

**EMOTIONAL INTELLIGENCE, ADJUSTMENT, MEDIA AND TECHNOLOGY  
USAGE, AND SEX AS PREDICTORS OF PSYCHOLOGICAL WELL-BEING  
AMONGST UNDERGRADUATE UNIVERSITY STUDENTS**

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Submitted in accordance with the requirements for the degree of

**MASTER OF SOCIAL SCIENCE  
(COUNSELLING PSYCHOLOGY)**

in the Faculty of the Humanities  
at the University of the Free State  
Bloemfontein

June 2021

Supervisor: Dr J. Jordaan

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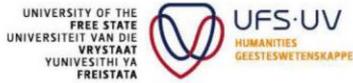
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I approve the submission for assessment and that the submitted work has not previously, either in part or in its entirety, been submitted to the examiners or moderators.

Kind regards.

Dr. J. Jordaan  
Supervisor



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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Overview of chapter**

This chapter introduces the research study and the main research area of interest, namely Psychological Well-being (PWB). This will be followed by discussing the context and rationale of this study, including an introduction to the research aim and research questions. The research methodology, data collection procedures, and data analysis procedures of this study will also be discussed. Furthermore, important terminology will be elaborated on, and the ethical considerations and the value of this study presented. This chapter will conclude with an overview of the chapters included in this dissertation.

### **1.2 Introduction**

University students face many new challenges such as new roles and responsibilities, financial pressures, and social difficulties (Credé & Niehorster, 2011; Stoklasa, 2015; Van Breda, 2017). South African students, in particular, face additional socio-economic challenges such as high levels of crime, violence and unemployment (Edwards et al., 2004). These challenges put university students at risk of mental health concerns such as anxiety, depression and post-traumatic stress disorder (PTSD) (Bantjies et al., 2019; Olasupo et al., 2018; Rousseau et al., 2021; Van Breda, 2017).

PWB has been found to predict successful academic performance (Bordbar et al., 2011; Freire et al., 2016; Turashvili & Japaridze, 2012). As a result, PWB interventions (e.g., the psychological well-being promotion model) have been used to research and promote PWB in university students (Harding et al., 2019). PWB is vital to the academic success of university

students and plays a role in their emotional and mental well-being (Braathen et al., 2013; Chow et al., 2018; Das-Munshi et al., 2016; Harding et al., 2019; Ramdass, 2009; Siddiqui, 2015; Smith & Yang, 2017; Turashvili & Japaridze, 2012; Udhayakymar & Illango, 2018).

### **1.3 Context and rationale**

South Africa is a country known for its rich cultural diversity and racial history (Braathen et al., 2013; Das-Munshi et al., 2016; Ramdass, 2009). Despite the ending of Apartheid over 25 years ago, our society remains unequal, with various racial and material inequalities still present (Beaubien, 2018; Braathen et al., 2013; Das-Munshi et al., 2016; Pillay, 2021; Ramdass, 2009). In addition, South Africa faces many socio-political issues (e.g., high levels of violence, crime, and unemployment) (Braathen et al., 2013; Das-Munshi et al., 2016; Ramdass, 2009). The South African context presents many unique challenges for university students, such as unequal access to resources and political unrest (Chetty & Pather, 2015; Edwards et al., 2004; LaBrie et al., 2012)

These challenges put university students at risk of developing mental health concerns such as depression, anxiety and PTSD as they often do not have the coping skills needed to deal with these challenges (Bantjies et al., 2019; Olasupo et al., 2018; Van Breda, 2017). These challenges and further mental health concerns can result in poor academic performance and students dropping out of university (Pather & Dorasamy, 2018).

In South Africa, only 20.3% of university students reach graduation (Essop, 2020; Mokgele & Rothmann, 2014) compared to 61% of students in the United States (National Center for Education Statistics [NCES], 2020). Not only does this highlight problems in the higher education system, but it also raises concerns about the competency of the South African labour market (Cilliers & Flotman, 2016).

Previous studies have found that increased levels of PWB in university students lead to lower rates of depression, anxiety, and stress, resulting in better resilience and coping

strategies (Freire et al., 2016; Olasupo et al., 2018). This research highlights the importance of researching PWB among university students and indicates how PWB can increase university students' quality of life, subsequently lowering the dropout rate (Bantjies et al., 2019; Freire et al., 2016; Olasupo et al., 2018).

Emotional Intelligence, Adjustment, Media and Technology Usage, and Sex are all variables relevant to university students. Emotional intelligence is defined as the ability to accurately perceive, understand, utilise and manage emotions in oneself and others (Shutte et al., 2013). Research on South African university students has found that higher levels of emotional intelligence tend to result in lower levels of somatic and depressive symptoms, better PWB, increased success and improved mental and physical health (Beckmann & Minnaert, 2018; Cronje, 2019; Lawal et al., 2018).

Adjustment refers to how well university students cope with university life (Feldt et al., 2011). As mentioned, university students face many challenges. Their adjustment to university life is essential to their PWB as a positive adjustment in South African university students could increase their PWB levels (LaBrie et al., 2012; Olasupo et al., 2018).

Maladjustment to university has been shown to significantly predict anxiety, depression and social dysfunction amongst South African undergraduate university students (Olasupo et al., 2018).

The use of media and technology is very prevalent in university students (Çardak, 2013; Twenge, 2019). Some studies show that media and technology usage can have adverse effects on the PWB of university students (Çardak, 2013; Twenge, 2019). Other studies, however, show the opposite, emphasising the potential uses of media and technology in measuring and intervening in well-being (Magasamen-Conrad et al., 2014; Yaden et al., 2018). Regardless, media and technology overuse in university students tends to lead to lower levels of PWB in

terms of diminished impulse control, loneliness/depression, lower social comfort and distraction (Anand et al., 2018; Çardak, 2013; Tangmunkongvorakul, 2019).

Differences have been found between men and women in terms of PWB, with each sex scoring higher on specific aspects of PWB; women have an overall lower sense of PWB (Gómez-Baya et al., 2018). Similar differences have also been found to occur in student populations (Chraif & Dumitru, 2015; Roothman et al., 2003).

Therefore, each variable is linked to the PWB of university students and will be discussed in more detail in later sections. This study will focus on identifying predictors of PWB in university students in South Africa to better aid the development of PWB in university students.

#### **1.4 Research aim of the study**

This study aims to identify the predictor variable(s) or combination of predictor variables that explain a significant percentage of the variance in PWB amongst undergraduate university students. The criterion variable in this study is PWB, and the predictor variables used are Emotional Intelligence, Adjustment, Media and Technology Usage, and Sex. This research will focus on undergraduate university students enrolled in the Faculty of the Humanities at the University of the Free State.

#### **1.5 Research questions**

In order to address the research aim of this study, the following research questions will be investigated:

- Does the combination of Media and Technology Usage, Adjustment, Emotional Intelligence, and Sex explain a significant percentage of the variance in psychological well-being amongst undergraduate university students?

- Do any of the individual variables significantly contribute to the variance in psychological well-being amongst undergraduate university students?

## **1.6 Research methodology**

### **1.6.1. Research approach and design**

This study utilised a non-experimental research type in which quantitative research methodology was followed (Morgan, 2018; Rutberg & Bouikidis, 2018; Seeram, 2019; Stangor, 2011, 2015). A correlational research design was used to identify correlations between the variables (Seeram, 2019).

### **1.6.2. Sampling**

This research study formed part of a larger research project and used an existing data set. The sample of the larger research project consisted of 1191 undergraduate university students aged between 18 and 29 enrolled in the Faculty of the Humanities at the University of the Free State, Bloemfontein, South Africa. Sampling was done using a non-probability sampling technique known as convenience sampling (Acharya et al., 2013; Sharma, 2017).

### **1.6.3. Data collection**

Data was collected through online questionnaires shared on Blackboard, an educational platform all registered students at the University of the Free State can access. Participation was voluntary and open to undergraduate university students in the Faculty of the Humanities at the University of the Free State. The measuring instruments used to collect the data is briefly discussed below.

### **1.6.3.1. Biographical questionnaire**

Firstly, a biographical questionnaire (Appendix C) was utilised to gather demographic data such as sex, ethnicity, language, year of study, main major, generation, province, education of parents, and happiness at the university. This provided insight into the demographic information of the sample.

### **1.6.3.2. Ryff's Scales of Psychological Well-being (SPWB)**

Ryff's *Scales of Psychological Well-being* (SPWB; Ryff & Singer, 2008) was used to measure the PWB of the participants. The SPWB consists of 42 items across six dimensions, namely (i) Autonomy, (ii) Environmental Mastery, (iii) Personal Growth, (iv) Positive Relations, (v) Purpose in Life, and (vi) Self-acceptance (Henn et al., 2016; Ryff, 1989, 2014). The SPWB uses a six-point Likert-type scale ranging from 1 ("*strongly disagree*") to 6 ("*strongly agree*") (Henn et al., 2016; Ryff, 1989, 2014). The Cronbach alphas for these dimensions range from 0.68 to 0.82 (Ryff, 2014; Van Dierendonck et al., 2007). Higher scores imply higher levels of PWB (Ryff, 1989).

### **1.6.3.3. The Schutte Emotional Intelligence Scale (SEIS)**

The *Schutte Emotional Intelligence Scale* (SEIS; Schutte et al., 1998) was used to measure the participants' emotional intelligence. The SEIS consists of 33 items and uses a five-point Likert-type scale to record the responses that range from 1 ("*strongly disagree*") to 5 ("*strongly agree*") (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Shutte et al., 1998; Shutte et al., 2009). Higher scores indicate higher levels of emotional intelligence (Shutte et al., 2009). The Cronbach alpha for this scale range between 0.90 and 0.93 (Cronje, 2019; Shutte et al., 1998).

#### **1.6.3.4. The Student Adaption to College Questionnaire (SACQ)**

The *Student Adaption to College Questionnaire* (SACQ; Credé & Niehorster, 2011) was used to measure the participants' adjustment. The questionnaire consists of 55 items covering two subscales of adjustment: (i) Positive Adjustment and (ii) Negative Adjustment (Credé & Niehorster, 2011; LaBrie et al., 2012). The responses are indicated using a nine-point Likert-type scale ranging from 1 (“*doesn't apply to me at all*”) to 9 (“*applies very closely to me*”) (LaBrie et al., 2012). The Cronbach alpha for this questionnaire has been identified as 0.83 (LaBrie et al., 2012). A higher score in Positive Adjustment indicates that the participant is better adjusted to university, while a higher score in Negative Adjustment suggests that the participant is not well adapted to university (Stoklosa, 2015).

