

Predictors of emotional intelligence amongst university students

Predictors of emotional intelligence amongst university students

by

Johrine Cronjé

This research thesis is submitted in agreement with the requirements for the degree

Master of Psychology

in the

FACULTY OF THE HUMANITIES

DEPARTMENT OF PSYCHOLOGY

at the

UNIVERSITY OF THE FREE STATE

Supervisor: Dr Jordaan

Co-supervisor: Prof Esterhuyse

Declaration

I hereby declare that the thesis submitted for the degree Master of Psychology at the University of the Free State is my own independent work and has not previously been submitted by me at another University/Faculty. I furthermore cede copyright of the thesis in favour of the University of the Free State.

SIGNATURE:

A handwritten signature in black ink, appearing to read 'J. Cronje', written in a cursive style.

DATE: 12 June 2019

Declaration of supervisor



Reference: Dr. J. Jordaan
Psychology Building, Room 204
University of the Free State
BLOEMFONTEIN
9301
Telephone: 051 – 401 2890
E-mail: jordaanj1@ufs.ac.za

11 June 2019

PERMISSION TO SUBMIT

Student: Ms. Johrine Cronje
Student number: 2011020779
Degree: Master's
Department: Psychology

Title: Predictors of emotional intelligence amongst university students

I hereby provide permission that this dissertation be submitted for examination – in fulfilment of the requirements for a Master's in Psychology, in the Department of Psychology, Faculty of the Humanities, at the University of the Free State.

I approve the submission for assessment and that the submitted work has not previously, either in part or in its entirety, been submitted to the examiners or moderators.

Kind regards.

A handwritten signature in black ink, appearing to read 'Jordaan', written over a light blue horizontal line.

Dr. J. Jordaan
Supervisor

Proof of language editor

LANGUAGE PRACTITIONER: Anneke Denobili

BA Communication Science (Corporate and Marketing Communications)*
BA Hons Communication Science (Corporate and Marketing Communications)*
* Cum Laude

6 Carl van Heerden Street
Universitas Ridge, Bloemfontein

Tel: 084 244 8961
annekedenobili@gmail.com

September 2019

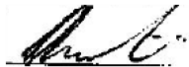
DECLARATION

I, Anneke Denobili, hereby declare that I did the language and APA editing of the dissertation of Johrine Cronjé (student number 2011020779) titled, *Predictors of emotional intelligence amongst university students*, for submission purposes in fulfilment of the requirements for the degree Master of Psychology in the Faculty of the Humanities at the University of the Free State. All the suggested changes, including the implementation thereof, was left to the discretion of the student.

Please note:

The editor will not be held accountable for any later additions or changes to the document that were not edited by the editor, nor if the student rejects/ignores any of the changes, suggestions or queries, which he/she is free to do. The editor can also not be held responsible for errors in the content of the document or whether or not the student passes or fails. It is the student's responsibility to review the edited document before submitting it for evaluation.

Sincerely



Anneke Denobili

SATI Registration #: 1003466

Editorial style

This thesis utilises the editorial style of the American Psychological Association (APA) as detailed in the Publication Manual of the American Psychological Association (6th edition).

Table of Contents

<i>Declaration</i>	<i>i</i>
<i>Declaration of supervisor</i>	<i>ii</i>
<i>Proof of language editor</i>	<i>iii</i>
<i>Editorial style</i>	<i>iv</i>
<i>List of tables</i>	<i>x</i>
<i>Table 1: Frequency distribution of participants according to demographic variables</i>	<i>x</i>
<i>Table 2: Descriptive statistics and reliability coefficients for the SEIS, RS, MTUAS subscales and MTUAS dimensions</i>	<i>x</i>
<i>Table 3: Correlations between the SEIS scale and Age, Gender, Religious affiliation, Religious practice, RS scale and MTUAS dimensions (N=1191)</i>	<i>x</i>
<i>Table 4: Contributions of Age, Gender, Religious Affiliation, Religious Practice, Resilience and the MTUAS dimensions to R2 with Emotional Intelligence as Criterion Variable</i>	<i>x</i>
<i>List of Appendices</i>	<i>xi</i>
<i>Appendix A: Biographical Questionnaire</i>	<i>xi</i>
<i>Appendix B: The Schutte Emotional Intelligence Scale (SEIS)</i>	<i>xi</i>
<i>Appendix C: The Resilience Scale (RS)</i>	<i>xi</i>
<i>Appendix D: Media and Technology Usage and Attitudes Scale (MTUAS)</i>	<i>xi</i>
<i>Abstract</i>	<i>xii</i>
<i>Opsomming</i>	<i>xiv</i>

Predictors of emotional intelligence amongst university students

<i>Chapter 1</i>	<i>1</i>
<i>Introduction</i>	<i>1</i>
1.1 Overview of chapter	1
1.2. Introduction	1
1.3 Context and rationale	3
1.4 Research objective of the study.....	7
1.5 Research questions	7
1.6 Research design and methodology.....	7
1.7 Data collection	8
1.8 Data analysis	10
1.9 Clarification of important concepts.....	10
1.10 Ethical considerations	12
1.11 Value of the study	12
1.12 Delineation of the manuscript	13
1.13 Summary of chapter	14
<i>Chapter 2</i>	<i>15</i>
<i>Literature review</i>	<i>15</i>
2.1 Chapter overview	15
2.2 Emotional Intelligence	15
2.3 The developmental phase of undergraduate university students.....	18

Predictors of emotional intelligence amongst university students

2.4 Theoretical perspectives supporting this study	20
2.5 The effect of Emotional Intelligence on Mental Health.....	24
2.6 Building blocks of Emotional Intelligence	27
2.6.1 Emotional awareness	27
2.6.2 Personal motivation	28
2.6.3 Emotional regulation.....	29
2.6.4 Emotional conceptualisation.....	30
2.7 The importance of emotional intelligence in South African undergraduate students ...	32
2.8 Predictor variables of emotional intelligence.....	35
2.8.1 Resilience and emotional intelligence	35
2.8.2 Media and Technology usage and emotional intelligence	37
2.8.3 Gender and emotional intelligence	40
2.8.4 Age and emotional intelligence	41
2.8.5 Religious affiliation and religious practice and emotional intelligence.....	42
2.9 Summary of the chapter	43
<i>Chapter 3</i>	45
<i>Methodology</i>	45
3.1 Overview of the chapter	45
3.2 Aim of the study.....	45
3.4. Research questions	46
3.5 Research design and methods	46
3.6 Sampling	47

Predictors of emotional intelligence amongst university students

3.7 Data collection	52
3.8 Measuring instruments	52
3.8.1 Biographical questionnaire	52
3.8.2 Schutte Emotional Intelligence Scale (SEIS)	53
3.8.3 Resilience Scale (RS).....	54
3.8.4 Media and Technology Usage and Attitudes Scale (MTUAS).....	55
3.10 Data analysis	57
3.11 Ethical considerations	59
3.12 Summary of chapter	60
<i>Chapter 4</i>	<i>61</i>
<i>Results</i>	<i>61</i>
4.1 Overview of chapter	61
5.1 Chapter overview	67
5.2.1 Schutte Emotional Intelligence Scale (SEIS)	68
5.2.2 Resilience Scale (RS).....	68
5.2.3 Media and Technology Usage and Attitudes Scale (MTUAS).....	68
5.3 Correlations between variables	69
5.4 Resilience as predictor of emotional intelligence	70
5.5 Media and Technology Usage as predictor of Emotional Intelligence	71
5.6 Age and gender as predictors of Emotional Intelligence	72
5.7 Religious affiliation and Religious Practice as predictors of Emotional Intelligence ..	72
5.8 Study limitations	72

Predictors of emotional intelligence amongst university students

5.9 Research contribution.....	74
5.11 Summary	76
<i>Appendix A</i>	<i>105</i>
<i>Appendix B</i>	<i>110</i>
<i>Appendix C</i>	<i>112</i>
<i>Appendix D</i>	<i>113</i>
<i>Appendix E</i>	<i>117</i>

List of tables

- Table 1: Frequency distribution of participants according to demographic variables
- Table 2: Descriptive statistics and reliability coefficients for the SEIS, RS, MTUAS subscales and MTUAS dimensions
- Table 3: Correlations between the SEIS scale and Age, Gender, Religious affiliation, Religious practice, RS scale and MTUAS dimensions ($N=1191$)
- Table 4: Contributions of Age, Gender, Religious Affiliation, Religious Practice, Resilience and the MTUAS dimensions to R² with Emotional Intelligence as Criterion Variable

List of Appendices

Appendix A: Biographical Questionnaire

Appendix B: The Schutte Emotional Intelligence Scale (SEIS)

Appendix C: The Resilience Scale (RS)

Appendix D: Media and Technology Usage and Attitudes Scale (MTUAS)

Appendix E: Ethical clearance letter

Appendix F: TurnItIn report

Abstract

The education of the labour force directly impacts the economy of a country. The successful employment of university students indicates a strong positive relationship with regards to students' academic performance and emotional well-being, especially during their university years. University students experience several psychological challenges that often lead to a withdrawal from their studies. Various studies within South Africa identified psychological challenges, such as depression, anxiety and post-traumatic stress, which leave students feeling despondent and vulnerable, often resulting in academic failure. Almost 50% of students complete their three-year or four-year undergraduate degree within five years. These statistics raise a concern to South Africa's competent labour market. The emotional intelligence of undergraduate university students is thus an important matter of concern, as it seems to be on the decrease, due to the technogenic age. These students' attention is held captive by technology use, resulting in fewer opportunities to practice emotional competencies as they find safety in the digital space rather than face-to-face interactions. However, resilience enables undergraduate university students to persevere through turbulent times. Students with a high level of resilience are better capable to alter or sustain their emotional reactions to the demands of the constantly changing emotional environment. This ability has a strong positive correlation with emotional intelligence and a positive effect on the mental health of undergraduate university students.

This study aims to investigate which variables or combination of variables explain a significant percentage in emotional intelligence amongst undergraduate university students. In order to determine the relationship between variables, a correlational design was central to the non-experimental, quantitative study. A non-probability convenience sampling method was employed to recruit 1191 registered undergraduate university students between the ages

Predictors of emotional intelligence amongst university students

of 18 and 30 at the University of the Free State. The sample included participants from all ethnic groups, cultures, languages, genders, provinces, majors and religious backgrounds. The measuring instruments included a biographical questionnaire, The Schutte Emotional Intelligence Questionnaire, the Resilience Scale and the Media and Technology Usage and Attitudes Scale. A hierarchical multiple regression analysis was used to analyse the data. The combination of the predictor variables (Resilience, Media and Technology usage, Age, Gender, Religious Affiliation and Religious Practice) statistically and practically significantly predicted emotional intelligence. The results further indicated that resilience is the only predictor variable with a statistically significant contribution to the emotional intelligence of undergraduate university students with a large corresponding effect size ($f^2 = 0.48$). It was found that resilience accounted for 27.8% variance in the Emotional Intelligence scores of the undergraduate university students. This finding concurs with the building blocks of the model of emotional intelligence competencies (Mayer et al., 2000). It is suggested that resilient individuals are able to (1) recognise emotions, (2) use emotions to facilitate thought, (3) make sense of emotional information and (4) regulate their emotions (Mayer, Salovey, & Caruso, 2000; Schutte, Malouff, & Thorsteinsson, 2013).

Keywords: Age, Emotional Intelligence, Free State, Gender, Religious Affiliation, Religious Practice, Resilience, Media and Technology Usage, Undergraduate University Students.

Opsomming

Die opvoeding van die arbeidsmag het 'n direkte impak op die ekonomie van 'n land. Die suksesvolle indiensneming van universiteitstudente toon 'n sterk positiewe verband met betrekking tot die studente se akademiese prestasie en emosionele welstand, veral tydens hul universiteitsjare. Universiteitstudente ervaar verskeie sielkundige uitdagings wat dikwels lei tot onttrekking van hul studies. Verskeie studies in Suid-Afrika het sielkundige uitdagings geïdentifiseer, ondermeer depressie, angs en post-traumatische stres, wat studente moedeloos en weerloos laat en dikwels akademiese mislukking tot gevolg het. Bykans 50% van studente voltooi hul drie-jaar of vier-jaar graad binne vyf jaar. Hierdie statistiek wek kommer tot die bevoegdheid van die Suid-Afrikaanse arbeidsmag. Die emosionele intelligensie van voorgraadse universiteitstudente is daarom 'n belangrike, dog kommerwekkende kwessie, aangesien dit blyk dat dit aan die afneem is vanweë die tegnologie-beheerde era. Hierdie studente se aandag word vasgevang deur die gebruik van tegnologie en derhalwe voel hulle veilig in die digitale ruimte eerder as in aangesig-tot-aangesig interaksies en dit het tot gevolg dat minder geleenthede beskikbaar is om emosionele bevoegdheid te beoefen.

Veerkrachtigheid stel egter voorgraadse universiteitstudente in staat om te volhard in moeilike tye. Studente met 'n hoë vlak van veerkrachtigheid is beter in staat om hul emosionele reaksies op die eise van die ewigdurende veranderende emosionele omgewing aan te pas of vol te hou. Hierdie vermoë het 'n sterk positiewe korrelasie met emosionele intelligensie en 'n positiewe effek op die geestesgesondheid van voorgraadse universiteitstudente.

Hierdie studie het ten doel om die veranderlikes of kombinasie van veranderlikes wat 'n beduidende persentasie in emosionele intelligensie onder voorgraadse universiteitstudente verduidelik, te ondersoek. Ten einde die verband tussen veranderlikes te bepaal, was 'n korrelasie-ontwerp kern tot die nie-eksperimentele, kwantitatiewe studie. 'n Nie-

waarskynlikheid-gerieflikheid steekproef is uitgevoer om 1191 geregistreerde voorgraadse universiteitstudeute tussen die ouderdomme van 18 en 30 van die Universiteit van die Vrystaat te bekom. Die steekproef het deelnemers van alle etniese groepe, kulture, tale, geslagte, provinsies, hoofvakke en geloofsagtergronde ingesluit. Die meetinstrumente het 'n biografiese vraelys ingesluit. Die Schutte Emosionele Intelligensie Vraelys, die Veerkragtigheidskaal en die Media en Tegnologie Gebruik- en Houding-skaal is gebruik. 'n Hiërargiese veelvuldige regressie analise is gebruik om die data te analiseer. Die kombinasie van die voorspeller-veranderlikes (Veerkragtigheid, Media en Tegnologie gebruik, Ouderdom, Geslag, Geloofs-affiliasie en Geloofsgebruike) het emosionele intelligensie statisties en prakties beduidend voorspel. Die resultate het verder aangedui dat veerkragtigheid die enigste voorspeller-veranderlike is wat 'n statisties-beduidende bydrae tot emosionele intelligensie van voorgraadse universiteitstudeute lewer met 'n omvattende ooreenstemmende effekgrootte ($f^2 = 0.48$). Daar is bevind dat veerkragtigheid vir 27.8% van die variansie in die Emosionele Intelligensietellings in voorgraadse universiteitstudeute verantwoordelik is. Hierdie bevinding bevestig die noodsaaklikheid van die boublokke in die model vir Emosionele Intelligensie vaardighede (Mayer et al., 2000). Dit is voorgestel dat veerkragtige individue in staat is om (1) emosies te herken, (2) emosies te gebruik om denke te fasiliteer, (3) om sin te maak van emosionele inligting en (4) hulle emosies te reguleer (Mayer, Salovey, & Caruso, 2000; Schutte, Malouff, & Thorsteinsson, 2013).

Sleuteltermes: Emosionele Intelligensie, Geloofs-affiliasie, Geloofsgebruik, Geslag, Media en tegnologie gebruik, Ouderdom, Veerkragtigheid, Voorgraadse universiteitstudeute, Vrystaat.

Chapter 1

Introduction

1.1 Overview of chapter

This South African research study takes an interest in the emotional intelligence (EQ) of students registered for an undergraduate degree at the University of the Free State. This research seeks to identify which predictor variable(s) account for a substantial percentage of the change in emotional intelligence (EQ). The concept of emotional intelligence will be introduced and conceptualised within a research framework and specific research questions will be formulated based on the objectives of the study. The research methodology and research design utilised in this study will also be described and a discussion on the important concepts, ethical concerns and value of the research study will be included.

1.2. Introduction

Without competence and confidence, a student will not be able to complete their tertiary education successfully. In this regard, emotional intelligence in students is vital, as they need to understand that they are the leaders of their own lives and the drivers of their own success in obtaining a degree; their response to the demands of the academic environment also being important (Cotrus, Stanciub, & Bulboreac, 2012; Hassel & Ridout, 2017).

The education of a country's labour force has a direct impact on the economy (Spaull, 2013). Thriving at university holds the prospect of successful employment and has

significant effects on health, culture, standard of living and social capital (Yorke & Longden, 2005). Various studies conducted within the South African context indicate that university students experience numerous psychological challenges (e.g., anxiety, depression, post-traumatic stress), which can result in a withdrawal from their studies and leave them feeling hopeless and helpless, often resulting in academic failure (Booi, Vincent, & Liccardo, 2017; Flisher, De Beer, & Bokhorst, 2002; Woods, Warnecke, Stirling, & Martin, 2018; Young, 2009). Although the gross enrolment ratio for universities in 2015 improved to 18.6% in individuals between the ages of 20 to 24 (Higher Education & Training, 2018), the success rates amongst these students are low (Beckmann & Minnaert, 2018; Cilliers & Flotman, 2014). Statistics indicate that undergraduate university students are taking more than five years to complete a three-year or four-year academic degree and only half of the students evidently complete their studies (Higher Education & Training, 2018). These statistics highlight the threat and concern thereof on South Africa's competent labour market (Cilliers & Flotman, 2014).

Previous studies found that the success of students at higher education institutions are predicted by students' emotional intelligence as well as their cognitive abilities (Beckmann & Minnaert, 2018). A recent study found that emotional intelligence functions as a moderator between general intelligence and classroom performance and that it evidently results in professional and academic achievement (Truninger, Fernández-i-Marín, Batista-Foguet, Boyatzis, & Serlavós, 2018). Thus, it can be assumed that for South Africa's labour market to be competent, both emotional intelligence and cognitive ability is needed. Blackwelder (2018) acknowledged these findings and stated that the emotional intelligence of students is imperative to a student's college success, their well-being and their quality as a prospective employee. Emotional intelligence has a much greater overall effect on academic performance than the intelligence quotient (IQ) (Blackwelder, 2018). Researchers confirmed

that it is vital to equip students with emotional competencies in order to help them persevere the developmental challenges through all of their life phases while training and preparing them for the workplace (Blackwelder, 2018; Rantalainen, Alakortes, Carter, Ebeling, & Sari, 2018). The development of emotional intelligence starts in the early life phases and play an important role throughout individuals' lives despite developmental challenges (Ruotsalainen et al., 2018). Research signifies the importance of emotional intelligence and have found meaningful positive outcomes, such as a positive self-image, a decrease in behaviour difficulties, relationship satisfaction, personal and professional achievements and a significant impact on physical and mental health (Boyatzis, 2018; Cheung, Cheung, & Hue, 2014; Truninger et al., 2018). Emotional intelligence is a learned competency across lifespan development that serves as a tool to prevent mental illness. A previous study delineates that individuals with a high emotional intelligence are more prone to lower intensities of supposed anxiety, increased intensities of adaptive psychological coping and a lowered physiological stress reprisal (Davis & Nichols, 2016).

1.3 Context and rationale

South Africa is rich in cultural and language diversity; also known as the Rainbow Nation (Ramdass, 2009). The history of South Africa greatly impacts the current picture of South Africa's humanity. Apartheid resulted in the present ambition to redress past racial segregation and lack of educational opportunities for the marginalised (Ramdass, 2009). Due to the lack in educational opportunities, the country experiences a lot of social issues, such as unemployment, poverty and violence. A high rate of mental illness amongst undergraduate university students were reported, with an increasing prevalence (Fata Nahas, Elkalmi, Al-Shami, & Elsayed, 2019). Furthermore, undergraduate university students face many

Predictors of emotional intelligence amongst university students

adjustment challenges, for example, independent living, academic stress and planning for their future careers. Many of these challenges exceed the undergraduate university students' emotional resources and coping abilities, resulting in a vulnerability for mental illness (Islam, Low, Tong, Yuen, & Abdullah, 2018). Research has reported that the initial onset of the lifetime mental illnesses occurs during university age (Ashraful Islam et al., 2019).

The mental health of undergraduate university students in South Africa is influenced by violence and crime in the educational environment (Ramdass, 2009). These chronic circumstances impact the students' ability to learn as the element of fear disable their optimal level of functioning and surpasses their limited emotional intelligence resources (Bledsoe, Baskin, & Berry, 2018). Fear has a prominent impact on the mental health of South African undergraduate university students, especially with regards to long-term psychological, emotional and physical distress. This distress may result in reduced self-esteem or a decline in academic involvement, a disposition to depression and even suicide (Deasy, Coughlan, Pironom, Jourdan, & Mannix-McNamara, 2014; Ashraful Islam et al., 2019). Researchers found that resilience and emotional competence may be qualities that serve as a buffer against suicide ideation and suicide amongst South African students (Casale, Boyes, Pantelic, Toska, & Cluver, 2018). Many South African undergraduate students are overwhelmed with emotions and become caught up in survival mode; leaving them unable to draw on internal resources to rise above these contextual challenges and succeed in their academic environment (Bezuidenhout, 2013; Nel, Jonker, & Rabie 2013). Students appear to be emotionally ill-equipped and emotional intelligence can, therefore, assist undergraduate university students to effectively deal with the demands of academics and prevent mental illness and psychological disorders (Ramesh, Thavaraj, & Ramkumar, 2016).

Undergraduate university students with low emotional intelligence often suffer from mental disorders, lack of empathy, anger, anxiety or weak defence mechanisms, resulting in

difficulties in managing their emotions (Marzuki, Salim, & Rani, 2017). However, a high emotional intelligence amongst undergraduate university students will enable students to (1) recognise emotions, (2) employ emotions to assist in thought, (3) make sense of emotional information and (4) regulate their emotions (Blackwelder, 2018). According to Robertson and Szabo (2017), an essential objective and interest of the National Mental Health Policy Framework and Strategic Plan in South African is the Community Mental Health Services (CMHS). Unfortunately, specialist CMHS are difficult to access and poorly situated within primary care, resulting in mental health services being inaccessible to undergraduate students.

Cognitive ability could assist individuals throughout their education, although emotional intelligence aids individuals through life (Goleman, 2004). Emotional intelligence came to prominence, as literature emphasise that the undergraduate university students' developmental phase, known as emerging adulthood, is signified by uncertainty and anxiety in the 21st century (Arnett, Sugimura, & Žukauskienė, 2014; Ruotsalainen et al., 2018). The emerging adulthood developmental phase is psychologically signified by an individual's full acceptance of ownership and responsibility of their lives, as well as independent decision-making (Arnett et al., 2014). Many undergraduate university students who form part of the emerging adult developmental phase, feel emotionally ill-equipped to face developmental challenges and often experience failed love relationships and the demands of future-orientated career decisions rest heavy on their shoulders (Arnett et al., 2014; Truniger et al., 2018). Arnett et al. (2014) asserted that the intense degree of uncertainty and instability that emerging adults experience is expected given their developmental phase, however, emotional intelligence can serve as a buffer and a preventative quality, especially regarding the development of mental illness (Arnett et al. 2014). The need for emotional intelligence to serve as a buffer is evident in undergraduate university students between the ages of 18 and 29, as statistics indicate that mental illness is 40% more prevalent in emerging adults than in

Predictors of emotional intelligence amongst university students

any other age category. Mental illness, especially mood disorders, substance abuse and anxiety disorders, are examples of the result of undergraduate university students who lack emotional intelligence and healthy coping mechanisms (Arnett et al., 2014; Ruotsalainen et al., 2018; Truniger et al., 2018). Therefore, high emotional intelligence is of utmost importance for emerging adults in their undergraduate university student years. This high emotional intelligence will enable these students to face the developmental challenges in the emerging adult developmental phase (Ruotsalainen et al., 2018; Truniger et al., 2018).

