approach temperaments had a negative relationship with avoidance temperaments; however, the relationship was small ($r = -.20$, $p < .01$). Thus, the correlation analysis supported H_2.

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[6] All hypotheses in this study were tested in a sample of South African university students.

Hypothesis 3 explored the relationships between approach-avoidance temperaments and CSE. Firstly, H_{3a} postulated that approach temperaments would be positively related to CSE. In support of this hypothesis, a medium, positive relationship between approach temperaments and core self-evaluations was observed ($r = .43$, $p < .01$). Conversely, it was expected that avoidance temperaments would be negatively related to CSE (H_{3b}). Strong evidence was found in support of H_{3b}, as there was a strong, negative relationship between avoidance temperaments and CSE ($r = -.65$, $p < .01$).

Similarly, hypothesis 4 examined the relationships between approach-avoidance temperaments and perceived employability. H_{4a} stated that approach temperaments would be positively related to perceived employability. Consistent with this expectation, H_{3a} was supported as approach temperaments had a medium positive relationship with perceived employability ($r = .31$, $p < .01$). On the other hand, H_{4b} proposed that avoidance temperaments would be negatively related to perceived employability ($r = -.17$, $p < .01$). The analysis revealed a small negative relationship between avoidance temperaments and perceived employability, providing support for H_{4b}.

Table 9

Correlation of Study Variables

Variable	*M*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1. Age	22.81	5.15	–														
2. Gender [a]	–	–	.03	–													
3. Race [b]	–	–	.50	-.03	–												
4. Approach Temperament	4.6	.71	.94	-.04	-.01	–											
5. Avoidance Temperament	4	1	.05	-.19**	-.03	-.20**	–										
6. Core Self-Evaluations	3.1	.61	.03	.11	.11	.43**	-.64**	–									
7. Socio-economic Status [c]	4.3	.85	.72	.01	.37**	-.06	-.08	.16**	–								
8. Study Funder	.58	.49	.88	.00	.29**	.01	.01	.11*	.55**	–							
9. Caregiver Education	2.51	.1.3	.34	-.00	.23**	-.07	.02	-.00	.76**	.33**	–						
10. Subjective SES	6.28	1.6	.80	.03	.33**	-.04	-.16**	.24**	.84**	.32**	.33**	–					
11. Self-Perceived Employability	4.3	.70	.43	.12*	-.02	.30**	-.14*	.31**	.00	-.05	-.06	.07	–				
12. University [d]	2.3	.81	.03	.03	-.15**	.18**	.00	.07	-.05	-.09	-.10	.02	.70**	–			
13. Labour Market [d]	4.7	.92	.63	.10*	.02	.21**	-.10	.25**	-.00	-.04	-.06	.05	.87**	.39**	–		
14. Field of Study [d]	3.9	1.1	.75	.12*	.00	.22**	-.09	.23**	.02	-.06	.02	.04	.69**	.34**	.50**	–	
15. Job Search Behaviour	2.7	1.03	.02	.13	-.16**	.19**	-.04	.04	-.12*	-.06	-.13*	-.07	.09	.09	.05	.06	–

Note. $N = 303$. Study Funder = Objective SES 1 (Bursary/NSFAS/self-funded); Caregiver Education = Objective SES 2 (grade 9-postgraduate); Subjective SES = ladder.

[a] Gender was coded such that women were 0 and men were 1; and $N = 293$. [b] Coded into designated (0) and non-designated (1) groups. [c] Composite SES measure containing objective and subjective SES items. [d] Indicates self-perceived employability subscale.

* $p < .05$; ** $p < .01$ (two-tailed).

Regression Analysis

Two standard multiple regression analyses were run to explore the predictors of perceived employability and job search behaviours. The variables included were perceived employability, job search behaviour, CSE, approach-avoidance temperament, race, and SES. Race was coded into a dichotomous variable according to the South African labour law's classification of designated groups (historically disadvantaged race groups) and non-designated groups. The designated group included the categories African, Indian, and Coloured. The categories White and Asians (born after Apartheid) were non-designated. Given that there were only a few people who selected "prefer not to answer" for race, these were grouped in the non-designated category. There were more individuals in the designated group; thus, this was selected as the reference category for the regression analyses. The results of the assumption testing are discussed under preliminary analyses.

The first regression analysis examined which of the study's variables was the strongest predictor of perceived employability. The independent variables included were CSE, approach-avoidance temperament, race, and SES. The model accounts for 14% of the variance in perceived employability (R^2 = .14, $F(5, 297) = 9.698$, $p < .001$). The adjusted R^2 was .12, indicating that only a small proportion of the variability in perceived employability can be attributed to CSE, approach temperament, avoidance temperament, race, and SES. The analysis revealed that both CSE (B= .299, $t(297) = 3.799$, $p < .001$) and approach temperaments (B= .187, $t(297) = 3.073$, $p = .002$) were significant predictors of perceived employability.

A second standard multiple regression analysis was run to establish which of the study's variables was the strongest predictor of job search behaviours to answer research question 5. The unidimensional scale for job search behaviours was used, and perceived employability, CSE, approach-avoidance temperament, race, and SES were the independent variables. The model accounts for approximately 7% of the variance in job search behaviours (R^2 = .069, $F(6, 296) = 3.635$, p =.002). Both approach temperaments (B= .185, $t(297)$ = 2.882, p = .004) and race (B= -.133, $t(297)$ = -2.19, p = .029) were significant predictors of job search behaviours.

Statistical Power

Post-hoc power analyses for the bivariate hypotheses (H1-H4) and regression analyses were conducted in G*Power 3.1.9.7 with an alpha value of .05. For the bivariate hypotheses, analyses were one-tailed and n = 303. The results showed that the power values ranged from .78 to 1 (see Table 10 below). Secondly, power values for the regression analyses were

calculated with *F*-tests for linear multiple regression (fixed model, R^2 deviation from zero), where $n = 303$. The power values for the regression analyses were .99 and .96 respectively (see Table 10 below). Overall, the power values indicate high power, reducing the likelihood of Type II errors and suggesting adequate sample size.

Table 10

Post-hoc Power Analyses

Analysis	Effect Size	Power
1: Self-perceived employability is positively related to core self-evaluations.	$r = .31$**	.99
2: Approach temperaments will be negatively related to avoidance temperaments.	$r = -.20$**	.96
3a: An approach temperament is positively related to core self-evaluations.	$r = .43$**	1.00
3b: An avoidance temperament is negatively related to core self-evaluations.	$r = -.64$**	1.00
4a: An approach temperament is positively related to self-perceived employability.	$r = .30$**	.99
4b: An avoidance temperament is negatively related to self-perceived employability.	$r = -.14$*	.78
Regression Analysis 1[a]	$F^2 = .16$	.99
Regression Analysis 2[b]	$F^2 = .07$	.96

Note. $N = 303$.

[a] $k = 5$. [b] $k = 6$.

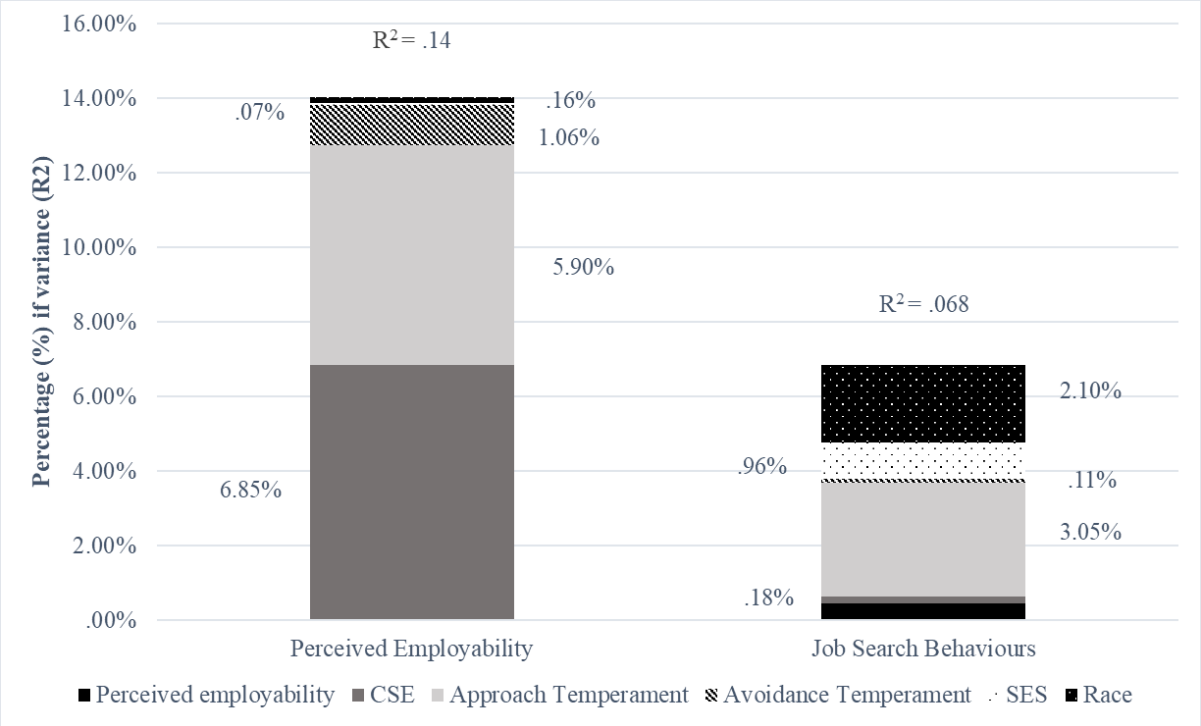
Relative Weights Analysis

Two relative weights analyses (RWA; Johnson, 2000) were performed using the online software RWA-Web to combat multicollinearity (Tonidandel & LeBreton, 2014). These analyses aimed to complement the multiple regression analysis by obtaining a more accurate understanding of each predictor's contribution to explaining variance in the dependent variable even when they are correlated (Tonidandel & LeBreton, 2011). The confidence intervals and significance tests were performed using bootstrapping with 10,000 replications following the recommendations of Tonidandel et al. (2009). Bias-corrected and accelerated confidence intervals were utilised owing to their superior coverage accuracy

(Tonidandel et al., 2009). An alpha level of .05 was selected, and 95% CIs were employed. The results of these analyses are presented visually in Figure 2 below.

Figure 2

Graphical Representation of Relative Weights Analyses Results



The first analysis examined the amount of variance explained by the weighted combination of the predictors (CSE, approach temperaments, avoidance temperaments, race, and SES) of perceived employability, as stated in research question 4. It revealed that these variables explained approximately 14% of the variance in perceived employability (R^2 = 0.14; see Table 11). A review of the confidence intervals for the tests of significance showed that only two out of the five variables (approach temperaments and CSE) explained a statistically significant amount of variance in perceived employability. CSE was the most important variable (RW = 0.068; 95% CI [0.0244, 0.1252]), followed by approach temperament (RW = 0.059; 95% CI [0.017, 0.1236]). Of the total R^2, CSE explained 48.8%, and approach temperament explained 42%. The results of the RWA corresponded with the multiple regression analysis, with a comparable amount of variance being explained by both models (14%) and both CSE and approach temperaments being the only significant predictors of perceived employability in each analysis. Tonidandel and LeBreton (2011) state that these

analyses should supplement each other. Thus, these results provide evidence that CSE and approach temperaments contribute uniquely to perceived employability.

Table 11

Results of the Relative Weights Analyses

	Predictor	*B*	β	RW_{raw} [95% CI]	RW%[a]
Perceived Employability					
	CSE	.344	.299**	0.0685 [.024, .125]	48.8
	Approach Temperament	.184	.187**	0.0590 [.017, .123]	42.01
	Avoidance Temperament	.056	.083	0.0106 [-.008, .026]	7.56
	SES	-.006	-.007	0.0007 [-.019, .016]	0.5
	Race	-.071	-.050	0.0016 [-.028, .007]	1.14
Total R^2		.14			100.00
Job Search Behaviours					
	CSE	-.083	-.051	0.0018 [-.035, .006]	2.59
	Approach Temperament	.256	.185**	0.0305 [-.004, .074]	44.39
	Avoidance Temperament	-.040	-.042	0.0011 [-.034, .008]	1.67
	SES	-.071	-.061	0.0096 [-.015, .042]	13.98
	Race	-.264	-.133**	0.0210 [-.009, .062]	30.62
	Perceived Employability	.061	.044	0.0046 [-.020, .030]	6.75
Total R^2		.069			

Note. $N = 303$. Bootstrapped confidence intervals were calculated using the bias-corrected accelerated method.

[a] Relative weights are not raw weights but rather rescaled to show each predictor's percentage contribution to overall R^2.

* $p < .05$, ** $p < .01$

Secondly, to answer research question 5 further, a relative weights analysis was done to analyse the amount of variance explained by the weighted combination of the predictors of job search behaviours. The six predictors, perceived employability, CSE, approach temperament, avoidance temperament, race, and SES, only explained about 6% of the variance in job search behaviours ($R^2 = 0.0687$; see Table 11). However, the confidence intervals for the tests of statistical significance suggest that none of these variables explained a statistically significant amount of the variance in job search behaviours.

Consequently, the relative weights results contradict the results of the multiple regression, which is not unusual (Tonidandel et al., 2009). Notably, the multiple regression revealed that approach temperament and race significantly predict job search behaviours, indicating that the shared variance among the variables may have influenced the results of the multiple regression analysis. These results emphasise the importance of utilising these analyses in combination to ratify research findings.