#### **1.6.3.5. The Media and Technology Usage and Attitudes Scale (MTUAS)**

The *Media and Technology Usage and Attitudes Scale* (MTUAS; Rosen et al., 2013) was used to measure the media and technology usage of the participants. The MTUAS is a 60-item scale that includes 11 usage subscales: Smartphone Usage, General Social Media Usage, Internet Searching, E-Mailing, Media Sharing, Text Messaging, Video Gaming, Online Friendships, Facebook Friendships, Phone Calling and TV Viewing (Rosen et al., 2013). The MTUAS also includes four attitudes subscales (Rosen et al., 2013), but only the usage subscales were used for this study. The usage subscales have been grouped into three dimensions, namely: (i) Media usage for social engagement (Online Friendships, Facebook Friendships), (ii) Media usage for communication (E-Mailing, Text Messaging, Phone Calling, Smartphone Usage, Media Sharing), and (iii) Media usage for leisure (TV Viewing, Internet Searching, Video Gaming, General Social Media Usage) (Cronje, 2019; Van Tonder, 2017, 2020). The usage subscales use a ten-point Likert-type scale where the responses range from 1 (“*never*”) to 10 (“*all the time*”) (Rosen et al., 2013). Cronbach alphas for the

dimensions vary between 0.71 and 0.89 (Cronje, 2019; Van Tonder, 2017, 2020). Higher scores indicate more regular use of media and technology (Rosen et al., 2013).

## **1.7 Statistical Procedures**

The Statistical Package for the Social Sciences (SPSS; Version 27) was used for the secondary analyses of the existing data set used in this study (IBM Corporation, 2020). Descriptive statistics were calculated for the sample and the measuring instruments. Cronbach alpha coefficients were calculated for the various scales to identify the internal consistency of the measuring instruments (Vaske et al., 2017). Correlations were calculated to investigate the correlations between PWB and the predictor variables, namely Emotional Intelligence, Adjustment, Media and Technology Usage, and Sex. Lastly, hierarchical regression analyses were conducted to determine the contribution of the various predictor variable(s) or combination of variables to the percentage of the variance of PWB amongst undergraduate university students.

## **1.8 Clarification of important terms**

### **1.8.1. Psychological Well-being**

PWB has been conceptualised in two different ways: hedonic and eudaimonic well-being (Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009). This study used the eudaimonic conceptualisation of well-being. Eudaimonic psychological well-being is described as self-actualisation or striving to one's full potential (Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009).

### **1.8.2. Emotional Intelligence**

Emotional Intelligence is defined as the ability to perceive, understand, utilise and manage emotions (Salovey & Mayer, 1990; Schutte et al., 2013).

### **1.8.3. Sex**

Sex refers to the biological and physiological differences between males and females (Short et al., 2013).

### **1.8.4. Adjustment to university**

Adjustment has been defined as how well university students cope with university life (Feldt et al., 2011).

### **1.8.5. Media and Technology Usage**

Media and Technology usage encompasses using a wide range of technological equipment such as cell phones, televisions, and computers (Rosen et al., 2013). It also includes a range of activities that can be performed on this equipment, such as texting, watching TV, and utilising social media (Rosen et al., 2013).

## **1.9 Ethical considerations**

This study utilised an existing data set of a larger research project, titled “Predictors of psychological well-being amongst undergraduate university students” (Ethics number: UFS-HSD2017/1313). This study received ethical clearance from the Research Ethics Committee of the Faculty of the Humanities at the University of the Free, including permission from the Dean of Students. Furthermore, ethical clearance for the secondary analyses of the data was granted by the General Human Research Ethics Committee of the University of the Free State

(Appendix A, Ethics number: UFS-HSD2020/1134/0510). During data collection, the principles of confidentiality, beneficence, and non-maleficence were upheld (Allan, 2015). Students who participated in the larger research project gave their informed consent (Appendix B); permission to report and store their data was also obtained. The informed consent briefly explained that the study is anonymous and voluntary. The data's safety and confidentiality were ensured by using a password-protected laptop that only the researcher could access. Participants were welcome to withdraw from the study at any point, and where necessary, were referred to the Student Counselling and Development Services at the University of the Free State. However, no students reported any need for counselling services.

### **1.10 Value of the study**

This study could contribute to the internationally growing body of research dedicated to PWB. In addition, the results from this study could make specific contributions to the understanding of PWB in a South African context and within a university student population. In addition, this study could contribute to a better understanding of Emotional Intelligence, Adjustment to University, and Media and Technology Usage as possible predictors of PWB in South African undergraduate university students. This research could be valuable for future research, and programme development to identify predictors of well-being could enhance and better focus PWB interventions for university students.

### **1.11 Outline of the chapters**

This dissertation consists of five chapters, eight tables, and eight appendices.

**Chapter One** provided an overview of this study and introduced PWB to the research context and rationale of the study. The research aim and research questions were also

outlined, and the research methodology, research design, data collection procedures, and data analyses procedures discussed. Furthermore, important terms were clarified, and the ethical considerations of the study presented. Lastly, the value of the study was discussed.

**Chapter Two** presents a discussion and a critical review of the relevant literature pertaining to PWB, the importance of PWB for university students, and what possible predictor variables (i.e., Sex, Adjustment, Emotional Intelligence, and Media and Technology Usage) can be used to predict PWB. This chapter also discusses the developmental phase and unique challenges of university students in South Africa.

**Chapter Three** outlines the research methodology used in this study to meet the research aim and answer the research questions. This chapter discusses the research approach, research design, sampling procedure, and data collection procedures. Furthermore, a discussion on the measuring instruments is provided. Lastly, the data analyses procedures and ethical considerations are presented.

**Chapter Four** outlines the various results of the data analyses. This includes the demographic information of the sample, descriptive statistics of the measuring instruments, correlations between the variables, and hierarchical regression analyses.

**Chapter Five**, the discussion, further discusses the results presented in Chapter Four. This chapter discusses the results with relevant literature and concludes the dissertation. It also highlights the limitations of the study and provides suggestions for further research.

## **1.12 Summary of the chapter**

This chapter introduced PWB and the various predictor variables used in this study, namely Emotional Intelligence, Adjustment, Media and Technology Usage, and Sex. The research aim and research questions were also outlined. This was followed by an overview of the research methodology, research approach, research design, data collection procedures,

and data analysis procedures. Also included was a discussion about the ethical considerations and the value of this study, including clarifying important terminology used in this dissertation. Lastly, an outline of the various chapters in this dissertation was presented.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Overview of the chapter**

This chapter includes an overview of the literature pertaining to the various variables explored in this study. Firstly, PWB will be explored, looking into the history and development of the construct and the importance of studying PWB among university students. Secondly, the unique challenges faced by university students in South Africa will be described. Following this, a discussion about the constructs of Emotional Intelligence (EI), Adjustment, Media and Technology usage, and Sex as possible predictors of PWB.

#### **2.2 Psychological Well-being**

The history of PWB and the definition of PWB used in this study will be highlighted. The PWB of university students will also be explored.

##### **2.2.1. The history of Psychological Well-being**

PWB has historically been developed into two different approaches, namely hedonic and eudemonic well-being (Bhullar et al., 2013; Dodge et al., 2012; Fernandes et al., 2010; Keyes et al., 2008; Khumalo et al., 2012; 2013; Oprea et al., 2018; Ryan & Deci, 2001; Ryff, 2014; Vázquez et al., 2009; Wissing et al., 2011; Wissing & Temane, 2008; Wissing & Van Eeden, 2002). The hedonic conceptualisation views well-being as the pursuit of happiness and pleasure (Bhullar et al., 2013; Dodge et al., 2012; Keyes et al., 2008; Khumalo et al., 2012; 2013; Ryan & Deci, 2001; Ryff, 2014; Vázquez et al., 2009; Wissing et al., 2011; Wissing & Van Eeden, 2002). This hedonic view has its roots in philosophy as a Greek philosopher, Aristippus, claimed happiness and pleasure as the purpose of life (Dodge et al., 2012; Ryan &

Deci, 2001; Vázquez et al., 2009). The hedonic approach defines well-being in terms of pain versus pleasure, referring to it as subjective well-being (Bhullar et al., 2013; Dodge et al., 2012; Keyes et al., 2008; Ryan & Deci, 2001; Oprea et al., 2018; Vázquez et al., 2009). Subsequently, well-being influences one's pursuit of happiness (Bhullar et al., 2013; Dodge et al., 2012; Fernandes et al., 2010; Keyes et al., 2008; Ryan & Deci, 2001; Vázquez et al., 2009). Within this framework, subjective well-being was evaluated based on three components of happiness: life satisfaction, the presence of a positive mood, and the absence of a negative mood (Dodge et al., 2012; Keyes et al., 2008; Ryan & Deci, 2001; Oprea et al., 2018; Vázquez et al., 2009; Wissing et al., 2011; Wissing & Temane, 2008).

However, not all researchers agreed with this conceptualisation of well-being and argued that happiness is not the main criterion of well-being (Bhullar et al., 2013; Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009). Philosopher Aristotle opposed the hedonic view as he felt it made humans slaves to their own desires (Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009). In contrast to hedonic views, PWB was conceptualised as separate from subjective well-being (Bhullar et al., 2013; Dodge et al., 2012; Keyes et al., 2008; Ryan & Deci, 2001; Oprea et al., 2018; Vázquez et al., 2009). Thus, eudaimonic theorists argued that not all human desires that are pleasure producing are beneficial for individuals and do not promote wellness (Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009). Eudaimonic psychological well-being focuses on positive functioning and human development (Bhullar et al., 2013; Dodge et al., 2012; Fernandes et al., 2010; Keyes et al., 2008; Khumalo et al., 2012; 2013; Oprea et al., 2018; Ryan & Deci, 2001; Ryff, 1989; Vázquez et al., 2009; Wissing et al., 2011; Wissing & Temane, 2008; Wissing & Van Eeden, 2002). The eudaimonic conceptualisation of well-being involves living in accordance with one's true self (Bhullar et al., 2013; Dodge et al., 2012; Ryan & Deci, 2001; Ryff, 1989; Vázquez et al., 2009). Eudaimonia occurs when people's actions are congruent with their

values (Dodge et al., 2012; Ryan & Deci, 2001; Vázquez et al., 2009). Ryff furthers this argument to describe well-being as “striving for perfection that represents the realisation of one’s true potential” (Ryff & Keyes, 1995, p.100).

According to Ryan and Deci (2001, p. 124), well-being is “optimal psychological functioning and experience”, while Dodge et al. (2012, p. 230) define well-being as “...when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge.” Despite differences in defining the construct, researchers agree that PWB is a multi-dimensional construct (Dodge et al., 2012; Khumalo et al., 2012; 2013; Ryff, 1989; Ryff & Singer, 2008).