The importance of emotional intelligence among undergraduate university students has been emphasised within the context of South Africa. Media and technology usage, resilience, gender, age, religious affiliation and religious practice, are all variables that apply to the lives of students (Cabello & Fernández-Berrocal, 2015). Each variable mentioned has been researched independently with regards to emotional intelligence and a deeper understanding of each variable will be facilitated. The primary focus in this research study is on undergraduate university students who are enrolled at the University of the Free State, Bloemfontein campus. This present research study endeavours to understand this specific undergraduate university student group, by seeking to discover which predictor variable or combination of variables explain a substantial percentage of variance of this group's emotional intelligence. This research regarding emotional intelligence in undergraduate university students would be valuable for future research and development. The discovery of the identified predictor variables could serve as the building blocks for future research in programme development, thus enhancing and contributing towards the balance in mental and emotional ability (Goleman, 2004).

1.4 Research objective of the study

The overall objective of this study is to establish which variable or combination of variables explains a substantial percentage in emotional intelligence amongst undergraduate university students.

1.5 Research questions

In order to address the objective of this study, the following research questions were explored:

1. Can a significant percentage of variance in the emotional intelligence of undergraduate university students be explained by the combination of media and technology usage, resilience, gender, age, religious practice and religious affiliation?
2. Can any meaningful contribution to the variance of emotional intelligence amongst undergraduate university students be subscribed to any one of the individual predictor variables being studied?

1.6 Research design and methodology

A correlational design is central to the study when determining the relationships between variables (Stangor, 2011, 2015). The nature of the methodology is quantitative and the study is non-experimental. The best-suited sampling method to recruit participants was a non-probability convenience sampling method (Stangor, 2011, 2015). The research sample included 1191 students registered at the University of the Free State, Bloemfontein campus that are enrolled for an undergraduate degree in the Faculty of the Humanities and aged

between 18 and 30. This sample included participants from the most prevalent cultures, religious backgrounds, ethnic groups, languages, genders, provinces and undergraduate academic majors in the South African context relevant to the sample.

1.7 Data collection

The researcher utilised self-administered questionnaires via the online student support system, known as Blackboard, which made it easily accessible for the students.

Four measuring instruments were used in this research study and are as follow:

1. A self-compiled biographical questionnaire were employed to gather the participant's demographic data (e.g., ethnicity, language, age, gender, religious affiliation, religious practice, provinces and majors). This self-compiled biographical questionnaire was implemented to collect data on the above-mentioned variables in order to gain insight into the students' personal details (Appendix A).
2. In order to measure the emotional intelligence of the participants, the researcher utilised The *Schutte Emotional Intelligence Scale* (SEIS; Jonker & Vosloo, 2009). The original SEIS model of emotional intelligence competencies was based on the conceptualised framework of Salovey and Mayers (1989, 1990). This SEIS scale comprises of 33 items (Jonker & Vosloo, 2009) and the items ranked on a five-point Likert-type scale ranging from (1) "*strongly disagree*" to (5) "*strongly agree*" (Harpe, 2015). The total score was used for data analysis (Jonker & Vosloo, 2009).

Participants with a high emotional intelligence reflected a high score on the SEIS and participants with a low emotional intelligence level reflected a low score on the SEIS.

An adequate Cronbach alpha were reported in other South African studies, ranging between 0.70 and 0.85 (Jonker & Vosloo, 2009; Nel, Du Plessis, & Bosman, 2015).

3. The *Resilience Scale* (RS; Wagnild & Young, 1993) was used in order to evaluate the resilience of the participants. The items of the scale are ranked on a seven-point Likert-type scale ranging from (1) “*totally disagree*” to (7) “*totally agree*” (Oladipo & Idemudia, 2015). The total score ranges between 25 and 175 points with higher scores indicating a higher degree of resilience and a lower score indicating a lower degree of resilience (Wagnild & Young, 1993). Studies that reported on the internal consistency of the resilience scale, indicated a Cronbach alpha ranging between 0.84 and 0.91 (Dalenberg et al., 2011; Surzykiewicz, Konaszewski, & Wagnild, 2019).
4. Rosen, Whaling, Carrier, Cheever and Rökkum (2013) outlined the purpose of The *Media and Technology Usage and Attitudes Scale* (MTUAS). In this study it was used to evaluate the participants’ use of technology. This scale measures the regularity of usage of various technologies and media (Rosen et al., 2013) (Appendix B). However, the attitudes subscales were not used, as it was not central to the purpose of this research study. This scale comprises of 11 subscales measuring the following: internet searching, smartphone usage, phone calling, emailing, text messaging, Facebook, online friendships, general social media usage, media-sharing, video-gaming and TV-viewing (Rosen et al., 2013). Items 1-40 on the MTUAS were ranked on a ten-point Likert-type scale, with responses ranging from (1) “*never*” to (10) “*all the time*”. Participants with lower scores point to less time using media and technology compared to participants with higher scores. Studies that reported on the internal consistency of the MTUAS found a Cronbach alpha ranging between 0.82 and 0.98 (Costa et al., 2016; Rosen et al., 2013).

1.8 Data analysis

The reliability of the various scales was calculated by the use of Cronbach's alpha, followed by the relevant samples' descriptive statistics. In an attempt to analyse which variable(s) explicate the highest percentage of variance in emotional intelligence, a hierarchical multiple regression analysis was used. The criterion variable was emotional intelligence, with age, gender, resilience, media and technology usage, religious affiliation and religious practice being the predictor (independent) variables. A hierarchical multiple regression analysis provides a framework for comparison. Once accounting for all other variables, a statistically significant amount of variance in the dependent variable were sought (Richardson, Hamra, MacLehose, Cole, & Chu, 2015). The analysis of the data was enabled by the use of the Statistical Package for the Social Sciences (Version 25) (IBM Corporation, 2017).

1.9 Clarification of important concepts

Emotional intelligence refers to “...*the ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth.*” (Mayer and Salovey, 1997, p. 10)

Emotional regulation is the ability to enhance, modify, prevent or reduce an emotional response in oneself and in others (Rowe & Fitness, 2018).

Personal motivation refers to a cognitive process that involves the capability to harness one's emotions for the purpose of solving problems, reasoning and processing interpersonal communication (Brackett, Rivers, & Salovey, 2011).

Predictors of emotional intelligence amongst university students

Emerging adulthood includes the age group between 18 and 30 years (Arnett et al., 2014) and it refers to the developmental phase that is psychologically signified by an individual's acceptance of ownership of the responsibility for their life and the ability to make independent decisions (Arnett et al., 2014).

Emotional awareness is the capability to recognise emotions accurately in both thoughts and physical states such as bodily expressions (Brackett et al., 2011).

Emotional conceptualisation refers to the ability to accurately recognise a specific emotion and to distinguish between both similarities and differences of emotions (Brackett et al., 2011; Hertel, Schütz, & Lammers, 2009).

Resilience is the capability of an individual to engage with misfortune or change in a productive manner known as resilience (Wagnild & Young, 1993).

Technology includes devices, systems and methods, which are the end result of scientific information being used for everyday purposes (Oxford Learners Dictionary, 2019).

Ethnicity refers to the state of belonging to a specific social group that shares mutual national or cultural traditions (Quinn, Gwede, & Meade, 2018).

According to Galderisi, Heinz, Kastrup, Beezhold and Sartorius (2015), mental health is defined as *“a state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to their community.”*

The American Psychiatric Association (2013, p. 11) defines a mental disorder as *“...a syndrome characterised by clinically significant disturbance in an individual's cognition, emotion regulation or behaviour that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning. Mental disorders are usually*

associated with significant distress or disability in social, occupational or other important activities.”

1.10 Ethical considerations

The Research Ethics Committee of the Faculty of the Humanities at the University of the Free State granted ethical clearance for this research study. The present research study forms part of a bigger research project titled: “Predictors of psychological well-being amongst undergraduate university students” (Ethics number: UFS-HSD2017/1313) (Appendix E). Permission was also obtained from the Dean of Students to conduct the study. The researcher explained the purpose of this research study, as well as the voluntary and anonymous nature of participation to all the participants beforehand. Those interested in taking part in the study had to provide informed consent before participating in the study. The safety and confidentiality of the data were secured by keeping the files on a password-protected computer and the researcher undertook to keep it in her possession only. An intervention was in place to assist participants with counselling services, if they experienced any emotional distress as a result of the research. The research implementation was independent in nature, thus the process did not rely on any external factors or impartial views.

1.11 Value of the study

The research results will reveal which variables or combination of variables predict emotional intelligence the best amongst undergraduate university students. These results may be of value for further research in the technocentric age that seeks to improve or encourage emotional intelligence in students. Therapeutic interventions, technology-based education and digital educational programmes/platforms may benefit from this research, as the results

of this research may contribute towards its development, implementation and evaluation. In order to enable researchers to design an evidence-based programme for the enhancement of emotional intelligence in South African undergraduate university students, it would be beneficial to incorporate the discovered predictor variables of emotional intelligence.

1.12 Delineation of the manuscript

This dissertation is divided into five chapters:

Chapter One served as an introduction to the study, which included an introduction of emotional intelligence to the research context and the rationale of the study. The research questions were formulated based on the objective of the study and the research design and methodology utilised in the study were elaborated on. Important concepts, ethical considerations and the value of the research were also emphasised. Furthermore, this chapter included a brief discussion regarding the measuring instruments employed.

Chapter Two encompasses a literature review with regards to the relevance of emotional intelligence in the South African context. A deeper understanding of the components of emotional intelligence is fostered by elaborating on the building blocks of emotional intelligence (empathetic response, self-regulation, self-awareness and self-motivation). This chapter also includes a discussion regarding the developmental phase that the undergraduate university students at the University of the Free State find themselves in. Possible predictor variables of emotional intelligence are delineated and discussed. The importance of emotional intelligence among undergraduate university students is also emphasised.

Chapter Three aims to report on the research methodology used in conducting the research. This chapter consists of a discussion of the research procedures that were utilised in

this study, including the research methodology, data analysis, research design, sampling methods, as well as data collection.

Chapter Four reports on the findings of this research study.

Chapter Five comprises of a summary of the fundamental findings of the study. A presentation of the summary of the results obtained will be presented and discussed. Furthermore, the contribution and value of the study pertaining to the existing literature are discussed and the chapter concludes with limitations of this study and provides suggestions and recommendations for future research studies.

1.13 Summary of chapter

This chapter introduced the concept of emotional intelligence and highlighted the importance of the study. Also, the selected predictor variables of emotional intelligence among undergraduate university students were introduced, followed by a discussion regarding the research design and research methodology utilised in the study, as well as the objectives of this research study in answering the research questions. Important concepts, ethical considerations and the value of this research study were emphasised and a brief discussion about the measuring instruments used, included. The chapter concluded with an outline of the chapters included in the manuscript. Chapter Two encompasses a literature review.

Chapter 2

Literature review

2.1 Chapter overview

This chapter starts by introducing the definition of emotional intelligence along with supporting theoretical perspectives based on the literature. This discussion will thus highlight the importance of emotional intelligence amongst South African undergraduate university students. The developmental phase and accompanied challenges that affect mental health will also be elaborated on. In order to be able to foster a deeper understanding of the components of emotional intelligence, the building blocks (emotional awareness, personal motivation, emotional regulation and emotional conception) will be explored. This chapter also explores the predictor (independent) variables (resilience, media and technology usage, gender, age, religious affiliation and religious practise) of emotional intelligence. Lastly, it concludes with a summary of the main aspects emphasised in the chapter.

2.2 Emotional Intelligence

Emotional intelligence is defined as the capacity to be flexible with one's emotional functioning (Schutte, Malouff, & Thorsteinsson, 2013) and thus involves managing personal emotions and those of others and utilising emotions in perception formation in one's thinking and understanding. Mayer and Salovey (1997) acknowledged this ability by indicating that emotional intelligence is the capability to monitor and differentiate between personal feelings and the feelings of others. Emotionally intelligent students will have the capability to employ

this information to direct their thinking and behaviour and to navigate their social context.

This definition is divided into four diverse, although related competencies that form the building blocks of emotional intelligence, namely emotional awareness, personal motivation, emotional conception and emotional regulation (Mayer & Salovey, 1997).

These definitions regarding emotional intelligence imply that individuals are enabled to use emotions to facilitate thought in social situations (Mayer & Salovey, 1997; Schutte et al., 2013). Emotional intelligence tends to bring emotions and mental ability together by enabling an individual to think about their emotions. In students, this mental ability prevents them from being overwhelmed and behaving in an emotionally driven way (Mayer, DiPaolo, & Salovey, 1990; Ubaidi, 2018). Students with high emotional intelligence think rationally about their emotions, leading to more adaptable behaviour (Brackett et al., 2011). Students who are involved in pursuits that lead to rich and meaningful experiences are usually students who realise their potential and present with high ratings of emotional intelligence. Such students perform better at university and benefit the labour force (Goleman, 2017).

According to Brackett et al. (2011), the personal, social, academic and workplace success of an individual are positively affected by a high emotional intelligence level. Other benefits of high emotional intelligence in undergraduate students include their tendency to exceed aptitude test predictions, have better health and live longer. Significantly, high emotional intelligence may be a distinguishing characteristic of great leaders, both at university and in the labour force (Goleman, 2017). However, students with low emotional intelligence struggle to effectively deal with challenges and are at higher risk for substance abuse as well as abuse. They present with maladapted social, psychological and physical aspects to their life. This includes low self-esteem, loneliness, substance use, negative thoughts and mental illness (Bibi, Saqlain, & Mussawar, 2016).

Predictors of emotional intelligence amongst university students

The model of Salovey and Mayer (1989), theorises that emotional competencies must be acquired through refining emotional and social skills (Ubaidi, 2018). Thus, emotional competence is a learned ability based on emotional intelligence that promises to result in exceptional work performance and academic success (Cherniss, Goleman, & Extein, 2006). A recent study discovered that emotional intelligence can be taught, although effective training programmes should incorporate practical work-integrated learning, especially in the form of active participation of participants and it should also provide participants with personalised feedback (Mattingly & Kraiger, 2018).

Life success is achieved by a contribution of 80% for emotional intelligence and only 20% for IQ (Cotrus et al., 2012). Therefore, the South African undergraduate university student's emotional intelligence is the primary focus, which aids them in the pursuit of life success. A recent study reported on the investigation of the relationship between high intelligence and mental illness (Karpinski, Kinase Kolb, Tetreault, & Borowski, 2018; Lawal, Idemudia, & Senyatsi, 2018) and a strong relationship between a high IQ score and mental illness was found. It also found that the corresponding exaggerated awareness that motivates a highly intelligent artist to craft, also has the potential to lead a person to withdraw into a deep depression (Jauk, Benedek, Dunst, & Neubauer, 2013; Karwowski et al., 2016; Karpinski et al., 2018; Pässler, Beinicke, & Hell, 2015).

Amongst university students, particularly high amounts of psychopathology are presented midst some of the most reputed masterminds. Karpinski et al. (2018) raised the concern that those students with an over-excitability cognitive ability are vulnerable to hyper-reactivity of the central nervous system, resulting in an increased awareness and various other psychological and physiological consequences. On the other hand, it is reported that those with a low-IQ score are more prone to be generative, to enjoy warm-hearted objective

interactions and to make use of mature defences compared to those with a high IQ (Karpinski et al., 2018).

Universities are the birthplace for the masterminds and leaders of the future, thus many graduates with a high IQ have hidden emotional wounds and are vulnerable to mental illness. The diversity in the South African undergraduate university student population includes a variety of students from all spheres of life, income groups and maturity levels (Pather & Dorasamy, 2018). Many undergraduate South African students are the first in their family to enrol for a tertiary qualification (Pather & Dorasamy, 2018). Although obtaining a qualification comes with a lot of pride and celebration, it also includes many challenges (Pather & Dorasamy, 2018). Often these university students feel unsupported and misunderstood by their families, as they feel that their families cannot relate to their academic challenges and they evidently withdraw from their academics based on non-academic factors (Pather & Dorasamy, 2018). These students become vulnerable to mental illness and ascribe this to a lack of emotional mature examples to follow and a lack of emotional mentorship to look up to (Pather & Dorasamy, 2018).

2.3 The developmental phase of undergraduate university students

The student period in an individual's life is considered as a difficult season, as students are transitioning from their adolescent developmental phase to emerging adulthood (Betz, Nehring, & Lobo, 2015). The term *emerging adulthood* refers to the age group between 18 and 29 years (Arnett et al., 2014). During this specific period, a student is faced with new developmental challenges, such as being away from family, having new social responsibilities and educational and academic pressures (Betz et al., 2015). This new developmental phase is known as a period of exhilaration and stress that spans from late teens

to mid-twenties (Galanaki & Leontopouloub, 2017). Struggling to adapt to this new developmental phase may lead to mental illness, resulting in a lack of motivation, neglecting to do homework, anxiety and fears that may cause students to spend ample amounts of their intellectual resources to attend to these difficulties (Betz et al., 2015). Furthermore, students experience changes in their family relationships and friendships, loneliness and eating and sleeping habits (Matthews et al., 2017).

Emotionally competent persons are better able to persevere demanding situations and adapt to new environments and developmental phases (Miloni et al., 2015). Internal resources such as emotional intelligence assist undergraduate university students in facing challenges in a healthy and constructive way (Simsek & Sali, 2014). It would thus benefit them to be emotionally inclined and being able and equipped to channel their attention to conflict resolution in these turbulent times (Simsek & Sali, 2014). Emotions are necessary to build and maintain stable relationships, trust and ethics (Nightingale, Spiby, Sheen, & Slade, 2018).

Evidence suggests the natural maturation of emotional intelligence levels of undergraduate students throughout a three-year period at university, without partaking in any specific emotional intelligence intervention (Parker, Saklofske, Wood, Eastabrook & Taylor, 2005). However, Matthews, Roberts and Zeidner (2008) question whether emotional intelligence can be taught or if it is merely a result of emotional development through life and whether these developmental programmes are necessary. Wong, Foo, Wang, and Wong (2007) also questioned whether emotional intelligence development is a worthwhile venture. In order to strengthen their argument, Wong et al. (2007) utilised theories in human development to argue that life experiences affect emotional intelligence development, subsequently making emotional intelligence development redundant.

2.4 Theoretical perspectives supporting this study

The original idea of emotional intelligence, as conceptualised by Salovey and Mayer (1989, 1990), forms the foundation of The Schutte Emotional Intelligence Scale. The psychologists, Jack Mayer and Peter Salovey, provided an emotional intelligence competencies model and subsequently introduced the concept emotional intelligence (Salovey & Mayer, 1989). Their theory of emotional intelligence incorporates fundamental thoughts from the fields of both intelligence and emotion. Research on emotion indicates that emotions are indicators that transfer methodical and discernible significances regarding relationships and it also indicates that several primary emotions are universal (Mayer, Salovey, & Caruso, 2000). According to the Intelligence Theory, intelligence includes the competence to apply abstract reasoning. Consequently, individuals differ in their ability to make sense of information that is emotional and evidently relate their emotional processing to a broader cognition (Dahl & Cilliers, 2012).

Emotional intelligence competencies are viewed as crucial for social interaction, especially since emotions assist with social and communicative purposes and also because it retains information regarding people's intentions and thoughts and it harmonises social encounters (Kanonuhwa, Rungani, & Chimucheka, 2018). In order to orientate oneself in the social world and to navigate the social context, people need to make sense of emotional information and manage emotional dynamics intelligently (Fan, Scheutz, Lohani, McCoy, & Stokes, 2017). Thus, emotional intelligence is essential for adaptation in various realms, such as social, emotional, relational and vocational (Mayer, Oosthuizen, & Surtee, 2017). Irrespective of one's destination, there are three inescapable forces of our time: the information revolution, globalisation and the speed of change (Dalenberg et al., 2011).

Despite change often causing stress and anxiety, resilience is key in ensuring performance and keeping up with change. An essential skill in handling stress and anxiety was proposed by Goleman (1998), as he introduced the solution of self-awareness; a vital skill in managing stress and anxiety. Therefore, the absence of emotional intelligence in a changing world and in a volatile environment can lead to failure with the consequences thereof being way beyond the individual.

Despite this, emotional intelligence was once a restricted field of interest and its importance questioned, although over the past decade the significance of research in this field has been emphasised, especially in research concerning leadership development and success in life (Cavazotte, Moreno, & Hickmann, 2012; Kanonuhwa et al., 2018).

Many assessments on emotional intelligence are self-reported measures and are criticised on several grounds, for example, the argument that emotional intelligence is a cognitive process that forms part of the general intelligence of a person (Nel et al., 2015). According to Murphy (2014), emotional intelligence is not a new form of intelligence. Furthermore, Murphy (2014) asserted that emotional intelligence is grounded on a non-scientific theoretical basis and due to the differentiation definition among researchers it leads to mistrust in the construct and discriminant validity. However, the concept gained great popularity amongst readers (Murphy, 2014; Nel et al., 2015).

The most prominent criticism entails that emotional intelligence is a poorly defined construct resulting in problems with discriminant and construct validity (Conte, 2005; Thingujam, 2002), thus assuming that emotional intelligence is a non-scientific theory (Murphy, 2014). Furthermore, emotional intelligence is seen as an old form of intelligence instead of new (Locke, 2005) and as lacking statistical evidence (Eysenck, 2000). Therefore, it suggests that emotional intelligence has many weaknesses of which the most critical argument remains the scientific non-credibility thereof (Murphy, 2014).

Predictors of emotional intelligence amongst university students

Joseph and Newman (2010) examined emotional intelligence literature by utilising three measuring instruments, which include the following:

Firstly, the *performance-based ability model*, which suggests that emotional intelligence is regarded as a form of intelligence based on emotional aptitudes and considered as a cognitive ability, allowing emotional reasoning and active information-processing (Mayer, Caruso, & Salovey, 2016). Within this framework, emotional intelligence is evaluated by using emotional problem-solving to test performance, which includes a set of correct and incorrect responses. The most descriptive instrument of this model is the “Mayer-Salovey-Caruso Emotional Intelligence Test” (MSCEIT; Mayer & Salovey, 2002).

The second model is the *self-report ability model*, which is similar to the performance-based ability model, although it regards emotional intelligence as a combination of emotional aptitudes. Within this model, self-report instruments are used where participants appraise their own emotional intelligence in a subjective manner (Fernández-Berrocal & Extremera, 2008). The “Trait Meta-Mood Scale” (TMMS) regards no response as correct or incorrect and is thus a well-used instrument for this approach in order to evaluate emotional intelligence in undergraduate university students (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995).