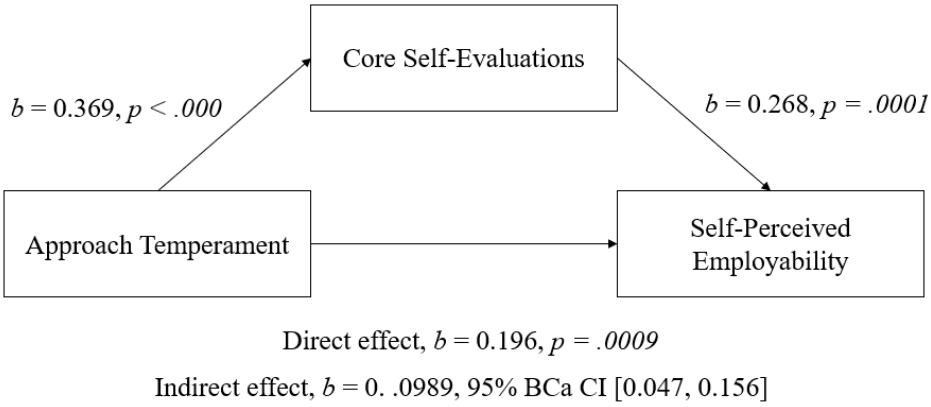
Mediation Analysis

Hayes SPSS Process Macro (model 4) was used to test the mediation effect for the final two hypotheses (Hayes, 2022). The assumptions required for mediation (normality, linearity, homoscedasticity, and normality of errors) were examined in the preliminary analyses. Covariates were not included in the mediation analyses. The assumptions were met, and the data were appropriate for mediation (Abu-Bader & Jones, 2021). Given that Baron and Kenny's (1986) approach to mediation has received some criticism, the precondition that a statistically significant relationship must exist between the independent and dependent variable was not considered essential (Abu-Bader & Jones, 2021; Baron & Kenny, 1986; MacKinnon et al., 2007). Thus, it is possible for a mediation effect to exist without a significant direct effect (MacKinnon et al., 2007). The results were interpreted using bootstrapped confidence intervals in an attempt to move away from the traditional reliance on *p*-values as the main criterion for assessing statistical significance (Field, 2018). To further support the analyses, the Sobel (1982) test was calculated using an online tool (Preacher & Leonardelli, 2023; Sobel, 1982).

There was a significant indirect effect of approach temperaments on self-perceived employability through CSE ($b = 0.099$, 95% BCa CI [0.047, 0.156]). Figure 3 below represents these findings. Furthermore, the Sobel test supported that the mediation was significant ($Z = 3.53$, $p < .000$). Therefore, the results supported $H_{5a.}$

Figure 3

Model of Approach Temperament as a Predictor of Perceived Employability, Mediated by Core Self-Evaluations

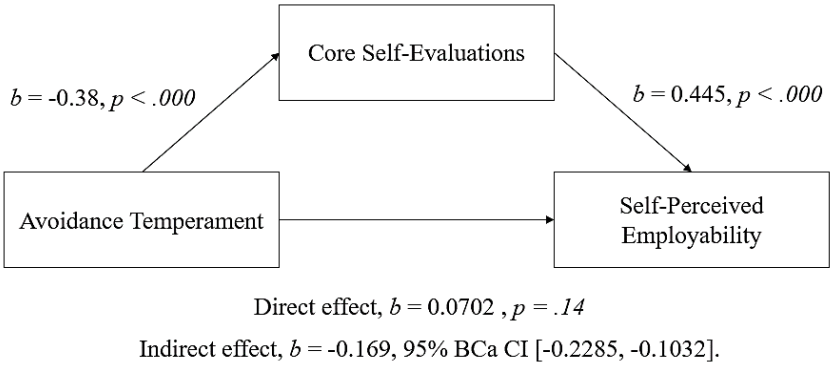


Note. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 1000 samples.

Secondly, there was a significant indirect effect of avoidance temperaments on self-perceived employability through CSE (b = -0.169, 95% BCa CI [-0.2285, -0.1032]). Figure 4 below visually represents this finding. Although the direct effect between avoidance temperament and perceived employability was not significant, the bootstrapped confidence intervals demonstrated that there is a significant indirect effect. Moreover, the Sobel test provided additional evidence to support the mediating effect of CSE between avoidance temperaments and perceived employability (Z = -5.08, p < .000). Therefore, H_{5b} was supported in this study.

Figure 4

Model of Avoidance Temperament as a Predictor of Perceived Employability, Mediated by Core Self-Evaluations



Note. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 1000 samples.

4.7 Further Analyses

Perceived Employability Subscales

The correlations between the subscales of perceived employability and the other study variables were included in Table 9. Although no hypotheses were included for these subscales, this analysis was conducted for exploratory purposes. The analysis showed that all three subscales were significantly positively related to approach temperament (University r = .19; Labour Market r = .21; Field of Study r = .22, p < .01). Labour Market (r = .26, p < .01) and Field of Study (r = .24, p < .01) were also positively related to CSE. There were also small correlations between the subscales and two contextual variables, race and gender.

4.8 Summary

This chapter presented the findings of this study. The chapter began by describing the data preparation process. Then, the measurement properties of the study's scales, preliminary analyses, and descriptive statistics were presented. Next, the results of the hypothesis testing and further analyses were provided. Importantly, all the hypotheses were supported by the results of this study (see Table 12). The following chapter discusses these results.

Table 12

Summary of Study Findings and Hypotheses

Hypothesis	Results	Interpretation
1: Self-perceived employability is positively related to core self-evaluations.	r = .31**	Medium positive relationship
2: Approach temperaments will be negatively related to avoidance temperaments.	r = -.20**	Small negative relationship
3a: An approach temperament is positively related to core self-evaluations.	r = .43**	Medium positive relationship
3b: An avoidance temperament is negatively related to core self-evaluations.	r = -.64**	Strong negative relationship
4a: An approach temperament is positively related to self-perceived employability.	r = .30**	Medium positive relationship
4b: An avoidance temperament is negatively related to self-perceived employability.	r = -.14*	Small negative relationship
5a: The relationship between approach temperaments and self-perceived employability will be mediated by core self-evaluations.	b = 0.099, 95% BCa CI [0.047, 0.156]	CSE partially mediated the effect of approach temperament on perceived employability
5b: The relationship between avoidance temperaments and self-perceived employability will be mediated by core self-evaluations.	b = -0.169, 95% BCa CI [-0.2285, -0.1032]	CSE partially mediated the effect of avoidance temperament on perceived employability

Note. Hypotheses were tested in a sample of South African university students. All hypotheses were supported.
* $p < .05$; ** $p < .01$ (two-tailed).

Chapter 5: Discussion

This chapter presents a discussion of the findings of this study. It begins with a brief overview of the research. Following this, the chapter delves into the key findings and discusses their theoretical implications. The chapter then outlines limitations, identifies avenues for future research and presents the practical implications of the findings of this study.

5.1 Overview of Research

The purpose of this study was to explore individual difference factors that influence individuals' perceptions of their employability by examining the relationship between perceived employability, general evaluations of capabilities and self-worth (core self-evaluations) and approach-avoidance temperaments (Elliot & Thrash, 2010; Harari et al., 2021). This study also explored, for the first time, whether approach-avoidance temperaments could be used as an organising framework to help explain why other factors might influence perceived employability. Approach-avoidance temperaments indicate the kinds of information individuals choose to evaluate or ignore (Elliot & Thrash, 2002). Both perceived employability and core self-evaluations (CSE) are self-appraisals of one's abilities and worth; thus, these perceptions are likely impacted by the information that individuals choose to evaluate or ignore as a result of their temperament. Ultimately, whether an individual has an approach or avoidance temperament may help explain why certain individual differences, like CSE, may shape employability perceptions.

5.2 Key Findings

The following section expands on the study's key findings in relation to previous research. First, it discusses the factors that influence and predict perceived employability. Second, evidence for integrating perceived employability into an approach-avoidance framework is examined. The exploratory findings on the role of contextual factors in employability perceptions are then presented. The section concludes with a discussion of the findings regarding job search behaviours.

Exploring Employability: Factors Shaping Perceived Employability

Core Self-Evaluations and Perceived Employability. The first question in this study was to establish whether individuals with a more positive evaluation of their capabilities and self-worth (CSE) were more likely to have a positive perception of their ability to obtain or maintain a job in this sample. Prior research on CSE and perceived employability shows effect sizes ranging from small to medium (p = .10 - .49) according to Cohen's (1988) guidelines (Harari et al., 2021; Onyishi et al., 2015; Rodrigues et al., 2019;

Vîrga et al., 2017). Consistent with this, the results represented a medium effect size, confirming that individuals with higher CSE were more likely to display higher perceived employability. In the same manner, individuals with more negative perceptions of their capabilities and self-worth tended to report more negative perceptions of their ability to obtain or maintain a job. These results show that the nature of students' general appraisals of their value and capabilities is related to how they evaluate their employability. These findings add to current knowledge on perceived employability by establishing CSE as an antecedent of perceived employability in this sample.

Despite the large number of studies demonstrating the association between CSE and perceived employability, this is the first evidence in the South African context (Lo Presti et al., 2021; Onyishi et al., 2015; Rodrigues et al., 2019; Vîrga et al., 2017). Perceived employability and CSE have been examined individually among South African university students (Arya et al., 2019; Goodman & Tredway, 2016; Pitan & Muller, 2019b; Weaver, 2021); however, this is the first research confirming the positive relationship between the two constructs in this context, making this an important contribution to the literature. Thus, the results demonstrate that South African university students are more likely to view their employability positively if they hold positive general self-evaluations.

Approach-Avoidance Temperaments and Perceived Employability. Secondly, this study sought to investigate whether perceived employability was associated with approach-avoidance temperaments. The results show that individuals with approach temperaments were more likely to demonstrate positive perceptions of their ability to obtain or maintain employment. Correspondingly, individuals with avoidance temperaments reported more negative perceptions of their employment prospects. These relationships imply that individuals' self-beliefs about employability may depend on their sensitivity to relevant positive or negative stimuli (Elliot & Thrash, 2002, 2010). Employability perceptions may not merely be a result of the kinds of information individuals are exposed to (e.g., the number of job opportunities); rather, these perceptions may be shaped by the information they subconsciously choose to evaluate or ignore based on their temperaments (Elliot & Thrash, 2010). Therefore, individuals who are sensitive to positive information are more likely to have a more favourable perception of their employability, and the converse is true for those who are more sensitive to negative information.

In addition, results unexpectedly shed light on the salience of positive versus negative employment information. Approach temperaments were significant predictors of perceived employability, explaining a significant amount of variance (5.9%), whereas avoidance

temperaments only accounted for a negligible amount of variance (1.06%). While these results demonstrate that both temperaments influence perceived employability, a sensitivity to positive information appeared to have a greater impact on respondents' perceptions of their employability. According to the approach-avoidance framework, individuals will pay attention to different information depending on their temperament. However, these results imply that the influence of this attending may not be equal across the temperaments (Elliot & Thrash, 2002, 2010). These results are similar to those reported by others who also observed that approach temperaments generally had a stronger relationship with other variables compared to avoidance temperaments (e.g., Bipp et al., 2017; Johnson et al., 2013). Perceived employability is believed to be shaped by students' evaluations of employment-related information in their environment, such as their abilities, the university they attend, their field of study and the state of the external labour market (Rothwell et al., 2008). These components serve as sources of both positive and negative information to which individuals actively pay attention (Rothwell & Arnold, 2007; Vanhercke et al., 2014). Considering the salience of approach temperaments, it can be inferred that students were more likely to be attentive to positive employment information than negative information in their environment in this study.

Moreover, the unequal influence of the temperaments on perceived employability implies that having an approach temperament may have more favourable outcomes for individuals' employability. In contrast, the unfavourable consequences of an avoidance temperament are less significant for one's employability. By way of example, individuals with an approach temperament would likely be impacted by positive information, such as a promising employment opportunity, to a greater extent than individuals with an avoidance temperament might be impacted by negative information, such as an unsuccessful job application (Elliot & Thrash, 2002, 2010). Essentially, an individual with an approach temperament is more likely to have a positive perception of their employability than an individual with an avoidance temperament is likely to have a negative perception of their employability.

One possible explanation for the significance of approach temperament is that goals may regulate the influence of approach-avoidance temperaments on perceived employability. Elliot and Thrash (2002, 2010) propose that goals may help individuals guide their behaviour and "override" temperaments when required. Approach-avoidance temperaments are core reactionary aspects of personality, but they are not absolute determinates. As Elliot and Thrash (2010) aptly state, "biology is by no means destiny" (p. 896). Although approach-

avoidance temperaments are relatively stable and constant over time, as individuals mature, are socialised, and develop personally, they learn to use goals strategically to manage their temperamental inclinations to achieve specific outcomes. Through this process, an individual's goals may influence the extent to which their temperament shapes their perceived employability.

In the context of this study, students may have career goals that mitigate the effect of avoidance temperaments on their perceived employability. For instance, students usually have goals about the types of positions they would like to be employed in after university; thus, they may already be developing the skills (ability) required for those roles. In doing so, they begin evaluating their employability more favourably (Hillage & Pollard, 1998). Despite a natural tendency to focus on the negative information around them, these students may actively bring more positive information into their environment as a result of their goals, thereby being less impacted by avoidance temperaments. In essence, goals may complement temperaments by providing directionality for temperament (Elliot & Thrash, 2010).

Although these results provide evidence to support that perceived employability may be shaped by approach-avoidance temperaments, there is a lack of prior research to draw on. There is a large body of research on other antecedents of perceived employability (Caballero et al., 2022; Goodman & Tredway, 2016; Kasler et al., 2017; Neneh, 2020). However, this is the first study to investigate the interplay between perceived employability and approach-avoidance temperaments. Therefore, the results supply new insights into possible psychological mechanisms underlying perceived employability.

Unexplained Variance: A Challenge in Employability Research. The findings reaffirm current knowledge of the factors that influence perceived employability; however, they also highlight how research has failed to comprehensively explain why people may perceive their employability differently. A host of research exists on the factors that influence perceived employability, yet as discussed in Chapter 2, the data is inconsistent and inconclusive (e.g., Botha, 2021; Ho et al., 2022; Low et al., 2020; Ngo et al., 2017; Peeters et al., 2020; Petruzziello et al., 2023). For this reason, further analyses were conducted to help explain the extent to which individual and contextual factors contribute to employability perceptions.