### **2.2.2. Defining Psychological Well-being**

This study will make use of Carol Ryff’s eudaimonic model of PWB. Ryff and Keyes (1995) described the term psychological well-being as distinct from subjective well-being. Ryff followed the eudaimonic understanding of well-being and developed the *Scales of Psychological Well-being* (Ryff & Keyes, 1995). For Ryff, PWB encompasses an individual’s positive functioning, dividing PWB into six core dimensions: (i) self-acceptance, (ii) personal growth, (iii) purpose in life, (iv) positive relations with others, (v) environmental mastery and (vi) autonomy (Ryff, 1989, 2014; Ryff & Keyes, 1995; Ryff & Singer, 2008).

Within these dimensions, Autonomy refers to one’s ability and desire for independence as well as an internal locus of control (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score on Autonomy implies that one is more self-determined and independent, while a lower score on Autonomy indicates that one relies on others to make decisions and conforms to social pressures (Ryff, 1989, 2014; Ryff & Keyes, 1995). Environmental Mastery refers to one’s ability to manage and control one’s environment to suit one’s needs (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score on Environmental Mastery implies that one is

competent in managing their environment, while a low score on Environmental Mastery suggests that one cannot change or improve their surroundings (Ryff, 1989, 2014; Ryff & Keyes, 1995).

Personal Growth refers to one's need for continued personal development or self-actualisation (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score of Personal Growth implies that one is open to new experiences and sees improvement in themselves, while a low score implies that one is bored and uninterested in life (Ryff, 1989, 2014; Ryff & Keyes, 1995). Positive Relations refers to one's ability to establish deep and satisfying relationships with others (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score on Positive Relations with others implies that one has satisfying relationships with others, while a low score suggests that one finds it difficult to open up to others and may be isolated or frustrated in their relationship (Ryff, 1989, 2014; Ryff & Keyes, 1995).

Purpose in Life refers to one's sense of direction and goals in life (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score on Purpose in Life implies that one has goals and aims for living, while a low score implies a lack of direction and meaning in life (Ryff, 1989, 2014; Ryff & Keyes, 1995). Lastly, Self-acceptance refers to positive attitudes toward oneself (Gustems-Carnicer et al., 2019; Oprea et al., 2018). A high score on Self-acceptance implies a positive attitude towards self, while a low score indicates a sense of dissatisfaction with self (Ryff, 1989, 2014; Ryff & Keyes, 1995).

Therefore, an individual with eudaimonic psychological well-being (1) is independent and self-determined (Autonomy), (2) can control their environment to suit their needs (Environmental Mastery), (3) is concerned with achieving their personal potential (Personal Growth), (4) has strong feelings of affection and relationships with others (Positive Relations with others), (5) has a sense of purpose and meaning in life (Purpose in Life) and (6) has a positive attitude towards themselves (Self-acceptance) (Ryff, 1989, 2014, 2017; Ryff &

Keyes, 1995). The Self-Determination Theory proposes that eudaimonia is a central aspect of well-being and necessary for optimal human functioning (Joshanloo, 2016; Ryan & Deci, 2001; Vasquez et al., 2009). Based on this eudaimonic well-being, psychological well-being can be defined as an ongoing state of optimal functioning characterised by high levels of Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life and Self-acceptance (Joshanloo, 2016; Ryff, 1989, 2014, 2017). The PWB of university students will now be discussed.

### **2.2.3. The Psychological Well-being of university students**

In order to discuss the unique factors that university students face, the developmental phase of university students will first be explored. This will be followed by the various challenges university students face, and the contextually unique factors faced by South African university students. Lastly, the influence that PWB has on university students will be explored regarding their academic, emotional, and mental well-being.

#### **2.2.3.1. Emerging Adulthood**

University students fall into the developmental stage known as emerging adulthood, marked by identity exploration and a variation in pathways to adulthood (Arnett, 2000). This developmental stage encompasses those aged between 18 and 29 years and is distinctly different from adulthood (Arnett, 2000, 2006, 2007). However, this developmental stage is not universal and is culturally determined (Arnett, 2000). This stage consists of endless possibilities in which attending university is only one option. During this developmental stage, university students have left the dependency associated with adolescence, but they have not yet taken on all of the responsibilities related to adulthood (Arnett, 2000, 2006). Attending university consists of many other options and choices regarding various areas of

the students' lives, such as friendships, romantic relationships, and career choices (Arnett, 2000). A student's identity exploration occurs through navigating these various options and choices (Arnett, 2000).

During the emerging adulthood developmental stage, individuals are thought to be going through a 'quarter-life crisis,' experiencing anxiety over the instability of the life phase and identifying challenges they face (Arnett, 2007). While some emerging adults experience an increase in PWB due to their new freedom, some emerging adults struggle with this freedom, leaving them feeling lost and developing mental health issues such as major depressive disorder or anxiety disorders (Arnett, 2007).

### **2.2.3.2. Challenges faced by university students**

Although university life presents students with many options and choices, it also raises many challenges for undergraduate students (Credé & Niehorster, 2011; Feldt et al., 2011; Olasupo et al., 2018; Stoklasa, 2015; Van Breda, 2017). Students are now faced with greater academic demands than ever before and a greater sense of responsibility (Credé & Niehorster, 2011; Stoklasa, 2015; Van Breda, 2017). They also face adjusting to a new social environment and take on new roles and responsibilities such as managing their time and finances (Credé & Niehorster, 2011; Stoklasa, 2015). Many university students also face separation from their friends and family (Credé & Niehorster, 2011; Stoklasa, 2015).

International research identified various stressors faced by university students: personal inadequacy, fear of failure, interpersonal difficulties with lecturers, poor time management, peer competition, financial management, inadequate study facilities, and managing their personal and academic life (Chernomas & Shapiro, 2013 Reddy et al., 2018; Sreeramareddy et al., 2007). Further research found that family-related pressures, scholarship requirements, financial burdens, competition in class, and course-related stress trigger both physical and

psychological issues such as lack of energy and sleeping problems (Ramachandiran & Dhanapal, 2018). In addition, South African research has found that these challenges lead to mental health concerns such as increased anxiety, depression, stress, PTSD and suicidal ideation (Bantjies et al., 2019; Olasupo et al., 2018; Rousseau et al., 2021; Van Breda, 2017). Furthermore, these challenges can increase dropout rates, reduce graduation rates and result in students taking longer to complete their degrees (Essop, 2020; Mokgele & Rothmann, 2014).

### **2.2.3.3. Challenges faced by South African university students**

All students attending university face unique challenges but South African students in particular face additional challenges that are unique to the socio-political history of South Africa (Chetty & Pather, 2015; Edwards et al., 2004; LaBrie et al., 2012). It is important to look at the unique context of South Africa as research has shown that context influences the manifestation of PWB (Roos et al., 2013; Temane & Wissing, 2006; Wissing & Temane, 2008). In South Africa, the first-year university dropout rate is 40%- 55%, with only 20.3% of students reaching graduation (Essop, 2020; Mokgele & Rothmann, 2014). In South Africa, students face high levels of crime, violence, and unemployment in addition to the already existing challenges discussed above (Edwards et al., 2004). In South Africa, university student's PWB is significantly lower than university students in the United States (Edwards et al., 2004). This may be attributed to the various socio-cultural and political factors faced in South Africa (Edwards et al., 2004). University students in low-middle income countries are more likely to be exposed to trauma and crime and less likely to access affordable mental health care. Between 2016 and 2019, depression rates in South African university students have been increasing yearly (Rousseau et al., 2021; Twenge, 2019). Approximately 33.2% of South African university students experience mild to moderate symptoms of depression,

while 15.8% of students experience mild to moderate symptoms of anxiety (Bantjies et al., 2016).

South Africa is a historically unequal society, and as such, the challenges faced by university students can vary depending on the students' circumstances and resources (Chetty & Pather, 2015; Edwards et al., 2004; LaBrie et al., 2012). Lack of study resources has been found to negatively affect PWB and leave students feeling demotivated and disconnected (Mokgele & Rothmann, 2014). Literature also shows a big mismatch in expectations and experiences in South African university students (Pather & Dorasamy, 2018). A mismatch between a students' expectations of university and their experience can lead to students feeling disconnected, resulting in poor academic performance or drop out (Pather & Dorasamy, 2018).

Furthermore, South African university students face additional political stressors, which could be seen in the 2015/2016 student protests where university students protested for the transformation and decolonisation of universities (Prinsloo, 2016). Despite currently living in a post-apartheid society, unequal treatments across schooling systems still exist (Chetty & Pather, 2015). Many university students come from disadvantaged schools where access to quality teachers and textbooks is challenging. In contrast, others come from private schools, surrounded by excellent teachers and resources (Chetty & Pather, 2015).

#### **2.2.3.4. The psychological impact on university students**

These challenges put university students at risk of developing mental health concerns such as anxiety, depression, PTSD and suicidal ideation (Bantjies et al., 2016; Bantjies et al., 2019; Olasupo et al., 2018; Rousseau et al., 2021; Van Breda, 2017). Furthermore, international and local research has shown how PWB can affect university students' academic, emotional, and mental well-being (Braathen et al., 2013; Chow et al., 2018; Das-

Munshi et al., 2016; Harding et al., 2019; Ramdass, 2009; Siddiqui, 2015; Smith & Yang, 2017; Turashvili & Japaridze, 2012; Udhayakymar & Illango, 2018).

PWB influences the academic well-being of university students. PWB has been linked to increased academic performance, increased goal attainment, and better coping skills (Braathen et al., 2013; Das-Munshi et al., 2016; Ramdass, 2009). Higher levels of PWB in university students tend to lead to increased academic performance (Bordar et al., 2011; Turashvili & Japaridze, 2012). In addition, university students with higher levels of PWB are usually more inclined to reach their academic goals more effectively (Sosik et al., 2017). Furthermore, higher levels of PWB in university students lead to increased use of adaptive coping skills, which better aids students regarding the academic stress and demands faced during their studies (Freire et al., 2016).

The emotional well-being of university students has also been found to be influenced by PWB. Research has identified that PWB is associated with mental health concerns such as anxiety, depression, and stress levels (Chow et al., 2018; Siddiqui, 2015; Smith & Yang, 2017; Turashvili & Japaridze, 2012; Udhayakymar & Illango, 2018). These studies found that increased PWB in university students tends to lead to decreased levels of anxiety, stress, and depression (Chow et al., 2018; Siddiqui, 2015; Smith & Yang, 2017; Turashvili & Japaridze, 2012; Udhayakymar & Illango, 2018). A South African research study found similar results indicating that increased PWB in university students tend to lead to lower rates of depression and anxiety (Olasupo et al., 2018).