Lastly, the *self-report mixed model* defines emotional intelligence as a broad concept and not specifically a form of intelligence. It includes interpersonal and intrapersonal abilities, motivations, empathy, personality factors and well-being (Mayer, Salovey, & Caruso, 2008). This model presents self-report instruments that evaluate the subjective perception of the participants’ emotional intelligence. The “Bar-On Emotional Quotient Inventory” (EQi), which has been named after its inventor (Bar-On, 2004), is a frequently employed test for this model.

Regardless of the assessment of the same construct by these three models, any correlations between them appear to be weak (Cabello & Fernández-Berrocal, 2015; Goldenberg & Matheson, 2006; Webb et al., 2013). A weak correlation between measures could be due to the emotional intelligence measures being based on different emotional intelligence models (Maillefer & Fiori 2017).

Research indicated that when a variety of measures of trait emotional intelligence were included, each exclusively predicted career decision-making (Di Fabio & Saklofske, 2014), academic achievement (Di Fabio & Palazzeschi, 2015) and psychological outcomes (Di Fabio & Saklofske, 2014), apart from variance accounted for by emotional intelligence ability and personality traits. Despite the difference between these models, a large number of emotional intelligence-related outcomes have been yielded. An overarching similarity in all the models is the aim of measuring and apprehending the components involved in the regulation and recognition of the emotions of others and one's own emotions (Goleman, 2001). All these models agree that there are certain essential components of emotional intelligence. For example, all models of emotional intelligence implicate the perception (or awareness) of emotions and the organisation of emotions as being fundamental components in being an emotionally intelligent person. Through statistical analysis a relationship among elements of the models has been found. Evidence indicates that different measures of emotional intelligence are associated and may be measuring similar components of emotional intelligence (Gong & Paulson, 2016).

This research study made use of the Schutte Emotional Intelligence Scale (SEIS), which is based on the work of Mayer, Salovey and Caruso (2000), specifically on the premises of its validity and reliability. The SEIS support the research that indicates an individual can either have high emotional intelligence or low emotional intelligence. Good mental and physical health has a positive correlation with high emotional intelligence scores. According to

Salovey, Bedell, Detweiler and Mayer (2001), low emotional intelligence result in mental health challenges, lack of empathy, anger, anxiety and difficulty with managing emotions. However, individuals with high emotional intelligence are able to (1) use emotions to facilitate thought, (2) recognise emotions, (3) make sense of emotional information and (4) regulate their emotions (Mayer et al., 2000; Schutte et al., 2013). South African studies have validated the Schutte Emotional Intelligence Scale (Dooba, 2009; Jonker & Vosloo, 2009; Pires-Putter & Jonker, 2013). Thus, this scale would be the most suited for studies in undergraduate university students (Cabello & Fernández-Berrocal, 2015; Nel et al., 2015; Schutte et al., 2013).

2.5 The effect of Emotional Intelligence on Mental Health

Mental health is defined by The World Health Organisation (WHO) as a state of well-being in which every individual from child, adolescent, student to adult, realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to their community (Galderisi et al., 2015, p. 6).

The American Psychiatric Association (2013) asserts that when someone's mental health is compromised, they could have a mental disorder that meets the Diagnostic and Statistical Criteria of Mental Disorders (DSM-5). A mental disorder is conceptualised by The American Psychiatric Association (2013) as "...a syndrome characterised by clinically significant disturbance in an individual's cognition, emotion regulation or behaviour that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational or other important activities..." (p. 11).

Predictors of emotional intelligence amongst university students

Furthermore, research found that low emotional intelligence indicates the possibility of suffering from mental illnesses (Gignac & Szodorai, 2016; Jauk et al., 2013; Karpinski et al., 2018; Karwowski et al., 2016; Simsek & Sali, 2014). Low emotional intelligence levels in undergraduate university students is a result of individuals that do not harness their emotions. The failure to meet set goals lead to a negative mood and depression, such as not meeting the academic goals set, failing to meet the minimum requirements for a postgraduate programme after completion of undergraduate studies or not being accepted into a sports team at tertiary level (Checa & Fernández-Berrocal, 2015). Undergraduate university students' inadequacy in developing emotional intelligence competence make them vulnerable to mental illness and ill-equipped to manage internal states, impulses and resources (Simsek & Sali, 2014). Enduring shortfalls in low emotional intelligence increases vulnerability in all major forms of mental illness (Sheppes, Suri, & Gross, 2015).

Since undergraduate university students are the capable ones selected by society as the constructors of a country's future, their mental health may have scientific importance when learning and increasing scientific knowledge (Chamani, 2016). This highlights the importance of emotional intelligence within the South African context among undergraduate university students. The occurrence of mental illness during the first year of undergraduate studies is lower than in the general population, although the prevalence becomes higher during the second undergraduate year of study (Chow, Schmidtke, Loerbroks, Muth, & Angerer, 2018). More students tend to seek assistance through university counselling (Chow et al., 2018). Non-academic factors (e.g. family support, peer support, mentoring, financial support, student-lecturer engagement, a sense of belonging) are critical assets that can be used to improve institutional support programmes in order to serve the varying needs of the diverse undergraduate student population in the South African context, specifically pertaining to academically disadvantaged students and first-generation students (Pather et al., 2017).

Predictors of emotional intelligence amongst university students

Changes in mental health abilities or emotions result in behavioural changes as well as changes in the brain. Humans are holistic beings with interactive and interdependent parts (Simsek & Sali, 2014). The human brain is structured in a manner that allows for the learning of emotional intelligence lessons in everyday life through interaction with peers and other people. This interaction and learned lessons of emotional intelligence ensure mental health in undergraduate university students (Simsek & Sali, 2014). Since university students spend much time using technology in their developmental phase, which is marked by turmoil, their mental health is vulnerable (Pan et al., 2014).

If cognitive ability influences emotions, one needs to consider one's emotions. Not all university students are equally able to perceive and make sense of their own subjective feelings and the feelings of others, to motivate adaptive social behaviour as a result of relying on their emotions as well as to regulate their emotions (Hoerger, Chapman, Epstein, & Duberstein, 2012). Emotionally intelligent university students may be more sufficiently equipped to self-manage emotions and lessen the impact of distress and anxiety while employing their understanding of these emotions for the purpose to inform and guide their relationships with others (Yip & Cote, 2013).

For the development of emotional intelligence skills and for the fostering of a good mental health, people need people. A concern in today's society is that undergraduate university students do not have the opportunity to practice and develop emotional intelligence skills due to their time being spent on technology (Simsek & Sali, 2014). A study found that students utilise artificial agents for their emotional support and through an internet search they attempt to address big challenges and search for answers about life's questions and heartaches (Holzapfel, 2019). Furthermore, artificial agents had made great progress in understanding and engaging (even manipulating) students' emotions. An example entails Facebook's ability to keep record of emotional memories and suggesting meals at specific times of the day;

fostering a sense of belonging that prevents mental illness. Criticism exists that these agents still fall short of empathy and support, which may lead to emotional harm (Fan et al., 2017; Yip & Cote, 2013).

Recent research investigated the importance of emotional intelligence in artificial agents and found that these emotionless agents project behaviour that is confusing to humans and thus misunderstood, unanticipated and violating human expectations and ultimately causing emotional injury (Fan et al., 2017). One recent study proposes that higher education and university environments present the ideal climate to improve emotional management that reinforces multiple learning experiences (Gilar-Corbi, Pozo-Rico, Sánchez, & Castejón, 2018). Successful emotional intelligence programmes enable students to successfully internalise learning, accurately implement it and aids against mental illness (Gilar-Corbi et al., 2018). The students who complete their training programmes successfully, will achieve tenacity, perseverance, the ability to produce and overcome challenges during essential milestones, such as graduating, entering the labour force and be dynamic and industrious members of society who have a higher level of life satisfaction and well-being (Gilar-Corbi et al., 2018).

In order to understand the importance of emotional intelligence, it is necessary to obtain a deeper understanding of the emotional competencies that serve as the building blocks thereof.

2.6 Building blocks of Emotional Intelligence

2.6.1 Emotional awareness

The first building block entails emotional awareness. Emotional awareness is the ability of a person to recognise and segregate emotions in themselves and others (Brackett et al.,

2011). Emotional awareness can also be seen as the ability to recognise emotions accurately in both thoughts and physical states, including bodily expressions (Brackett et al., 2011; Poonamallee, Harrington, Nagpal, & Musial, 2018). More progressively, this ability empowers one to recognise emotions in works of art, colour, objects using cues such as sound, language, behaviour, appearance and other people. It empowers one to differentiate between true and false emotional expressions in others and is regarded as a particularly sophisticated perceiving ability (Poonamallee et al., 2018).

Accurate expression of emotions signifies the ability for more complex problem-solving in this building block (Brackett et al., 2011; Cherniss et al., 2006). However, being aware of an emotion is not the same as expressing it. Individuals are only able to be responsible with their emotional responses, when they are aware of the emotions they are experiencing.

Awareness of one's emotions enables one to decide how to express emotions or whether to respond at all. Emotional awareness provides new possibilities for behaviour, as individuals recognise how emotions shape what they perceive, think and do (Cherniss et al., 2006).

Research indicated that psychoeducation sessions as part of emotional intelligence training for students increase their levels of emotional awareness leading to a rapid emotional display recognition (Mattingly & Kraiger, 2018; Waugh, Thompson, & Gotlib, 2011).

2.6.2 Personal motivation

The second building block is personal motivation. Personal motivation refers to the productive use of emotion in order to facilitate thinking (Brackett et al., 2011). This building block enables an individual to resist the temptation to be in control of emotions and rather harness and employ them in an attempt to facilitate behaviours to reach their goals. This productive use of emotions serves as a buffer against mental illness and includes managing

one's internal states, impulses and resources (Simsek & Sali, 2014). Personal motivation is a cognitive process, which involves the ability to harness one's emotions for the purpose of solving problems, reasoning and processing interpersonal communication (Brackett et al., 2011; Cherniss et al., 2006). A primary function of this ability is employing emotions as a tool to prioritise thinking. This is facilitated by directing attention to that which is relevant regarding people or the environment (Brackett et al., 2011; Lim, 2016). Advancement in this ability involves the experience and holding of intense emotions while contemplating multiple perspectives. Furthermore, it enhances memory processes and serves as a buffer against judgment of opposing ideas (Goleman, 2001; Lim, 2016). More than one thinking style is fostered when having multiple perspectives, which lead to a more detail-oriented thinking style (Brackett et al., 2011). Research found that students with the ability to integrate within the academic and social environment seem to be more successful, as they remain dedicated to their academic goals (Saenz et al., 2011). A research study regarding student success found that personal motivation is an attribute shared across successful students (Martin, Galentino, & Townsend, 2014; Saenz et al., 2011).

2.6.3 Emotional regulation

The third building block is the reflective regulation of emotions. This building block includes the ability to prevent, modify, enhance or reduce an emotional response in oneself and in others (Rowe & Fitness, 2018). Emotions are often perceived as uncontrollable forces that produce an effect on behaviour (Linton & Shaw, 2011). It has been established that individuals are fully able to be aware of and be in control of their emotional processing. Individuals are able to manage how emotion guides attention and manage cognitive appraisals that give way to emotional experience. The result of emotional experiences that

manifest in a behavioural effect can also be managed by the individual (Gross, 1998; Porges, 2007; Rothermund, Voss, & Wentura, 2008). Therefore, emotions are controllable forces and individuals can be held accountable for their thoughts, feelings and behaviours (Mbuthia, Kumar, Falkenström, Kuria, & Othieno, 2018). Emotional regulation enables one to experience a variety of emotions while deciding upon their appropriateness or usefulness in a given situation (Cherniss et al., 2006).

Basic emotional regulation is seen as the ability that involves staying open to both pleasant and unpleasant feelings and paying attention to it (MacCormack & Lindquist, 2018). It enables one to engage with or detach from an emotion, on condition of its perceived usefulness in a situation (MacCormack & Lindquist, 2018). Personal reflecting and monitoring of one's own emotions and those of others signify more complex problem-solving abilities (Brackett et al., 2011). When people are consistently unable to regulate their emotions, it might result in serious disturbances, such as high blood pressure, diabetes, attention deficit hyperactive disorder (ADHD), bipolar disorder and low self-control that may lead to substance abuse (Castonguay, Miquelon, & Boudreau, 2018; Schoeman & Liebenberg, 2017). Enduring shortfalls in emotional regulation increases vulnerability in all major forms of mental illness (Sheppes et al., 2015).

2.6.4 Emotional conceptualisation

The fourth building block is emotional conceptualisation, which has a positive relationship with emotional regulation. In order to conceptualise emotions an individual needs an emotional vocabulary and accurate language to label emotions to recognise both differences as well as similarities between emotional labels and emotions (Brackett et al., 2011; Hertel et al., 2009). Students who have a large vocabulary to articulate what they are feeling, develop

emotional literacy, which is a key component of emotional competence (Santiago-Poventud et al., 2015). Unfortunately, many South African university students grow up in language-limited environments with a significantly lower quality vocabulary (Lanciano, & Curci, 2015). Subsequently, these students make use of language less frequently to uncover the deeper understanding of others' thinking and feelings and fail to amend their behaviour appropriately (Santiago-Poventud et al., 2015). It has been established that language is of utmost importance in social and emotional skill development in children, students and adults (Santiago-Poventud et al., 2015).

When university students are able to accurately distinguish between complex emotions (of self and others) such as “embarrassment,” “frustration,” “anger” and “jealousy”, they are able to understand and effectively manage situations in which these feelings arise (Santiago-Poventud et al., 2015). For university students to gain an understanding of their emotions (and those of others), they need to pay attention to emotions and critically analyse and distinguish between them (Rowe & Fitness, 2018). Interpreting roots and meanings of emotions (e.g., sadness as a result of the loss of a loved one, joy resulting from reaching a goal) and understanding complex emotional states, such as simultaneous moods or emotions (feeling both interested and bored) or combinations of feelings, signify a more advanced understanding of emotion (Brackett et al., 2011). For the development of a firm understanding of this emotional vocabulary, students need opportunities that require deep emotional processing through activities such as thinking, examining the meaning of words and articulating thoughts (Santiago-Poventud et al., 2015).

Recognising alterations between emotions (e.g., sadness may lead to hopelessness, which may lead to desolation) is a significant component of this block (Brackett et al., 2011). It has been found that the ability to apprehend emotional information and the ability to regulate emotions significantly distinguishes between groups of people with low emotional

intelligence and groups with high emotional intelligence (Hertel et al., 2009). Thus, students who are able to utilise language skills endorse the ability to understand and conform to the behavioural expectations, cope healthily with learning demands and relate positively to educators and peers. This supports emotional intelligence in university students. Therefore, language and emotional skills development provide critical foundational support for effective engagement in learning in undergraduate university students (Santiago-Poventud et al., 2015).

2.7 The importance of emotional intelligence in South African undergraduate students

The population of South Africa comprises of more than 56 million people, with 26 universities across the country (Butler-Adam, 2018). Higher Education South Africa (HESA, 2017) reported in 2017 that a deplorable 45% of enrolled students fail to bring their studies to completion and 25% of students withdraw after their first year of study (Mabelebele, 2012). Students struggle to complete three-year degrees in time and their degree completion range between four to six years, resulting in a decrease in the universities capacity to accommodate new students in the system (Arends & Petersen, 2018). It has been estimated that one out of five students who enter higher education nationally will end their studies during their first year (Arends & Petersen, 2018). Furthermore, the Council on Higher Education (2013) reports that many undergraduate university students are under-prepared for the educational demands that are currently offered in South Africa. Also, the council asserts that institutions are equally underprepared for the students. The low student success rate (particularly at first-year level) evidently demonstrates that the South African educational system is not yet acquainted with the learning essentials and needs of the majority of the student bodies in universities (Council on Higher Education, 2013). The perturbing educational context in

Predictors of emotional intelligence amongst university students

South Africa demands emphasis on the importance to build on factors relating to student success, not only to increase the number of new entries in tertiary educational institutions, but also for the preservation and successful completion of such entries for an effective labour market (Görgens-Ekermans, Delpont, & Du Preez, 2015).

These statistics signify the importance for future research in order to enhance the understanding of the essential skills that university students need for success at higher education institutions. A recent announcement suggests that the success rates among South African undergraduate university students will improve when the system takes structured, intentional and proactive action, which is systematic in nature and coordinated in application (Arends & Petersen, 2018). Over the past decades, innovative practices in a variety of forms emerged, all aiming to effectively facilitate the first-year transitions that may contribute to student drop out. For example, a combined effort to prioritise this matter is between the South African National Resource Centre for the First-Year Experience and Students in Transition (SANRC) (Arends & Petersen, 2018).

These initiatives aim to meet some of the challenges that lead to student drop out. Challenges include difficulty in constructing new relationships, coping with the management of increased responsibility and functioning as an independent adult (Parker, Summerfeldt, Hogan, & Majeski, 2004). Furthermore, South African university students are frequently overwhelmed by an enormous amount of stressors, both academically (Chambel & Curral, 2005; Chow, 2007; Mayer, 2011; Ross, Cleland, & Macleod, 2006) and personally (Brougham, Zail, Mendoza, & Miller, 2009; Perry, Hall, & Ruthig, 2007), that might result in a loss of focus during their academics, leading to derailment or withdrawal. High emotional intelligence in undergraduate university students might be a helpful way to recover from post-apartheid challenges as well as the challenges they face in their developmental phase (emerging adulthood) (Simsek & Sali, 2014).

Predictors of emotional intelligence amongst university students

The emotional intelligence of university students has the potential to affect mental health positively and assist in more adaptable behaviour, which contributes to undergraduate student success (Brackett et al., 2011; Lyubomirsky, King, & Diener, 2005). It is argued that a student's emotional intelligence and their ability to regulate and gain control of their affective states could play a significant role in persevering and overcoming challenges during higher education (Görgens-Ekermans et al., 2015). If these students are provided with these emotional intelligence competencies (through involved parents who could teach them emotional intelligence skills or a programme that may assist in compensating for the loss of parenting), they would have a reduced number of emotional and behavioural problems, higher self-knowledge and be more likely to make wiser career choices, thus leading to greater success (Lachmann et al., 2018). The degree to which a country's labour force is educated gives assurance for a stable and strong economy (Spaull, 2013). Most South African education programmes focus on cognitive ability and fail to acknowledge emotional abilities in preparation for the labour market, resulting in low rates of student success (Spaull, 2013). Research suggests that undergraduate university students will greatly benefit on a personal, social and societal level if emotional intelligence training were part of the curricula of universities (Vandervoort, 2006). The academic sphere began to resonate with the idea that emotional intelligence is of utmost importance for the developmental phase undergraduate students find themselves in (Parker et al., 2004; Sparkman, Maulding, & Roberts, 2012). Gilar-Corbi et al. (2018) stated that universities are the ideal learning environment to instil emotional competence in undergraduate university students for life satisfaction and the development of personal and professional well-being. Researchers claim that emotional competence is essential for undergraduate university students in order to develop attitudes and values that direct the transfer and application of knowledge to everyday

life challenges and circumstances of academic, professional, personal and social growth (Theron & Bitzer, 2016; Zepke, 2014).

Thus, we can assume that emotional intelligence is relevant and of utmost importance in the everyday life of South African undergraduate university students, not merely for academic performance but also the development of a holistic well-functioning individual across all developmental stages and spheres (Gilar-Corbi, 2018).

2.8 Predictor variables of emotional intelligence

There are numerous variables that serve as predictors of emotional intelligence amongst university students. Some of these variables are inherent characteristic traits of the individual student, whilst others are demographic factors relating to the emotional intelligence of students. The six variables used in this study in order to predict emotional intelligence include resilience, media and technology usage, gender, age, religious affiliation and religious practice. These six predictors are discussed in the following sections.

2.8.1 Resilience and emotional intelligence

According to Wagnild and Young (1993), resilience is a characteristic of a person with the capacity to overcome stressful life circumstances, regardless of the experience of adversity. Resilience refers to an individual's ability to participate with change or misfortune in a productive manner (Wagnild & Young, 1993). A student is resilient when he or she is able to succeed in academics, despite personal vulnerability (Wang, Haertel, & Walberg, 1994). Resilience enables undergraduate university students to persevere through the turbulent times of adjusting to student and academic demands (Mason, 2018). Furthermore, resilient students

Predictors of emotional intelligence amongst university students

are emotionally more flexible and balance their emotional responses to the ever-changing emotional stimuli (Waugh et al., 2011). Furthermore, students with a high level of resilience are better able to alter or sustain their emotional reactions to the demands of the constantly changing emotional environment (Waugh et al., 2011). This ability results positively on the mental health of undergraduate university students, as they are able to endure challenging situations and hardships (Dippenaar & Schaap, 2017; Waugh et al., 2011).

These explanations of resilience relate to the building blocks of emotional intelligence. Undergraduate university students with high emotional intelligence tend to overcome tribulations and use their emotions when solving problems (Mayer & Salovey, 1997). However, Rodríguez-Fernández et al. (2018) state that the ultimate evaluation of a resilient individual is not merely the ability to adapt and persevere turbulent times, but having an unrelenting strength of mind in order to succeed their academic life, for example; an essential character trait needed in undergraduate university students in the South African context. As mentioned earlier, students are faced with a variety of developmental challenges during their undergraduate years (Sanders-McDonagh & Davis, 2018). This period of exhilaration and their experience of high academic stress result in many undergraduate university students struggling with mental illness, lack of motivation and other challenges that require them to rely on emotional resources and needing to be resilient (Sanders-McDonagh & Davis, 2018). Many extinguish their emotional resources and fail to persevere, resulting in an abrupt abandonment of their studies (Mabelebele, 2012). Recent research shows that high levels of stress correlate negatively with resilience in undergraduate students (Chow et al., 2018). However, there is a significant positive relationship between academic achievement and resilience in undergraduate students (Rodríguez-Fernández, Ramos-Díaz, & Axpe-Saez, 2018), which implies that resilient undergraduate university students will have a higher academic achievement. Thus, the need to strengthen the character trait of resilience in

undergraduate students is imperative. It is recommended that students should be provided with a supportive student-centred learning environment that includes problem-solving activities and emotional reflective activities such as reflective writing exercises (Chow et al., 2018; Holdsworth, Turner, & Scott-Young, 2017).

Research indicates that undergraduate university students have lower levels of resilience, especially when compared to postgraduate university students (Chow et al., 2018). The maturity and personal growth of postgraduate students reflect high levels of resilience (Chow et al., 2018). The undergraduate student's experience of persevering their first year of studies and completing their degree may provide them with coping skills to endure adversities and meet the demands of postgraduate studies (Chow, 2018). A recent study on resilience from both undergraduate and postgraduate student's perspectives reported that university students that are equipped with practical coping mechanisms and surrounded by meaningful relationships, will be resilient (Holdsworth et al., 2017). Therefore, resilience seems to be an important possible predictor variable of emotional intelligence.

2.8.2 Media and Technology usage and emotional intelligence

There have been many efforts and attempts to gain a complete understanding of the definition of technology use, but technology continues to evolve (Carroll, 2017). One dictionary defined technology as devices, systems and methods, which are the end result of scientific information being used for everyday purposes (Oxford Learners Dictionary, 2019).