The evidence provided by the relative weights analysis reveals that the variables included in the study were only able to explain a portion (14%) of why individuals may perceive their employability differently. Approach temperaments and CSE were the only significant predictors of perceived employability, indicating that the type of information

individuals attend to, as well as self-appraisals, impact employability perceptions. However, it also emphasises that other factors affect employability beliefs beyond those considered in this study. It was by no means expected that the factors would comprehensively account for employability perceptions, but it was surprising that the factors explained so little of the variance in perceived employability. Attempts to develop employability models have yielded similar results, with research often only making incremental advances (Harari et al., 2021; van Harten et al., 2022). For instance, Caballero et al. (2022) conducted a study to develop a holistic perceived employability model in university students. The model included five broad areas, namely, human capital, social capital, cultural capital, individual attributes and behaviours, and contextual factors. Despite the inclusion of multiple factors, the model only explained a quarter of the variability in perceived employability among university students. In the same manner, a large portion of variance was unaccounted for in this study, confirming that much remains to be known about what shapes employability perceptions in university students.

It is noteworthy that avoidance temperaments, race and socio-economic status (SES) did not explain why individuals may have different levels of perceived employability. As discussed earlier, approach temperaments have a greater influence than avoidance temperaments on individuals' employability perceptions. Likewise, none of the contextual factors controlled for were significant, reinforcing the importance of individual differences in shaping how individuals evaluate the ability to obtain or maintain employment (Fugate et al., 2004; Harari et al., 2021).

Overall, these findings emphasise the complexity inherent in the development of employability perceptions (van Harten et al., 2022). With a substantial amount of the variance in perceived employability being unaccounted for in this study, there are likely multiple other factors impacting individuals' employability evaluations. A South African qualitative study came to similar conclusions, suggesting that graduate employability is a complex, non-linear issue (Senekal & Smith, 2022). They state that a diverse range of potential influencing factors, such as family responsibility, individual circumstances, and employment location, should be considered when examining employability in the South African context. Thus, employability is inherently multifaceted and has a diverse array of influencing factors.

It is because of this complexity that researchers have repeatedly attempted to develop models to explain variance in perceived employability (e.g., Álvarez-González et al., 2017; Dacre Pool & Sewell, 2007; Hogan et al., 2013). While these models are valuable sources of information about employability antecedents and, occasionally, outcomes, it is unlikely that

any model could comprehensively account for the development of perceived employability. Even if this were to be achieved, developing a model with enduring relevance poses a significant challenge (Akkermans, Le Blanc, et al., 2024). When examining the substantial list of factors related to employability, it becomes apparent that developing an exhaustive list of antecedents and outcomes is perhaps not the solution to understanding employability. Instead, it may be of greater value to shift more attention towards understanding the underlying psychological mechanisms that make these factors important when considering employability. The existing employability research provides a valuable foundation to begin this exploration. Understanding *why* certain factors are relevant to one's employability (and why others are not) may provide a more dynamic approach to employability—not only for the study of employability but for practical applications to individuals' lives. Moreover, the constantly evolving employment landscape suggests that it may be prudent to begin developing more dynamic, adaptable models that can be applied over time (Akkermans, Le Blanc, et al., 2024). Accordingly, the need for a theoretical framework for perceived employability was reemphasised by the unexplained variance in this study.

Perceived Employability: An Approach-Avoidance Perspective

Integrating Perceived Employability into an Approach-Avoidance Framework. This research offers an approach-avoidance framework as a novel approach to studying perceived employability to address the lack of a theoretical framework mentioned in the previous section. The complexity and the current fragmentation of the employability literature necessitate the development of a theoretical framework for perceived employability (Harari et al., 2021). Given that it was beyond the scope of this study to develop a theoretical framework, approach-avoidance temperaments were offered as a preliminary lens through which this research can be viewed. The study followed a similar logic to that of Ferris et al. (2011), who integrated CSE within an approach-avoidance framework by examining the association between CSE and approach and avoidance temperaments. Evidence to support the integration of perceived employability into an approach-avoidance framework was mixed, indicating the need for further research in this area. Nevertheless, approach-avoidance temperaments provided some insight into understanding the psychological underpinnings involved in the development of individuals' employability perceptions.

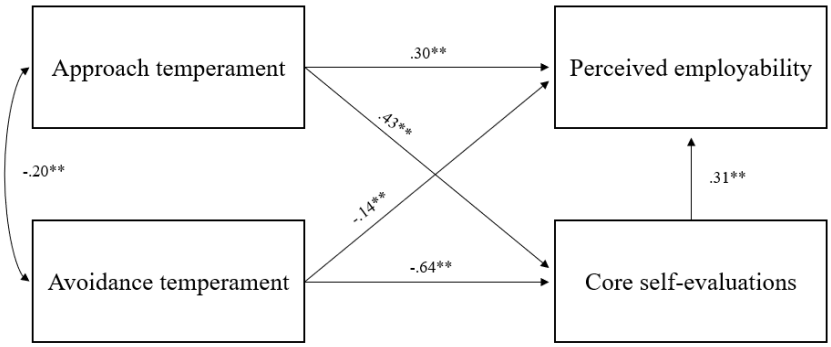
Given that the approach-avoidance framework defines the kinds of information individuals evaluate, this framework may explain why individuals have different perceptions of their employability (Elliot & Thrash, 2002). Both perceived employability and CSE are evaluations of specific information in one's environment, suggesting that one's temperament

may shape them (Chang et al., 2012). Hence, it was proposed that approach-avoidance temperaments may inform students' generalised evaluations of their self-worth and capabilities, which, in turn, may inform their employment-specific evaluations. The relationships between perceived employability, CSE and approach-avoidance temperaments were examined to explore this proposition.

Supporting Evidence for the Approach-Avoidance Framework. On the one hand, results suggest that there is some support for the integration of perceived employability into the approach-avoidance framework. Firstly, the bivariate hypothesised relationships were confirmed in this study, implying that an individual's perception of how employable they are is impacted by their CSE and approach-avoidance temperaments. Using Cohen's (1988) effect sizes, it can be seen that the strength of the relationships ranged from small to large (see Figure 5 below). The strength of these associations highlights the importance of approach-avoidance temperaments and CSE in shaping individuals' perceived employability, reinforcing the possible integration of perceived employability into an approach-avoidance framework.

Figure 5

Diagram of Hypothesised Relationships and Results



Mechanisms Underlying Perceived Employability. In addition, the mediation analyses shed light on the mechanisms that underlie the development of perceived employability. The results show that the impact of approach-avoidance temperaments on perceived employability occurs indirectly through CSE. In other words, an individual's temperament influences their self-worth and the way they assess their capabilities, and in turn, this generalised self-appraisal influences how they assess their employability. These results further support the ideas of Judge et al. (1997), who initially proposed that CSE

influences outcomes by shaping individuals' thoughts and evaluations. For instance, students with underlying avoidance temperaments may focus on negative information in their environment, such as poor academic performance, developing in them a lowered sense of self-worth and confidence in their abilities. Subsequently, the student may begin to view their employment opportunities and abilities through this lens of lowered self-worth and decreased confidence, leading to a poor perception of their employment prospects (Álvarez-González et al., 2017; Pitan & Muller, 2019a). In this way, university students' temperaments may influence their perceived employability through their CSE.

Inconsistencies with the Approach-Avoidance Framework. On the other hand, some inconsistencies challenge the integration of perceived employability into an approach-avoidance framework. Primarily, challenges arise with the nature of approach-avoidance temperaments as a construct. Although there was a negative association between the temperaments, there is insufficient evidence that approach and avoidance are strictly antithetical concepts (Elliot & Thrash, 2010). Interestingly, small negative relationships are frequently observed in approach-avoidance research, and studies have failed to confirm a statistical relationship between the temperaments (e.g., Bipp et al., 2017; Briki, 2018; Elliot & Thrash, 2010; Ferris et al., 2011). What is intriguing about these results is that they suggest that the temperaments may not be mutually exclusive, indicating that individuals may have characteristics of both approach and avoidance temperaments at the same time. This evidence suggests that there may be conceptual or operational challenges with the construct of approach-avoidance temperaments.

Furthermore, approach and avoidance temperaments demonstrated differing impacts on perceived employability as well as other variables. In general, approach temperaments appeared to have a greater influence on outcome variables than avoidance temperaments. In other words, a sensitivity to positive information, rather than negative information, had a greater influence on perceived employability, self-reported SES, and job search behaviour. Students with approach temperaments were more likely to report higher scores on these factors, re-emphasising the salience of approach temperaments. Essentially, by paying more attention to, reacting more positively to, and seeking out positive elements of one's environment, students may develop favourable perceptions of their employability, perceive themselves as better off socio-economically, and report engaging in more job-seeking behaviours (Elliot & Thrash, 2010). While some studies have supported the salience of approach temperaments (e.g., Bipp et al., 2017; Yeatts & Lochbaum, 2013), others produced contradictory results, highlighting the difficulties with the approach-avoidance framework

(Ferris et al., 2011). Nevertheless, in this study, approach temperament displayed a stronger relationship with perceived employability, SES and job search behaviours than avoidance temperament.

There are possible explanations for these contradictory results. It is well-established in psychology that people tend to focus on the positive more than the negative, particularly concerning remembering the past, and place more importance on positive factors in decision-making (Matlin & Stang, 1978; Sedikides & Skowronski, 2020). This tendency to focus on the positive, coined the Pollyanna Principle by Matlin and Stang (1978), may explain the salience of approach temperaments in this study. Although the data confirm that the average respondent had more indicators of approach temperaments, the difference was not substantial, nor was it analysed (see Table 8). While this explanation seems plausible based on existing knowledge, it remains conjecture until additional research is conducted.

It could also be argued that the Pollyanna Principle explains why individuals demonstrate both approach and avoidance characteristics simultaneously. The Pollyanna Principle could suggest that individuals merely *remember* more positive information than negative information when responding to questionnaires (Sedikides & Skowronski, 2020). When asked about the past, students may have remembered and reported the positive events, tendencies, and employment-related information more, resulting in a greater association between approach temperament and other variables than avoidance temperaments. Thus, the salience of approach temperaments may be rooted in reporting bias as a result of the Pollyanna Principle.

Lastly, it is worth noting that the salience of approach temperaments did not apply to CSE as students' CSE was shaped more by avoidance temperaments than approach temperaments. Both temperaments influenced CSE quite considerably; however, avoidance temperaments had the strongest relationship with a large effect size (approach temperaments represented a medium effect size). Ferris et al.'s (2011) study on working adults showed comparable results, as avoidance temperaments had much stronger associations with CSE than avoidance temperaments. The association between CSE and avoidance temperament may be the result of conceptual similarities between avoidance temperaments and the emotional stability dimension of CSE, which could explain why the salience of approach temperaments did not extend to CSE (Ferris et al., 2013; Judge et al., 2003).

Overall, the findings provide novel insights into the possible integration of perceived employability into an approach-avoidance framework. The results provide some support for the utilisation of approach-avoidance temperaments as a framework for studying perceived

employability; however, they also highlight key inconsistencies with the nature of approach-avoidance temperaments and their relationship with perceived employability. These inconsistencies with the construct infer that integrating perceived employability into this framework may not be straightforward, signalling the need for further research in this area.

Understanding Context: The Role of Contextual Factors in University Students' Employability Perceptions

In addition to the study's main hypotheses, exploratory analyses were conducted to understand the role that contextual factors might play in the participants' employability perceptions. In accordance with prior research, the contextual factors included in this study were gender, SES and race (Niu et al., 2019; Pitan & Muller, 2019a; Rodrigues et al., 2019). The exploratory results show that these contextual factors had minimal influence on perceived employability.

Surprisingly, gender was the only contextual variable that was significantly related to perceived employability, with men reporting slightly higher perceived employability than women. This result differs from most other perceived employability studies that include gender (Harari et al., 2021; Kasler et al., 2017; Rodrigues et al., 2019), but it is consistent with South African evidence (Pitan & Muller, 2019a). It may be that university students in South Africa consider gender more relevant to employability than in other countries (e.g., in the United Kingdom; Rodrigues et al., 2019). These perceptions may be a result of the South African employment landscape. Given that women have a lower job-finding rate than men in South Africa, it seems plausible that female students would perceive themselves as less employable (Anand et al., 2016).

In contrast, perceived employability was unrelated to self-reported SES, nor was SES a significant predictor of perceived employability. This implies that individuals' employability perceptions may develop independently of socio-economic factors such as who funds their studies or parental education level. Although there is limited research on SES and perceived employability, these findings appear to contradict what is currently accepted in the literature (Bozgeyikli et al., 2023; Morrison, 2014). Individuals' socio-economic positions are known to impact employment prospects; thus, it appears counterintuitive that SES was not associated with employability perceptions (L. Patel et al., 2020; Tivaringe, 2019). Therefore, these results suggest that employability perceptions may develop independently from their reported SES.

In a similar manner, race was unrelated to perceived employability, nor was race a significant predictor of perceived employability. There was one exception—race was

associated with the perceived employability subscale, "University", which relates to students' perceptions of their university's reputation (Rothwell et al., 2008). This may indicate that individuals in designated groups were less likely to report that their university's reputation contributed to their employability. In contrast, individuals in non-designated groups were more likely to report that their university's reputation influenced their ability to obtain or maintain a job (e.g., "Employers are eager to employ graduates from my university"). It could be that while race does not have a direct impact on one's perception of employability, race may indirectly shape perceptions through other factors; however, additional research is required to gain more reliable insight into these relationships.

Interestingly, despite race being unrelated to how individuals perceived their employability, race was related to their job search behaviours. Individuals in designated groups were less likely to report engaging in job search behaviours than individuals in non-designated groups. This could mean that White students generally engage in more job-seeking than Black students. Likewise, race significantly predicted job search behaviours in this sample (2.10%), reflecting the impact that race has on other labour market outcomes such as unemployment or underemployment (e.g., Baldry, 2016; Fongwa et al., 2018).