Lastly, PWB influences the mental well-being of university students, leading to higher levels of resilience, coping skills, mindfulness and physical health (Chow et al., 2018; Harding et al., 2019; Nath & Pradhan, 2012; Olasupo et al., 2018; Panahi et al., 2016; Smith & Yang, 2017; Turashvili & Japaridze, 2012).

PWB can benefit university students' academic, emotional and mental well-being (Chow et al., 2018; Harding et al., 2019; Olasupo et al., 2018; Panahi et al., 2016; Smith & Yang, 2017; Turashvili & Japaridze, 2012). Therefore, identifying predictors and studying the PWB of university students can provide valuable information for intervention programmes to improve the PWB of university students (Morales-Rodríguez, 2020).

Variables such as emotional intelligence, adjustment, media and technology usage, and sex can be studied as possible predictor variables of PWB. Studies done on South African university students show that higher levels of emotional intelligence tend to result in increased levels of PWB (Beckmann & Minnaert, 2018; Carmeli et al., 2009; Cronje, 2019; Lawal et al., 2018). Lack of adjustment to university has been shown to significantly predict anxiety, depression, and social dysfunction amongst South African undergraduate university students (Olasupo et al., 2018), with media and technology usage having adverse effects on the PWB of university students (Çardak, 2013; Twenge, 2019). Differences have been found between male and female university students in PWB; each sex scored higher on specific aspects of PWB (Chraif & Dumitru, 2015; Roothman et al., 2003). These predictor variables will be discussed in the following sections.

### **2.3. Predictor variables of Psychological Well-being**

There are various predictor variables of PWB amongst university students, such as intrinsic characteristics or demographic factors. This study focuses on four possible predictor variables of PWB: Emotional Intelligence, Adjustment, Media and Technology usage, and Sex.

### **2.3.1. Emotional Intelligence**

Emotional Intelligence (EI) was introduced by Salovey and Mayer (1990). It was initially defined as:

a set of skills hypothesised to contribute to the accurate appraisal and expression of emotion in oneself and others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan, and achieve in one's life. (Salovey & Mayer, 1990, p. 185)

Since the original model of Emotional Intelligence was described, EI has been a topic of increasing interest as it has been found to have implications in mental health, business, education, and medicine (Salovey & Mayer, 1990; Schutte et al., 1998; Schutte et al., 2013). While further models have been developed, the definition of EI is still understood as the ability to perceive, understand, utilise and manage emotions (Salovey & Mayer, 1990; Schutte et al., 2013). Perception of emotions refers to recognising emotion-related facial and voice cues in others and an awareness of one's own emotional states (Salovey & Mayer, 1990; Schutte et al., 2013). Understanding one's emotions refer to knowing the causes and consequences of various emotions and differentiating between different emotions (Salovey & Mayer, 1990; Schutte et al., 2013). Utilising emotions refers to the ability to use different emotions for different purposes (Salovey & Mayer, 1990; Schutte et al., 2013). Lastly, managing emotions refers to regulating one's emotions to be appropriate for the situation or individual (Salovey & Mayer, 1990; Schutte et al., 2013).

Emotional intelligence has since been conceptualised in many different ways: (1) ability versus trait models, (2) mixed versus ability models, and (3) trait versus information-processing models (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013). These different conceptualisations came about after debates around the validity of measuring emotional intelligence (Gardner & Qualter, 2010; Jonker & Vosloo,

2008; Schutte et al., 2009; Schutte et al., 2013). Emotional Intelligence was then divided into two different constructs: trait EI and ability EI (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013). The difference between trait and ability EI lies in the method used to measure the construct (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013). Trait EI is measured through self-report questionnaires and relates more to emotional self-efficacy, while ability EI is measured through tests of maximal performance and looks at cognitive-emotional ability (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013).

The difference between the mixed and ability models of EI is not related to the type of measurement used but rather linked to the theoretical constructs underlying the constructs (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013). A mixed EI model includes personality variables, while the ability model focuses on a cognitive definition of EI (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 2009; Schutte et al., 2013). Lastly, a differentiation is made between trait EI and information-processing EI (Jonker & Vosloo, 2008), a broader approach that includes measurement methods and theoretical underpinnings (Jonker & Vosloo, 2008). According to this classification, trait EI is concerned with specific traits or behaviours such as empathy, and information-processing EI is concerned with abilities such as the ability to label emotions (Jonker & Vosloo, 2008). Furthermore, trait EI is concerned with personality factors and is measured through self-report questionnaires, while information-processing EI is focused on the main parts of EI and its relationship to traditional intelligence and is measured through tests of maximal performance (Jonker & Vosloo, 2008).

Emotional intelligence has been found to have a positive effect on PWB (Balluerka et al., 2016; Görgens-Ekermans et al., 2015; Lawal et al., 2018; Shah et al., 2018; Yusoff et al., 2013). Emotional intelligence moderates students' PWB during stressful times (Shah et al.,

2018; Yusoff et al., 2013). Research conducted on schoolchildren found that EI can play a critical role in a classroom or group setting (Balluerka et al., 2016). As EI entails the ability to perceive and attend to others' feelings, this can improve the social dynamics and mood in the classroom, subsequently increasing the learners' PWB (Balluerka et al., 2016).

Furthermore, increased EI in university students has led to decreased anxiety and depression levels, increased self-esteem, and increased levels of PWB (Malinauskas & Malinauskiene, 2020; Moeller et al., 2020; Rehman & Sohail, 2018; Singh & Kaur, 2019).

Studies done on South African university students show that higher levels of emotional intelligence tend to result in lower levels of somatic and depressive symptoms, increased success, improved mental and physical health, and better PWB (Beckmann & Minnaert, 2018; Cronje, 2019; Lawal et al., 2018). Further South African studies have shown that as EI encompasses the ability to deal with negative moods, students with higher EI are less likely to experience negative moods, and positive affect is associated with higher levels of PWB (Görgens-Ekermans et al., 2015).

It is clear that EI has been found to be positively correlated with PWB in university students (Balluerka et al., 2016; Beckmann & Minnaert, 2018; Cronje, 2019; Lawal et al., 2018; Görgens-Ekermans et al., 2015; Malinauskas & Malinauskiene, 2020; Rehman & Sohail, 2018; Shah et al., 2018; Singh & Kaur, 2019; Yusoff et al., 2013). Adjustment as a possible predictor variable of PWB will be discussed next.

### **2.3.2. Adjustment**

Adjustment can be defined as how well students cope with university (Feldt et al., 2011). However, as the definition of adjustment is quite vague different terms across the literature have been used to describe adjustment, such as psychological adjustment and positive adaption (Feldt et al., 2011; Lent, 2004). This has caused conceptual problems and confusion

around adjustment (Feldt et al., 2011). Lent (2004) suggested the term psychosocial wellness instead of adjustment, which comprises how well students are equipped to handle the demands that come with university life, such as academic demands, social demands, and personal management of time and dedication to their studies (Feldt et al., 2011; Mattanah et al., 2004). While there may be confusion over the specific terminology used around adjustment, it is agreed that it is a useful construct to measure (Feldt et al., 2011; Taylor & Pastor, 2015).

University life can be a very stressful period, and how university students adjust to university can affect their mental health and PWB (Ababu et al., 2018; LaBrie et al., 2012). International research found that poor adjustment is associated with using alcohol as a coping mechanism, leading to increased drinking consequences such as ‘passing out’ or not being able to study for a test (LaBrie et al., 2012).

Unresolved adjustment issues can lead to the individual developing Adjustment Disorder (American Psychiatric Association [APA], 2013). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), Adjustment Disorder is characterised by the development of emotional and behavioural symptoms in response to an identifiable stressor within three months of the onset of the stressor (APA, 2013). These symptoms are clinically significant and impair social or academic functioning (APA, 2013). Up to 36% of university students have been found to fit the criteria for Adjustment Disorder (Alnakhli et al., 2018; Esmael et al., 2018). University students in low-middle income countries such as South Africa have an increased vulnerability to developing a mental disorder such as Adjustment Disorder (Bantjies et al., 2019). South African research on university students has found that up to 59.31% of university students reported experiencing Adjustment Disorder symptoms (Setshedi, 2018). It is important to note that COVID-19 is increasing adjustment problems in

university students, but further research is still required to clarify its severity (Arslan et al., 2020).

Research conducted on South African university students found that maladjustment to university life significantly predicted anxiety, depression, and social dysfunction (Olasupo et al., 2018). University students who can adjust to university life are less inclined to experience anxiety, depression, and social dysfunction and more prone to experience increased levels of PWB (Olasupo et al., 2018). In addition, both South African and international studies found that successful adjustment is associated with better academic performance (Peterson & Dumont, 2009; Wintre & Yaffe, 2000). It is, therefore, an important area of research to better aid our university students' PWB. The next possible predictor of PWB, Media and Technology Usage, will be discussed below.

### **2.3.3. Media and Technology Usage**

Media and technology is part of our everyday lives (Anand et al., 2018). The internet is a place to exchange ideas, thoughts, pictures, play games, and engage socially with other individuals (Anand et al., 2018). Engaging with peers is pivotal to the developmental phase of emerging adulthood. However, nowadays, a lot of social engagement is happening online instead of in real life (Dissing et al., 2019). This increase in media and technology usage and online socialisation has been a cause for concern for individuals' well-being and social skills (Becker et al., 2012). Up to 95% of university students currently utilise media and technology, with social media being the primary media used (Mese & Aydin, 2019; Nagel et al., 2018). South African individuals aged between 18 and 36 years, which encompasses university students on average, use more social media platforms and more frequently than older age groups due to growing up with the development of social media (Budree et al., 2019). As media and technology usage is such a big part of university students lives, it is

critical to examine whether it can serve as a possible predictor of PWB (Anand et al., 2018; Becker et al., 2012; Dissing et al., 2019).

Research conducted on university students found that high media and technology usage and specifically media multitasking (simultaneously using two or more forms of media) is associated with mental health concerns such as depression and social anxiety (Becker et al., 2012). Similarly, international research on Thai university students found that excessive smartphone usage is associated with lower PWB (Tangmunkongvorakul et al., 2019). In addition, excessive media and technology usage in university students tends to lead to lower levels of PWB in terms of diminished impulse control, increased loneliness and depression, lower social comfort, and distraction (Anand et al., 2018; Çardak, 2013; Tangmunkongvorakul, 2019).