In society today, interaction with technology is more important than engaging in meaningful communication and technology dependence are increasing, especially since individuals move through the world in a narcissistic bubble, detached from their private

world (Anderson & Rainie, 2018; Geyer & Baumeister, 2012). A study found that 57% of young people meet a friend online either through social media or internet gaming platforms (Lenhart, Smith, Anderson, Duggan, & Perrin, 2015). Furthermore, 29% of young people made at least five friends, who remain in the digital space; only 20% met a digital friend in person (Lenhart et al., 2015). Also, 63% of online friendships are made via social media sites, such as Facebook or Instagram. Another communal meeting place for friendship formation is networked video gaming (36% friendships formed). Female students are more prone to meet friends via social media (78% vs. 52% of males) and male students are more prone to formulate online friendships via video gaming (57% vs. 13% of females) (Lenhart et al., 2015).

It was also found that 46% of undergraduate university students reported that they cannot imagine a life without their smartphone, as they engage with technology most of the day (Parry & Le Roux, 2018). Students use smartphones to escape boredom and to ignore those with whom they have difficulty interacting (Lenhart et al., 2015; Wegmann, Ostendorf, & Brand, 2018). Undergraduate university students use a wide range of communication tools to foster close friendships with each other (Lenhart et al., 2015). A total of 49% of undergraduate university students identify messaging applications as their first choice of an interaction platform in order to converse with close friends (Lenhart et al., 2015). Students rely on technology (more specifically the internet and social media) for the establishment of their identity, well-being and information. Thus, technology use has become indispensable for undergraduate students (Lanciano & Curci, 2015; Lenhart et al., 2015).

However, an over-use of technology has a significantly negative impact on the building blocks of emotional intelligence as individuals prefer using technology as an escape or temporary comforter that distracts them from persevering challenges and dealing with their emotions (McDaniel & Radesky, 2017). This results in a decrease in conversation skills and

a collapse in positive interactions, leaving undergraduate university students less compassionate and sensitive to others (Hoerger et al., 2012). It has been estimated that many technology-dependent students engage with technology approximately 10 to 200 times a day for social purposes (Hawi & Samaha, 2016). This overuse of technology results in anxiety, anger, sleep disturbances, depression and anger (Cha & Seo, 2018). It was also reported that social support is a predictor of loneliness. Students find their supportive community in the digital space and virtually connect on an emotionally intimate level (Brownlie, 2018; Lenhart et al., 2015).

According to Tshuma (2016), students from both urban and rural areas in South Africa use technology for social dialogue and as informative mediums. It was statistically reported that 30.9% of these technology users were classified as being vulnerable to addiction (Tshuma, 2016). The overuse of technology among undergraduate students has a concerning effect on their emotional intelligence. Spending less and less time in face-to-face interaction leaves them emotionally vulnerable and ill-equipped during this turbulent developmental stage (Bonk & Zhang, 2006; McDaniel & Radesky, 2018; Wagnild & Young, 2009). People acquire emotional intelligence through daily engagement with others, but undergraduate students of the technocentric age have fewer opportunities to develop these skills, as they have to use turbulent times as opportunities to strengthen resilience and emotional growth (Goleman, 2017; Mayer et al., 2016; Rowe & Fitness, 2018; Wagnild, 2009).

Nonetheless, media and technology usage is part of the lifestyle of South African university students. The education process has also integrated the use of technology in the formal learning process (Pedro, Barbosa, & Santos, 2018). It has been established and recognised that universities are the ideal learning environment to promote emotional competence in students (Gilar-Corbi, 2018; Pedro et al., 2018). Nevertheless, more research is necessary to clarify how media and technology usage with pedagogy can evolve in an

attempt to assist students in developing the building blocks of emotional intelligence. This will encourage undergraduate university students to thrive and achieve their full potential, especially when they enter the workplace (Döveling, Harju, & Sommer, 2018; Singh, 2010). Emotionally intelligent and emotionally competent individuals will experience personal and professional growth, as well as have the ability to apply their acquired knowledge in their work, which will assist them with dealing with challenging circumstances (Theron & Bitzer, 2016; Zepke, 2014). Evidently emotions get lost when technology is used, as technology use negatively correlate with high levels of emotional intelligence (Kalogiannakis & Touvlatzis, 2015). Thus, the greater the dependence on technology, the lower the emotional intelligence of undergraduate university students (Döveling et al., 2018). Furthermore, it is imperative to focus on media and technology usage as a possible predictor of emotional intelligence, which was included in this research study.

2.8.3 Gender and emotional intelligence

BarOn (2000) found that gender has a positive effect on emotional intelligence. Research findings report that emotional intelligence, unlike IQ, is a developing skill in both males and females (Cotruş et al., 2012). Researchers support the general perception that male students have lower emotional intelligence levels than females (Chinyamurindi, & Louw, 2010; Mayer et al. 2000; Van Rooy, Dilchert, Viswesvaran, & Ones, 2006). However, Meshkat and Nejati (2017) report the opposite, stating that females have lower emotional intelligence levels than males. This is in contrast to the results found in previous studies where women repetitively had higher scores than men on tests of emotional intelligence (Brown & Schutte, 2006; Day & Carroll, 2004; Downey, Mountstephen, Lloyd, Hansen, & Stough, 2011; Van Rooy, Alonso, & Viswesvaran, 2005).

Predictors of emotional intelligence amongst university students

A recent study conducted among 455 undergraduate students concerning their emotional intelligence levels, found that men might have lower emotional intelligence levels than women due to women having more intensive perceptions and experiences of emotions (Fischer, Kret, & Broekens, 2018). Another study found that females are more empathetic and conscious of their emotions than males and also that females and males socialise differently in terms of their emotional expression, especially since males socialise to suppress their emotions, which results in low emotional intelligence scores (Meshkat & Nejati, 2017). These contradictory findings necessitate further exploration in order to see whether gender can serve as a predictor of emotional intelligence.

2.8.4 Age and emotional intelligence

Almran and Punamaki (2008) assert that there is no correlation between age and emotional intelligence. It is argued that age is not an ensured indicator of emotional intelligence due to the exponential development of emotional intelligence through life experiences (Llego, 2017). However, Maye, Roberts, and Barsade (2008) argue that there is a significant relationship between age and emotional intelligence, as the majority of older people present with higher emotional intelligence scores compared to younger people (Chen, Peng, & Fang, 2016). Research that is based on the dynamic media sharing and video gaming for males found that younger people use more technology in comparison to older people and lower educated individuals are less prone to technology use than highly educated people (Rosen et al., 2013). Lifespan studies suggest that the older an individual, the more skilled they are at regulating their emotion. These findings suggest that certain facets of emotional intelligence may increase with age (Chen et al., 2016). More recent studies acknowledge the findings of Almran and Punamaki (2018) and report that age is not a predictor of emotional intelligence

(Maillefer & Fiori, 2018). Thus, age seems to be a possible predictor of emotional intelligence and was, therefore, included in this study.

2.8.5 Religious affiliation and religious practice and emotional intelligence

The religious landscape of South Africa is diverse and has a significant influence on the role that members of faith communities play within this context (Schoeman, 2017).

Overall, South Africa is regarded as a highly religious country with between 85% (Diener, Tay, & Myers, 2011) and 97% (Schoeman, 2017) of the population stating that religion plays an important role in their daily lives. All religions are accompanied with a multitude of particular practices such as meditation, prayer, fasting, reading religious scriptures, attendance of rituals or services and engagement in religious acts, for example (Villegas, 2018). The majority of South African undergraduate students are Christians and socialise according to the teachings of the scriptures (Nell, 2016).

Exploring the relationship between religious affiliation and religious practices and emotional intelligence might assist in constructing a better understanding of both factors in psychosocial functioning. Lowicki and Zajenkowski (2017) stated that only a few attempts have been made to explore the significance of this relationship. Some researchers assert that emotional competence is gained through religious beliefs (Blanch, 2007). More recently, it has been established that religious beliefs and religious practices have positive relationships with various emotional regulation processes (a key building block of emotional intelligence) (Lowicki & Zajenkowski, 2017; Vishkin, Bigman, & Tamir, 2014; Watts, 2007).

Research also claims that religious individuals who perceive their religion as an active driving force and not merely a tool to reach personal needs, have greater emotional awareness and self-control (Geyer & Baumeister, 2012). Being held accountable by their religious

communities might be the reason why (Geyer & Baumeister, 2012; Lowicki & Zajenkowski, 2017). Nonetheless, a negative correlation was found between self-centred religious affiliation and religious practises and emotional intelligence. Individuals who participate in religious practises with the primary aim of selfish gain appear to have lower emotional intelligence scores (Dehghani-Firoozabadi et al., 2016; Lowicki & Zajenkowski, 2017).

Today's mental health systems are concerned about the impact of religious beliefs on mental health (Chamani, 2016), although more recently, psychologists have emphasised the role of religion in mental health and psychotherapy (Chamani, 2016). The World Health Organisation explored the health of the four basic characteristics of the social, physical, psychological and spiritual dimension, highlighting the significance of religion and spirituality in the life of society (Chamani, 2016). In the process of adapting to the new academic context, undergraduate university students rely on their social context and religion. Religious organisations provide students with an opportunity to build friendships and communities based on shared beliefs and practises that serve as a buffer against mental illness (Chamani, 2016; Simsek & Sali, 2014). Both these variables seem to be possible predictors of emotional intelligence and were, therefore, included in this study.

2.9 Summary of the chapter

This chapter emphasised the significance and importance of emotional intelligence in the South African undergraduate university student context. It also highlighted the relevance of emotional intelligence in the emerging adulthood developmental phase, including the benefits thereof. A deeper understanding of the components of the building blocks (emotional awareness, personal motivation, emotional regulation and emotional conception) of emotional intelligence were explored, as well as the effect of emotional intelligence on

Predictors of emotional intelligence amongst university students

mental health. This chapter concluded with a discussion of the possible predictors of emotional intelligence.

Chapter 3

Methodology

3.1 Overview of the chapter

This chapter encompasses a discussion on the research methodology and procedures employed in order to identify the predictor (independent) variable or combination of variables that best predict emotional intelligence among undergraduate university students at the University of the Free State, Bloemfontein. Furthermore, in this chapter the research objectives, research questions, research design and data analysis methods utilised to prioritise the aim of the study will be explored. The sampling of the research participants, ethical considerations during the research process and the value of this research study will also be clarified.

3.2 Aim of the study

The overarching aim of this research study is to explain a significant percentage of emotional intelligence amongst undergraduate university students by identifying the predictor (independent) variable(s) or combination of variables.

3.3 Research Objective

The objective of this research study is to understand which predictive variable is responsible for the largest percentage variance in the emotional intelligence scores amongst undergraduate university students.

3.4. Research questions

In order to address the aim of this study the following research questions were explored:

1. Can a significant percentage of variance in the emotional intelligence of undergraduate university students be explained by the combination of media and technology usage, resilience, gender, age, religious practice and religious affiliation?
2. Can any meaningful contribution to the variance of emotional intelligence amongst undergraduate university students be subscribed to any one of the individual predictor variables being studied?

3.5 Research design and methods

A correlational design was central to the study, in determining the relationships between the predictor variables of emotional intelligence (Stangor, 2011, 2015). In order to determine whether there are statistical significant correlations between variables, correlational research is proposed (McLeod, 2018; Nestor & Schutt, 2019). Correlation does not imply causation or permit the researcher to bypass available data (McLeod, 2018). The nature of the methodology was quantitative and the study was non-experimental. Non-experimental research was used as the researcher did not manipulate any of the variables studied in this research. Through non-experimental research, several variables, including university students' resilience, media and technology usage, religious affiliation, religious practice, age and gender were examined and used to predict emotional intelligence amongst undergraduate university students. The primary aim of quantitative methodology is to employ and obtain measurements that are accurate and reliable. These measurements allow researchers to quantify data and enable statistical analysis (Nestor & Schutt, 2019; Queirós, Faria, &

Almeida, 2017). Flick (2011) highlighted that another advantage of quantitative methodology is that a large population can be included in a relatively short time.

3.6 Sampling

This research study was advertised amongst undergraduate university students in the Faculty of the Humanities and who are enrolled at the University of The Free State in Bloemfontein, South Africa. Participants who indicated an interest in the study were informed about the study and gave consent for their voluntarily participation electronically; via the online student support system known as Blackboard. A total number of 1191 enrolled students were sampled and completed the questionnaires. The inclusion criteria for the sampling of the 1191 undergraduate university students enrolled at the University of the Free State were individuals between the ages of 18 and 30 years and included the most prevalent cultures, ethnic groups, languages, genders and religious upbringings in the South African context (see Table 1).

Participants who were excluded from the study were those who did not meet the inclusion criteria. Although probability sampling remains the most scientific sampling method, the sampling method best suited for use in this study was a non-probability convenience sampling method (Stangor, 2011, 2015). Non-probability convenience sampling refers to a sampling method where only a specific group in the population had a chance to participate in the research, unlike probability sampling. This sampling method is also more cost- and time-effective in comparison to probability sampling (McMillan & Schumacher, 2001; Vehovar, Toepoel, & Steinmetz, 2016). Convenience sampling refers to the selection of participants who are available at a specific place and time and can thus be anonymously included in the study sample (Etikan, Musa, & Alkassim, 2016). Convenience sampling was the most

Predictors of emotional intelligence amongst university students

suitable sampling method for the selection of the undergraduate university student participants, due to the easy accessibility of participants.

Table 1 illustrates the frequencies for the research sample and is calculated based on gender, culture, ethnicity, year of study, main major, living arrangements, religious affiliation, generation, relationship status, province, education of parents, happiness at university and satisfaction with the university.

Table 1

Frequency distribution of participants according to demographic variables

Biographical variable	N	%
<i>Gender</i>		
Male	268	22.5
Female	923	77.5
<i>Ethnicity</i>		
Black	961	80.7
Coloured	49	4.1
White	153	12.8
Asian	1	0.1
Indian	4	0.3
Other	23	1.9
<i>Culture</i>		
South Sotho	285	23.9
North Sotho	41	3.4
Xhosa	107	9.0
Zulu	339	28.5
Tswana	132	11.1
English	49	4.1
Afrikaans	134	11.3
Other	104	8.7
<i>Year of study</i>		
First year	29	2.4
Second year	596	50.0

Predictors of emotional intelligence amongst university students

Third year	439	36.9
Fourth year	72	6.0
Other	55	4.6
<hr/>		
<i>Main major</i>		
Psychology	759	63.7
Criminology	62	5.2
Sociology	35	2.9
Anthropology	2	0.2
Political science	16	1.3
Industrial psychology	91	7.6
Communication science	25	2.1
Education	33	2.8
Languages	30	2.5
Social work	26	2.2
Other	112	9.4
<hr/>		
<i>Living arrangement</i>		
Campus hostel	156	13.1
Hostel off campus	226	19.0
Home with parents	210	17.6
Flat in town	146	12.3
Student house	289	24.3
Other	164	13.8
<hr/>		
<i>Religious affiliation</i>		
No religion	46	3.9
Christianity	1071	89.9
Judaism	2	0.2
Islam	5	0.4
Buddhism	2	0.2
Hindu	1	0.1
Other	64	5.4
<hr/>		
<i>Generation</i>		
First generation student	539	45.3
Continuous generation student	652	54.7
<hr/>		
<i>Relationship status</i>		

Predictors of emotional intelligence amongst university students

Single	587	49.3
In a relationship	536	45.0
Married	16	1.3
Divorced	3	0.3
Separated	6	0.5
Other	43	3.6
<hr/>		
<i>Province</i>		
Eastern Cape	75	6.3
Free State	507	42.6
Gauteng	66	5.5
KwaZulu-Natal	291	24.4
Limpopo	41	3.4
Mpumalanga	27	2.3
Northern Cape	67	5.6
North West	36	3.0
Western Cape	24	2.0
Other	57	4.8
<hr/>		
<i>Education of parents</i>		
Neither parents	572	48.0
Mother only	209	17.5
Father only	102	8.6
Both parents	252	21.2
Do not know	56	4.7
<hr/>		
<i>Like being at university</i>		
I am enthusiastic about it	342	28.7
I like it	496	41.6
I am more or less neutral about it	317	26.6
I do not like it	36	3.0
<hr/>		
<i>Same institution</i>		
Yes, definitely	340	28.5
Probably yes	398	33.4
Probably no	299	25.1
No, definitely not	154	12.9
<hr/>		

Predictors of emotional intelligence amongst university students

A total of 1191 participants formed part of this research study, with 77.2% being female and 22.5% male. The overall majority of the students formed part of the Black ethnic group, with 961 representatives followed by the second largest ethnic group of 153 White undergraduate students and the smallest ethnic group being Asian (only one representative). The cultural group with the most students (339) represented the Zulu culture, followed by the second largest cultural representative group (South Sesotho), which consisted of 285 students. The cultural group with the smallest representation was 3.4% of North Sesotho members. The average age of the participants was 22.12 years ($SD = 2.65$). It appeared that more than half (57.4%) of the students were continuous generation students. Currently, 50% of the participants were in their second academic year of study and the first-year students were the smallest student group with only 29 representatives. The majority of the students' subject major was Psychology (63.7%) and the smallest group majoring in Political Science (16 students). Of the overall sample, the majority of students seem to live in student houses (24.3%) and the minority resides in a flat in town (12.3%). Christianity appeared to be the largest religious group (89.9%) and the smallest religious group being Hindu (only one representative). More than half of the students (57.4%) were continuous generation students, indicating that their parents earned a tertiary education prior to their enrolment at university. However, a total of 572 of the students' parents have not graduated from university. Students also reported about their relationship status and 49.3% indicated that they are single and 16 students are currently married. Of the overall sample, 43% of the students are originally from the Free State province, with the Western Cape being represented by the smallest number of students (24 in total; 2%). Questions pertaining to students' university experience resulted in almost half (41.6%) of the students indicating that they enjoy being at university and 28.7% felt enthusiastic about their experience at university. The minority (3%) indicated that they

do not enjoy their university experience. Only 28.5% of participants reported that they would enrol at the University of the Free State again if they could start all over with their studies.

3.7 Data collection

In order to collect the data, the researcher utilised four electronic measuring instruments (questionnaires) via Blackboard, which made it easily accessible for the students. The research study was advertised during undergraduate Psychology lectures and these students were invited to participate in the study. The questionnaires were available online via Blackboard and the participants had one month to complete the questionnaires. A coding system was used in order to ensure the anonymity of the participants.

3.8 Measuring instruments

The four measuring instruments used to measure the variables, included:

- Biographical questionnaire
- Schutte Emotional Intelligence Scale (SEIS)
- Resilience Scale (RS)
- Media and Technology Usage and Attitudes Scale (MTUAS)

3.8.1 Biographical questionnaire

A self-compiled biographical questionnaire was administered in order to collect demographic data of participants, such as (i) ethnicity, (ii) language, (iii) age, (iv) gender, (v) religious affiliation and (vi) religious practice (Appendix A).

3.8.2 Schutte Emotional Intelligence Scale (SEIS)

In order to measure the emotional intelligence of the participants, The *Schutte Emotional Intelligence Scale* (SEIS; Jonker & Vosloo, 2009) was applied (Appendix C). The SEIS is based on the conceptualised framework of Salovey and Mayer's (1990) original model of emotional intelligence competencies (Salovey & Mayer, 1989). This measurement scale comprises of 33 items (Jonker & Vosloo, 2009), ranked on a five-point Likert-type scale ranging from (1) “*strongly disagree*” to (5) “*strongly agree*” (Nemoto & Beglar, 2014) and the total score was used for data analysis (Jonker & Vosloo, 2009). In a more recent African study, the SEIS was validated on the basis of a high internal reliability with a Cronbach Alpha of 0.70 on a study conducted among 341 students at the University of North West (Pires-Putter & Jonker, 2013). Jonker and Vosloo (2009) highlighted the importance of contextual sensitivity when using the SEIS and the study limitations emphasised the importance of determining norm levels for measured groups in South Africa. A high score on the SEIS will indicate that a participant has a high emotional intelligence. A South African study reports that the SEIS is a relatively new measuring instrument, consequently few studies have critically appraised its psychometric properties (Jonker & Vosloo, 2009). Herewith an example of three questions that undergraduate university students were asked, while administering the Schutte Emotional Intelligence questionnaire: (Question 1) “*I know when to speak about my personal problems to others*”, (Question 2) “*When I am faced with obstacles, I remember times I faced similar obstacles and overcame them*”, (Question 3) “*I expect that I will do well on most things I try*” (Jonker & Vosloo, 2009).

3.8.3 Resilience Scale (RS)

The resilience of the participants were measured by the use of The *Resilience Scale* (RS; Wagnild & Young, 1993) (Appendix D). Before this scale got reduced to a concentrated scale of 25 items, by means of a factor analysis, it incorporated 50 items. The scale's items are rated on a seven-point Likert-type scale ranging from (1) "*totally disagree*" to (7) "*totally agree*" (Oladipo & Idemudia, 2015). The total score varies between a minimum of 25 to a maximum of 175 points, with higher scores indicating a higher degree of resilience. The questionnaire's internal consistency reliability represented an adequate coefficient alpha ranging between 0.89 and 0.91 (Wagnild & Young, 1993). A recent study at a South African university tested the resilience levels of Nigerian students and reported that the scores for the Resilience Scale varied from 25 to 175 (Oladipo & Idemudia, 2015). Scores greater than 160 indicated high resilience, scores between 145 and 160 indicated moderately high to high resilience levels, scores from 121 to 145 indicated moderately low to moderate resilience levels and scores of 120 and below indicated low resilience levels (Oladipo & Idemudia, 2015). The Cronbach alpha reliability coefficient of the overall scale in this particular study was 0.867 (Oladipo & Idemudia, 2015). In a South African study, the Cronbach alpha for the Resilience Scale ranged from 0.9 to 0.93 (Botha, 2014; De Villiers, 2009). An example of three items that undergraduate university students were asked to report on, while administering the Resilience Scale questionnaire, included: (Item 5) "*I can be on my own if I have to*", (Item 6) "*I feel proud that I have accomplished things in life*", (Item 7) "*I usually take things in stride*" (Wagnild & Young, 1993).

3.8.4 Media and Technology Usage and Attitudes Scale (MTUAS)

In order to evaluate the use of media and technology by the participants, The *Media and Technology Usage and Attitudes Scale* were administered (MTUAS; Rosen et al., 2013). The MTUAS were the most suited measure to evaluate the frequency usage of various technologies and media (Rosen et al., 2013) (Appendix B). This scale comprises of 11 subscales measuring the following: emailing, media-sharing, internet searching, text messaging, general social media usage, TV-viewing, phone calling, Facebook, online friendships, video-gaming and smartphone usage (Rosen et al., 2013). The attitudes scale was relevant to the aim of the study and subsequently excluded.

The responses of items 1- 40 on the MTUAS were ranked on a 10-point Likert-type scale and ranged from (1) “*never*” to (10) “*all the time*”. A higher score implied that participants spend most of their time using media and technology than those participants with lower scores. Mobile phone activity was measured from items 5 to 18. For example, items 5, 6 and 7 measured how often undergraduate students use their mobile phones: (item 5) “*Send, receive text messages on a mobile phone*”, (item 6) “*Make and receive mobile calls*”, (item 7) “*Check for text messages on a mobile phone.*” Items 41 to 44 measured the amount of followers/friends/connections that students have on social media platforms ranging between 0 and 750 (Rosen et al., 2013).