Context and Approach-avoidance Temperaments. Furthermore, the relationship between approach-avoidance temperaments and SES was explored, yet no evidence for an association between these variables was found. Subjective SES was the only exception to this, as individuals with avoidance temperaments were more likely to perceive themselves as worse off in relation to other people in society. Given that approach-avoidance temperaments are relatively stable, biologically-based individual differences, factors such as an individual's position in society, wealth or education are unlikely to have a significant influence over their temperament (Derryberry & Rothbart, 1988; Elliot, 1999). Moreover, there is no evidence to suggest that temperament could influence an individual's objective SES. That is, temperament is unlikely to influence the structural components that define an individual's position in society (e.g., material resources or educational attainment; Antonoplis, 2023; Tan et al., 2020). Temperaments could, however, influence the way individuals evaluate the components of their SES, possibly accounting for the slight association between subjective SES and avoidance temperaments. Nonetheless, considering that self-report measures for SES were used, it is surprising that temperaments did not impact this self-report. It may be that the measurement of SES was less affected by the respondent's subjectivity than one might expect, resulting in the unrelatedness of these factors.

Context and Core Self-Evaluations. Conversely, the study found that students' CSE appears to be influenced by SES. As students' evaluations of their capabilities become more positive and their self-worth increases, so do their reported positions in society. Although the nature of this research prevents any causal relationships from being inferred, and no prior research explains this relationship, the researcher proposes two possible reasons for this finding. First, it is possible that by having a more positive view of self, students are more likely to view themselves as better off socio-economically than others. Alternatively, SES may, in some way, affect the students' general evaluations of their capabilities and self-worth. Despite CSE being a stable personality trait, the development of its dimensions may be influenced by external factors (Judge et al., 1997, 1998). For example, self-efficacy is developed through mastery experiences (Bandura, 1997). However, further research is required to explain the relationship between CSE and SES.

Race and Socio-economic Status. Another notable finding was that students in designated groups reported lower SES than students in non-designated groups. In the past, race has erroneously been used as a proxy for SES (Mfeketho, 2021). Although measuring and defining SES is underdeveloped in the literature, it is clear that race and SES are separate constructs (Antonoplis, 2023). Nevertheless, there is an undeniable link between socio-economic inequality and race in South Africa because race is historically one of the main determinants of socio-economic factors as a result of Apartheid (Baldry, 2016). The legacy of Apartheid continues to influence these outcomes today; thus, it is evident why an association between race and SES might exist within the context of this study (Tivaringe, 2019).

Together, the results on gender, SES and race highlight the relevance of context when studying perceived employability in South Africa—a country with marked socio-economic disparities and high unemployment. With a Gini Index of 63.0, South Africa's distribution of income (or consumption expenditure) is closer to absolute inequality (100) than perfect equality (The World Bank, 2023). Moreover, research shows that race, gender and SES continue to impact various employment outcomes in South Africa (Anand et al., 2016). Although evidence reinforces the relevance of contextual factors in South Africa, the mixed results of this study signal the need for further research (Fongwa et al., 2018). Therefore, these findings demonstrate the enduring relevance of contextual factors in employability research.

Going Beyond Employability Perceptions: Job Search Behaviours as an Outcome

Any investigation on why individuals may perceive their ability to obtain or maintain employment would be futile unless these perceptions lead to meaningful outcomes in society.

One of the core assumptions about perceived employability is that individuals act on their subjective self-perceptions more than on objective reality (Vanhercke et al., 2014). Prior research indicates that perceived employability is a valuable psychological resource for graduates entering the job market as it is related to various employment outcomes (e.g., Atitsogbe et al., 2019; Coetzee & Engelbrecht, 2020; Onyishi et al., 2015; Vîrga et al., 2017). For this reason, a behavioural measure was included to explore the association between perceived employability and an employment outcome, namely job search behaviours. Job search behaviours include activities that prepare individuals for the job search process and actual job-seeking activities, such as following up on job leads or interviewing for jobs (Blau, 1993). In further analyses, this study investigated the relationship between job search behaviours and the study's core variables to answer research question 5 further.

Among the variables included in the study, approach temperaments, race, and SES showed some association with job search behaviours. Using Bosco et al.'s (2015)[7] effect size guidelines for applied psychological research (where correlations of up to .15 were deemed small, .19-.41 were medium, and .42 and above were large), the strength of the relationships ranged from small to medium. Previously, biographical variables, such as race and age, were shown to be marginally related to job search behaviours (Kanfer et al., 2001). Likewise, personality variables, originally used as indicators of approach-avoidance temperaments, have also been linked to an individual's job search behaviour (Kanfer et al., 2001; Zimmerman et al., 2012). For instance, extraversion (an indicator of approach temperament) was associated with job search behaviours (Zimmerman et al., 2012). Thus, it was not surprising that approach temperaments were related to job search behaviours. However, it is noteworthy that avoidance temperaments were not associated with job search behaviours. This novel finding suggests that the greater a student's sensitivity towards positive stimuli, the more likely they are to have recently engaged in job-seeking behaviours, further emphasising the salience of approach temperaments in this sample.

Furthermore, the variables in the study negligibly explained why individuals engage in job search behaviours differently (6.8%). Although certain variables predicted and were associated with job search behaviours, they failed to explain the variance in job search behaviours meaningfully. Notably, perceived employability did not predict job search

[7] Attitudes: Intentions relation type was used to determine effect sizes for job search behaviours. For all other analyses, effect sizes were determined using Cohen's (1988) guidelines as Bosco et al. (2015) does not account for the relation type of person characteristics—attitudes.

behaviours. Additional factors, like financial need, ambition, and self-esteem, likely contributed to differences in job search behaviours (Kanfer et al., 2001; Zimmerman et al., 2012). It is also possible that many students were not engaging in job search behaviours because they were not graduating soon or looking for employment, as evidenced by the heteroscedasticity of these variables. Moreover, the relative weights analysis indicated that the shared variance among the antecedents of job search behaviours may influence results, which is why the variables still emerge as significant predictors of job search behaviours (Tonidandel et al., 2009). Overall, these results indicate that, while approach temperaments, race, and SES may influence why individuals engage in job search differently, the relationship is unclear.

5.3 Theoretical Implications

The findings of the present study raise three key theoretical implications for the employability literature.

First, the findings provide initial support for the possible integration of perceived employability into an approach-avoidance framework. As discussed earlier in the chapter, the results support the possible integration of perceived employability into an approach-avoidance framework; however, some inconsistencies signal the need for further research to investigate these conceptual issues.

Theoretically, the framework provides broad explanations for the underlying mechanisms of perceived employability and its associated variables. In particular, the findings extend the understanding of how perceived employability may be developed, suggesting that temperaments influence the development of individuals' self-worth and capabilities (Ferris et al., 2011), which, in turn, may shape individuals' perceptions of their employability. While past research has primarily focussed on the "what" by examining the antecedents and outcome variables of perceived employability (e.g., Botha, 2021; Caballero et al., 2022; Jackson & Wilton, 2017), this research offers new insights into the "how" by presenting approach-avoidance temperaments as possible underlying mechanisms of perceived employability. Thus, despite the mixed results, this study provides a novel perspective on perceived employability by using an approach-avoidance framework.

In addition, the study refines current knowledge on the factors that influence perceived employability by providing empirical support for core self-evaluations and approach-avoidance temperaments as predictors of perceived employability. This research adds to the growing body of research that identifies CSE as one of the most robust predictors of perceived employability by providing the first evidence of this relationship in South

African university students (Harari et al., 2021). This finding is significant for the employability literature as it shows that this association is consistent across location and population. Furthermore, this study was the first to examine approach-avoidance temperaments as predictors of perceived employability, extending our knowledge of the factors that influence perceived employability. Taken together, these results on CSE and approach-avoidance temperaments reveal that individual differences may play a critical role in shaping individuals' employability perceptions.

Finally, the results on the contextual factors in this study challenge existing ideas about the role of context in perceived employability. It was surprising to discover that the contextual factors seemed to play little to no role in why individuals might think differently about their employability. This indicates that irrespective of whether SES, race, and gender affect an individual's *actual* employment outcomes, contextual factors may be immaterial in terms of how they *perceive* their employability (Baldry, 2016; Tivaringe, 2019). This finding appears to contradict current conceptualisations of the role of context in employability (Baluku et al., 2021; Kiley, 2020). Given that there remains an objective link between contextual factors and employment outcomes in South Africa, these results likely say more about how individuals perceive certain factors rather than any potential causal relationships between context and employability (Baldry, 2016; Tivaringe, 2019). Additionally, these results emphasise the importance of distinguishing between subjective perceptions and objective realities in the employability literature. Moreover, they highlight the need to integrate objective measures for contextual factors in future employability research, especially when seeking to understand how context influences employment outcomes.

5.4 Limitations and Future Directions

This study had a few limitations that should be considered when interpreting the findings of this research and serve as a foundation for future research.

Design

As with much of perceived employability research (Harari et al., 2021), the cross-sectional, correlational design prevented any causal inferences from being drawn. However, the correlational design provided a necessary and resource-efficient starting point to establish support for the hypothesised relationships (Spector, 2019). Although the cross-section design precludes temporal insights, the results reflect participants' subjective evaluations at a given point in time, which enabled the researcher to test the novel hypotheses and support prior research findings. Given these limitations, more work needs to be done to understand the relationship between perceived employability and CSE and approach-avoidance

temperaments further. It may be useful to adopt longitudinal designs to determine if or how these self-evaluations change over time. Certainly, there is a need for experimental and quasi-experimental research in the employability field. However, perceived employability and its predictors may be difficult to manipulate experimentally, given that they are internal self-evaluations. Therefore, it was prudent to clarify the current knowledge of how individual differences impact perceived employability first before conducting experimental research.

Generalisability

Secondly, the use of purposive, non-probability sampling leads to generalisability concerns. The target population for the study was comprised of South African university students; thus, purposive sampling techniques were necessary to reach participants. Despite these efforts, the sample was not representative of the South African student population (e.g., Black students were underrepresented).[8] Considering that race was associated with some of the variables (i.e., job search behaviour and SES), this limitation must be acknowledged. Future research should focus on increasing representativeness by employing different sampling techniques, such as quota sampling, to prevent similar issues (Polit & Beck, 2010).

Moreover, employability is not only a South African issue, but it was studied within a South African context, which should be considered when generalising these results. With regard to perceived employability and CSE, WEIRD countries have shown a similar pattern to non-WEIRD countries (Henrich et al., 2010; Onyishi et al., 2015; Rodrigues et al., 2019). However, the generalisability of the findings on approach-avoidance temperaments and contextual factors is unknown. It would be of particular interest to examine whether the novel relationships in this research are reproduced in other studies. Further research might benefit from replicating this study in similar contexts (e.g., developing countries or countries with high unemployment) to determine how broadly these findings might be applied.

Common Method Bias

Another methodological limitation is the threat of common method bias. Method bias refers to when the method of measurement impacts the estimates of a construct's reliabilities and validities as well as the covariation between the constructs (Podsakoff et al., 2003, 2012). In this study, the constructs were predominantly measured using self-report, Likert scales and the same data source, all of which can lead to common method bias. According to Podsakoff

[8] In 2022, 76.4% of all students in SA were Black African students and only 11,4% were White students (Stats SA, 2022).

et al.'s (2003, 2012) recommendations, the researcher attempted to limit the threat of common method bias by implementing procedural strategies, such as assuring participants of response anonymity, using different numbers of scale points and improving scale items to limit ambiguity. A behavioural measure (job search behaviours) was also included to increase the diversity in measurement methods. It is challenging to measure self-evaluations using methods other than self-report, so a possible solution for future research in this field is to include more objective measures when studying perceived employability, such as skills or behavioural variables (Jordan & Troth, 2020).

Measurement

Some measurement limitations must be acknowledged in this study. One of the challenges encountered was choosing a suitable instrument for perceived employability, as this scale was anticipated to be a possible limitation if not chosen appropriately. There are several operationalisations of the construct, and the psychometric properties of these scales are often not reported, making the applicability and rigour of these instruments uncertain (Neroorkar, 2022; van Harten et al., 2022). To prevent this limitation, the researcher chose the self-perceived employability scale (Rothwell et al., 2008), a widely utilised, validated scale explicitly developed for university students. She also explored the scale's validity and reliability in this sample. Despite efforts to mitigate measurement limitations, the scale still had complications. Items were removed due to validity and reliability concerns, reducing the scale from 16 to 13 items. Moreover, the original four-factor structure was not replicated; instead, a three-factor structure was observed (Rothwell et al., 2008, 2009). These measurement issues are not singular to this study; instead, they represent a persistent challenge across the literature (Baluku et al., 2021; Goodman & Tredway, 2016; Hu et al., 2022; Neroorkar, 2022; Tredway, 2012; van Harten et al., 2022).

The researcher joins with others who call for future perceived employability research to bring clarity to what is known to be a "fuzzy" construct (Forrier et al., 2015). Specifically, it is recommended that future studies explicitly operationalise employability and report the psychometric properties of any employability scale used. In addition, validation studies should be conducted on employability scales, focusing on the psychometric properties of the scales and examining why some scales are effective while others are not. For example, studies should explore how factors such as sample, context, and method impact the validity and reliability of employability scales (van Harten et al., 2022). In this way, the measurement limitations of the perceived employability scale can be mitigated in the future.

Similarly, some concerns about the discriminant validity of the Approach-avoidance Temperament Questionnaire (ATQ) emerged from this research. Firstly, avoidance temperaments were strongly associated with CSE in this study (r = -.64). The similarity between avoidance temperaments and emotional stability (a dimension of CSE) has raised concerns in the past; however, scholars argue that CSE is a distinct measure of an individual's general self-evaluations (Judge et al., 2003). The results also showed that individuals reported characteristics of approach and avoidance temperaments simultaneously, raising more questions about the validity of the ATQ. Whether this is a measurement or conceptual issue remains to be determined. Given the scarcity of research on approach-avoidance temperaments and its potential to offer valuable theoretical insights, the measurement of approach-avoidance temperaments is an important area for further research. As a starting point, validation studies of the convergent and discriminant validity are recommended.