However, one could argue that this relationship may depend on the type of media being used, the purpose of using the media, and the user's personality (Becker et al., 2012). Internet use varies according to education, income, and age (Van der Merwe, 2014). Extroverts and introverts also tend to use the internet for different purposes, with extroverts using the internet less for social engagement as their social needs are more sufficiently fulfilled offline (Van der Merwe, 2014). In contrast, introverts might find the internet more accessible to develop friendships than in their real-life (Van der Merwe, 2014). Previous research has also shown that lonely individuals or those with poorer social skills are more likely to develop excessive internet use (Kim et al., 2009). Overall using the internet for social involvement generally has negative effects, while using the internet for communication has more positive effects (Van der Merwe, 2014). The majority of university students mostly use the internet and social media platforms for communication, making friends and maintaining friendships (Mese & Aydin 2019; Oueder & Abousaber, 2018). During the COVID-19 pandemic, many university students have had to complete their studies online, leading to increased media and

technology usage, resulting in increased anxiety levels due to the spread of false information and the inability to connect in real-time life (Jiang, 2021).

While there may be negative associations with media and technology usage, there is still potential for positive effects. When online interaction is positive and fosters a sense of community, this can improve the PWB of individuals who may struggle with real-life social interaction (Magasamen-Conrad et al., 2014). Furthermore, the developments in technology could allow psychologists to pick up individuals in need much quicker (Yaden et al., 2018). For example, technology could help detect the onset of depressive or manic episodes by analysing texts and social media messages so that psychologists can intervene as soon as possible (Yaden et al., 2018). Furthermore, wearable technology such as watches can monitor sleeping patterns and other behaviour, which can be important mental health indicators (Doucette, 2021). During the COVID-19 pandemic, universities such as Fairview University have implemented teletherapy, which incorporated technology that has anonymously recorded statistics of what the university students are struggling with to improve their approach in supporting their students (Doucette, 2021).

Overall, some studies show that media and technology usage can have adverse effects on the PWB of university students (Çardak, 2013; Twenge, 2019). However, other studies found that some aspects of media and technology usage can positively affect individuals' PWB and emphasise the potential uses of media and technology in measuring and intervening in well-being (Doucette, 2021; Magasamen-Conrad et al., 2014; Yaden et al., 2018). The possible predictor variable, sex, will be discussed next.

#### **2.3.4. Sex**

While this research study focuses on sex as a predictor variable, it is well understood that sex and gender are very closely linked. As a result, certain relevant research based on gender

has been included in this discussion. Sex is an important social determinant of mental and physical health (Matud et al., 2019). It is important to acknowledge that while men and women are equal, they are not identical, and the possible differences between them need to be considered to promote their PWB (Roothman et al., 2003). Men and women often differ with regard to mental health. Women are more likely to develop internalising disorders such as depression, while men are more likely to develop externalising disorders such as substance abuse disorders (Matud et al., 2019). Men also have much higher suicide rates than women (Matud et al., 2019). Male university students have similarly been found to have higher suicide rates than their female counterparts (Burrows et al., 2007; Freeman et al., 2017).

In terms of their PWB, both local and international studies have reported no significant differences between men and women (Roothman et al., 2003; Salleh & Mustafa, 2016). However, some studies have reported consistent differences (Chraif & Dumitru, 2015; Matud et al., 2019). Statistically significant differences have been found on four of the dimensions of PWB between males and females (Chraif & Dumitru, 2015; Matud et al., 2019). Men score significantly higher in Self-acceptance and Autonomy, while women score higher on Personal Growth and Positive relations with others (Chraif & Dumitru, 2015; Matud et al., 2019). This could be attributed to societal stereotypes around gender role; men are encouraged to be more independent and self-reliant, leading to men having a higher sense of Autonomy and Self-acceptance (Maroof & Khan, 2016; Matud et al., 2019). In comparison, women are encouraged to build relationships and be social, leading to women having a higher sense of Personal Growth and Positive Relations with others (Maroof et al., 2016; Matud et al., 2019).

Similar research done on university students has had mixed results. For example, some studies found that male students tend to have higher levels of PWB than female students (Akhter & Kroener-Herwig, 2017; Freire et al., 2016). Other studies show no significant

differences in PWB between male and female students (Ashok, 2017; Edwards et al., 2004; Salleh & Mustaffa, 2016; Shafiq et al., 2015). Due to the varying results in the literature, sex has been included as a possible predictor variable of PWB.

#### **2.4. Summary of chapter**

This chapter introduced the history and definition of psychological well-being (PWB) and explored its measures, including the importance of researching the PWB of university students. Following this, the unique challenges of university students in South Africa were outlined. Lastly, Emotional Intelligence, Adjustment, Media and Technology Usage and Sex were explored as possible predictors of PWB. The research methodology will be discussed in the next chapter.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1. Overview of the chapter**

This chapter includes a discussion about the research methodology used in this study to identify the predictor variable(s) or combinations of predictor variables that explain a significant percentage of variance in PWB amongst undergraduate university students at the University of the Free State, Bloemfontein. This chapter will present the research problem, research questions, research approach, and research design, followed by a discussion of the sampling and data collection procedures. The measurement instruments and data analysis procedures are also discussed. Lastly, ethical considerations and a summary of the chapter will be provided.

#### **3.2. Aim of the study**

This research study aims to determine which variable(s) or combination of variables explain a significant percentage of the variance in PWB amongst undergraduate university students at the University of the Free State. In this study, PWB is the criterion (dependent) variable, while Adjustment, Emotional Intelligence, Media and Technology Usage, and Sex are the predictor (independent) variables.

### **3.3. Research objective and questions**

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

- Does the combination of Media and Technology Usage, Adjustment, Emotional Intelligence, and Sex explain a significant percentage of variance in psychological well-being amongst undergraduate university students?
- Do any of the individual variables significantly contribute to the variance in psychological well-being amongst undergraduate university students?

### **3.4. Research design and methods**

A research design can be defined as a blueprint that guides the researcher throughout the research process (Abutabenjeh & Jaradat, 2018; Vogt et al., 2012). Thus, the research design is the ‘what’ and ‘why’ of the research project (Tobi & Kampen, 2017). It encompasses the research questions, central theories to the project, and the constructs that will be measured (Tobi & Kampen, 2017). This study made use of a non-experimental research type in which quantitative research methodology was followed, and a correlational research design used (Stangor, 2011, 2015).

Quantitative research maintains that phenomena have objective realities and can therefore be studied through numerical and measurable data (Morgan, 2018; Slevitch, 2011). An advantage of utilising a quantitative research approach is that a large population can be analysed in a relatively short amount of time (Morgan, 2018; Slevitch, 2011). Quantitative research can be further divided into experimental, pre-experimental, quasi-experimental, and non-experimental research (Rutberg & Bouikidis, 2018; Sukamolson, 2007; Thompson & Panacek, 2007). This study was non-experimental in nature. Non-experimental research includes studying phenomena without manipulating variables by the researcher (Rutberg &

Bouikidis, 2018; Sukamolson, 2007; Thompson & Panacek, 2007). Interventions and random assignment also do not form part of non-experimental research (Rutberg & Bouikidis, 2018). Instead, the researcher analyses phenomena at one point in time to determine possible correlations (Rutberg & Bouikidis, 2018; Sukamolson, 2007; Thompson & Panacek, 2007). Non-experimental studies are used to investigate correlations between variables that they cannot control or manipulate and compare groups with each other, and the results tend to be purely descriptive (Rutberg & Bouikidis, 2018; Sukamolson, 2007; Swart et al., 2019; Thompson & Panacek, 2007).

Lastly, a correlational research design was utilised to explore the relationships between variables. A correlational research design is a type of non-experimental research design that is used to identify correlations between variables (Seeram, 2019). However, it is important to note that correlation does not imply causation (Seeram, 2019).

### **3.5. Sampling**

A sample can be defined as a subset of a population selected to represent a population that a researcher would like to study (Acharya et al., 2013; Sharma, 2017). Sampling is the technique used to select the sample (Acharya et al., 2013; Sharma, 2017). This research study formed part of a larger research project, titled “Predictors of psychological well-being amongst undergraduate university students” (Ethics number: UFS-HSD2017/1313). The sample consisted of 1191 undergraduate university students aged 18 to 30 enrolled under the Faculty of the Humanities at the University of the Free State in Bloemfontein, South Africa. University students from any sex, ethnic group, home language, year of study, main major, generation, province, religious affiliation, and enrolled degree were allowed to participate in the project. Participants who did not fall within the specific age range or met the inclusion

criteria were excluded from the study. The demographic characteristics of the sample population will be discussed in Chapter Four.

The participants were readily available to the researcher, and non-probability sampling was chosen as the sampling method. Furthermore, convenience sampling was used as it is more cost-effective and more time-effective than probability sampling techniques (Acharya et al., 2013; Sharma, 2017). Convenience sampling relies on participants being willing and able to participate at a given time, having access to the research material and being in close proximity to the researcher (Acharya et al., 2013; Sharma, 2017). This was achieved through voluntary participation and the research materials being available on Blackboard; thus, the participants could participate in their own time. Blackboard is an online educational platform utilised by the University of the Free State to communicate with students (Bradford et al., 2007).

### **3.6. Data collection**

The original research project was advertised during undergraduate Psychology lectures, and students could voluntarily participate in the study. The data were collected using five questionnaires that measured Psychological Well-being, Adjustment, Media and Technology Usage, and Emotional Intelligence. The participants also completed a biographical questionnaire that provided demographic information. The questionnaires were administered in English and completed in the student's own time through the online educational platform, Blackboard. The students had three months to complete the questionnaires. Once their data was collected, a coding system was used to ensure the anonymity of the participants.

### **3.7. Measuring Instruments**

The five measuring instruments used to gather the data were:

- A biographical questionnaire
- Ryff's *Scales of Psychological Well-Being* (SPWB)
- The *Student Adaption to College Questionnaire* (SACQ)
- The *Schutte Emotional Intelligence Questionnaire* (SEIS)
- The *Media and Technology Usage and Attitude Scale* (MTUAS)

### 3.7.1. Biographical questionnaire

A self-compiled biographical questionnaire was included to obtain demographic information such as sex, ethnicity, home language, year of study, main major, generation, province, and parents' education.

### 3.7.2. Ryff's Scales of Psychological Well-Being (SPWB)

Ryff's *Scales of Psychological Well-Being* (SPWB; Ryff & Singer, 2008) was used to measure the PWB of the participants. It consists of 42 items across six dimensions: (i) Autonomy, (ii) Environmental Mastery, (iii) Personal Growth, (iv) Positive Relations, (v) Purpose in Life, and (vi) Self-acceptance (Henn et al., 2016; Ryff, 1989, 2014).