The individual items of the MTUAS can be adjusted to fit any social networking platform or application (Rosen et al., 2013). A study using the MTUAS in university students reported on the comparison of Facebook users and non-users (Rosen et al., 2013). The research indicated a significant strong relationship between the individual subscales of the MTUAS. For example, it is implied that social media users are also users of other media and technology; excluding the use of television. These users experience both positive and

negative attitudes, have anxiety about missing out when they do not use technology and feel dependent on technology (Rosen et al., 2013). Furthermore, males are more dynamic in media sharing and video gaming, younger people use more technology than older people and highly educated individuals are more prone to technology use than lower educated people (Rosen et al., 2013). A Cronbach's alpha of 0.70 were reported in previous research studies conducted among 913 university students (Özgür, 2016).

3.9. Descriptive statistics of the measuring instruments

Table 2 illustrates the following scores for the entire group of participants: the means, standard deviations, skewness, kurtosis and internal consistencies of the various subscales of the measuring instruments. A calculation of a Cronbach's alpha coefficient (α) provided an indication of the internal consistency of the subscales.

Table 2

Descriptive statistics and reliability coefficients for the SEIS, RS, MTUAS subscales and MTUAS dimensions

Measures	N	M	SD	α	Skewness	Kurtosis
<i>SEIS</i>	1191	120.4022	16.65388	0.928	-0.290	0.154
<i>RS</i>	1191	132.2813	24.23115	0.948	-0.440	-0.372
<i>MTUAS</i>						
E-mailing	1191	24.3392	9.43322	0.909	0.432	-0.864
Text messaging	1191	22.2166	6.04535	0.734	-0.376	-0.644
Phone calling	1191	13.8413	4.77397	0.745	-0.213	-0.931
Smartphone usage	1191	58.3703	18.87303	0.896	0.352	-0.795
TV viewing	1191	10.2762	5.84406	0.860	0.477	-0.995
Media sharing	1191	20.5332	11.05990	0.910	0.609	-0.820
Internet searching	1191	23.6423	10.57703	0.905	0.287	-1.089
Video gaming	1191	12.7582	9.38685	0.899	0.768	-0.744

Predictors of emotional intelligence amongst university students

General social media usage	1191	54.2242	21.81876	0.941	0.186	-0.776
Online friendships	1191	8.5743	6.43279	0.878	1.095	-0.048
Facebook friendships	1191	12.6045	5.50345	0.827	0.051	-0.545
<i>Dimensions</i>						
Media usage for social engagement	1191	21.1788	11.02240	0.884	0.886	0.053
Media usage for communication	1191	139.3006	42.71410	0.949	0.642	-0.465
Media usage for leisure	1191	100.9009	41.24948	0.954	0.687	-0.397

Table 2 illustrates the Cronbach's alpha coefficients for the SEIS, RS and MTUAS scales which range from 0.734 to 0.941. According to Vogt (2005), these scales display acceptable to excellent levels of internal consistency and, therefore, all were included within in the subsequent analyses. In order to simplify the statistical analyses, the researcher grouped the MTUAS subscales into three dimensions, namely (i) Media usage for social engagement (Online friendships, Facebook friendships), (ii) Media usage for communication (Smartphone usage, Media sharing, E-mailing, Text messaging, Phone calling) and (iii) Media usage for leisure (Video gaming, TV viewing, Internet searching, General social media usage). These three dimensions also displayed good to excellent levels of internal consistency. As part of the descriptive statistics in this table, the researcher investigated whether the data is normally distributed by calculating the skewness and kurtosis values of the different subscales. According to Kahane (2008), the cut-off point for skewness is $> |2|$ and kurtosis $> |4|$. From Table 2, it is evident that the scores on all the subscales are within these cut-off points and thus do not deviate substantially from normality.

3.10 Data analysis

Specific analytical strategies and methods were used in order to investigate the objectives of the study. A calculation of a Cronbach's alpha coefficient (α) provided an indication of

the internal consistency of the measurement instruments (see Table 2) (Tavakol & Dennick, 2011). The statistical properties, such as validity and reliability, as well as the biographical characteristics of properties of the different variables in this sample, were examined by employing descriptive statistics. The descriptive statistics aim to supply summaries regarding the collected information (see Table 1) (Tavakol & Dennick, 2011).

For the purpose of this research, it was necessary to determine to what extent the predictor (independent) variables contribute to the total variance found in emotional intelligence (criterion variable) amongst undergraduate university students. The most suited measure to identify which variable(s) explicate the highest percentage variance in emotional intelligence, is the hierarchical multiple regression analysis (Stangor, 2011, 2015; Van der Westhuizen, Monteith, De K, & Steyn, 1989). Regression analysis is a method of mathematically sorting which variables have a significant impact (Bürkner & Vuorre, 2019). The purpose of a regression analysis includes techniques for analysing and modelling several variables, especially when the emphasis is on the relationship between dependent variables and one or more independent variables (Bürkner & Vuorre, 2019). More explicitly, regression analysis promotes the understanding of the typical value of the dependent variable, including which independent variables are related to the dependent variable (Bürkner & Vuorre, 2019).

The squared multiple correlation coefficient (R^2) suggests the percentage of variance in the criterion variable that is accounted for by a specific predictor variable or combination of variables. Although it can be found that a specific variable contributes significantly towards the variance of emotional intelligence among undergraduate students, it is also important to define if this contribution is useful, thus a hierarchical F -test was used. By determining the size of the effect associated with the specific variable, the contribution value can be established (Van der Westhuizen et al., 1989).

Predictors of emotional intelligence amongst university students

Firstly, the total variance of the six predictor variables (resilience, media and technology usage, age, gender, religious affiliation and religious practice) needs to be calculated with regards to the criterion variable (emotional intelligence). The repetition and subsequently eliminating one predictor at a time from the calculation determined the specific predictor variable's contribution to the total variance. In conclusion, all the variables of a specific set were removed in order to conclude their combined effect on the variance in emotional intelligence (Stangor, 2015; Van der Westhuizen et al., 1989).

In addition to determining the statistical significance of an increase in R^2 , it is also essential to evaluate the effect size of the contribution made by a specific predictor or set of predictors to the explanation of the variance in the criterion variable. Effect sizes illustrate the contribution to R^2 with regards to the proportion of inexplicable (residual) variance in the full model (all predictors included). The Statistical Package for the Social Sciences (Version 25) was employed for all data analysis (IBM Corporation, 2017).

3.11 Ethical considerations

The Research Ethics Committee of the Faculty of the Humanities, University of the Free State granted ethical clearance for this study. Furthermore, this study forms part of a larger research project titled "Predictors of psychological well-being amongst undergraduate university students" (Ethics number: UFS-HSD2017/1313). The Dean of Students also granted permission for this study to be conducted. Informed consent was obtained from all the participants and the voluntary and anonymous nature of participation was discussed with participants before the onset of the research. The primary purpose of this research study was also explained to the participants before they agreed to participate. The researcher ensured the safety and confidentiality of the data by keeping the data secure on a password-protected

computer to which only the researcher has access. Furthermore, the researcher ensured that an intervention was in place to assist participants with counselling services if any emotional distress was experienced as a result of the research. However, none of the participants reported any distress due to this research study and, therefore, these services were not utilised. Also, the research does not rely on any external factors, impartial views, analysis or outlook from external researchers, thus the implementation of this research was done independently.

3.12 Summary of chapter

This chapter encompassed a detailed discussion of the research methodology utilised in this study and included an exploration of the research questions that were formulated in an attempt to answer the corresponding aim of the study. The non-experimental research type and correlational design were also explained and the specific sampling technique that was utilised, namely non-probability convenience sampling, elaborated on, followed by a discussion of the participants. The method of data collection was defined by exploring the measuring instruments employed. Furthermore, the hierarchical multiple regression data analysis method to answer each research question was described and examined. The chapter also clarified the ethical considerations and value of the research in order to adhere to professional standards. The next chapter reports on the results obtained in the study.

Chapter 4

Results

4.1 Overview of chapter

This chapter will delineate the results of the statistical analyses. The chapter starts with an explanation of the results of the correlation analysis. This is followed by an elaboration on the independently conducted analysis for the criterion variable (emotional intelligence), which forms part of the hierarchical regression analyses.

4.2 Introduction

In this chapter, the results of the statistical analyses are described. Only medium to large effect sizes based on the correlation analysis will be ascertained and elaborated on. With regards to correlations, Steyn (2005) stated that an effect size of 0.1 is small, an effect size of 0.3 is medium and a large effect size is 0.5. The results of the hierarchical regression analyses conducted for the criterion variable (emotional intelligence) will subsequently be explored and discussed. Only results that indicate at least a medium effect size and that are statistically significant will be examined in the reporting of the results. According to Cohen (1992), an effect size of 0.02 is small, an effect size of 0.15 is medium and an effect size of 0.35 is large. The 1% and 5%-levels of significance were jointly used in the analyses of the data.

4.3 Correlation

The Pearson Product Moment correlation coefficients were premediated for the independent (predictor) and dependent (outcome) variables, prior to conducting the regression analyses. In order to utilise the Religious affiliation variable, the researcher created two categories (Not religious and Religious) wherein the different affiliations were categorised. Table 3 illustrates the correlation coefficients.

Table 3

Correlations between the SEIS scale and Age, Gender, Religious affiliation, Religious practice, RS scale and MTUAS dimensions (N=1191)

	1	2	3	4	5	6	7	8	9
1. Emotional intelligence	-	-0.12**	0.10**	0.04	0.19**	0.64**	-0.34**	-0.22**	-0.29**
2. Age		-	-0.28	0.10**	0.26**	-0.10**	0.13**	0.12**	0.11**
3. Gender			-	0.10**	0.26**	0.10**	-0.14**	-0.10	-0.10**
4. Religious affiliation				-	0.40**	0.10*	-0.03	-0.01	-0.00
5. Religious practice					-	0.19**	-0.10**	-0.06*	-0.10**
6. Resilience						-	-0.44**	-0.30**	-0.38**
7. M1							-	0.69**	0.74**
8. M2								-	0.86**
9. M3									-

Key: M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

**p<0.01, *p<0.05

Table 3 indicates that emotional intelligence exhibit a strong statistically significant positive correlation with Resilience. This correlation is statistically significant at the 1% level with a strong corresponding effect size of 0.6. This finding indicates that when students have increased levels of resilience, they will also have increased levels of emotional intelligence. Table 3 further implies that emotional intelligence demonstrates statistically significant negative correlations with all three dimensions of the MTUAS, namely (i) Media usage for social engagement, (ii) Media usage for communication and (iii) Media usage for leisure. A significance level of 1% indicates that these correlations are statistically significant. The

effect sizes of these three correlations range between small and medium. These findings suggest that students' levels of emotional intelligence decreases as their usage of media and technology increase. According to Table 3, emotional intelligence demonstrates very weak statistically significant correlations with Gender, Age and Religious practice. These findings are statistically significant at the 1% level and the corresponding effect sizes indicate that these findings are of little importance. Thus, no detailed discussion will follow with regards to these specific results.

4.5 Hierarchical regression analyses

The segment of the variance in emotional intelligence is explained by the independent (predictor) variables and subsequently investigated. A hierarchical regression analyses was employed in order to investigate the contribution of the different sets of variables (biographical, religious affiliation, religious practice, resilience and media and technology usage) to the percentage of variance in emotional intelligence, as well as the contribution of each of the individual independent variables.

4.5.1 Hierarchical regression analysis with Emotional Intelligence as criterion variable

According to Table 4, emotional intelligence is the criterion variable as delineated by the results of the hierarchical regression analysis.

Predictors of emotional intelligence amongst university students

Table 4

Contributions of Age, Gender, Religious Affiliation, Religious Practice, Resilience and the MTUAS dimensions to R² with Emotional Intelligence as Criterion Variable

<i>Variables in equation</i>	<i>R²</i>	<i>Contribution to R²: full minus reduced model</i>	<i>F</i>	<i>f²</i>
1. [Age + Gender] + [RA + RP] + [Resilience] + [M1 + M2 + M3]	0.423	1-5=0.003	2.06	0.01
2. [Age + Gender] + [RA + RP] + [Resilience] + M1	0.423	2-5=0.003	6.16*	0.01
3. [Age + Gender] + [RA + RP] + [Resilience] + M2	0.421	3-5=0.001	2.05	-
4. [Age + Gender] + [RA + RP] + [Resilience] + M3	0.422	4-5=0.002	4.10*	-
5. [Age + Gender] + [RA + RP] + [Resilience]	0.420			
6. [Age + Gender] + [RA + RP] + [M1 + M2 + M3] + [Resilience]	0.423	6-7=0.278	569.50**	0.48
7. [Age + Gender] + [RA + RP] + [M1 + M2 + M3]	0.145			
8. [M1 + M2 + M3] + [Resilience] + [Age + Gender] + [RA + RP]	0.423	8-11=0.004	4.10*	0.01
9. [M1 + M2 + M3] + [Resilience] + [Age + Gender] + RA	0.419	9-11=0.000	0.000	-
10. [M1 + M2 + M3] + [Resilience] + [Age + Gender] + RP	0.422	10-11=0.003	6.14*	0.01
11. [M1 + M2 + M3] + [Resilience] + [Age = Gender]	0.419			
12. [M1 + M2 + M3] + [Resilience] + [RA + RP] + [Age + Gender]	0.423	12-15=0.001	1.02	-
13. [M1 + M2 + M3] + [Resilience] + [RA + RP] + Age	0.423	13-15=0.001	2.05	-
14. [M1 + M2 + M3] + [Resilience] + [RA + RP] + Gender	0.422	14-15=0.000	0.00	-
15. [M1 + M2 + M3] + [Resilience] + [RA + RP]	0.422			

Key: RA = Religious affiliation, RP = Religious practice, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

**p≤0.01, *p≤0.05

As per Table 4, the grouping of the independent variables is responsible for 42.3% ($F_{8;1182} = 108.35; p \geq 0.05$) of the variance in the Emotional Intelligence scores of the sample. The MTUAS dimensions (Media usage for social engagement, Media usage for communication and Media usage for leisure) as a combination of predictors, accounted for 0.3% of the variance in the Emotional Intelligence scores of the university students. The small effect size

($f^2 = 0.01$) indicates that this discovery is of little importance. Even though two of the MTUAS dimensions contribute statistically significantly to the variance of the Emotional Intelligence scores, all the effect sizes are small and therefore no detailed discussion will follow.

It is illustrated in Table 4 that 27.8% of the variance in the Emotional Intelligence scores of the students are accounted for by Resilience as a significant predictor variable. The large comparable effect size ($f^2 = 0.48$) suggests that this finding is of practical significance and the statistical significance is at the 1% level. Furthermore, Table 3 indicates that Resilience positively relates to Emotional Intelligence.

Table 4 illustrates that Religious Affiliation and Religious Practice as a combination set of predictors are responsible for 0.4% of the variance in the Emotional Intelligence scores of the sample. This finding is statistically significant at the 5% level of significance. The corresponding effect size ($f^2 = 0.01$) indicated that it is of little practical significance. Despite Religious Practice independently contributing statistically significantly to the variance of the Emotional Intelligence scores, the effect size is small and the results will not be discussed in any further detail.

Age and Gender (demographic variables) served as a set of predictors, as displayed in Table 4 and it accounted for 0.1% of the variance in the Emotional Intelligence scores of the students. No detailed discussion will follow due to the statistical insignificance of this finding.

4.7 Summary

This chapter encompassed a discussion on the results of the statistical analyses. Resilience was the only variable that statistically significantly predicted Emotional Intelligence with a

Predictors of emotional intelligence amongst university students

strong corresponding effect size. Resilience was positively associated with Emotional Intelligence, suggesting that when students have increased levels of resilience, they will also have increased levels of emotional intelligence. The following chapter will elaborate on the reported results in relation to the relevant literature within the context.

Chapter 5

Discussion

5.1 Chapter overview

The central aim of this research study was to investigate which predictor (independent) variable or set of variables explain the highest variance in emotional intelligence amongst undergraduate university students. In this chapter, the core findings of the study will be discussed in relation to various sources of literature, followed by a discussion of the limitations of the study. The recommendations for future research will also be included. Chapter Five will conclude with a summary of the essential indicators that were valued during this research process.

5.2. Discussion of the measuring instruments used in this study

This study employed four measuring instruments (see appendices on pages 104-115). Since these measurement instruments display acceptable to excellent levels of internal consistency (Sigerson & Cheng, 2018), all were included in the analyses. Table 2 illustrated the Cronbach's alpha coefficients for the Schutte Emotional Intelligence Scale, Resilience Scale and Media and Technology Usage and Attitudes Scale ranging from 0.734 to 0.941.

5.2.1 Schutte Emotional Intelligence Scale (SEIS)

In order to measure the emotional intelligence of the participants, the *Schutte Emotional Intelligence Scale* (SEIS; Jonker & Vosloo, 2009) was administered (Appendix C). Salovey and Mayer (1990) introduced the original model of emotional intelligence competencies, which forms the basis of the SEIS. This study reported an exceptional Cronbach alpha of 0.928 on 1191 university students aged between 18 and 30 years, who are enrolled for an undergraduate degree at the University of the Free State. This finding confirms the results found in previous studies (Jonker & Vosloo, 2009; Pires-Putter & Jonker, 2013).

5.2.2 Resilience Scale (RS)

In order to measure the resilience of the undergraduate university students, the *Resilience Scale* (RS; Wagnild & Young, 1993) was utilised (Appendix D). This study presented with a significant internal consistency reliability for the Resilience Scale with a Cronbach alpha of 0.948. This finding confirms those found in previous studies (Botha, 2014; De Villiers, 2009; Oladipo & Idemudia, 2015).

5.2.3 Media and Technology Usage and Attitudes Scale (MTUAS)

The media and technology use of the participants were evaluated by administrating the *Media and Technology Usage and Attitudes Scale* (MTUAS; Rosen et al., 2013). This measuring instrument were the most suited to measure the usage of various technologies and media (Rosen et al., 2013) (Appendix B). The present research study displayed with sufficient internal reliability coefficients for all the MTUAS dimensions with 0.884 for Media

usage for social engagement, 0.949 for Media usage for communication and 0.954 for Media usage for leisure. A previous research study confirmed these findings (Özgür, 2016).

5.3 Correlations between variables

Researchers emphasise the importance of resilience and assert that it is important to foster resilience in undergraduate students in an attempt to increase their levels of emotional intelligence as a buffer against pathology (Chow et al., 2018; Holdsworth et al., 2017; Lowicki & Zajenkowski, 2017; Vishkin et al., 2014). This study found that resilience is statistically significant and positively correlate with emotional intelligence. Thus, resilience is of utmost importance in the promotion of emotional intelligence and mental health and vice versa. Emotional intelligence is also of imperative in the nurturing of resilience (Chow et al., 2018). If the levels of resilience are low, the emotional intelligence levels will also be low, resulting in an increase in the vulnerability for mental illness among students.

The Media and Technology usage data indicated the following results: The 11 subscales were organised into three dimensions, namely Media usage for social engagement (Facebook Friendships, Online Friendships), Media usage for communication (Smartphone usage, Phone Calling, E-Mailing, Text messaging and Media-sharing) and Media usage for leisure (TV Viewing, Video gaming, General social media usage and Internet searching). The Media and Technology usage dimensions have statistically significant negative correlations with emotional intelligence. This suggests that students who spend most of their time on technology, whether for communication purposes, leisure or social engagement, have decreased levels of emotional intelligence (Anderson & Rainie, 2018). One of the reasons for the decrease is that undergraduate students prioritise engagement with technology over engaging in meaningful communication for most of their day, thus avoiding and suppressing

emotional challenges (Anderson & Rainie, 2018; Parry & Le Roux, 2018; Wegmann et al., 2018).

5.4 Resilience as predictor of emotional intelligence

According to this study, resilience as a predictor variable is the only variable with both a statistically significant contribution to the emotional intelligence of undergraduate university students with a large corresponding effect size ($f^2 = 0.48$). The 27.8% variance in the Emotional Intelligence scores of the undergraduate university students were accounted for by Resilience as a predictor variable. As a construct, resilience predicts some of the building blocks of emotional intelligence, such as emotional awareness, personal motivation, emotional regulation and emotional conception (Goleman, 2017). This finding is in line with most of the existing literature in the field of psychology (Chow, 2018; Holdsworth et al., 2017; Mabelebele, 2012; Mayer & Salovey, 1997; Naidoo & McKay 2018; Rodríguez-Fernández., et al 2018; Sanders-McDonagh, 2018). Each building block builds on the previous and research provides insight that these competencies can be learned throughout life and contribute towards 80% of life success (Schutte et al., 2013).

According to Mayer & Salovey (1997), students with high emotional intelligence display resilience by overcoming distress and by applying the building blocks of emotional intelligence. For example, problems are solved both in their vocation and relationships by having learned how to become aware of their emotions, accurately articulating their feelings, regulating those feelings in order to listen and involve rather than to react, resulting in an empathic response. A recent resilience study on students found that those who are equipped with practical coping mechanisms and surrounded by meaningful relationships will be more resilient and have a higher emotional intelligence (Holdsworth et al., 2017).

Predictors of emotional intelligence amongst university students

Naidoo and McKay (2018) emphasise the importance of resilience as a foundation for the success and survival of South African undergraduate university students. The finding of resilience as a predictor of emotional intelligence reinforces the suggestion to strengthen the vital trait of resilience in undergraduate university students (Chow, 2018). Research recommended that provision should be made by means of supportive student-centred learning environments, problem-solving development activities and emotional reflection activities (Chow, 2018, Holdsworth et al., 2017). Social and emotional learning is currently a subject undergoing intense study in the field of education (Weissberg, 2019). Some researchers opine that the future of education relies on resilience training for both teachers and students (Weissberg, 2019).

5.5 Media and Technology Usage as predictor of Emotional Intelligence

Two of the Media and Technology usage dimensions statistically significantly predicted emotional intelligence amongst university students. However, the corresponding effect sizes are small and the results were not discussed. Although most of the recent literature in the field of psychology and overall mental health supports a link between emotional intelligence and Media and Technology use (Anderson & Rainie, 2018; Cha & Seo, 2018; Geyer & Baumeister, 2012; Goleman, 2017; Mayer et al., 2016; McDaniel & Radesky, 2017; McDaniel & Radesky, 2018; Rowe & Fitness, 2018), it could not be substantiated in this study.

5.6 Age and gender as predictors of Emotional Intelligence

A small proportion of the variance in the emotional intelligence of students is explained by the set of demographic variables (Age and Gender). Previous studies found that age (Chen et al., 2016; Maye et al., 2008) and gender (Mayer et al 2000; Meshkat & Nejati, 2017; Shallcross, Ford, Floerke, & Mauss, 2013; Van Rooy et al., 2006) are predictors of emotional intelligence. However, these findings were not found in this study.