5.5 Practical Implications

The importance of individual differences in shaping employability perceptions has practical implications for several stakeholders.

First, prospective job seekers' employment outcomes may be improved by a better understanding of their CSE and approach-avoidance temperaments. If job seekers focus on developing their perceptions of their self-worth and capabilities (CSE), they may perceive themselves as more capable of obtaining a job. Considering that individuals are known to act on their perceptions, this may prove valuable for job seekers in their job search process (Vanhercke et al., 2014). Similarly, job seekers may find value in understanding their approach-avoidance temperament. By understanding how they evaluate information, job seekers can become more aware of how their beliefs or attitudes towards job search are being shaped.

Moreover, understanding one's approach or avoidance tendencies could help job seekers identify whether they need to learn regulatory mechanisms like goal setting to improve their job search (Elliot & Thrash, 2002, 2010). For example, avoidant job seekers might become more aware of their tendency to react negatively to job application rejections. Without this awareness, they may be discouraged and avoid applying for additional positions. Alternatively, with an awareness of these tendencies, they could set a goal to apply for a certain number of positions irrespective of the outcomes. It is possible, therefore, that job seekers may improve their employment outcomes by increasing their awareness of these individual differences.

Second, education institutions and career counsellors or coaches may also utilise individual differences in their interventions and processes to assist students in preparing for the labour market. Education institutions may use CSE and approach-avoidance temperaments as part of a screening process to identify individuals in need of additional assistance to develop their employability. Relatedly, career counsellors or coaches could include CSE and approach-avoidance questionnaires as part of their intake process to understand individuals' CSE and approach-avoidance temperaments and adapt their sessions accordingly (Frigerio & Rix, 2021; Yates, 2013). For example, depending on the results of these questionnaires, they could include different awareness-creation or goal-setting techniques in their sessions with clients (Yates, 2013). Thus, incorporating individual difference concepts into employability-related interventions and processes may help education institutions and career counsellors develop students' employability and effectively prepare them for the labour market.

Accordingly, it may be beneficial for practitioners to consider approach-avoidance concepts and CSE when designing and administering interventions. Effective job search interventions require several components (Liu et al., 2014). In addition to developing job search skills, research shows that interventions also require motivation-enhancing techniques such as improving goal setting and self-efficacy. Previous experimental research has found that approach-avoidance concepts and self-efficacy (a dimension of CSE) are applicable to the motivational components of job search, specifically goal orientations (Noordzij et al., 2013). Therefore, practitioners may find value in incorporating approach-avoidance concepts and CSE when developing employability interventions.

Conclusion

Employability remains a critical issue of practical and theoretical significance (Akkermans, Le Blanc, et al., 2024). The labour market is becoming increasingly more difficult for new entrants as traditional understandings of what it means to be employable are constantly shifting (Baluku et al., 2021; De Vos et al., 2021). As a result, the university students of today will be faced with unprecedented challenges once they graduate and enter the labour market (Chiesa et al., 2018; Harrison et al., 2021; Petruzziello et al., 2022; Schettino et al., 2022; Thijssen et al., 2008). In response to these issues, this study sought to advance the understanding of employability among South African university students by examining their employability perceptions.

This study adds to the perceived employability discourse through three main contributions. Firstly, the results show that perceived employability is influenced by individuals' general self-appraisals (CSE) and their approach-avoidance temperaments. This augments current knowledge and highlights the critical role that individual differences play in shaping employability perceptions (Harari et al., 2021). Second, the study provides empirical support for the integration of perceived employability into an approach-avoidance framework (Elliot & Thrash, 2002). The framework provides insight into the mechanisms through which CSE and approach-avoidance temperaments influence perceived employability, enhancing the knowledge of the psychological underpinnings involved in developing individuals' employability perceptions. Lastly, exploratory research on contextual factors, such as SES, gender, and race, presented further insights into the role of context in employability perceptions. Therefore, this study expands the understanding of how individual and contextual factors shape employability perceptions in South African university students (Botha, 2021; Goodman & Tredway, 2016; Koloba, 2017; Pitan & Muller, 2019a, 2019b; Weaver, 2021). It is hoped that these contributions will be valuable for future theoretical investigations on employability and offer valuable insights for job seekers, educational institutions, and practitioners.

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Appendix A: Measurement Scales

Table A1

Perceived Employability Scale (Rothwell et al., 2008)

Below are some statements that may describe how you think about yourself right now. Please indicate your level of agreement or disagreement with the following statements. (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Somewhat agree, 5 = Agree, 6 = Strongly agree)						
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
1a. I achieve high grades in relation to my studies.	1	2	3	4	5	6
1b. I regard my academic work as top priority.	1	2	3	4	5	6
2a. Employers are eager to employ graduates from my university.	1	2	3	4	5	6
2b. The status of my university is a significant asset to me in my job search. *	1	2	3	4	5	6
3a. Employers specifically target my university in order to recruit individuals from my subject area(s).	1	2	3	4	5	6
3b. My university has an outstanding reputation in my field(s) of study.	1	2	3	4	5	6
4a. A lot more people apply for my degree than there are places available.	1	2	3	4	5	6
4b. My chosen subject(s) rank(s) highly in terms of social status.	1	2	3	4	5	6
5a. People in the career I am aiming for are in high demand in the external labour market.	1	2	3	4	5	6
5b. My degree usually leads to a career that is perceived as highly desirable.*	1	2	3	4	5	6
6a. There is generally a strong demand for graduates at the present time.	1	2	3	4	5	6
6b. There are plenty of job vacancies in the geographical area where I am looking.	1	2	3	4	5	6
7a. I can easily find out about opportunities in my chosen field.	1	2	3	4	5	6

7b. The skills and abilities that I possess are what employers are looking for.	1	2	3	4	5	6
8a. I am generally confident of success in job interviews and selection events.	1	2	3	4	5	6
8b. I feel I could get any job so long as my skills and experience are reasonably relevant.	1	2	3	4	5	6

Note. * reworded items; original items were: 2b. The status of my university is a significant asset to me in job seeking; 5b. My degree is seen as leading to a specific career that is generally perceived as highly desirable.

Table A2

Amended Job Search Behaviour Scale (Blau, 1993; D. J. Q. Chen & Lim, 2012)

Below are several statements about you with which you may agree or disagree. Please indicate your level of agreement or disagreement with the following statements. (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Somewhat agree, 5 = Agree, 6 = Strongly agree)						
Preparatory job search						
In the last three months, I...						
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
1. … read job ads in newspapers, professional magazines, or online.	1	2	3	4	5	6
2. …prepared/ revised my CV.	1	2	3	4	5	6
3. …read books or articles about getting a job.	1	2	3	4	5	6
4. …talked to friends or relatives about possible job leads.	1	2	3	4	5	6
5. …spoke with previous employers or business acquaintances about possible job leads.	1	2	3	4	5	6
6. …used the internet to locate job openings.	1	2	3	4	5	6
Active job search						
In the last three months, I...						
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
1. ...posted my CV on recruitment websites.	1	2	3	4	5	6
2. …sent my CV to potential employers.	1	2	3	4	5	6
3. … filled out a job application.	1	2	3	4	5	6
4. … had an interview with a prospective employer.	1	2	3	4	5	6
5. …contacted an employment agency or an executive search firm.	1	2	3	4	5	6
6. …telephoned, emailed or messaged a prospective employer.	1	2	3	4	5	6

7. …attended company recruitment talks.	1	2	3	4	5	6
8. …attended career exhibitions or job fairs.	1	2	3	4	5	6

Table A3

Core Self-Evaluation Scale (Judge et al., 2003)

Below are several statements about you with which you may agree or disagree. Please indicate your level of agreement or disagreement with the following statements. (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree)					
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I am confident I get the success I deserve in life.	1	2	3	4	5
2. Sometimes I feel depressed.	1	2	3	4	5
3. When I try, I generally succeed.	1	2	3	4	5
4. Sometimes when I fail I feel worthless.	1	2	3	4	5
5. I complete tasks successfully.	1	2	3	4	5
6. Sometimes, I do not feel in control of my work.	1	2	3	4	5
7. Overall, I am satisfied with myself.	1	2	3	4	5
8. I am filled with doubts about my competence.	1	2	3	4	5
9. I determine what will happen in my life.	1	2	3	4	5
10. I do not feel in control of my success in my career.	1	2	3	4	5
11. I am capable of coping with most of my problems.	1	2	3	4	5
12. There are times when things look pretty bleak and hopeless to me.	1	2	3	4	5

Table A4

Approach and Avoidance Temperaments (Elliot & Thrash, 2002)

Below are several statements about you with which you may agree or disagree. Please indicate your level of agreement or disagreement with the following statements. (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Somewhat agree, 5 = Agree, 6 = Strongly agree)						
	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
Avoidance temperament						
1. By nature, I am a very nervous person.	1	2	3	4	5	6
3. It doesn't take much to make me worry.	1	2	3	4	5	6
6. I feel anxiety and fear very deeply.	1	2	3	4	5	6
7. I react very strongly to bad experiences.	1	2	3	4	5	6
9. When it looks like something bad could happen, I have a strong urge to escape.	1	2	3	4	5	6
12. It is easy for me to imagine bad things that might happen to me.	1	2	3	4	5	6
Approach temperament						
2. Thinking about the things I want really energizes me.	1	2	3	4	5	6
4. When I see an opportunity for something I like, I immediately get excited.	1	2	3	4	5	6
5. It doesn't take a lot to get me excited and motivated.	1	2	3	4	5	6
8. I'm always on the lookout for positive opportunities and experiences.	1	2	3	4	5	6
10. When good things happen to me, it affects me very strongly.	1	2	3	4	5	6

11. When I want something, I feel a strong desire to go after it.	1	2	3	4	5	6

Contextual Measures

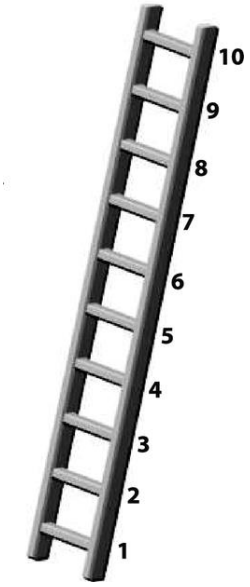
Table A5

Demographic Variables

What year of study are you in?
1st year
2nd year
3rd year
4th year
5th year
6 or above
When do you intend to graduate?
2022 – onwards
Have you ever worked in paid employment for more than 20 hours per week?
Yes/No
Please indicate your age
Participants were given a drop-down box to select their age.
Please indicate your gender
Female
Male
Transgender female
Transgender male
Gender variant/non-conforming
Other
Prefer not to answer
Please indicate your race
African
Asian
Coloured
Indian
White
Prefer not to answer
Please indicate your field of study
Commerce
Education
Engineering and EBE
Health Sciences
Humanities
Law
Science
Other

Table A6

Socio-Economic Status Scale

MacArthur Scale of Subjective Socio-economic Status (Adler et al., 2000)
Think of this ladder as representing where people stand in our society. At the top of the ladder are the people who are the best off, those who have the most money, most education, and best jobs. At the bottom are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Select the step (1-10) of the ladder that best represents where you think you stand on the ladder.

Objective SES: Funder Type
Please indicate who funds your studies below
• NSFAS bursary • Other bursary (e.g., a private company) • Parents/caregiver/self-funded
Objective SES: Parental Education
Please specify the highest level of education earned by a parent or primary caregiver. *You only need to indicate the level of education of the parent/caregiver with the highest level of education. For example, if one parent has a matric certificate, but the other has a Bachelor's degree, select "University degree" below.*
• Completed grade 9 • Completed grade 12 (matric) • Post-secondary school training (vocational training) • University degree (Bachelor's degree) • Honours/Masters/Doctorate

Appendix B: Data Preparation Flow Diagram (Tabachnick and Fidell, 2013)

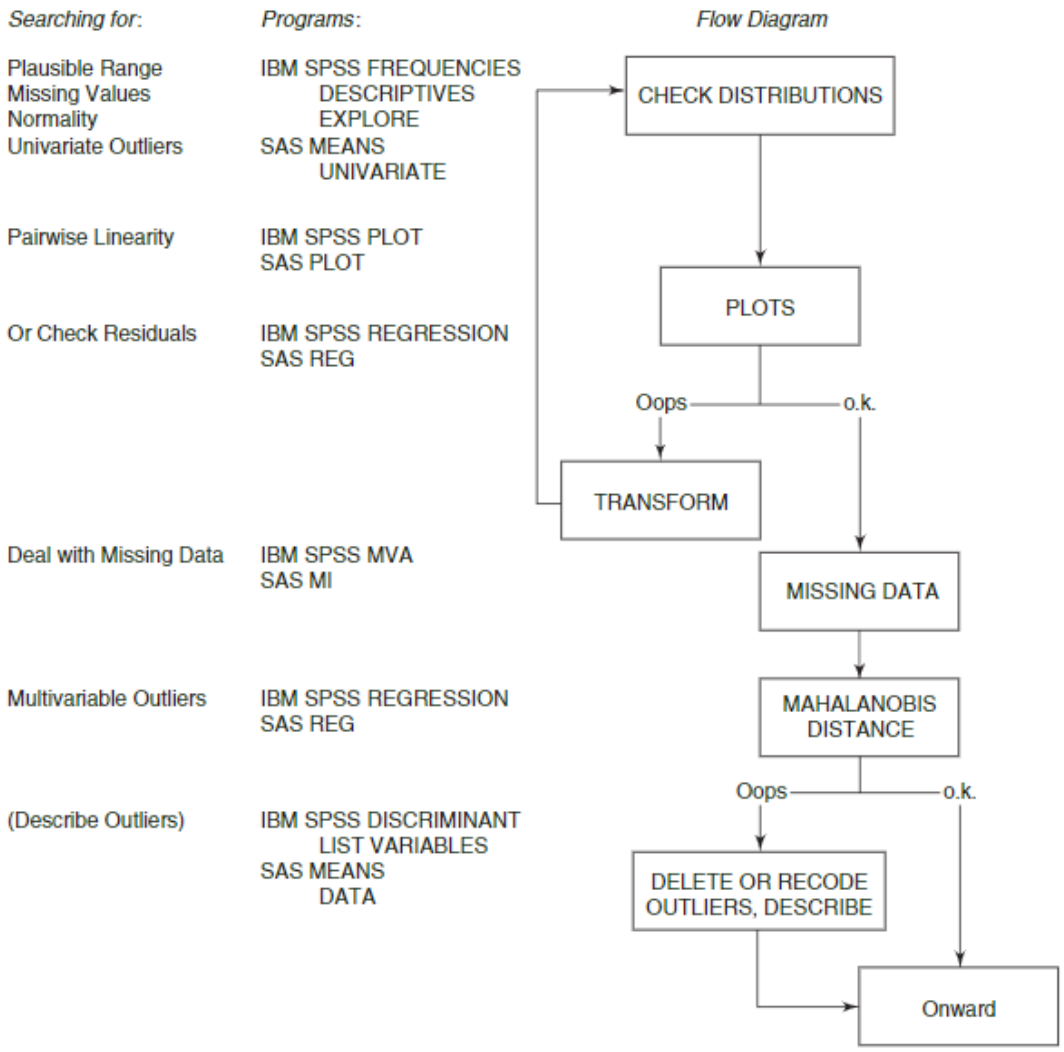


FIGURE 4.8 Flow diagram for screening ungrouped data.