The SPWB uses a six-point Likert-type scale ranging from 1 ("*strongly disagree*") to 6 ("*strongly agree*") (Henn et al., 2016; Ryff, 1989, 2014). Cronbach alphas identified for the core dimensions are 0.71 (Autonomy), 0.79 (Self-acceptance), 0.78 (Positive relations with others), 0.68 (Environmental mastery), 0.82 (Purpose in life), and 0.71 (Personal growth) (Van Dierendonck et al., 2007). Gao and McLellan (2018) and Li (2014) reported similar internal consistencies between 0.60 and 0.78 for the six core dimensions. Chan et al. (2017) reported slightly higher internal consistencies ranging from 0.77 to 0.88. A higher score on Autonomy implies a higher level of Autonomy, with a higher score on Self-acceptance indicating a higher level of Self-acceptance (Ryff, 1989). A higher score on Positive

Relations with others implies a higher level of Positive Relations with others (Ryff, 1989). A higher score on Environmental Mastery suggests a higher level of Environmental Mastery. A higher score on Purpose in Life implies a higher level of Purpose in Life. A higher score on Personal Growth suggests a higher level of Personal Growth (Ryff, 1989).

There has been debate over the six-factor model and criticism over overlapping dimensions (Henn et al., 2016; Ryff & Singer, 2006; Van Dierendonck et al., 2007). However, the PWB remains a prominent measure of psychological well-being in research and has reported multiple sources of evidence for the validity of the PWB (Ryff, 2014).

### **3.7.3. The Student Adaption to College Questionnaire (SACQ)**

The *Student Adaption to College Questionnaire* (SACQ; Credé & Niehorster, 2011) was used to measure the adjustment of the participants. The SACQ consists of 55 items covering two subscales, namely (i) Positive Adjustment and (ii) Negative Adjustment (Credé & Niehorster, 2011; LaBrie et al., 2012). The responses are indicated using a nine-point Likert-type scale ranging from 1 (“*doesn’t apply to me at all*”) to 9 (“*applies very closely to me*”) (LaBrie et al., 2012). The SACQ has been used for various purposes, such as a diagnostic tool to identify students who are not well-adjusted (Baker & Siryk, 1989; Feldt et al., 2011; Taylor & Pastor, 2015). It has also been used to monitor college adjustment and programme evaluation (Feldt et al., 2011; Taylor & Pastor, 2007). Positive adjustment has been defined as experiencing events or behaviour that is associated with healthy or normal adjustment, while Negative Adjustment is defined as experiencing events or behaviour that are associated with poorer adjustment (LaBrie et al., 2012). The Cronbach alpha for the whole questionnaire has been identified as greater than 0.80 (Beyers & Goossens, 2002; Feldt et al., 2011; LaBrie et al., 2012). Cronbach alphas for the subscales have been identified as 0.92 for Negative adjustment and 0.93 for positive adjustment (LaBrie et al., 2012). A higher score for Positive

Adjustment implies that a person is positively or well adjusted to university, while a higher score for Negative Adjustment suggests that a person is negatively or poorly adjusted to university (LaBrie et al., 2012).

#### **3.7.4. The Schutte Emotional Intelligence Questionnaire (SEIS)**

The *Schutte Emotional Intelligence Questionnaire* (SEIS; Schutte et al., 1998) was used to measure the emotional intelligence of the participants. The SEIS consists of 33 items and uses a five-point Likert-type scale to record the responses ranging from 1 (“*strongly disagree*”) to 5 (“*strongly agree*”) (Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 1998; Schutte et al., 2009). The SEIS measures global trait emotional intelligence (Schutte et al., 1998; Schutte et al., 2009).

A high score is indicative of higher levels of emotional intelligence (Schutte et al., 2009). The Cronbach alpha for this scale ranges between 0.90 and 0.93 (Cronje, 2019; Gardner & Qualter, 2010; Jonker & Vosloo, 2008; Schutte et al., 1998; Schutte et al., 2009). In South African studies, it was found that some of the items in the questionnaire do not accurately measure the subscale they fall under, but they still contribute to overall emotional intelligence (Jonker & Vosloo, 2008). Due to concerns over the contextual use of the SEIS in South Africa and debates over the subscales, the total scale score was used in this study (Jonker & Vosloo, 2008). The original authors of the SEIS view the SEIS as a homogenous construct of EI and, as such, is used as a total construct in this study (Schutte et al., 1998).

#### **3.7.5. The Media and Technology Usage and Attitude Scale (MTUAS)**

The *Media and Technology Usage and Attitudes Scale* (MTUAS; Rosen et al., 2013) was used to measure the media and technology usage of the participants. The MTUAS is a 60-item scale that includes 11 usage subscales: Smartphone Usage, General Social Media Usage,

Internet Searching, E-Mailing, Media Sharing, Text Messaging, Video Gaming, Online Friendships, Facebook Friendships, Phone Calling and TV Viewing (Rosen et al., 2013). The MTUAS also includes four attitudes subscales (Rosen et al., 2013). However, for this study, only the usage subscales were used. The usage subscales use a ten-point Likert-type scale where the responses range from 1 (“*never*”) to 10 (“*all the time*”) (Rosen et al., 2013). The reliability of the subscales varies between 0.71 and 0.89 (Cronje, 2019; Özgür, 2016; Van Tonder, 2020). Higher scores indicate more regular use of media and technology (Rosen et al., 2013).

In the past, measuring media and technology usage has failed to measure a broad range of domains and did not consider newer technology developments such as smartphones (Rosen et al., 2013). Generally, technology usage was measured by the self-reported number of hours and minutes per day that are spent using technology (Rosen et al., 2013). However, it was found that self-reported time estimates were not accurate compared to the actual time users were using technology (Rosen et al., 2013). The MTUAS was therefore developed to measure self-reported frequency instead of self-reported time use and include a wider variety of activities that are performed across different devices (Rosen et al., 2013). The subscales cover a mixture of older technology (e.g., television) while including newer technologies such as smartphones and using phrasing to cover new technologies that have not yet been developed (Rosen et al., 2013).

Previous studies have grouped the 11 subscales into three dimensions: (i) Media usage for social engagement (Online Friendships, Facebook Friendships), (ii) Media usage for communication (E-Mailing, Text Messaging, Phone Calling, Smartphone Usage, Media Sharing), and (iii) Media usage for leisure (TV Viewing, Internet Searching, Video Gaming, General Social Media Usage) (Cronje, 2019; Van Tonder, 2017, 2020). These dimensions were found to have good Cronbach alpha coefficients with 0.89, 0.95, and 0.96 for the three

respective dimensions (Cronje, 2019; Van Tonder, 2017, 2020). These three dimensions were used in this research study.

### **3.8. Statistical procedures and data analysis**

The Statistical Package for the Social Sciences (SPSS) Version 27 (IBM Corporation, 2020) was used to analyse the data used in this study. SPSS can be used for univariate, bivariate, and multivariate analyses to conduct both comparison and correlational statistical tests and can be used for parametric and non-parametric statistical procedures (Ong & Puteh, 2017).

Descriptive statistics were calculated for the sample and the measuring instruments. Cronbach alphas were calculated for the measuring instruments to identify the internal consistency of the measuring instruments (Vaske et al., 2017). Correlations were then calculated to investigate the correlations between the variables, namely PWB, Emotional Intelligence, Adjustment, Media and Technology Usage, and Sex. In order to determine the contribution of the various predictor variable(s) or combination of predictor variables to the variance of PWB, hierarchical regression analyses were conducted.

Regression analysis is a method of determining which variables explain a significant percentage of the variance of the criterion variable (Bürkner & Vuorre, 2019, Cronje, 2019). Hierarchical regression analysis is a sequential process that involves entering the predictor variables in steps to determine their impact on the criterion variable (Lewis, 2007). The order of the steps or entry of the variables is determined by the researcher and based on theory (Lewis, 2007).

In order to conduct the hierarchical analyses, the total variance explained by the combination of the predictor variables (Adjustment, Emotional Intelligence, Media and Technology Usage, and Sex) must first be calculated (Cronje, 2019; Lewis, 2007). After that,

the analysis is repeated while subsequently eliminating one variable at a time to determine the specific variable's contribution to the total variance (Cronje, 2019; Lewis, 2007). The percentage of variance in the criterion variable that is explained by a predictor variable or a combination of predictor variables is known as the squared multiple correlation coefficient ( $R^2$ ) (Bürkner & Vuorre, 2019, Cronje, 2019, Lewis, 2007).

### **3.9. Ethical considerations**

This study utilised an existing data set of a larger research project, titled “Predictors of psychological well-being amongst undergraduate university students” (Ethics number: UFS-HSD2017/1313). Ethical clearance was granted by the Research Ethics Committee of the Faculty of the Humanities at the University of the Free. Permission from the Dean of Students for the research project was also obtained. Furthermore, ethical clearance for this study and the secondary analyses of the data was granted by the General Human Research Ethics Committee (GHREC) of the Faculty of the Humanities at the University of the Free State (Appendix A, Ethics number: UFS-HSD2020/1134/0510). During data collection, the principles of confidentiality, beneficence and non-maleficence were upheld (Allan, 2015). Informed consent was given by the students before they participated in the research project (Appendix B). The research information leaflet explained that the study is anonymous and voluntary, and permission to report and store their data was obtained. The safety and confidentiality of the data were ensured through the use of a password-protected laptop that only the researcher could access. Participants were allowed to withdraw from the study at any point. Where necessary, participants were referred to the Student Counselling and Development Services at the University of the Free State. However, no students reported any need for counselling services.

### **3.10. Summary of the chapter**

This chapter consisted of a discussion about the research methodology used in this study, including explaining the research problem and research aim. This was followed by an overview of the non-experimental quantitative research approach and the correlational research design. Following this, the non-probability convenience sampling procedure and the data collection process was explained, and the measuring instruments introduced.

Furthermore, a discussion of the data analysis procedure was presented. Lastly, this chapter included a brief discussion of the ethical considerations involved in this study. The following chapter will discuss the results obtained from the data analysis.

## CHAPTER FOUR

### RESULTS

#### 4.1. Overview of the chapter

This chapter presents the results of the statistical analyses. Firstly, the descriptive statistics of the sample will be discussed, followed by a presentation of the descriptive statistics (i.e., the means, standard deviations, skewness, kurtosis, and internal consistencies) of the various measuring instruments. The results of the correlation analyses will also be presented.