5.7 Religious affiliation and Religious Practice as predictors of Emotional Intelligence

An increase in emotional awareness results from students who utilise their religion as an active driving force to cope with the adaptation to the new academic context (Geyer & Baumeister, 2012). Although studies indicate correlations between religious affiliation and religious practice to emotional intelligence (Lowicki & Zajenkowski, 2017; Vishkin et al., 2014; Watts, 2007), it could not be substantiated in this research study. Therefore, no elaboration on the results were included for this set of variables.

5.8 Study limitations

This study is not without limitations and the results should be interpreted against the following limitations: Firstly, the research findings cannot be generalised, as the selected sample was collected by means of convenience sampling and because they formed part of the Faculty of the Humanities. Therefore, the results cannot be generalised to other faculties at the University of the Free State, as the sample is only representative of undergraduate students within one faculty at the University of the Free State. Secondly, the results cannot be generalised to other age groups and contexts outside the University.

Predictors of emotional intelligence amongst university students

The questionnaires were administered by utilising technology in English, which is the second language for most of the students. There is a possibility of intentional distortion due to self-reported measuring instruments. Thus, face-to-face assessments might deliver a different result, such as participants suggesting information that is not a true reflection of their emotional intelligence, technology use, resilience and religious practice, in an attempt to create an improved idea of themselves. Another limitation could be that the self-reported questionnaires may have resulted in participants answering in a way that might put them in a more positive light (Lavrakas, 2008). This phenomenon is known as response bias or survey bias. It is a general term for a range of cognitive biases that occur when a participant falsely or inaccurately answer questions on a questionnaire or survey (Lavrakas, 2008). Stangor (2015) describes this phenomenon as reactivity. It is also described as self-promotion.

Furthermore, no change in variables over time were considered. This quantitative study does not lend itself to discover the meaning of the phenomenon being studied (Durrheim & Painter, 2006). It is suggested that future longitudinal and qualitative studies be conducted in order to investigate emotional intelligence among a representative sample of South African undergraduate university students. These qualitative investigations could lead to more in-depth knowledge and a better understanding of emotional intelligence and how the resilience and religious practices predict a high emotional intelligence within the diverse South African context. Making use of qualitative strategies might provide a richer insight into the exploration of the research questions and may provide a better understanding of the dynamics involved in emotional intelligence. The results indicate that Resilience was the only practically and statistically significant predictor variable of emotional intelligence. Therefore, the question arises whether the set of predictor variables were limited in their selection. However, the literature informed the choice of the variables. Due to South Africa's unique multi-cultural context, it is possible that the predictor variables for the South

African undergraduate participants differ from those identified in the United States of America or the United Kingdom, where most literature originates from.

5.9 Research contribution

Despite the abovementioned limitations, this study contributes to the knowledge of resilience as a predictor of emotional intelligence among undergraduate university students in the South African context. It was, however, emphasised that this research contributes and addresses the lack of research in the field of emotional intelligence in the South African context.

5.10 Future recommendations

The findings gathered in this study can be used to create psycho-education programmes and/or interventions in which entrusted parties, such as teachers, lecturers, religious leaders, parents and students may be educated regarding the factors and variables that either increase or decrease their emotional intelligence. Also, students may be educated and equipped with proactive ways in which to survive their developmental phase and how to thrive in the workplace by fostering the development of the building blocks of emotional intelligence. It is further recommended that social and emotional training be included in the curriculum for both students and teachers/lecturers. Thus, curriculum amendments could assist those in the educational sphere with a resilience toolkit.

There is a statistically significant positive relationship between resilience and academic achievement in undergraduate students (Pancer, Hunsberger, Pratt, & Alisat, 2000; Pretorius & Theron, 2018). Cognitive complexity of research is needed on how technology can be

Predictors of emotional intelligence amongst university students

used as a tool to increase or foster emotional intelligence and resilience in undergraduate university students. Research to develop a model where emotional intelligence and resilience meets artificial intelligence on online learning platforms in an attempt to enhance pedagogy in the technogenic age is another possibility to explore. Research on problematic internet use and the contribution to the DSM changes are also essential and how resilience and emotional intelligence can serve as a buffer against obsessive-compulsive internet usage. Future research could be valuable where researchers implement the same study but on more students from different faculties, thus using random sampling, rather than convenience sampling. This recommendation would increase the generalisability of the study. In order to further increase the generalisability of the study, it is recommended that the same study should be repeated across universities in different provinces with a larger group of students. In order to gain a deeper insight into the predictor variables of emotional intelligence, it is further recommended that a larger set of predictor variables be measured and also to include more character traits as possible predictor variables. Further research is also needed regarding the difference in the emotional intelligence levels of undergraduate university students compared to postgraduate university students, thus seeking similarities and differences.

From the results of this study, it is evident that more research should be conducted on how to support and equip South African undergraduate university students, not only for the university but also for the world of work. They should be equipped with intellectual skills and cognitive abilities, such as an emotional toolkit in order to thrive during difficult times. More research is needed to understand problematic internet use among university students in order to enable researchers to develop programmes to increase the emotional intelligence of undergraduate students. Practical interventions in the form of workshops are required for lecturers, parents and students to equip and empower South Africans with emotional intelligence and resilience tools.

It is also important that the Department of Health commit, at policy level, to make mental health care services available to the public for general health care. Unfortunately, CMHS is under-resourced, which leads to limited implementation of this policy in service-delivery for students seeking emotional support and mental health services within their community (Robertson & Szabo, 2017). However, governmental pilot projects were initiated throughout the country in an attempt to facilitate psychological empowerment by means of life skills programmes and peer mediation (Cilliers & Flotman, 2014), although this initiative in South African is still in its infancy phase.

5.11 Summary

Overall, this study found that the variable that best predicts emotional intelligence is Resilience. This finding concurs with the building blocks of the model of emotional intelligence competencies (Mayer et al., 2000). Furthermore, resilient individuals are, thus able to (1) recognise emotions, (2) use emotions to facilitate thought, (3) make sense of emotional information and (4) regulate their emotions (Mayer et al., 2000; Schutte et al., 2013).

References

- Almran, J., & Punamaki, R. (2008). Relationship between gender, age, academic achievement, emotional intelligence, and coping styles in Bahraini adolescents. *Individual Differences Research, 6*(1), 104-119. doi: 10.1007/s10608-014-9662-4
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: APA. doi: 10.1176/appi.books.9780890425596
- Anderson, J., & Rainie, L. (2018). *The future of well-being in a tech-saturated world*. Pew Research Centre. Retrieved from http://www.elon.edu/docs/eweb/imagining/surveys/2018_survey/Elon_Pew_Digital_Life_and_Well_Being_Report_2018_Expanded_Version.pdf
- Arends, D., & Petersen, N. F. (2018). The role of first-year experience excursion in promoting social integration at university: Student teachers' views. *The Journal of Childhood Education, 8*(1), 543. doi: 10.4102/sajce.v8i1.543
- Arnett, J. J., Žukauskienė, R., & Sugimura, K. (2014). The new life stage of emerging adulthood at ages 18–29 years: Implications for mental health. *The Lancet Psychiatry, 1*(7), 569–576. doi: 10.1016/s2215-0366(14)00080-7
- Ashraful Islam, M., Yun Low, W., Ting Tong, W., Wan Yuen, C. C., & Abdullah, A. (2018). Factors associated with depression among university students in Malaysia: A cross-sectional study. *KnE Life Sciences, 4*(4), 415–427. doi: [10.18502/cls.v4i4.2302](https://doi.org/10.18502/cls.v4i4.2302)
- BarOn, R. (2000). *BarOn Emotional Quotient Inventory Short (EQ-i: S): Technical manual*. Multi-Health Systems. Retrieved from https://www.academia.edu/5514911/Bar-On_Emotional_Intelligence-Inventory_Short_Test_Evaluation_
- Bar-On, R. (2004). “The Bar-on Emotional Quotient Inventory (EQ-i): Rationale, description and summary of psychometric properties,” in measuring emotional intelligence: Common

- ground and controversy. *Measuring Emotional Intelligence: Common Ground and Controversy*. Hauppauge, NY: Nova Science Publishers.
- Beckmann, E., & Minnaert, A. (2018). Non-cognitive characteristics of gifted students with learning disabilities: An in-depth systematic review. *Frontiers in Psychology, 9*, 1-20. doi: 10.3389/fpsyg.2018.00504
- Betz, C. L., Nehring, W. M., & Lobo, M. L. (2015). Transition needs of parents of adolescents and emerging adults with special health care needs and disabilities. *Journal of Family Nursing, 21*(3), 362–412. doi: 10.1177/1074840715595024
- Bezuidenhout, C. (2013). *Child and youth misbehaviour in South Africa: A holistic approach*. South Africa, Pretoria: Van Schaik Publishers: Van Schaik Publishers.
- Bibi, S., Saqlain, S., & Mussawar, B. (2016). Relationship between emotional intelligence and self-esteem among Pakistani university students. *Journal of Psychology & Psychotherapy, 6*(4) 1-6. doi: 10.4172/2161-0487.1000279
- Blackwelder, J. (2018). Improving our emotional intelligence. *American Journal of Nursing, 118*(1), 10. doi: 10.1097/01.NAJ.0000529697.15321.1b
- Blanch, A. (2007). Integrating religion and spirituality in mental health: The promise and the challenge. *Psychiatric Rehabilitation Journal, 30*(4), 251–260.
- Bledsoe, S., Baskin, J. J., & Berry, F. (2018). Fear not! How students cope with the fears and anxieties of college life. *College Teaching, 66*(3), 1–8. doi: 10.1080/87567555.2018.1472064
- Bonk, C. J., & Zhang, K. (2006). Introducing the R2D2 model: Online learning for the diverse learners of this world. *Distance Education, 27*(2), 249–264. doi: 10.1080/01587910600789670

- Booi, M., Vincent, L., Liccardo, S. (2017). Counting on demographic equity to transform institutional cultures at historically White South African universities? *Taylor and Francis Online*, 36(3), 498-510. doi: 10.1080/07294360.2017.1289155
- Botha, A. (2014). *The influence of risk and resilience factors on the life satisfaction of adolescents* (Unpublished doctoral dissertation). University of the Free State, Bloemfontein, South Africa.
- Boyatzis, R. E. (2018). The behavioral level of emotional intelligence and its measurement. *Frontiers in Psychology*, 9(1438), 1-42. doi: 10.3389/fpsyg.2018.01438
- Brackett, M., Rivers, S., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic and workplace success. *Social and Personality Psychology*, 88-103. doi: 10.1111/j.1751-9004.2010.00334
- Brougham, R. R., Zail, C. M., Mendoza, C. M., & Miller, J. R. (2009). Stress, sex differences, and coping strategies among college students. *Current Psychology*, 28(2), 85–97. doi: 10.1007/s12144-009-9047-0
- Brown, R., & Schutte, N. (2006). Direct and indirect relationships between emotional intelligence and subjective fatigue in university students. *Journal of Psychosomatic Research*. 60(1), 585- 593. doi: 10.1016/j.jpsychores.2006.05.001
- Brownlie, J. (2018). Looking out for each other online: Digital outreach, emotional surveillance and safe(r) spaces. *Emotion, Space and Society*, 27, 60–67. doi: 10.1016/j.emospa.2018.02.001
- Bürkner, P. C., & Vuorre, M. (2019). Ordinal regression models in psychology: A tutorial. *Advances in Methods and Practices in Psychological Science*, 2(1), 77-101. doi: 10.1177/2515245918823199
- Butler-Adam, J. (2018). And out into the world they go. *South African Journal of Science* 114(7/8), 1. doi: 10.17159/sajs.2018/a0282

Predictors of emotional intelligence amongst university students

- Cabello, R., & Fernández-Berrocal, P. (2015). Implicit theories and ability emotional intelligence. *Frontiers in Psychology*, 6(1), 700. doi: 10.3389/fpsyg.2015.00700
- Carroll, L. (2017). A comprehensive definition of technology from an ethological perspective. *Social Sciences*, 6(4), 126. doi: 10.3390/socsci6040126
- Casale, M., Boyes, M., Pantelic, M., Toska, E., & Cluver, L. (2018). Suicidal thoughts and behaviour among South African adolescents living with HIV: Can social support buffer the impact of stigma? *Journal of Affective Disorders*. 245(1) 82-90. doi: 10.1016/j.jad.2018.10.102
- Castonguay, A., Miquelon, P., & Boudreau, F. (2018). Self-regulation resources and physical activity participation among adults with Type 2 diabetes. *Health Psychology Open*, 5(1). 1-15. doi: 10.1177/2055102917750331
- Cavazotte, F., Moreno, V., & Hickmann, M. (2012). Effects of leader intelligence, personality and emotional intelligence on transformational leadership and managerial performance. *The Leadership Quarterly*, 23(3), 443–455. doi: 10.1016/j.leaqua.2011.10.003
- Cha, S. S., & Seo, B. K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. *Health Psychology Open*. 5(1) 1-15. doi: 10.1177/2055102918755046
- Chamani, O. B. M. (2016). The relationship between emotional intelligence and religious attitudes with mental health of high school students in Neka City. *Mediterranean Journal of Social Sciences*. 7(3), 118-122. doi: 10.5901/mjss.2016.v7n3s2p118.
- Chambel, M., & Curren, L. (2005). Stress in academic life: Work characteristics as predictors of student well-being and performance. *Applied Psychology: An International Review*, 54(1), 135-147. doi: 10.1111/j.1464-0597.2005.00200.x

Predictors of emotional intelligence amongst university students

- Checa, P., & Fernández-Berrocal, P. (2015). The role of intelligence quotient and emotional intelligence in cognitive control processes. *Frontiers in Psychology, 6*(1853),1-8. doi: 10.3389/fpsyg.2015.01853
- Chen, Y., Peng, Y., & Fang, P. (2016). Emotional intelligence mediates the relationship between age and subjective well-being. *The International Journal of Aging and Human Development, 83*(2), 91–107. doi: 10.1177/0091415016648705
- Cherniss, C., Goleman, D., & Extein, M. (2006). Emotional intelligence: What does the research really indicate? *Educational Psychologist, 41*(4), 239–245.
- Cheung, C. K., Cheung, H. Y., & Hue, M. T. (2014). Emotional intelligence as a basis for self-esteem in young adults. *The Journal of Psychology, 149*(1), 63–84. doi: 10.1080/00223980.2013.838540
- Childhood Education, 8(9), 109. doi: 10.4102/sajce.v8i1.543
- Chinyamurindi, W., & Louw, G. (2010). Gender differences in technology acceptance in selected South African companies: Implications for electronic learning. *South African Journal of Human Resource Management, 8*(1), 7. doi: 10.4102/sajhrm.v8i1.204
- Chow, H. (2007). Psychological well-being and scholastic achievement among university. *Social Psychology of Education: An International Journal, 10*, 483-493.
- Chow, W. S., Schmidtke, J., Loerbroks, A., Muth, T., & Angerer, P. (2018). The relationship between personality traits with depressive symptoms and suicidal ideation among medical students: A cross-sectional study at one medical school in Germany. *International Journal of Environmental Research and Public Health, 15*(7), 1-11. doi: 10.3390/ijerph15071462
- Cilliers, F., & Flotman, A. (2014). The psychological well-being manifesting among master's students in Industrial and Organisational Psychology. *South African Journal of Industrial Psychology, 42*(1). doi: 10.4102/sajip.v42i1.1323

Predictors of emotional intelligence amongst university students

- Cohen, J. (1992). A power primer. *Psychological Bulletin, Psychology Articles*, 112(1) 155-159. Retrieved from <http://www.bwgriffin.com/workshop/Sampling%20A%20Cohen%20tables.pdf>
- Conte, J. M. (2005). A review and critique of emotional intelligence measures. *Journal of Organizational Behavior*, 26(4), 433–440.
- Costa, J. J. M., Matos, A. M., Pinheiro, M. R., Salvador, M. C., Vale-Dias, M. L., Zenha & Rela, M. (2016). Evaluating use and attitudes towards social media and ICT for Portuguese youth: The MTUAS-PY Scale. *Health and Health Psychology*, Porto, Portugal. doi: 10.15405/epsbs.2016.07.02.9. Retrieved from <https://www.futureacademy.org.uk/files/images/upload/9ichandhpsy2016.pdf>
- Cotrus, A., Stanciub, C., & Bulboreac, A. (2012). EQ vs. IQ. Which is most important in the success or failure of a student? *Procedia - Social and Behavioral Sciences*, 46, 5211-5213. doi: 10.1016/j.sbspro.2012.06.411
- Council on Higher Education. (2013). *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*. Pretoria, South Africa. Retrieved from https://www.che.ac.za/sites/default/files/publications/Full_Report.pdf
- Dahl, D., & Cilliers, F. (2012). The relationship between cognitive ability, emotional intelligence and negative career thoughts: A study of career-exploring adults. *South African Journal of Human Resource Management*, 10(2), 14. doi: 10.4102/sajhrm.v10i2.461
- Dalenberg, C. M., Brand, B. L., Gleaves, D. H., Dorahy, M. J., Loewenstein, R. J., Cardeña, & Da Silva, J. P. (2011). 14-Item Resilience Scale (RS-14): Psychometric properties of the Brazilian Version. *Journal of Nursing Measurement*, 19(3), 131–145. doi: 10.1891/1061-3749.19.3.131
- Davis, S. K., & Nichols, R. (2016). Does emotional intelligence have a “dark” side? A

Predictors of emotional intelligence amongst university students

review of the literature. *Frontiers in Psychology*, 7(3) 1-10. doi:

10.3389/fpsyg.2016.01316

Day, A., & Carroll, S. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours.

Personality and Individual Differences, 36, 1443–1458.

De Villiers, M., (2009). *The relationship between employee wellness and career anchors*.

Retrieved from <http://hdl.handle.net/105002622>

Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mannix-McNamara, P. (2014).

Psychological distress and coping amongst higher education students: A mixed method enquiry. *PLoS ONE*, 12(12). doi: 10.1371/journal.pone.0115193

Dehghani-Firoozabadi, E. S., Mohtashami, J., Atashzadeh-Shoorideh, F., Nasiri, M.,

Dolatian, M., & Sedghi, S. (2016). Correlation between religious attitude and resiliency of women under domestic violence. *Global Journal of Health Science*, 9(3), 199. doi:

10.5539/gjhs.v9n3p199

Di Fabio, A., & Palazzeschi, L. (2015). Beyond fluid intelligence and personality traits in

scholastic success: Trait emotional intelligence. *Learning and Individual Differences*, 40, 121–126. doi: 10.1016/j.lindif.2015.04.001

Di Fabio, A., & Saklofske, D. H. (2014). Comparing ability and self-report trait emotional

intelligence, fluid intelligence, and personality traits in career decision. *Personality and Individual Differences*, 64, 174–178. doi: 10.1016/j.paid.2014.02.024

Diener, E., Tay, L., & Myers, D. G. (2011). The religion paradox: If religion makes people

happy, why are so many dropping out? *Journal of Personality and Social Psychology*, 101, 1278–1290.

Predictors of emotional intelligence amongst university students

- Dippenaar, M., & Schaap, P. (2017). The impact of coaching on the emotional and social intelligence competencies of leaders. *South African Journal of Economic and Management Sciences*, 20(1), 1460. doi: 10.4102/sajems.v20i1.1460
- Dooba, I. (2009). Validation of an emotional intelligence scale: A case of an African sample. *Academic Leadership: The Online Journal*, 7(4), 38.
- Döveling, K., Harju, A. A., & Sommer, D. (2018). From mediatized emotion to digital affect cultures: New technologies and global flows of emotion. *Social Media and Society*. doi: 10.1177/2056305117743141
- Downey, L., Mountstephen, J., Lloyd, J., Hansen, K., & Stough, C. (2011). Emotional intelligence and scholastic achievement in Australian adolescents. *Australian Journal of Psychology*, 60(1), 10-17. doi: 10.1080/00049530701449505
- Durrheim, K., & Painter, D. (2006). *Collecting quantitative data: Sampling and measuring research in practice* (2nd ed.). Cape Town: UCT Press.
- Etikan, I., Musa, S.A., Alkassim, R.S, (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*. 5(1) 1-4. doi: 10.11648/j.ajtas.20160501.11
- Eysenck, H. J. (2000). *Intelligence: A new look*. New Brunswick, NJ: Transaction Publishers.
- Fan, L., Scheutz, M., Lohani, M., McCoy, M., & Stokes, C. (2017). Intelligent artificial agents? First results of human perceptions of emotional intelligence in humans compared to robots. In J. Beskow, C. Peters, G. Castellano, C. O'Sullivan, I. Leite, & S. Kopp (eds.), *Lecture Notes in Computer Science* (10498). doi: 10.1007/978-3-319-67401-815
- Fata Nahas, A., Elkalmi, R. M., Al-Shami, A. M., & Elsayed, T. M. (2019). Prevalence of depression among health sciences students: Findings from a public university in Malaysia.

Predictors of emotional intelligence amongst university students

Journal of Pharmacy & Bioallied Sciences, 11(2), 170–175. doi:

10.4103/jpbs.JPBS_263_18

Fernández-Berrocal, P., & Extremera, N. (2008). A review of trait meta-mood research.

International Journal of Psychology Research, 2(1) 39–67.

Fischer, A. H., Kret, M. E., & Broekens, J. (2018). Gender differences in emotion perception and self-reported emotional intelligence: A test of the emotion sensitivity hypothesis.

PLOS ONE, 13(1), 1-19. doi: 10.1371/journal.pone.0190712

Flick, U. (2011). *Introducing research methodology: A beginner's guide to doing a research project*. London: SAGE Publications Ltd.

Flisher, A., De Beer, J., & Bokhorst, F. (2002). Characteristics of students receiving counselling service at the University of Cape Town. *British Journal of Guidance & Counselling*, 30(3), 299-310. doi: 10.1080/030698802100002000

Galanaki, E., & Leontopouloub, S. (2017). Criteria for the transition to adulthood, developmental features of emerging adulthood, and views of the future among Greek studying youth. *Europe's journal of Psychology*, 3, 417–440. doi:

10.5964/ejop.v13i3.1327

Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. *World Psychiatry*, 14(2), 231–233. doi: 10.1002/wps.20231

Geyer, A., & Baumeister, R. (2012). Religion, morality, and self-control: Values, virtues, and vices. In J. Gross, R. Paloutzian, & C. Park (eds.), *Handbook of psychology of religion and spirituality* (pp. 412-432). New York: Guilford Press.

Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, 102, 74–78. doi:

10.1016/j.paid.2016.06.069

- Gilar-Corbi, R., Pozo-Rico, Sánchez, B., & Castejón, J. L. (2018). Can emotional competence be taught in higher education? A randomized experimental study of an emotional intelligence training program using a multimethodological approach. *Frontiers in Psychology, 9*(1039), 1-11. doi: [10.3389/fpsyg.2018.01039](https://doi.org/10.3389/fpsyg.2018.01039)
- Goldenberg, I., & Matheson, K. (2006). The assessment of emotional intelligence: A comparison of performance-based and self-report methodologies. *Journal of Personality Assessment, 86*, 33–45. doi: [10.1207/s15327752jpa8601_05](https://doi.org/10.1207/s15327752jpa8601_05)
- Goleman, D. (1998). *Working with emotional intelligence*. New York, US: Bantam.
- Goleman, D. (2001). Emotional intelligence: Perspectives on a theory of performance. In C. Cherniss & D. Goleman (eds.), *The emotionally intelligent workplace*. San Francisco: Jossey-Bass.
- Goleman, D. (2004). *Working with emotional intelligence*. London: Bloomsbury Publishing.
- Goleman, D. (2017). The emotional intelligence of leaders. *Frances Hesselbein Leadership Forum, 1998*(10), 20-26. doi: [10.1002/ltl.40619981008](https://doi.org/10.1002/ltl.40619981008)
- Gong, X., & Paulson, S. E. (2016). Validation of the Schutte Self-Report Emotional Intelligence Scale with American college students. *Journal of Psychoeducational Assessment, 36*(2), 175–181. doi: [10.1177/0734282916669245](https://doi.org/10.1177/0734282916669245)
- Görgens-Ekermans, G., Delport, M., & Du Preez, R. (2015). Developing emotional intelligence as a key psychological resource reservoir for sustained student success. *South African Journal of Industrial Psychology, 41*(4), 1-13. doi: [10.4102/sajip.v41i1.1251](https://doi.org/10.4102/sajip.v41i1.1251)
- Gross, J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224-237. doi: [10.1037/0022-3514.74.1.224](https://doi.org/10.1037/0022-3514.74.1.224)
- Harpe, S. E. (2015). How to analyze Likert and other rating scale data? *Currents in Pharmacy Teaching and Learning, 7*(6), 836–850. doi: [10.1016/j.cptl.2015.08.001](https://doi.org/10.1016/j.cptl.2015.08.001)

Predictors of emotional intelligence amongst university students

- Hassel, S., & Ridout, N. (2018). An investigation of first-year students' and lecturers' expectations of university education. *Frontiers in Psychology*, 8(2218), 1-13. doi: 10.3389/fpsyg.2017.02218
- Hawi, N. S., & Samaha, M. (2016). The relations among social media addiction, self-esteem, and life satisfaction in university students. *Social Science Computer Review*, 35(5), 576–586. doi: 10.1177/0894439316660340
- Hertel, J., Schütz, A., & Lammers, C. (2009). Emotional intelligence and mental disorder. *Journal of Clinical Psychology*, 65(9), 942-954. doi: 10.1002/jclp.20597
- Higher Education and Training. (2018, March 31). *Investment trends on post-school education and training in South Africa*. Retrieved from <http://www.dhet.gov.za>
- Higher Education South Africa. (2017). Integrating the challenges relating to higher education, access and admissions. *Insight*, 3, 1-28. Retrieved from http://www.usaf.ac.za/wp-content/uploads/2016/09/HESA-Insight-No-3_September-2011.pdf
- Hoerger, M., Chapman, B., Epstein, R., & Duberstein, P. (2012). Emotional intelligence: A theoretical framework for individual differences in affective forecasting. *Emotion*, 12, 716-725. doi: 10.1037/a0026724
- Holdsworth, S., Turner, M., & Scott-Young, C. M. (2017). Not drowning, waving. Resilience and university: A student perspective. *Studies in Higher Education*, 43(11), 1837-1853. doi: 10.1080/03075079.2017.1284193
- Holzapfel, B. (2019). *Emotion and cognition in the age of AI: New research from Microsoft Education and The Economist Intelligence Unit*. Retrieved from <https://educationblog.microsoft.com/en-us/2019/02/emotion-and-cognition-in-the-age-of-ai-new-research-from-microsoft-education-and-the-economist-intelligence-unit/>

Predictors of emotional intelligence amongst university students

IBM Corporation. (2017). *IBM SPSS Statistics for Windows* (Version 25.0). Armonk, NY:

IBM Corp.

Jauk, E., Benedek, M., Dunst, B., & Neubauer, A. C. (2013). The relationship between intelligence and creativity: New support for the threshold hypothesis by means of empirical breakpoint detection. *Intelligence, 41*(4), 212–221. doi:

10.1016/j.intell.2013.03.003

Jonker, C., & Vosloo, C. (2009). The psychometric properties of Schutte Emotional Intelligence Scale. *Suid-Afrikaanse Tydskrif vir Bedryfsielkunde, 34*(2), 21–30. doi:

10.1016/j.profnurs.2007.12.002

Joseph, D., & Newman, D. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology, 95*(1), 54-78. doi: 10.1037/a0017286

Kahane, L. (2008) *Regression basics*. (2nd ed.). Thousand Oaks, California: Sage Publications.

Kalogiannakis, M., & Touvlatzis, S. (2015). Emotions experienced by learners and their development through communication with the tutor-counsellor. *European Journal of Open, Distance and E-Learning, 18*(2), 36-48. doi: 10.1515/eurodl-2015-0012

Kanonuhwa, M., Rungani, E. C., & Chimucheka, T. (2018). The association between emotional intelligence and entrepreneurship as a career choice: A study on university students in South Africa. *South African Journal of Human Resource Management, 16*(0), 1-9. doi: 10.4102/sajhrm.v16i0.907

Karpinski, R. I., Kinase Kolb, A. M., Tetreault, N. A., & Borowski, T. B. (2018). High intelligence: A risk factor for psychological and physiological overexcitabilities. *Intelligence, 66*, 8–23. doi: 10.1016/j.intell.2017.09.001

Karwowski, M., Dul, J., Gralewski, J., Jauk, E., Jankowska, D. M., Gajda, A.,

Chruszczewski, M. H., & Benedek, M. (2016). Is creativity without intelligence possible?

Predictors of emotional intelligence amongst university students

- A necessary condition analysis. *Intelligence*, 57, 105–117. doi:
10.1016/j.intell.2016.04.006
- Lachmann, B., Sindermann, C., Sariyska, R., Luo, R. Melchers, C., Becker, B., Cooper, A. J.,
..... & Montag, C. (2018). The role of empathy and life satisfaction in internet and
smartphone use disorder. *Frontiers in Psychology*, 9(398), 1-11. doi:
10.3389/fpsyg.2018.00398.
- Lanciano, T., & Curci, A. (2015). Does emotions communication ability affect psychological
well-being? A study with the Mayer-Salovey-Caruso Emotional Intelligence Test
(MSCEIT) v2.0. *Health Communication*, 30(11), 1112–21. doi:
10.1177/0956797612450031
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage
Publications, Inc. doi: 10.4135/9781412963947
- Lawal, A. M., Idemudia, E. S., & Senyatsi, T. (2018). Emotional intelligence and mental
health: An exploratory study with South African university students. *Journal of
Psychology in Africa*, 28(6), 492–497. doi: 10.1080/14330237.2018.1540229
- Lenhart, A., Smith, A., Anderson, M., Duggan, M., & Perrin, A., (2015). *Teens, technology
and friendships*. Pew Research Centre. Retrieved from [https://www.pewresearch.org/wp-
content/uploads/sites/9/2015/08/Teens-and-Friendships-FINAL2.pdf](https://www.pewresearch.org/wp-content/uploads/sites/9/2015/08/Teens-and-Friendships-FINAL2.pdf)
- Lim, N. (2016). Cultural differences in emotion: Differences in emotional arousal level
between the East and the West. *Integrative Medicine Research*, 5(2), 105-109.
- Linton, S., & Shaw, W. (2011). Impact of psychological factors in the experience of pain.
Physical Therapy, 91(5), 700-711. doi: 10.2522/ptj.20100330
- Llego, H. (2017). Demographic influence on emotional intelligence of science technology
and engineering teachers in Region 1 Philippines. *Imperial Journal of Interdisciplinary
Research*, 3(3). Retrieved from <http://www.onlinejournal>

Predictors of emotional intelligence amongst university students

Locke, E. A. (2005). Why emotional intelligence is an invalid concept. *Journal of Organizational Behavior*, 26(4), 425–431.

Łowicki, P., & Zajenkowski, M. (2017). No empathy for people nor for God: The relationship between the Dark Triad, religiosity and empathy. *Personality and Individual Differences*, 115, 169–173. doi: 10.1016/j.paid.2016.02.012

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6), 803–855. doi: 10.1037/0033-2909.131.6.803

Mabelebele, J. (2012, May). *Towards strengthening HESA-NASDEV partnerships: Some tentative views*. Keynote Address, National Association of Student Development Practitioners, Johannesburg, Emperors' Palace. Retrieved from [https://books.google.co.za/books?id=cuOLDwAAQBAJ&pg=PT68&lpg=PT68&dq=Mabelebele,+J.+\(2012,+May\).+Towards+strengthening+HESA-NASDEV+partnerships:+Some+tentative+views.+Keynote+Address,+National+Association+of+Student+Development+Practitioners,+Johannesburg,+Emperors%E2%80%99+Palace.&source=bl&ots=IFHHn8Tpx3&sig=ACfU3U1drEA3ar5wyzScfaEbuumZmqiYgg&hl=en&sa=X&ved=2ahUKEwi_naeuy8HiAhXNShUIHYr6CmgQ6AEwAHoECAcQAQ#v=onepage&q=Mabelebele%20J.%20\(2012%20May\).%20Towards%20strengthening%20HESANASDEV%20partnerships%3A%20Some%20tentative%20views.%20Keynote%20Address%20National%20Association%20of%20Student%20Development%20Practitioners%20Johannesburg%20Emperors%E2%80%99%20Palace.&f=false](https://books.google.co.za/books?id=cuOLDwAAQBAJ&pg=PT68&lpg=PT68&dq=Mabelebele,+J.+(2012,+May).+Towards+strengthening+HESA-NASDEV+partnerships:+Some+tentative+views.+Keynote+Address,+National+Association+of+Student+Development+Practitioners,+Johannesburg,+Emperors%E2%80%99+Palace.&source=bl&ots=IFHHn8Tpx3&sig=ACfU3U1drEA3ar5wyzScfaEbuumZmqiYgg&hl=en&sa=X&ved=2ahUKEwi_naeuy8HiAhXNShUIHYr6CmgQ6AEwAHoECAcQAQ#v=onepage&q=Mabelebele%20J.%20(2012%20May).%20Towards%20strengthening%20HESANASDEV%20partnerships%3A%20Some%20tentative%20views.%20Keynote%20Address%20National%20Association%20of%20Student%20Development%20Practitioners%20Johannesburg%20Emperors%E2%80%99%20Palace.&f=false)

MacCormack, J. K., & Lindquist, K. A. (2018). Feeling hangry? When hunger is conceptualized as emotion. *Emotion*, 19(2), 301-319. doi.org/10.1037/emo0000422

Predictors of emotional intelligence amongst university students

- Maillefer, A.V., & Fiori, M. (2017). Emotional intelligence as an ability: Theory, challenges, and new directions. *Frontiers in Psychology*, 9(1078), 1-15. doi: 10.3389/fpsyg.2018.01078
- Martin, K., Galentino, R., & Townsend, L. (2014). Community college student success: The role of motivation and self-empowerment. *Community College Review*, 42, 221-241. doi: 10.1177/0091552114528972
- Marzuki, N., Salim, A., & Rani, U. (2017). Emotional intelligence and psychological well-being among hearing impaired: Does it relates? *MATEC Web of Conferences*, 150(1) 1-5. doi: 10.1051/matecconf/201815005084
- Mason, H. D. (2018). Grit and academic performance among first-year university students: A brief report. *Journal of Psychology in Africa*, 28(1), 66–68.
- Matthews, G., Roberts, R. D., & Zeidner, M. (2008). The science of emotional intelligence: Current consensus and controversies. *European Psychologist*, 13(1), 64-78. doi: 10.1027/1016-9040.13.1.64
- Matthews, T., Danese, A., Gregory, A. M., Caspi, A., Moffitt, T. E., & Arseneault, L. (2017). Sleeping with one eye open: Loneliness and sleep quality in young adults. *Psychological Medicine*, 47(12), 2177–2186. doi: 10.1017/s0033291717000629
- Mattingly, V., & Kraiger, K. (2018). Can emotional intelligence be trained? A meta-analytical investigation. *Human Resource Management Review*, 29(2), 140-155. doi: 10.1016/j.hrmr.2018.03.002
- Maye, J., Roberts, R., & Barsade, S. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology*, 59, 507–36. doi: 10.1146/annurev.psych.59.103006.093646

Predictors of emotional intelligence amongst university students

- Mayer, C. (2011). *The meaning of sense of coherence in transcultural management* (Vol. 563). Münster: Waxmann.
- Mayer, C. H., Oosthuizen, R. M., & Surtee, S. (2017). Emotional intelligence in South African women leaders in higher education. *South African Journal of Industrial Psychology, 43*(0), a1405. doi: 10.4102/sajip.v43i0.1405
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–31). New York: Basic Books.
- Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality, 9*(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
- Mayer, J., & Salovey, P. (1989). *Emotional Intelligence*. Baywood Publishing Inc.
- Mayer, J., & Salovey, P. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) User's Manual Test*. Multi-Health Systems. Retrieved from <https://www.mhs.com/MHS-Talent?prodname=msceit>
- Mayer, J., Caruso, D., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review, 8, 4*, 290-300. doi: 10.1177/1754073916639667
- Mayer, J., DiPaolo, M., & Salovey, P. (1990). Perceiving affective content in ambiguous visual stimuli: a component of emotional intelligence. *Journal of Personality Assessment, 1*(54), 772-781.
- Mayer, J., Salovey, P., & Caruso, D. (2000). Effects of emotional intelligence and self-leadership on students' coping with stress. *Social Behavior and Personality, 44*(5), 853-864.
- Mayer, J., Salovey, P., & Caruso, D. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist, 63*, 503–517. doi:10.1037/0003-066X.63.6.503

Predictors of emotional intelligence amongst university students

Mbuthia, J. W., Kumar, M., Falkenström, F., Kuria, M. W., & Othieno, C. J. (2018).

Attributions and private theories of mental illness among young adults seeking psychiatric treatment in Nairobi: An interpretive phenomenological analysis. *Child and Adolescent Psychiatry and Mental Health*, 12, 28. doi: 10.1186/s13034-018-0229-0

McDaniel, B. T., & Radesky, J. S. (2017). Technoference: Parent distraction with technology and associations with child behavior problems. *Child Development*, 89(1), 100–109. doi: 10.1111/cdev.12822

McDaniel, B., & Radesky, J. S. (2018). Technoference: Parent distraction with technology and associations with child behaviour problems. *Child development*, 89(1). 100-109. doi: 10.1111/cdev.12822

McLeod, S. A. (2018, January). *Correlation*. Retrieved from <https://www.simplypsychology.org/correlation.html>

McMillan, J. H., & Schumacher, S. (2001). *Research in education: A conceptual introduction* (5th ed.). New York: Longman.

Meshkat, M., & Nejati, R. (2017). Does emotional intelligence depend on gender? A study on undergraduate English majors of three Iranian universities. *Sage Journals*, 7(3), 1-8. doi: 10.1177/2158244017725796

Milioni, M., Alessandri, G., Eisenberg, N., Castellani, V., Zuffianò, A., Vecchione, M., & Caprara, G. (2015). Reciprocal relations between emotional self-efficacy beliefs and ego-resiliency across time. *Journal of Personality*, 83(5). doi: 10.1111/jopy.12131

Murphy, K. R. (2014). *A critique of emotional intelligence: What are the problems and how can they be fixed?* London: Psychology Press.

Naidoo, A., & McKay, T.J.M. (2018) Student funding and student success: A case study of a South African university. *South African Journal of Higher Education*. 32(5), 158-172. doi.org/10.20853/32-5-2565

Predictors of emotional intelligence amongst university students

- Nel, J. A., Jonker, C. S., & Rabie, T. (2013). Emotional intelligence and wellness among employees working in the nursing environment. *Journal of Psychology in Africa, 23*(2), 195–203. doi: 10.1080/14330237.2013.10820615
- Nel, P., Du Plessis, M., & Bosman, L. (2015). Comparing different versions of the Rahim EI questionnaire in a South African context: A confirmatory factor analysis approach. *South African Journal of Industrial Psychology, 14*(1), 9. doi: 10.4102/sajip.v41i1.1220
- Nell, W. (2016). The religious lives of students at a South African university. *HTS Theological Studies, 72*(1), 1-11. doi: 10.4102/hts.v72i1.3177
- Nemoto, T., & Beglar, D. (2014). Developing Likert-scale questionnaires. In N. Sonda & A. Krause (eds.), *JALT2013 Conference Proceedings*. Tokyo: JALT
- Nestor, P. G., & Schutt, R. K. (2019). *Research methods in Psychology: Investigating human behavior*. Retrieved from <https://books.google.co.za/books?hl=en&lr=&id=niFoDwAAQBAJ&oi=fnd&pg=PP1&dq=research+methods+in+psychology+correlational+research+2018&ots=VqhQCVs0Kv&sig=eCAjMQ0ZghrZYdJnhdytkKPiARQ#v=onepage&q=research%20methods%20in%20psychology%20correlational%20research%202018&f=false>
- Nightingale, S., Spiby, H., Sheen, K., & Slade, P. (2018). The impact of emotional intelligence in health care professionals on caring behaviour towards patients in clinical and long-term care settings: Findings from an integrative review. *International Journal of Nursing Studies, 80*, 106-117. doi: 10.1016/j.ijnurstu.2018.01.006
- Oladipo, S., & Idemudia, E. (2015). Reliability and validity testing of Wagnild and Young's Resilience Scale in a sample of Nigerian youth. *Journal of Psychology, 6*(1), 57–65.
- Oxford Learners Dictionary. (2019). In *Oxford University Press*. Retrieved from <https://www.oxfordlearnersdictionaries.com/definition/academic/technology?q=technolog>

- Özgür, H. (2016). Adapting the Media and Technology Usage and Attitudes Scale to Turkish. *Educational Science: Theory and Practice*, 16(5), 1711-1735. doi: 10.12738/estp.2016.5.0085
- Pan, W., Wang, T., Wang, X., Hitchman, G., Wang, L., & Chen, A. (2014). Identifying the core components of emotional intelligence: Evidence from amplitude of low-frequency fluctuations during resting state. *PLoS ONE*, 9(10). doi: 10.1371/journal.pone.0111435
- Pancer, S., Hunsberger, B., Pratt, M., & Alisat, S. (2000). Cognitive complexity of expectations and adjustment to university in the first year. *Journal of Adolescent Research*, 15, 38–57. doi: 10.1177/0743558400151003
- Parker, J., Saklofske, D., Wood, L., Eastabrook, J., & Taylor, R. (2005). Stability and change in emotional intelligence: Examining the transition to young adulthood. *Journal of Individual Differences*, 26, 100–106. doi: 10.1027/1614-0001.26.2.100
- Parker, J., Summerfeldt, L., Hogan, M., & Majeski, S. (2004). Emotional intelligence and academic success: Examining the transition from high school to university. *Personality and Individual Differences*, 36(1), 163-172. doi: 10.1016/S0191-8869(03)00076-X
- Parry, D., & Le Roux, D. (2018). In-lecture media use and academic performance: Investigating demographic and intentional moderators. *South African Computer Journal*, 30(1). doi: [10.18489/sacj.v30i1.434](https://doi.org/10.18489/sacj.v30i1.434)
- Pässler, K., Beinicke, A., & Hell, B. (2015). Interests and intelligence: A meta-analysis. *Intelligence*, 50, 30–51. doi: 10.1016/j.intell.2015.02.001
- Pather, S., & Dorasamy, N. (2018). The mismatch between first-year students' expectations and experience alongside university access and success: A South African university case study. *Journal of Student Affairs in Africa*, 6(1). 2307-6267. doi: 10.24085/jsaa.v6i1.3065

Predictors of emotional intelligence amongst university students

- Pather, S., Norodien-Fataar, N., Cupido, X., & Mkonto, N. (2017). First year students' experience of access and engagement at a University of Technology. *Journal of Education*, 1(69), 161-184. Retrieved from http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2520-98682017000200008&lng=en&tlng=en.
- Pedro, L., Barbosa, C., & Santos, C. (2018). A critical review of mobile learning integration in formal educational contexts. *International Journal of Educational Technology in Higher Education*, 15(10). doi: 10.1186/s41239-018-0091-4
- Perry, R., Hall, N., & Ruthig, J. (2007). Perceived (academic) control and scholastic attainment in higher education. In R. Perry, N. Hall, & J. Ruthig (eds.), *The scholarship of teaching and learning in higher education: An evidence-based perspective* (pp. 477-551). Dordrecht, The Netherlands: Springer Publications.
- Pires-Putter, J. K., & Jonker, C. S. (2013). The psychometric properties of an emotional intelligence measure within non-professional counsellors in South Africa. *Journal of Psychology in Africa*, 23(4), 585–588. doi: 10.1080/14330237.2013.10820671
- Poonamallee, L., Harrington, A. M., Nagpal, M., & Musial, A. (2018). Improving emotional intelligence through personality development: The effect of the smart phone application based Dharma Life Program on emotional intelligence. *Frontiers in Psychology*, 23(9), 169. doi: 10.3389/fpsyg.2018.00169
- Porges, S. (2007). The polyvagal perspective. *Biological Psychology*, 74, 116-143. doi: 10.1016/j.biopsycho.2006.06.009
- Pretorius, T., & Theron, L. (2018). 'A pillar of strength': Empowering women and the resilience of township-dwelling adolescents. *YOUNG*. 27(4) 1-22. doi: 10.1177/1103308818795081

- Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, 3(9), 369 – 387. doi: 10.5281/zenodo.887089
- Quinn, G., Gwede, C., & Meade, C. (2018). Diversity beyond race and ethnicity: Enhancing inclusion with an expanded definition of diversity. *The American Journal of Bioethics*, 18(4), 47-48. doi: 10.1080/15265161.2018.1431705
- Ramdass, K. (2009). *The challenges facing education in South Africa*. University of Johannesburg. Johannesburg: HSRC Press. Retrieved from <https://ujcontent.uj.ac.za/vital/access/services/Download/uj:6232/CONTENT1>
- Ramesh, S., Thavaraj, H., & Ramkumar, D. (2016). Impact of emotional intelligence on academic achievement of college students. *International Journal of Business Management & Research*, 6(2), 25-30.
- Richardson, D. B., Hamra, G. B., MacLehose, R. F., Cole, S. R., & Chu, H. (2015). Hierarchical regression for analyses of multiple outcomes. *American Journal of Epidemiology*, 182(5), 459–467. doi: 10.1093/aje/kwv047
- Robertson, L. J., & Szabo, C. P. (2017). Community mental health services in southern Gauteng: An audit using Gauteng District Health Information Systems data. *South African Journal of Psychiatry*, 23(1055) 1-6. doi: 10.4102/sajpsychiatry.v23i0.1055
- Rodríguez-Fernández, A., Ramos-Díaz, E., & Axpe-Saez, I. (2018). The role of resilience and psychological well-being in school engagement and perceived academic performance: An exploratory model to improve academic achievement. *Health and Academic Achievement*. 10(1)159- 176. doi: 10.5772/intechopen.73580
- Rosen, L., Whaling, K., Carrier, L., Cheever, N., & Rokkum, J. (2013). The Media and Technology Usage and Attitudes Scale: An empirical investigation. *Computers in Human Behavior*, 29(6), 2501–2511. doi: 10.1016/j.chb.2013.06.006