Appendix C: Outlier Boxplots

Figure C1

Perceived Employability Scores Boxplot

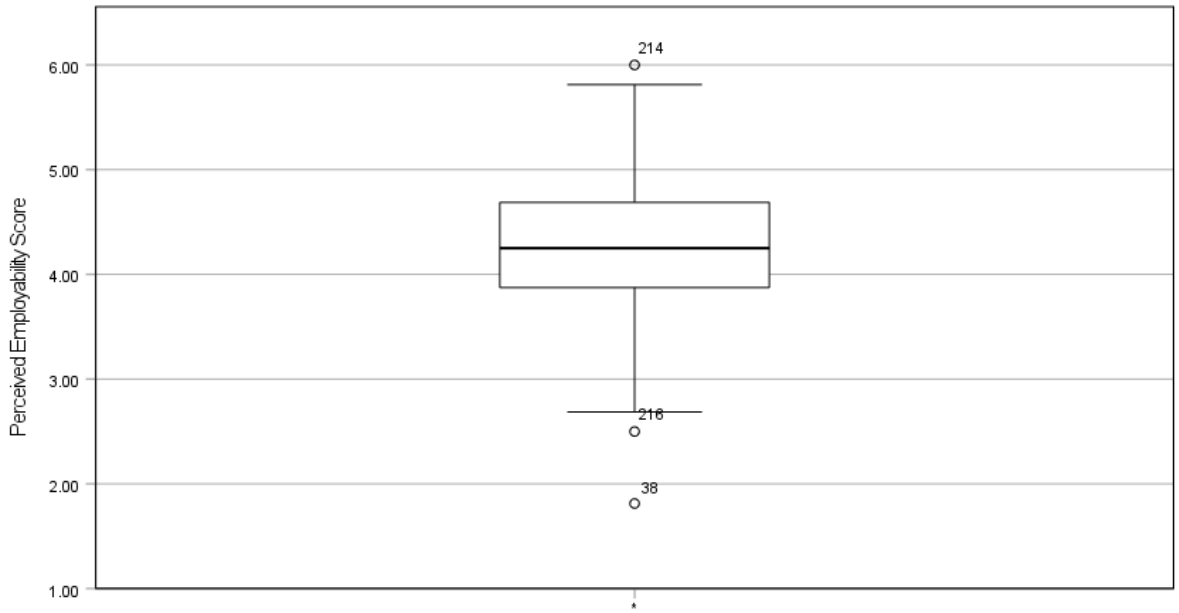


Figure C2

Avoidance Temperament Scores Boxplot

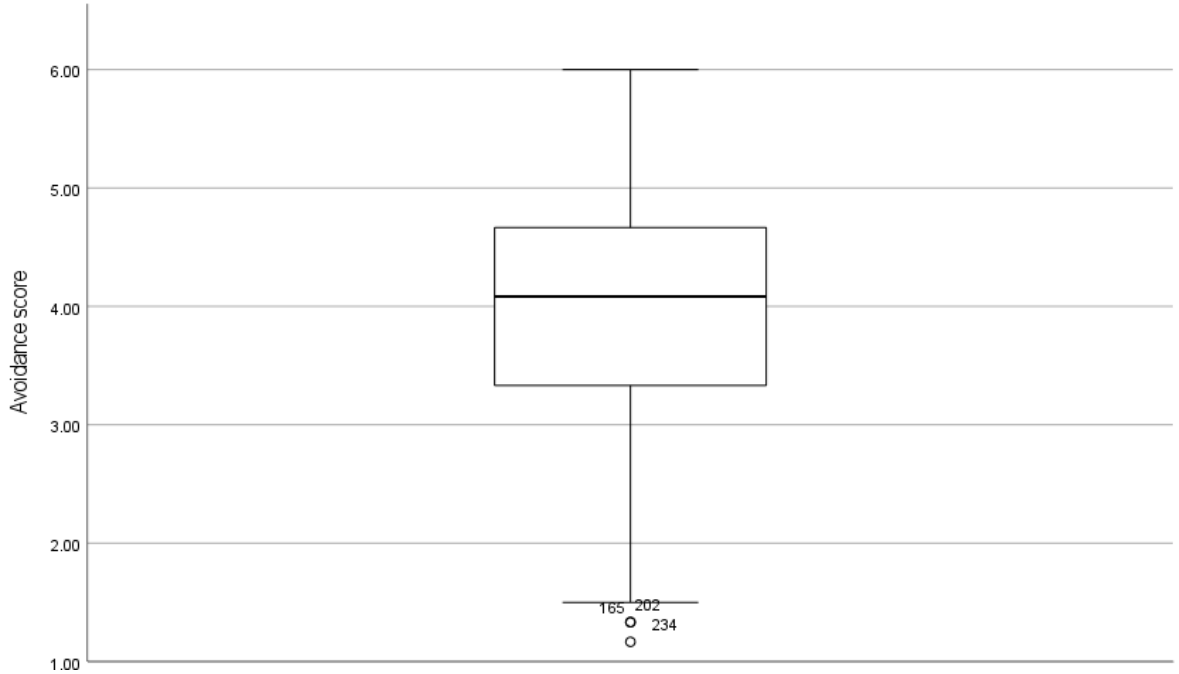


Figure C3

Approach Temperament Scores Boxplot

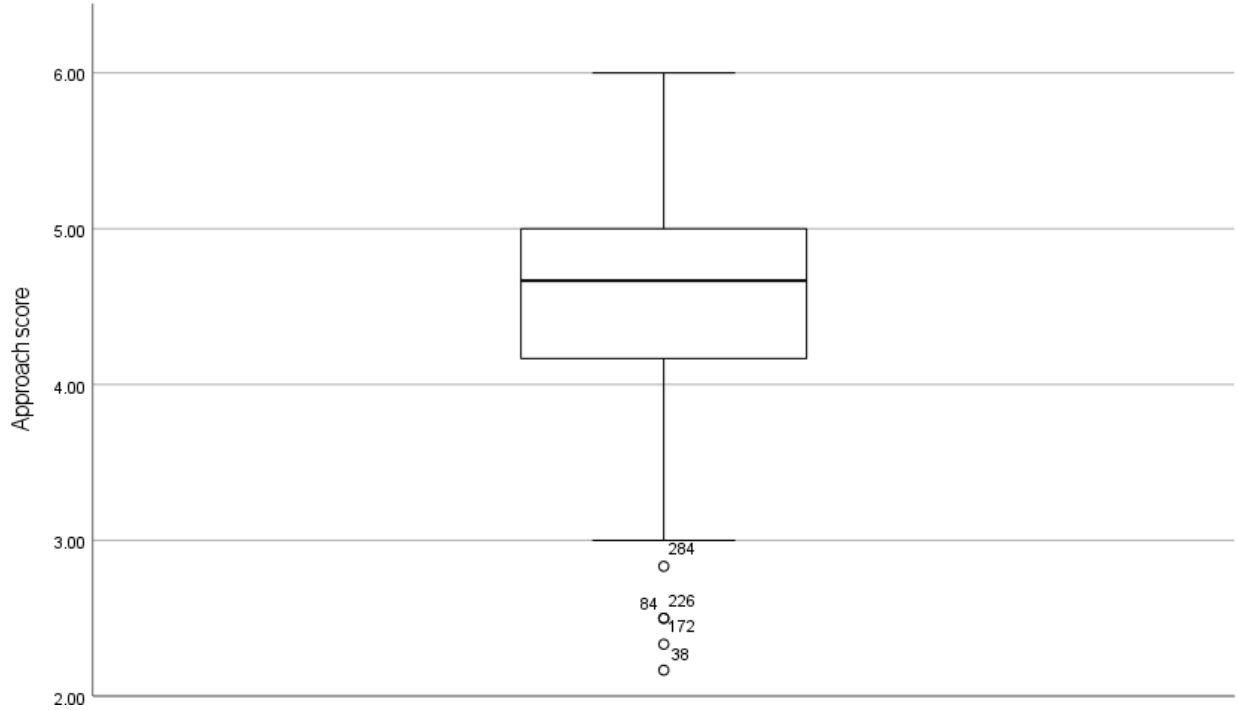
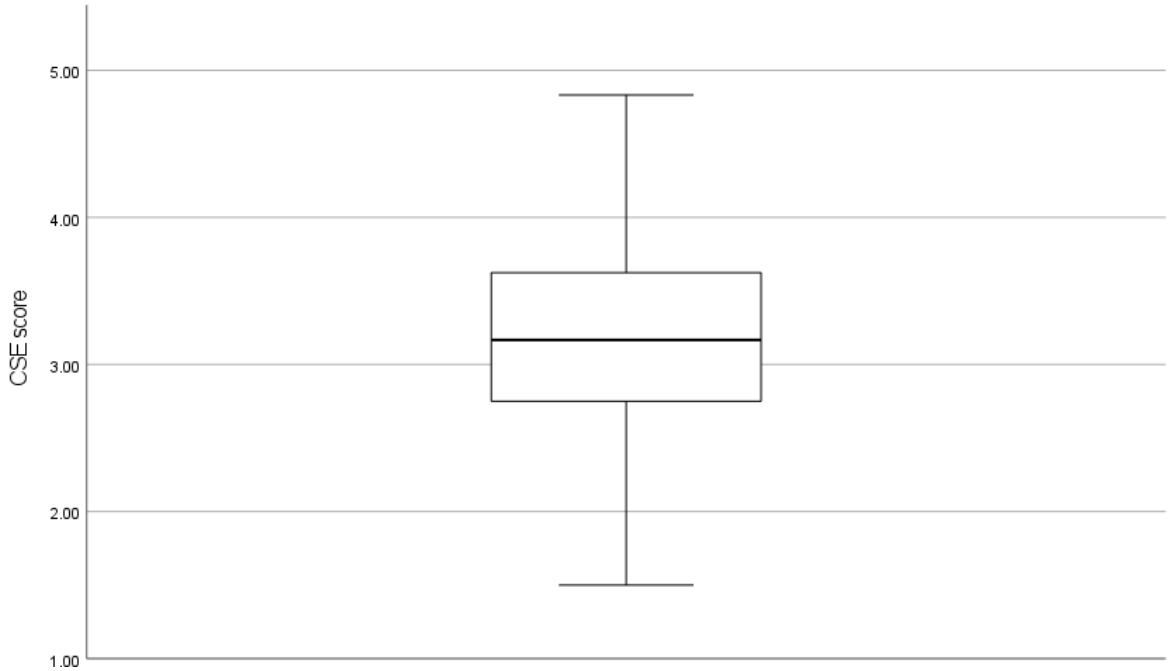


Figure C4

Core Self-Evaluation Scores Boxplot



Appendix D: Inadequate Responses

Careless Responding and Outliers

To identify inadequate (i.e., inattentive or dishonest) responses, a combination of supporting evidence was examined. Responses that showed strong evidence for poor responding were removed from the dataset. Firstly, the data were checked for possible careless responding by running the careless package in R using a Long-string index, which identifies consecutive strings of identical responses given by participants (Curran, 2016). By identifying when respondents selected the same response repeatedly, the analysis can determine if a respondent was likely responding with little attention or possibly faking their answers. Given that there are no established cut-off scores for this method, a combination of high total long-string (> 14) and average long-string (> 2) scores were noted (Curran, 2016). Then, the results of the long-string analysis and the outlier analyses were looked at together. Response time is another criterion for detecting poor responses; thus, the response times were noted as well (the survey was expected to take approximately 10 minutes; Huang et al., 2012). Based on this evidence, five responses were removed (see Table D1). The job search scales were not considered in this analysis as many respondents may not have engaged in any job search activities and thus gave the same response for every item.

Table D1

Inadequate Responses and Outliers Removed

Case no.	Univariate Tutlier	Multivariate Outlier	Careless	Response Time (seconds)	Decision for Removal
45	Perceived Employability & Approach	No	Yes	115	Strong supporting evidence for dishonest or careless responding.
193	No	No	Yes	195	Many of the same responses and strong evidence for dishonest responding.
251	Perceived Employability	No	Yes	390	Evidence for dishonest/careless responding. Long-string of 16 same responses.
281	No	Yes	No	401	Based on cut-off for multivariate outliers.
331	No	No	Yes	120	Strong supporting evidence for dishonest/careless responding.