According to Steyn (2005), the effect size can be defined as small (0.1), medium (0.3), and large (0.5) regarding correlations. The results of the hierarchical regression analyses will also be displayed. With regards to hierarchical regression, Cohen (1992) states that effect size can be defined as small (0.02), medium (0.15), and large (0.35). In this study, only results that are statistically and practically significant will be discussed. Both the 1% and 5% level of significance was used in the analyses of the data.

#### 4.2. The demographic information of the sample

The sample is described in Table 1, where the frequencies of the sample according to sex, ethnicity, home language, year of study, main major, generation, province, and education of parents are provided.

**Table 1**

*Frequency distribution of participants according to demographic variables*

<b>Biographical variable</b>	<b>N</b>	<b>%</b>
<i>Sex</i>		
Male	268	22.5
Female	923	77.5
<i>Ethnicity</i>		
Black	961	80.7
Coloured	49	4.1
White	153	12.8

<b>Biographical variable</b>	<b>N</b>	<b>%</b>
Asian	1	0.1
Indian	4	0.3
Other	23	1.9
<i>Home Language</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
Third-year	439	36.9
Fourth year	72	6.0
Other	55	4.6
<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
<i>Generation</i>		
First-generation students	539	45.3
Non-first-generation student	652	54.7
<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
<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

In terms of sex, the sample consisted mostly of females, comprising 77.5% of the sample (N=923), while the remaining 22.5% of the sample consisted of males (N=268). The average age of the participants was 22.12 years (SD =2.65).

This sample consisted of a diverse range of ethnicities, with the vast majority of the sample identifying as Black (N=961, 80.7%). The remaining 19.3% consisted of participants who identify as Coloured (N=49, 4.1%), White (N=153, 12.8%), Asian (N=1, 0.1%), Indian (N=4, 0.3%) and Other (N=23, 1.9%).

With regards to home language, the participants were more widely spread. A total of 23.9% of the participants identified their home language as South Sotho (N=285), while 3.4% indicated their home language as North Sotho (N=41). The Xhosa-speaking participants made up 9.0% of the sample (N=107), while the Zulu-speaking participants comprised 28.5% (N=339). The remaining participants consisted of the following home languages: Tswana (N=132, 11.1%), English (N=49, 4.1%), Afrikaans (N=134, 11.3%), and Other (N=104, 8.7%).

The majority of the undergraduate students were in their second year of study (N=596, 50.0%). The rest of the students were in the following years: the first year of study (N=29, 2.4%), the third year of study (N=439, 36.9%), the fourth year of study (N=72, 6.0%), and other (N=55, 4.6%). The sample consisted primarily of Psychology students (N=759, 63.7%). Other common degree majors were Criminology (N=62, 5.2%), Industrial Psychology (N=91, 7.6%), and Other (N=112, 9.4%). The remaining sample consisted of the following majors: Sociology (N=35, 2.9%), Anthropology (N=2, 0.2%), Political Science (N=16, 1.3%), Communication Science (N=25, 2.1%), Education (N=33, 2.8%), Languages (N=30, 2.5%) and Social Work (N=26, 2.2%).

With regards to first-generation students, the sample was more or less evenly divided between first-generation students (N=539, 45.3%) and non-first-generation students (N=652, 54.7%) with there being more non-first-generation students in the sample. The majority of the students resided in the Free State (N=507, 42.6%), which is followed by KwaZulu-Natal (N=291, 24.4%), Eastern Cape (N=75, 6.3%), Northern Cape (N=67, 5.6%), Gauteng (N=66,

5.5%), Other (57, 4.8%), Limpopo (N=41, 3.4%), North West (N=36, 3.0%), Mpumalanga (N=27, 2.3%) and lastly the Western Cape (N=24, 2.0%).

The majority of the sample consisted of participants whose parents had no tertiary education (N=572, 48.0%), while 21.2% had both parents who received a tertiary education (N=252). The remaining participants had only a mother who received tertiary education (N=209, 17.5%), only a father who completed tertiary education (N=102, 8.6%), and 4.7% of the sample does not know about their parent's education status (N=56).

### 4.3. Descriptive statistics of the various measuring instruments

The means, standard deviations, skewness, kurtosis, and internal consistencies of the various measuring instruments are reported in Table 2. Internal consistency was measured through the calculation of Cronbach's alpha coefficient ( $\alpha$ ).

**Table 2**

*Descriptive statistics and reliability coefficients for the PWB, SEIS, SACQ and MTUAS dimensions*

Measures	N	M	SD	$\alpha$	Skewness	Kurtosis
<i>SPWB</i>						
Autonomy	1191	29.63	5.398	0.60	-0.58	-0.152
Environmental Mastery	1191	27.38	4.668	0.40	-0.089	0.041
Personal Growth	1191	32.41	5.242	0.61	-0.234	-0.777
Positive relations	1191	30.17	5.867	0.63	-0.095	-0.463
Purpose in life	1191	30.77	5.259	0.60	-0.368	-0.124
Self-acceptance	1191	29.97	6.270	0.71	-0.383	-0.051
<i>SACQ</i>						
Positive adjustment	1191	143.65	29.621	0.89	-0.121	0.253
Negative adjustment	1191	137.25	39.027	0.90	-0.088	-0.181
<i>SEIS</i>						
	1191	120.40	16.654	0.93	-0.290	0.154
<i>MTUAS</i>						
Media usage for social engagement	1191	21.1788	11.022	0.88	0.886	0.053
Media usage for communication	1191	139.3006	42.714	0.95	0.642	-0.465
Media usage for leisure	1191	100.9009	41.250	0.95	0.687	-0.397

It is evident in Table 2 that the SEIS, SACQ subscales, and the three dimensions of the MTUAS all have acceptable to exceptional Cronbach alpha coefficients ranging from 0.89 to

0.95. Cronbach alpha is a measure of internal consistency of the instrument (Ponterotto & Ruckdeschel, 2007; Vaske et al., 2017). Most researchers acknowledge that a Cronbach alpha coefficient above 0.90 is exceptional (Ponterotto & Ruckdeschel, 2007; Vaske et al., 2017). While many researchers view an internal consistency of above 0.70 as satisfactory, there is research showing that an internal consistency of 0.60 is satisfactory; this study will therefore use an internal consistency of 0.60 as the cut-off (Aiken, 2009; Ponterotto & Ruckdeschel, 2007; Robinson et al., 1999; Vaske et al., 2017). The SPWB subscales, Autonomy, Personal Growth, Positive Relations, Purpose in Life, and Self-acceptance all have satisfactory Cronbach alphas. However, the subscale Environmental Mastery was not included in further statistical analyses due to an unsatisfactory Cronbach alpha. With regards to skewness and kurtosis, according to Kahane (2008), the cut-off point for skewness is  $> |2|$  and kurtosis is  $> |4|$ . From Table 2, it is evident that all of the subscales are within the cut-off range and therefore do not deviate from normality.

#### **4.4. Correlation**

In order to investigate correlations between the variables, Pearson Product Moment correlation coefficients were calculated for the variables. The correlation coefficients are illustrated in Table 3.

**Table 3***Correlations between the PWB scales and Sex, Positive and Negative Adjustment, Emotional Intelligence and the MTUAS dimensions (N=1191)*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Sex	-	0.36	0.116**	0.118**	0.097**	0.084**	-0.17	-0.16	0.095**	-0.138**	-0.056	-0.100**
2. Autonomy		-	0.439**	0.379**	0.395**	0.493**	0.346**	-0.292**	0.344**	-0.80**	-0.067*	-0.113*
3. Personal Growth			-	0.487**	0.505**	0.496**	0.410**	-0.384**	0.458**	-0.147**	-0.101**	-0.171**
4. Positive relations				-	0.459**	0.522**	0.474**	-0.391**	0.406**	-0.113**	-0.104**	-0.140**
5. Purpose in life					-	0.612**	0.475**	-0.357**	0.397**	-0.138**	-0.081**	-0.133**
6. Self-acceptance						-	0.528**	-0.480**	0.393**	-0.073**	-0.082**	-0.130**
7. PA							-	-0.465**	0.507**	-0.135**	-0.103**	-0.136**
8. NA								-	-0.326**	0.127**	0.132**	0.188**
9. Emotional intelligence									-	-0.335**	-0.224**	-2.86**
10. M1										-	0.687**	0.743**
11. M2											-	0.856**
12. M3												-

Key: PA = Positive Adjustment, NA = Negative Adjustment, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure,

\*\*p≤0.01, \*p≤0.05

Table 3 shows that Autonomy has a statistically significant positive correlation with Positive Adjustment. This correlation is statistically significant at the 1% level with a medium effect size of 0.35. This finding seems to suggest that students with higher levels of Autonomy tend to adjust better to university. This finding may also indicate that well-adjusted students tend to have higher levels of Autonomy. Autonomy also has a statistically significant positive correlation with Emotional Intelligence. This correlation is statistically significant at the 1% level with a medium effect size of 0.34. This finding suggests that students with higher levels of Autonomy tend to have higher levels of Emotional Intelligence. This finding may also indicate that students with higher levels of Emotional Intelligence tend to have higher levels of Autonomy.

Personal Growth has a statistically significant positive correlation with Positive Adjustment. This correlation is statistically significant at the 1% level with a medium effect size of 0.41. This finding suggests that students with higher levels of Personal Growth tend to be better adjusted to university. This finding may also indicate that well-adjusted students tend to have higher levels of Personal Growth. Personal Growth also has a statistically significant negative correlation with Negative Adjustment. This correlation is statistically significant on the 1% level with a medium effect size of 0.38. This finding indicates that students with adjustment difficulties tend to have lower levels of Personal Growth. This finding may also suggest that students with lower levels of Personal Growth tend to have adjustment difficulties.

Furthermore, Personal Growth has a statistically significant positive correlation with Emotional Intelligence. This correlation is statistically significant at the 1% level with a medium effect size of 0.46. This finding suggests that students with higher levels of Personal Growth tend to have higher levels of Emotional Intelligence. This finding may also suggest

that students with higher levels of Emotional Intelligence tend to have higher levels of Personal Growth.

Table 3 indicates that Positive Relations has a statistically significant positive correlation with Positive Adjustment. This correlation is statistically significant at the 1% level with a medium effect size of 0.47, thus indicating that students with higher levels of Positive Relations tend to be better adjusted to university. This finding may further suggest that well-adjusted students tend to have higher levels of Positive Relations. Positive Relations also has a statistically significant negative correlation with Negative Adjustment. This correlation is statistically significant on the 1% level with a medium effect size of 0.39, suggesting that students with adjustment difficulties tend to have lower levels of Positive Relations. This finding also indicates that students with lower levels of Positive Relations tend to experience adjustment difficulties.