Predictors of emotional intelligence amongst university students

- Ross, S., Cleland, J., & Macleod, M. (2006). Stress, debt, and undergraduate medical student performance. *Medical Education, 40*(6), 584-589. doi: 10.1111/j.1365-2929.2006.02448.x
- Rothermund, K., Voss, A., & Wentura, D. (2008). Counter-regulation in affective attentional biases: A basic mechanism that warrants flexibility in emotion and motivation. *Emotion, 8*(1), 34-46. doi: 10.1037/1528-3542.8.1.34
- Rowe, A., & Fitness, J. (2018). Understanding the role of negative emotions in adult learning and achievement: A social functional perspective. *Behavioral Sciences, 8*(2), 27. doi: 10.3390/bs8020027
- Ruotsalainen, L. P., Rantalainen, K., Alakortes, J., Carter, A. C., Ebeling, H.E., & Sari, K. (2018). Social-emotional/behavioural problems and competencies in toddlers: Relationships with early vocabulary development. *Journal of Early Childhood Education Research, 7*, 184-206.
- Saenz, V. B., Hatch, D., Bukoski, B. E., Kim, S., Lee, K.H., & Valdez, P. (2011). Community college student engagement patterns: A typology revealed through exploratory cluster analysis. *Community College Review, 39*(3), 235. doi: 10.1177/0091552111416643
- Salovey, P., & Mayer, J. D. (1989). Emotional intelligence. *Imagination, Cognition and Personality, 9*, 185-211. doi: 10.2190/DUGG-P24E-52WK-6CDG
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*, 185-211. doi: 0.2190/DUGG-P24E-52WK-6CDG
- Salovey, P., Bedell, B., Detweiler, J., & Mayer, J. (2001). *Coping intelligently: Emotional intelligence and the coping process*. New York: Oxford University Press. doi: 10.2190/DUGG-P24E-52WK-6CDG

- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using Trait Meta-Mood Scale. In J. W. Pennebaker (ed.), *Emotion, disclosure and health* (pp. 125-154). Washington DC: APA.
- Sanders-McDonagh, E., & Davis, C. (2018). Resisting neoliberal policies in UK higher education: Exploring the impact of critical pedagogies on non-traditional students in a post-1992 university. *Education, Citizenship and Social Justice*, 13(3), 217–228. doi: 10.1177/1746197918793061
- Santiago-Poventud, L., Corbett, N. L., Daunic, A. P., Aydin, B., Lane, H. B., & Smith, S. W. (2015). Developing social-emotional vocabulary to support self-regulation for young children at risk for emotional and behavioral problems. *International Journal of School and Cognitive Psychology*, 2(3), 1–9. doi: 10.4172/ijscp.1000143
- Schoeman, W. J. (2017). South African religious demography: The 2013 General Household Survey'. *Theological Studies*, 73(2), 1-7. doi: 10.4102/hts.v73i2.3837
- Schoeman, R., & Liebenberg, R. (2017). The South African Society of Psychiatrists/Psychiatry Management Group management guidelines for adult attention-deficit/hyperactivity disorder. *South African Journal of Psychiatry*, 23. Retrieved from <https://doi.org/10.4102/sajpspsychiatry.v23i0.1060>
- Schutte, N., Malouff, J., & Thorsteinsson, E. (2013). Increasing emotional intelligence through training: Current status and future directions. *International Journal of Emotional Education*, 5(1), 56-72.
- Shallcross, A. J., Ford, B. Q., Floerke, V. A., & Mauss, I. B. (2013). Getting better with age: The relationship between age, acceptance, and negative affect. *Journal of Personality and Social Psychology*, 104(4), 734–749. doi: 10.1037/a0031180

Predictors of emotional intelligence amongst university students

- Sheppes, G., Suri, G., & Gross, J. (2015). Emotion regulation. *Annual Review of Clinical Psychology, 11*, 379–405. doi: 10.1146/annurev-clinpsy-032814-112739
- Sigerson, L., & Cheng, C. (2018). Scales for measuring user engagement with social network sites: A systematic review of psychometric properties. *Computers in Human Behavior, 83*, 87–105. doi: 10.1016/j.chb.2018.01.023
- Simsek, E., & Sali, J. (2014). The role of internet addiction and social media membership on university students' psychological capital. *Contemporary Educational Technology, 5*(3), 239-256.
- Singh, K. (2010). Developing human capital by linking emotional intelligence with personal competencies in Indian business organizations. *International Journal of Business Science and Applied Management, 5*(2), 30–42.
- Sparkman, L., Maulding, W., & Roberts, J. (2012). Non-cognitive predictors of student success in college. *College Student Journal, 46*(3), 642-652.
- Spaull, N. (2013). *South Africa's education crisis: The quality of education in South Africa*. Centre for Development and Enterprise, Johannesburg. Retrieved from <http://www.section27.org.za/wp-content/uploads/2013/10/Spaull-2013-CDE-report-South-Africas-Education-Crisis.pdf>
- Stangor, C. (2011). *Research methods for the behavioral sciences* (4th ed.). Cengage, CA, Mountain View.
- Stangor, C. (2015). *Research methods for behavioural science* (5th ed.). Belmont, Wadsworth, CS.
- Steyn, H. S. (2005). *Handleiding vir die bepaling van effekgrootte indekse en praktiese betekenisvolheid*. Retrieved from <http://www.puk.ac.za/fakulteit/natuur/skd/index.htm>

Predictors of emotional intelligence amongst university students

- Surzykiewicz, J., Konaszewski, K., & Wagnild, G. (2019). Polish version of the Resilience Scale (RS-14): A validity and reliability study in three samples. *Frontiers in Psychology*, 9(2762), 1-16. doi: 10.3389/fpsyg.2018.02762
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. doi: 10.5116/ijme.4dfb.8dfd
- Theron E., & Bitzer, E. (2016). Student learning engagement at a private higher education institution. *Tydskrif vir Geesteswetenskappe*, 56(1), 207–220. doi: 10.17159/2224-7912/2016/v56n1a13
- Thingujam, N. S. (2002). Emotional intelligence: What is the evidence? *Psychological Studies*, 47(1-3), 54–69.
- Truninger, M., Fernández-i-Marín, X., Batista-Foguet, J. M., Boyatzis, R. E., & Serlavós, R. (2018). The power of EI competencies over intelligence and individual performance: A task-dependent model. *Frontiers in Psychology*. 9(1532) 1-40. doi: 10.3389/fpsyg.2018.01532
- Tshuma, S. (2016). *Health and young people in South Africa*. Retrieved from www.unicef.org/southafrica/SAF_resources_saAdolescentSocialMedia.pdf
- Ubaidi, B. (2018). Is emotional intelligence a need skill for health care providers? *Journal of Family Medicine and Disease Prevention*, 4(1), 1-6. doi: 10.23937/2469-5793/1510071
- Van der Westhuizen, G. J., Monteith, J. L., De K., & Steyn, H. S. (1989). Relative contribution of different sets of variables to the prediction of the academic achievement of Black students. *South African Journal of Education*, 9(4), 769-773.
- Van Rooy, D. L., Dilchert, S., Viswesvaran, C., & Ones, D. S. (2006). Multiplying intelligences: Are general, emotional, and practical intelligences equal? What are the problems and how can they be fixed? In K. R. Murphy (ed.), *A critique of emotional*

Predictors of emotional intelligence amongst university students

- intelligence: What are the problems and how can they be fixed?* (pp. 235-262). Mahwah, NJ: Erlbaum.
- Van Rooy, D., Alonso, A., & Viswesvaran, C. (2005). Group differences in emotional intelligence scores: Theoretical and practical implications. *Personality and Individual Differences, 38*(3), 689–700. doi: 10.1016/j.paid.2004.05.023
- Vandervoort, D. (2006). The importance of emotional intelligence in higher education. *Current Psychology: Developmental, Learning, Personality, Social, 25*, 4-7. doi: 10.1007/s12144-006-1011-7
- Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). Non-probability sampling. In C. Wolf, D. Joye, T. W. Smith Y. & Fu(eds.). *The SAGE handbook of survey methodology* (pp. 329-345). London: SAGE Publications Ltd. doi: 10.4135/9781473957893
- Villegas, D. L. (2018). Spirituality and belief: Implications for study and practice of Christian spirituality. *Theological Studies, 74*(3), 5037. doi: 10.4102/hts.v74i3.5037
- Vishkin, A., Bigman, Y., & Tamir, M. (2014). Religion, emotion regulation, and well-being. In C. Kim-Prieto (ed.), *Positive psychology of religion and spirituality across cultures* (pp. 247-269). New York, NY: Springer.
- Vogt, W.P. (2005). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences*. Thousand Oaks, CA: Sage
- Wagnild, G. (2009). *The resilience scale user's guide for the US English version of the resilience scale and the 14-item resilience scale (RS-14)*. Retrieved from https://www.academia.edu/2227996/14-item_resilience_scale_RS-14_psychometric_properties_of_the_Brazilian_version
- Wagnild, G., & Young, H. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nurses Measurements, 1*(2), 165–178. Retrieved from www.ncbi.nlm.nih.gov/pubmed/7850498

- Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). *Educational resilience in inner-city America: Challenges and prospects* (pp. 1-224). New York: Routledge. doi: 10.4324/9780203052723
- Watts, F. (2007). Emotion regulation and religion. In J. Gross, & J. Gross (eds.), *Handbook of emotion regulation* (pp. 504-520). New York: Guilford Press.
- Waugh, C. E., Thompson, R. J., & Gotlib, I. H. (2011). Flexible emotional responsiveness in trait resilience. *Emotion, 11*(5), 1059–1067. doi: 10.1037/a0021786
- Webb, C., Schwab, Z., Weber, M., Deldonno, S., Kipman, M., & Weiner, M. (2013). Convergent and divergent validity of integrative versus mixed model measures of emotional intelligence. *Intelligence, 3*, 149–156. doi: 10.1016/j.intell.2013.01.004
- Wegmann, E., Ostendorf, S., & Brand, M. (2018). Is it beneficial to use Internet communication for escaping from boredom? Boredom proneness interacts with cue-induced craving and avoidance expectancies in explaining symptoms of Internet-communication disorder. *PLOS ONE, 13*(4) 1-18. doi: 10.1371/journal.pone.0195742
- Weissberg, R. P. (2019). Promoting the social and emotional learning of millions of school children. *Perspectives on Psychological Science, 14*(1), 65–69. doi: 10.1177/1745691618817756
- Wong, C., Foo, M., Wang, C., & Wong, P. (2007). The feasibility of training and development of EI: An exploratory study in Singapore, Hong Kong and Taiwan. *Intelligence, 35*, 141-150.
- Woods, M., Warnecke, E., Stirling, C., & Martin, A. (2018). Psychological health of doctoral candidates, study-related challenges and perceived performance. *Higher Education Research & Development, 37*(3). doi: 10.1080/07294360.2018.1425979
- Yip, J., & Cote, S. (2013). The emotionally intelligent decision-maker: Emotion understanding. *Psychological Science, 24*, 48-55. doi: 10.1177/0956797612450031

Predictors of emotional intelligence amongst university students

Yorke, M., & Longden, B. (2005). Setting the scene. *Journal of Industrial Psychology*, 4-12.

Young, C. (2009). The CORE-OM intake norms of students attending a South African university counselling service: A comparison with UK counselling service data. *British Journal of Guidance & Counselling*, 37(4), 473-483. doi: 10.1080/03069880903161377

Zepke, N. (2014). Student engagement research in higher education: Questioning an academic orthodoxy. *Teaching in Higher Education*, 19, 697–708. doi: 10.1080/13562517.2014.901956

Appendix A

Biographical Questionnaire

1. What is your gender?

Male	1
Female	2

2. How old are you?

18 years old	1
19 years old	2
20 years old	3
21 years old	4
22 years old	5
23 years old	6
24 years old	7
25 years old	8
26 years old	9
27 years old	10
28 years old	11
29 years old	12
Other:	13
Please specify:	

3. What is your ethnic group?

Black	1
Coloured	2
White	3
Asian	4
Indian	5
Other	6
Please specify:	

Predictors of emotional intelligence amongst university students

4. What is your culture?

South Sotho	1
North Sotho	2
Xhosa	3
Zulu	4
Tswana	5
English	6
Afrikaans	7
Other:	8
Please specify:	

5. In what year of study are you currently?

First year	1
Second year	2
Third year	3
Fourth year	4
Other:	5
Please specify:	

6. What is your main major?

Psychology	1
Criminology	2
Sociology	3
Anthropology	4
Political science	5
Industrial psychology	6
Communication	7
Education	8
Languages	9
Philosophy	10
Social work	11
Other:	12
Please specify:	

Predictors of emotional intelligence amongst university students

7. Where do you live?

Campus hostel	1
Hostel off campus	2
Home with parents	3
Flat in town	4
Student house	5
Other:	6
Please specify:	

8. With what religion do you identify?

No religion	1
Christianity	2
Judaism	3
Islam	4
Buddhism	5
Hindu	6
Other:	7
Please specify:	

9. How important is religion in your day-to-day life?

Not at all important	1
Somewhat important	2
Important	3
Very important	4
Extremely important	5

10. What is the frequency of your religious practice?

Never	1
Seldom	2
Regularly	3
Very regularly	4

Predictors of emotional intelligence amongst university students

11. Are you one of the following?

First generation student	1
Continuous generation student	2

12. What is your relationship status?

Single	1
In a relationship	2
Married	3
Widowed	4
Divorced	5
Separated	6
Other:	7
Please specify:	

13. From which South African province are you?

Eastern Cape	1
Free State	2
Gauteng	3
KwaZulu-Natal	4
Limpopo	5
Mpumalanga	6
Northern Cape	7
North West	8
Western Cape	9
Other:	10
Please specify:	

14. Did either of your parents graduate from college?

No	1
Yes, mother only	2
Yes, father only	3
Yes, both parents	4
Do not know	5

Predictors of emotional intelligence amongst university students

15. How well do you like being at university?

I am enthusiastic about it	1
I like it	2
I am more or less neutral about it	3
I don't like it.	4

16. If you could start over again, would you go to the same institution you are now attending?

Yes, definitely	1
Probably yes	2
Probably no	3
No, definitely	4

Appendix B

The Schutte Emotional Intelligence Scale (SEIS)

Please rate each statement with how it reflects to your emotional intelligence, using the scale below to make your choice.

No	Statement	Strongly disagree			Strongly agree	
		1	2	3	4	5
1.	I know when to speak about my personal problems to others.	1	2	3	4	5
2.	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	1	2	3	4	5
3.	I expect that I will do well on most things I try.	1	2	3	4	5
4.	Other people find it easy to confide in me.	1	2	3	4	5
5.	I find it hard to understand the non-verbal messages of other people.*	1	2	3	4	5
6.	Some of the major events of my life have led me to re-evaluate what is important and not important.	1	2	3	4	5
7.	When my mood changes, I see new possibilities.	1	2	3	4	5
8.	Emotions are one of the things that make my life worth living.	1	2	3	4	5
9.	I am aware of my emotions as I experience them.	1	2	3	4	5
10.	I expect good things to happen.	1	2	3	4	5
11.	I like to share my emotions with others.	1	2	3	4	5
12.	When I experience a positive emotion, I know how to make it last.	1	2	3	4	5
13.	I arrange events others enjoy.	1	2	3	4	5
14.	I seek out activities that make me happy.	1	2	3	4	5
15.	I am aware of the non-verbal messages I send to others.	1	2	3	4	5
16.	I present myself in a way that makes a good impression on others.	1	2	3	4	5
17.	When I am in a positive mood, solving problems is easy for me.	1	2	3	4	5
18.	By looking at their facial expressions, I recognize the emotions people are experiencing.	1	2	3	4	5
19.	I know why my emotions change.	1	2	3	4	5
20.	When I am in a positive mood, I am able to come up with new ideas.	1	2	3	4	5
21.	I have control over my emotions.	1	2	3	4	5
22.	I easily recognize my emotions as I experience them.	1	2	3	4	5
23.	I motivate myself by imagining a good outcome to tasks I take on.	1	2	3	4	5
24.	I compliment others when they have done something well.	1	2	3	4	5
25.	I am aware of the non-verbal messages other people send.	1	2	3	4	5

Predictors of emotional intelligence amongst university students

26.	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.	1	2	3	4	5
27.	When I feel a change in emotions, I tend to come up with new ideas.	1	2	3	4	5
28.	When I am faced with a challenge, I give up because I believe I will fail.*	1	2	3	4	5
29.	I know what other people are feeling just by looking at them.	1	2	3	4	5
30.	I help other people feel better when they are down.	1	2	3	4	5
31.	I use good moods to help myself keep trying in the face of obstacles.	1	2	3	4	5
32.	I can tell how people are feeling by listening to the tone of their voice.	1	2	3	4	5
33.	It is difficult for me to understand why people feel the way they do.*	1	2	3	4	5

Reverse score items: 5, 28, 33

Appendix C

The Resilience Scale (RS)

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Click the circle below the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, click "1". If you are neutral, click "4", and if you strongly agree, click "7", etc.

	Strongly Disagree				Strongly Agree		
1. When I make plans, I follow through with them.	1	2	3	4	5	6	7
2. I usually manage one way or another.	1	2	3	4	5	6	7
3. I am able to depend on myself more than anyone else.	1	2	3	4	5	6	7
4. Keeping interested in things is important to me.	1	2	3	4	5	6	7
5. I can be on my own if I have to.	1	2	3	4	5	6	7
6. I feel proud that I have accomplished things in life.	1	2	3	4	5	6	7
7. I usually take things in stride.	1	2	3	4	5	6	7
8. I am friends with myself.	1	2	3	4	5	6	7
9. I feel that I can handle many things at a time.	1	2	3	4	5	6	7
10. I am determined.	1	2	3	4	5	6	7
11. I seldom wonder what the point of it all is.	1	2	3	4	5	6	7
12. I take things one day at a time.	1	2	3	4	5	6	7
13. I can get through difficult times because I've experienced difficulty before.	1	2	3	4	5	6	7
14. I have self-discipline.	1	2	3	4	5	6	7
15. I keep interested in things.	1	2	3	4	5	6	7
16. I can usually find something to laugh about.	1	2	3	4	5	6	7
17. My belief in myself gets me through hard times.	1	2	3	4	5	6	7
18. In an emergency, I'm someone people can generally rely on.	1	2	3	4	5	6	7
19. I can usually look at a situation in a number of ways.	1	2	3	4	5	6	7
20. Sometimes I make myself do things whether I want to or not.	1	2	3	4	5	6	7
21. My life has meaning.	1	2	3	4	5	6	7
22. I do not dwell on things that I can't do anything about.	1	2	3	4	5	6	7
23. When I'm in a difficult situation, I can usually find my way out of it.	1	2	3	4	5	6	7
24. I have enough energy to do what I have to do.	1	2	3	4	5	6	7
25. It's okay if there are people who don't like me.	1	2	3	4	5	6	7

Appendix D

Media and Technology Usage and Attitudes Scale (MTUAS)

1. Please indicate how often you do each of the following e-mail activities on any device (mobile phone, laptop, desktop, etc.)

No	How often do you:	Never	Once a month	Several times a month	Once a week	Several times a week	Once a day	Several times a day	Once an hour	Several times a hour	All the time
1	Send, receive and read emails (not including spam or junk mail)										
2	Check your personal e-mail										
3	Check you work or school e-mail.										
4	Send or receive files via e-mail										

2. Please indicate how often you do each of the following activities on your mobile phone:

No	How often do you:	Never	Once a month	Several times a month	Once a week	Several times a week	Once a day	Several times a day	Once an hour	Several times a hour	All the time
5	Send, receive text messages on a mobile phone										
6	Make and receive mobile calls										
7	Check for text messages on a mobile phone										
8	Check for voice calls on a mobile phone										
9	Read e-mail on a mobile phone										
10	Get directions or use GPS on mobile phone										
11	Browse the web on a mobile phone										
12	Listen to music on a mobile phone										
13	Take pictures using a mobile phone										

Predictors of emotional intelligence amongst university students

- 14 Check news on mobile phone
- 15 Record a video on mobile phone
- 16 Use apps (for any purpose) on mobile phone
- 17 Search for information on a mobile phone
- 18 Use mobile phone during class or work time

3. How often do you do each of the following activities?

No	How often do you:	Never	Once a month	Several times a month	Once a week	Several times a week	Once a day	Several times a day	Once an hour	Several times a n hour	All the time
19	Watch TV shows, movies, etc. on a TV set										
20	Watch video clips on a TV set										
21	Watch TV shows, movies etc. on a computer										
22	Watch video clips on a computer										
23	Download media files from other people on a computer										
24	Share your own media files on a computer										
25	Search the internet for news on any device										
26	Search the internet for information on any device										
27	Search the internet for videos on any device										
28	Search the internet for videos and photos on any device										
29	Play video games on a computer, video game console or smartphone, BY YOURSELF										
30	Play video games on a computer, video game console or smartphone, WITH OTHER PEOPLE IN THE SAME ROOM										
31	Play video games on a computer, video game console or smartphone,										

WITH OTHER PEOPLE
ONLINE

Do you have a Facebook account? If the answer is “yes,” continue with item 32; if “no”, skip to the Attitudes subscales below. NOTE: The word “social media” may be substituted for Facebook in the question stem above and in items 32–34.

4. How often do you do each of the following activities on social networking sites such as Facebook?

No	How often do you:	Never	Once a month	Several times a month	Once a week	Several times a week	Once a day	Several times a day	Once an hour	Several times an hour	All the time
32	Check your Facebook page or other social networks										
33	Check your Facebook page from your smartphone										
34	Check Facebook at work or school										
35	Post status updates										
36	Post photos										
37	Browse profiles and photos										
38	Read postings										
39	Comment on postings, status updates, photos etc.										
40	Click “Like” to a posting photo, etc.										

5. Please answer the following questions about your Facebook and other online friends. NOTE: In item 41 and 42 the words “social media” (or any specific social media site) may be substituted for Facebook.

No	How many:	0	1-50	51-100	101-175	176-250	251-375	376-500	501-750	750 or more
41	How many friends do you have on Facebook?									

Predictors of emotional intelligence amongst university students

- 42 How many of your Facebook friends do you know in person?
- 43 How many people have you met online that you have never met in person?
- 44 How many people do you regularly interact with online that you have never met in person?

Appendix E



Faculty of the Humanities

11-Oct-2017

Dear Mr Jordaan

Ethics Clearance: **Predictors of psychological well-being amongst university students**

Principal Investigator: **Mr Jacques Jordaan**

Department: **Psychology (Bloemfontein Campus)**

APPLICATION APPROVED

With reference to your application for ethical clearance with the Faculty of the Humanities. I am pleased to inform you on behalf of the Research Ethics Committee of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence is: **UFS-HSD2017/1313**

This ethical clearance number is valid for research conducted from **11-Oct-2017 to 11-Oct-2018**. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours Sincerely

Prof. Robert Peacock
Chair: Research Ethics Committee
Faculty of the Humanities



Appendix F:

ORIGINALITY REPORT

16%	8%	4%	13%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of the Free State Student Paper	3%
2	scholar.ufs.ac.za:8080 Internet Source	1%
3	uir.unisa.ac.za Internet Source	1%
4	journal.frontiersin.org Internet Source	<1%
5	Görgens-Ekermans, Gina, Marthinus Delpoort, and Ronel Du Preez. "Developing Emotional Intelligence as a key psychological resource reservoir for sustained student success", SA Journal of Industrial Psychology, 2015. Publication	<1%
6	Submitted to Eiffel Corporation Student Paper	<1%