Note. Careless = high long-string and/or average long-string.

Appendix E: Data Preparation Figures

Figure E1

Standardised Residual Plot for Perceived Employability

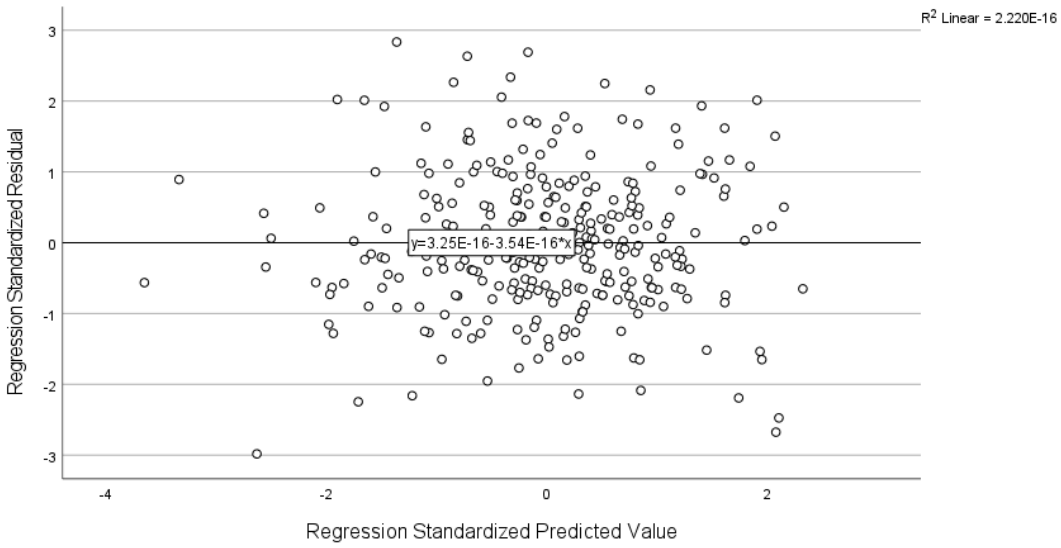


Figure E2

Pairwise Scatterplot of Variables

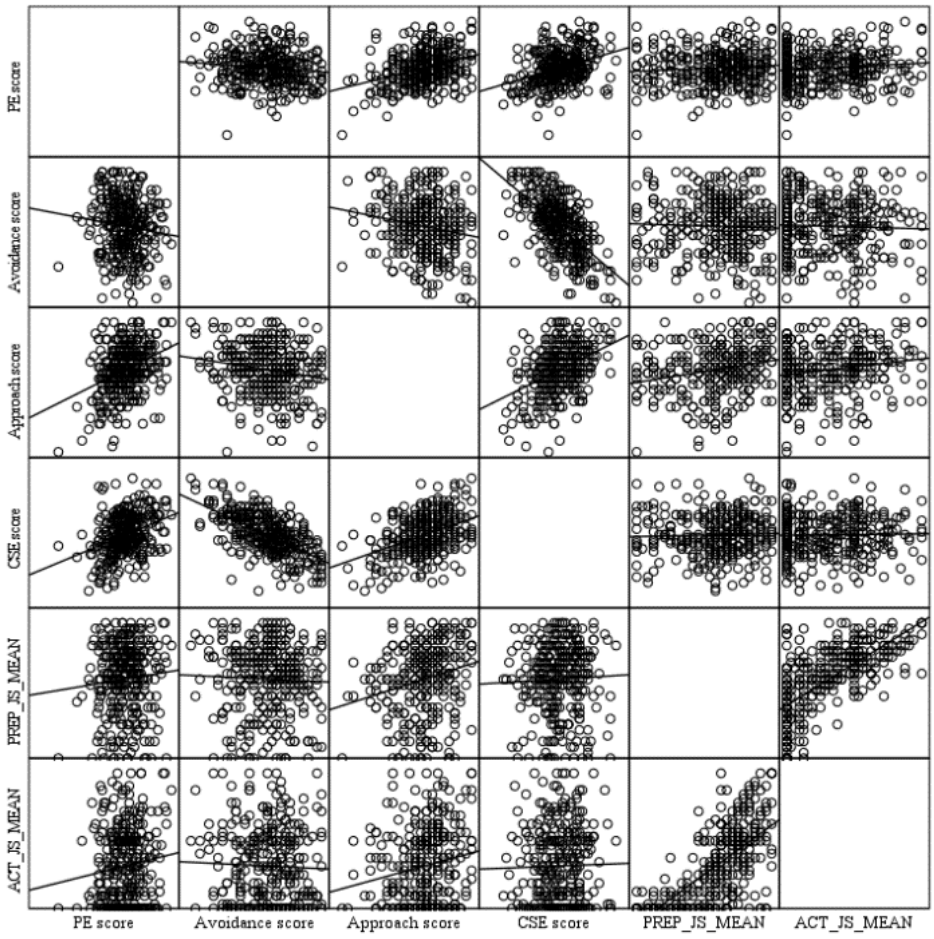


Figure E3

P-P Plot of Perceived Employability Standardised Residuals

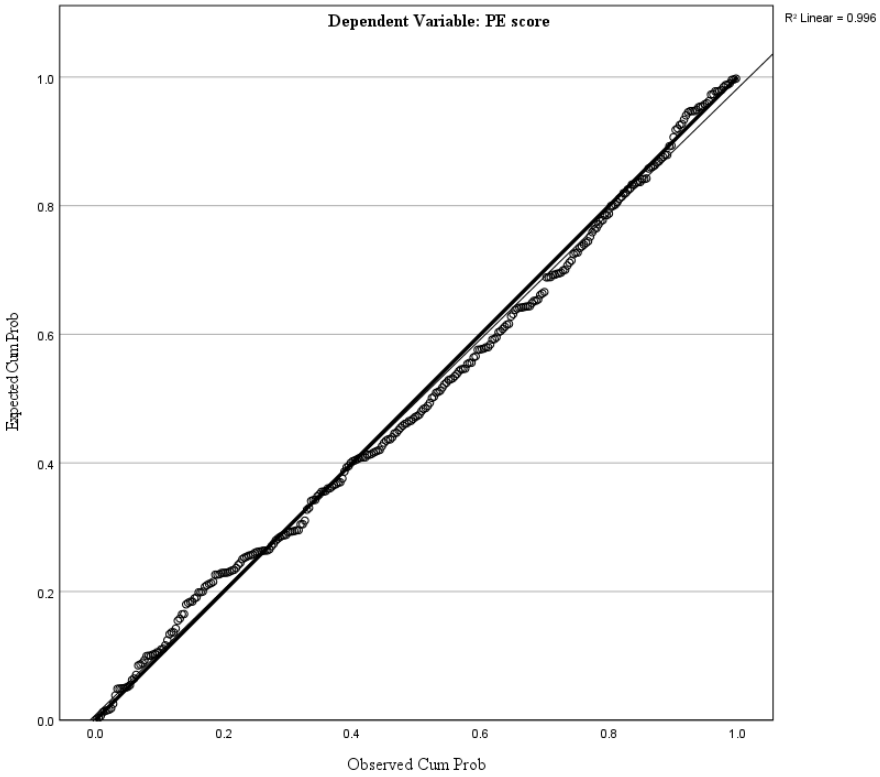
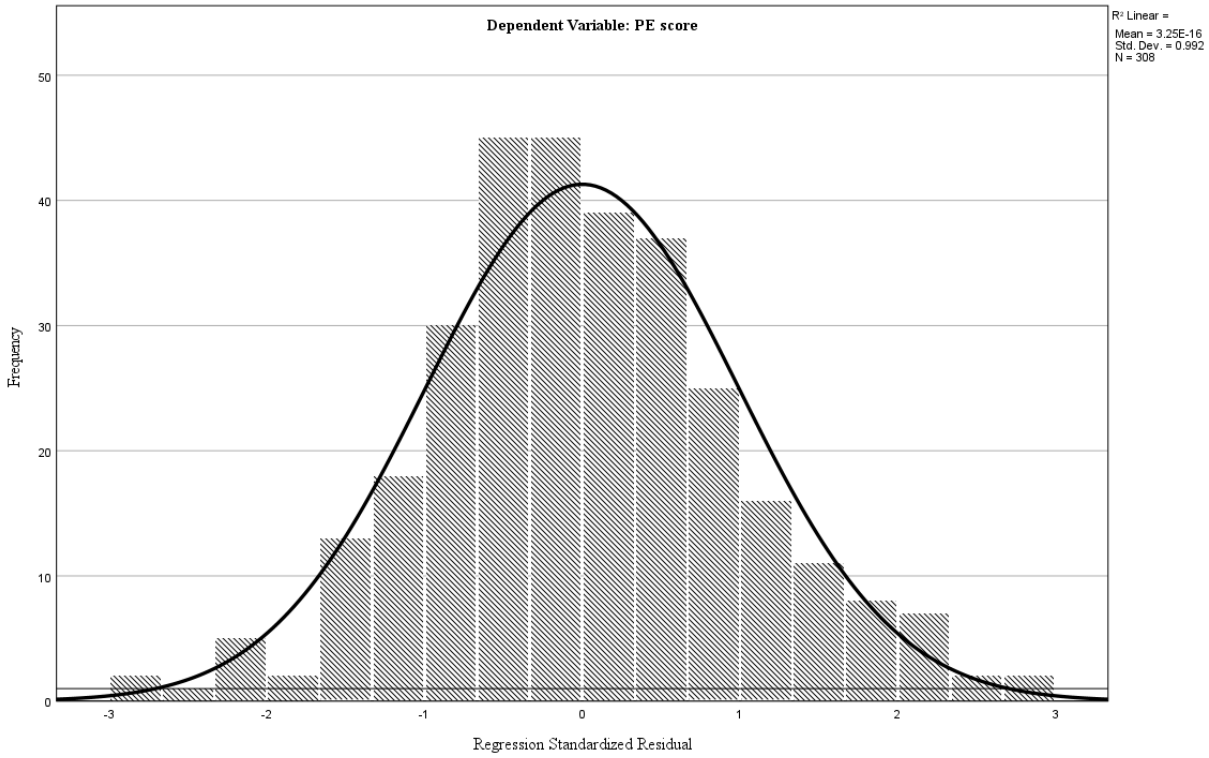


Figure E4

Histogram of Perceived Employability Standardised Residuals



Appendix F: Exploratory Factor Analysis Results

Table F1

Factor Loadings for the 16-Item Perceived Employability Scale Following PAF

Item No.	Item	1	2	3	4	5
1	I achieve high grades in relation to my studies.					.490
2	I regard my academic work as top priority.			.847		
3	Employers are eager to employ graduates from my university.		.659			
4	The status of my university is a significant asset to me in my job search.		.607			
5	Employers specifically target my university in order to recruit individuals from my subject area(s).		.562			
6	My university has an outstanding reputation in my field(s) of study.		.550			
7	A lot more people apply for my degree than there are places available.					
8	My chosen subject(s) rank(s) highly in terms of social status.				-.799	
9	People in the career I am aiming for are in high demand in the external labour market.	.585				
10	My degree usually leads to a career that is perceived as highly desirable.	.346			-.565	
11	There is generally a strong demand for graduates at the present time.	.575				
12	There are plenty of job vacancies in the geographical area where I am looking.	.734				
13	I can easily find out about opportunities in my chosen field.	.443				
14	The skills and abilities that I possess are what employers are looking for.					.378
15	I am generally confident of success in job interviews and selection events.					.728
16	I feel I could get any job so long as my skills and experience are reasonably relevant.	.350				
Eigenvalue		4.58	1.57	1.30	1.22	1.10
Explained Variance (%)		28.68	9.84	8.14	7.64	6.87

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation with Kaiser Normalisation; Rotation converged in 27 iterations.

Table F2

Factor Loadings for the 15-Item Perceived Employability Scale following PAF

Item No.	Item	1	2	3	4
1	I achieve high grades in relation to my studies.				.656
2	I regard my academic work as top priority.		.217		.239
3	Employers are eager to employ graduates from my university.		.605		
4	The status of my university is a significant asset to me in my job search.		.595		
5	Employers specifically target my university in order to recruit individuals from my subject area(s).		.539		
6	My university has an outstanding reputation in my field(s) of study.		.607	-.214	
8	My chosen subject(s) rank(s) highly in terms of social status.			-.733	
9	People in the career I am aiming for are in high demand in the external labour market.	.656			
10	My degree usually leads to a career that is perceived as highly desirable.	.306		-.570	
11	There is generally a strong demand for graduates at the present time.	.570			
12	There are plenty of job vacancies in the geographical area where I am looking.	.585			
13	I can easily find out about opportunities in my chosen field.	.597			
14	The skills and abilities that I possess are what employers are looking for.	.476			.218
15	I am generally confident of success in job interviews and selection events.	.589			.380
16	I feel I could get any job so long as my skills and experience are reasonably relevant.	.520			
Eigenvalue		4.57	1.56	1.27	1.16
Explained Variance (%)		30.43	10.43	8.49	7.79

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation with Kaiser Normalisation; Rotation converged in 9 iterations.

Table F3

Factor Loadings for the 14-Item Perceived Employability Scale Following PAF

Item No.	Item	1	2	3	4
1	I achieve high grades in relation to my studies.				.413
3	Employers are eager to employ graduates from my university.		.652		
4	The status of my university is a significant asset to me in my job search.		.599		
5	Employers specifically target my university in order to recruit individuals from my subject area(s).		.579		
6	My university has an outstanding reputation in my field(s) of study.		.552	-.208	
8	My chosen subject(s) rank(s) highly in terms of social status.			-.747	
9	People in the career I am aiming for are in high demand in the external labour market.	.610			
10	My degree usually leads to a career that is perceived as highly desirable.			-.661	
11	There is generally a strong demand for graduates at the present time.	.632			
12	There are plenty of job vacancies in the geographical area where I am looking.	.759			
13	I can easily find out about opportunities in my chosen field.	.420			
14	The skills and abilities that I possess are what employers are looking for.	.214			.384
15	I am generally confident of success in job interviews and selection events.				.755
16	I feel I could get any job so long as my skills and experience are reasonably relevant.	.378			.222
Eigenvalue		4.50	1.56	1.21	1.10
Explained Variance (%)		32.20	11.14	8.65	7.86

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation with Kaiser Normalisation; Rotation converged in 10 iterations.

Table F4

Global Construct of Perceived Employability

Subscale	Factor loading
University	.519
Field of Study	.668
Labour Market	.756

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation.

Table F5

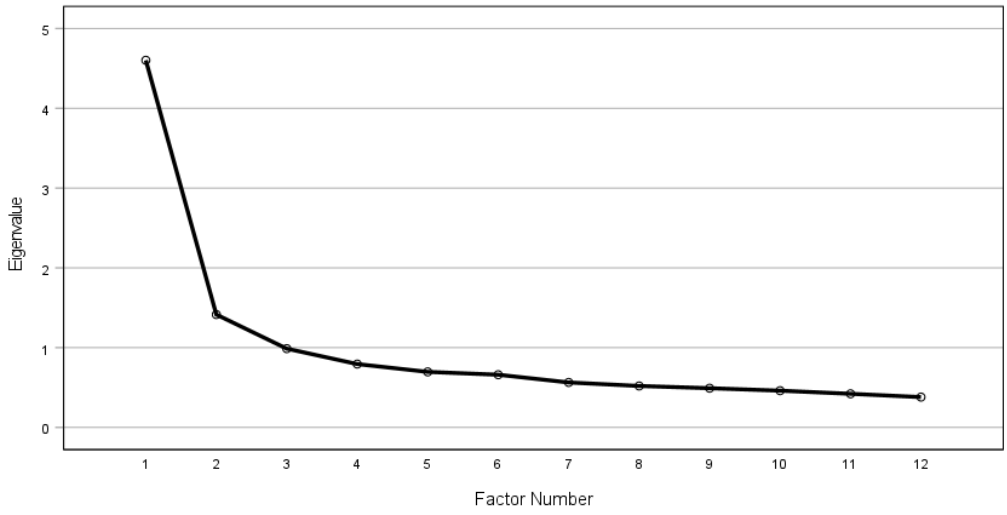
Unrotated Eigenvalues and Explained Variances for the 12-Item Core Self-Evaluation Scale

Factor	Eigenvalue	Explained Variance (%)
1	4.60	38.35
2	1.41	11.79

Note. The extraction method was Principal Axis Factoring with a direct oblimin rotation.

Figure F1

Scree Plot for Core Self-Evaluation Scale



Appendix G: Assumption Testing

Figure G1

Standardised Residuals

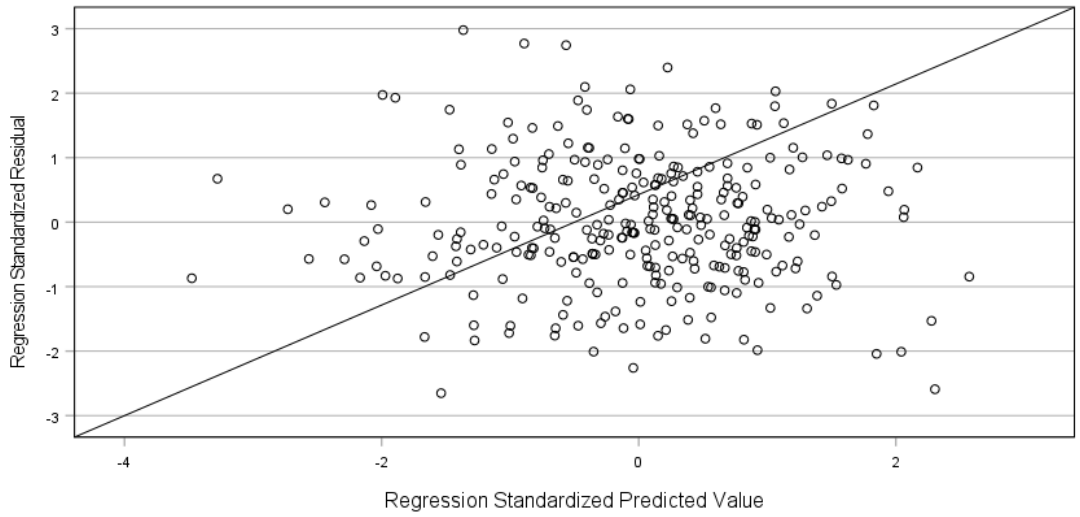


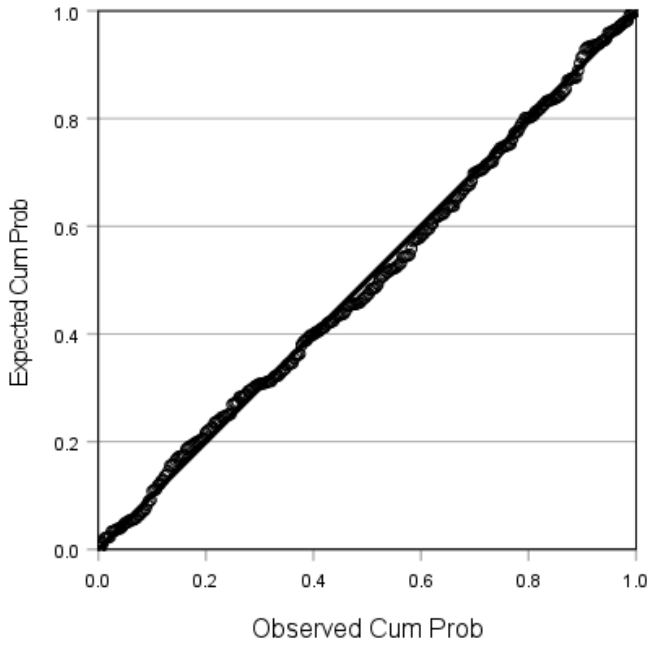
Table G1

Skewness and Kurtosis Statistics for Normality

	Skewness		Kurtosis	
	Statistic	SE	Statistic	SE
Self-Perceived Employability (reduced)	.021	.140	-.190	.279
Avoidance	-.254	.140	-.332	.279
Approach	-.413	.140	.120	.279
Core Self-Evaluations	-.053	.140	-.010	.279

Figure G2

Normal P-P Plot of Regression Standardised Residuals



Note. Dependent variable = Self-Perceived Employability (reduced)

Figure G3

Normal P-P Plot of Self-Perceived Employability (Reduced)

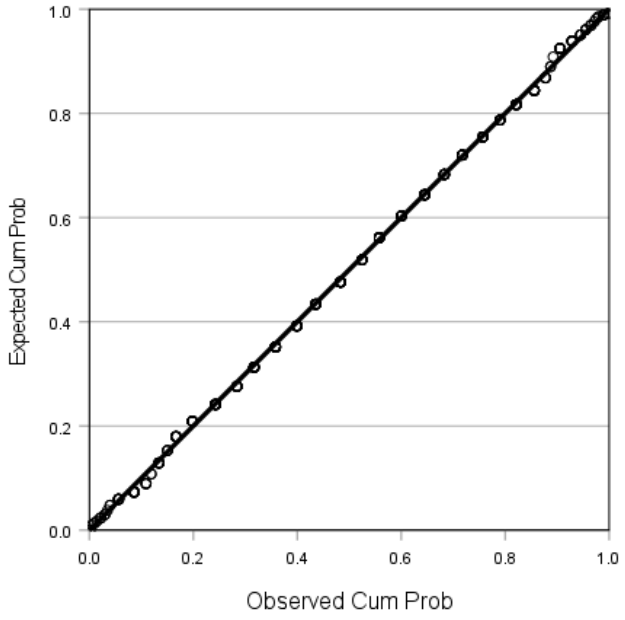


Figure G4

Normal P-P Plot of Core Self-Evaluations

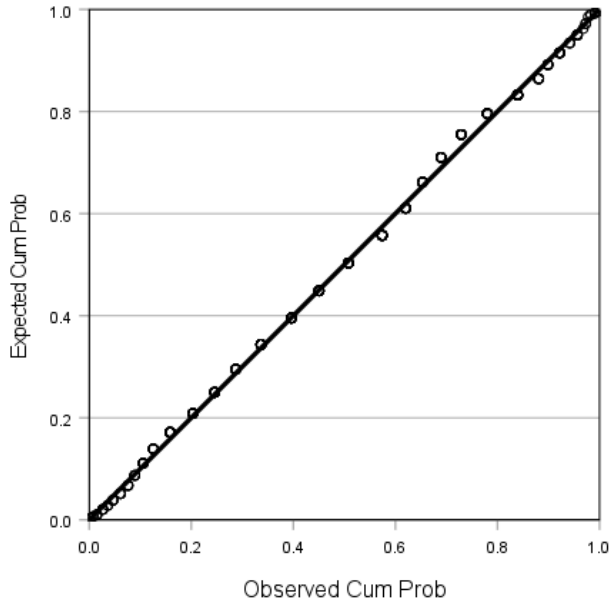


Figure G5

Normal P-P Plot of Approach Temperament

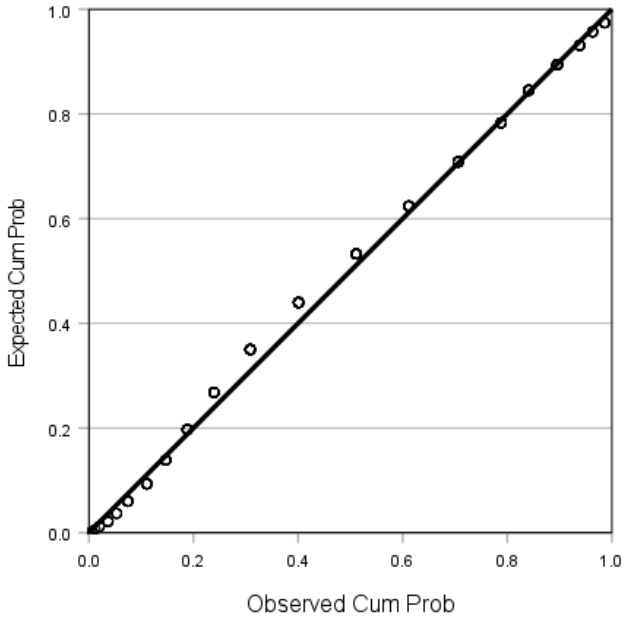


Figure G6

Normal P-P Plot of Avoidance Temperament

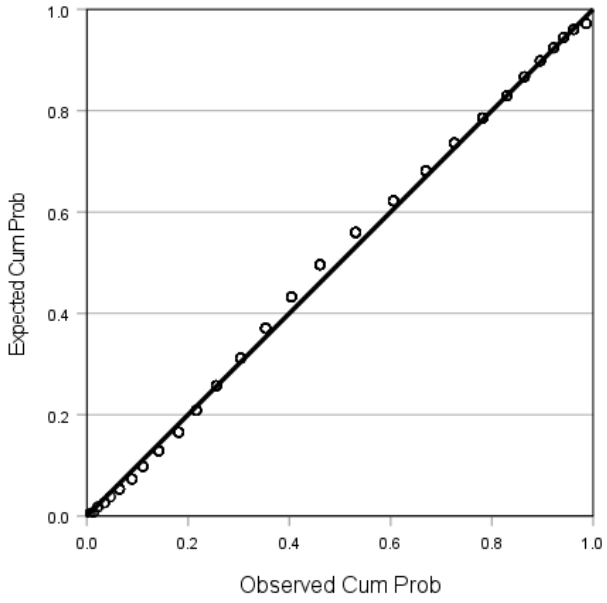
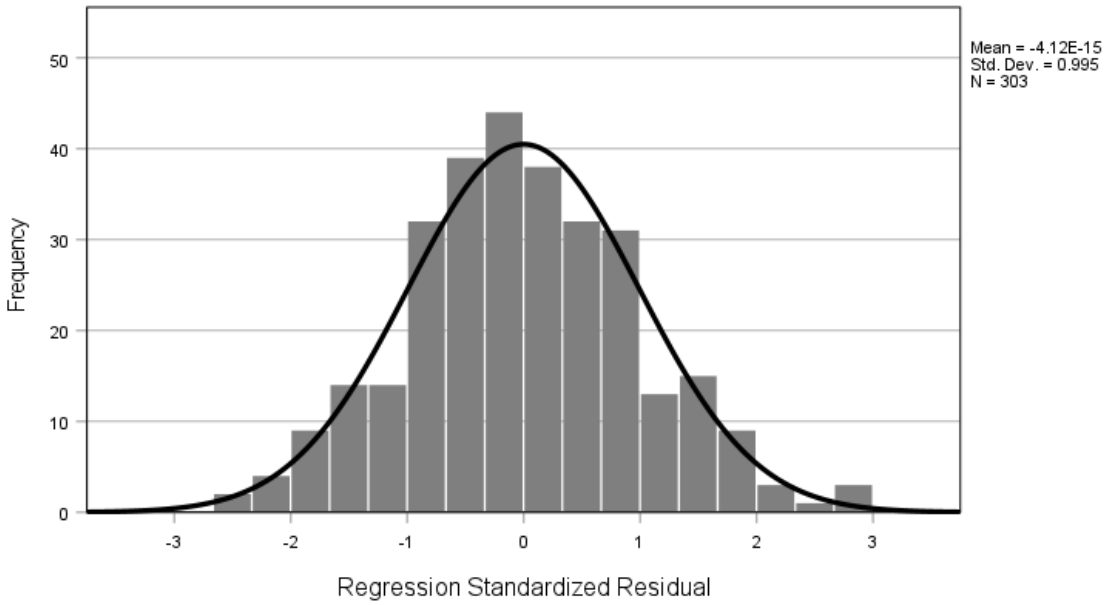


Figure G7

Histogram of Residuals



Note. Dependent variable = Self-Perceived Employability (reduced)