Furthermore, Positive Relations has a statistically significant positive correlation with Emotional Intelligence. This correlation is statistically significant at the 1% level with a medium effect size of 0.41, suggesting that students with higher levels of Positive Relations tend to have higher levels of Emotional Intelligence. This finding may also suggest that students with higher levels of Emotional Intelligence tend to have higher levels of Positive Relations.

In addition, Table 3 indicates that Purpose in Life has a statistically significant positive correlation with Positive Adjustment. This correlation is statistically significant at the 1% level with a medium effect size of 0.48. This finding suggests that students with higher levels of Purpose in Life tend to be better adjusted to university. This finding may also indicate that well-adjusted students tend to have higher levels of Purpose in Life. Purpose in Life also has a statistically significant negative correlation with Negative Adjustment. This correlation is statistically significant on the 1% level with a medium effect size of 0.36, indicating that

students with adjustment difficulties tend to have lower levels of Purpose in Life. This finding may also suggest that students with lower levels of Purpose in Life tend to experience adjustment difficulties.

Furthermore, Purpose in Life has a statistically significant positive correlation with Emotional Intelligence. This correlation is statistically significant at the 1% level with a medium effect size of 0.40. This finding suggests that students with higher levels of Purpose in Life tend to have higher levels of Emotional Intelligence. This finding may also suggest that students with higher levels of Emotional Intelligence tend to have higher levels of Purpose in Life.

Lastly, Table 3 indicates that Self-acceptance has a statistically significant positive correlation with Positive Adjustment. This correlation is statistically significant at the 1% level with a large effect size of 0.53, suggesting that students with higher levels of Self-acceptance tend to be better adjusted to university. This finding may also indicate that well-adjusted students tend to have higher levels of Self-acceptance. Self-acceptance also has a statistically significant negative correlation with Negative Adjustment. This correlation is statistically significant on the 1% level with a medium effect size of 0.48. This finding suggests that students with adjustment difficulties tend to have lower levels of Self-acceptance. This finding may also indicate that students with lower levels of Self-acceptance tend to experience adjustment difficulties.

Furthermore, Self-acceptance has a statistically significant positive correlation with Emotional Intelligence. This correlation is statistically significant at the 1% level with a medium effect size of 0.39, suggesting that students with higher levels of Self-acceptance tend to have higher levels of Emotional Intelligence. This finding may also indicate that students with higher levels of Emotional Intelligence tend to have higher levels of Self-acceptance.

#### **4.5. Hierarchical regression analyses**

Hierarchical regression analyses were utilised to identify the contribution of the combination of predictor variables (i.e., Sex, Adjustment, Emotional Intelligence, and Media and Technology Usage) and the contribution of the individual predictor variables to the percentage of the variance in the psychological well-being subscales.

##### **4.5.1. Hierarchical Regression Analyses with Autonomy as Criterion Variable**

The results of the hierarchical regression analyses with Autonomy as criterion variable are reported in Table 4.

**Table 4**

*Contributions of Sex, Adjustment, Emotional Intelligence, and MTUAS dimensions to R<sup>2</sup> with Autonomy as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Sex] + [PA + NA] + [EI] + [M1 + M2 + M3]	0.178	1-5= 0.004	1.919	0.01
2. [Sex] + [PA + NA] + [EI] + M1	0.176	2-5= 0.002	2.876	-
3. [Sex] + [PA + NA] + [EI] + M2	0.175	3-5= 0.001	1.436	-
4. [Sex] + [PA + NA] + [EI] + M3	0.174	4-5= 0.00	-	-
5. [Sex] + [PA + NA] + [EI]	0.174			
6. [Sex] + [PA + NA] + [M1 + M2 + M3] + [EI]	0.178	6-7= 0.031	44.610**	0.04
7. [Sex] + [PA + NA] + [M1 + M2 + M3]	0.147			
8. [Sex] + [EI] + [M1 + M2 + M3] + [PA + NA]	0.178	8-11= 0.053	38.138**	0.06
9. [Sex] + [EI] + [M1 + M2 + M3] + PA	0.164	9-11= 0.039	55.234**	0.05
10. [Sex] + [EI] + [M1 + M2 + M3] + NA	0.158	10-11= 0.033	46.404**	0.04
11. [Sex] + [EI] + [M1 + M2 + M3]	0.125			
12. [EI] + [M1 + M2 + M3] + [PA + NA] + [Sex]	0.178	12-13=0.001	1.439	-
13. [EI] + [M1 + M2 + M3] + [PA + NA]	0.177			

Key: PA = Positive Adjustment, NA = Negative Adjustment, EI= Emotional Intelligence, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

\*\*p<0.01, \*p<0.05

As illustrated in Table 4, the combination of the independent variables is responsible for 17.8% ( $F_{7;1183}= 36.559$ ;  $p\leq 0.01$ ) of the variance in the Autonomy scores of the sample. No practically significant results were found with this hierarchical regression analyses.

#### **4.5.2. Hierarchical Regression Analyses with Personal Growth as Criterion Variable**

The results of the hierarchical regression analyses with Personal Growth as a criterion variable are reported in Table 5.

**Table 5**

*Contributions of Sex, Adjustment, Emotional Intelligence, and MTUAS dimensions to R<sup>2</sup> with Personal Growth as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Sex] + [PA + NA] + [EI] + [M1 + M2 + M3]	0.298	1-5= 0.004	2.247*	-
2. [Sex] + [PA + NA] + [EI] + M1	0.294	2-5= 0.000	-	-
3. [Sex] + [PA + NA] + [EI] + M2	0.294	3-5= 0.00	-	-
4. [Sex] + [PA + NA] + [EI] + M3	0.294	4-5= 0.00	-	-
5. [Sex] + [PA + NA] + [EI]	0.294			
6. [Sex] + [PA + NA] + [M1 + M2 + M3] + [EI]	0.298	6-7= 0.059	99.26**	0.08
7. [Sex] + [PA + NA] + [M1 + M2 + M3]	0.239			
8. [Sex] + [EI] + [M1 + M2 + M3] + [PA + NA]	0.298	8-11= 0.075	63.194**	0.11
9. [Sex]+ [EI] + [M1 + M2 + M3] + PA	0.267	9-11=0.044	71.072**	0.06
10. [Sex] + [EI] + [M1 + M2 + M3] + NA	0.281	10-11=0.058	95.510**	0.08
11. [Sex] + [EI] + [M1 + M2 + M3]	0.223			
12. [EI] + [M1 + M2 + M3] + [PA + NA] + [Sex]	0.298	12-13= 0.007	11.796**	-
13. [EI] + [M1 + M2 + M3] + [PA + NA]	0.291			

Key: PA = Positive Adjustment, NA = Negative Adjustment, EI = Emotional Intelligence, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

\*\*p≤0.01, \*p≤0.05

As illustrated in Table 5, the combination of the independent variables is responsible for 29.8% ( $F_{7;1183}=71.755; p\leq 0.01$ ) of the variance in the Personal Growth scores of the sample. No practically significant results were found with this hierarchical regression analyses.

#### **4.5.3. Hierarchical Regression Analyses with Positive Relations as Criterion Variable**

The results of the hierarchical regression analyses with Positive Relations as criterion variable are reported in Table 6.

**Table 6**

*Contributions of Sex, Adjustment, Emotional Intelligence, and MTUAS dimensions to R<sup>2</sup> with Positive Relations as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Sex] + [PA + NA] + [EI] + [M1 + M2 + M3]	0.303	1-5= 0.002	1.31	-
2. [Sex] + [PA + NA] + [EI] + M1	0.302	2-5=0.001	1.700	-
3. [Sex] + [PA + NA] + [EI] + M2	0.301	3-5= 0.000	-	-
4. [Sex] + [PA + NA] + [EI] + M3	0.301	4-5= 0.000	-	-
5. [Sex] + [PA + NA] + [EI]	0.301			
6. [Sex] + [PA + NA] + [M1 + M2 + M3] + [EI]	0.303	6-7= 0.025	42.432**	0.04
7. [Sex] + [PA + NA] + [M1 + M2 + M3]	0.278			
8. [Sex] + [EI] + [M1 + M2 + M3] + [PA + NA]	0.303	8-11= 0.127**	107.77**	0.18**
9. [Sex] + [EI] + [M1 + M2 + M3] + PA	0.275	9-11= 0.099**	161.678**	0.14**
10. [Sex] + [EI] + [M1 + M2 + M3] + NA	0.249	10-11= 0.073**	115.089**	0.10**
11. [Sex] + [EI] + [M1 + M2 + M3]	0.176			
12. [EI] + [M1 + M2 + M3] + [PA + NA] + [Sex]	0.303	12-13= 0.011	18.670**	0.02
13. [EI] + [M1 + M2 + M3] + [PA + NA]	0.292			

Key: PA = Positive Adjustment, NA = Negative Adjustment, EI = Emotional Intelligence, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

\*\*p≤0.01, \*p≤0.05

As illustrated in Table 6, the combination of the independent variables is responsible for 30.3% ( $F_{7;1183} = 73.420$ ;  $p \leq 0.01$ ) of the variance in the Positive Relations scores of the sample.

The Adjustment subscales as a combination were found to account for 12.7% of the variance in the Positive Relations scores. This finding is statistically significant at the 1% level, with the corresponding effect size ( $f^2 = 0.182$ ) suggesting that this is of medium practical significance.

Negative Adjustment accounts for 7.3% of the variance in the Positive Relations scores. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.10$ ) suggests that this is of small practical significance. Positive Adjustment accounts for 9.9% of the variance in the Positive Relations scores. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.14$ ) suggests that this is of medium practical significance. Table 3 showed a positive statistically significant correlation between Positive Adjustment and Positive Relations.

#### **4.5.4. Hierarchical Regression Analysis with Self-acceptance as Criterion Variable**

The results of the hierarchical regression analysis with Self-acceptance as a criterion variable are reported in Table 7.

**Table 7**

*Contributions of Sex, Adjustment, Emotional Intelligence, and MTUAS dimensions to R<sup>2</sup> with Self-acceptance as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Sex] + [PA + NA] + [EI] + [M1 + M2 + M3]	0.374	1-5= 0.006	3.78**	0.01
2. [Sex] + [PA + NA] + [EI] + M1	0.372	2-5= 0.004	7.548**	0.01
3. [Sex] + [PA + NA] + [EI] + M2	0.368	3-5= 0.000	-	-
4. [Sex] + [PA + NA] + [EI] + M3	0.368	4-5= 0.000	-	-
5. [Sex] + [PA + NA] + [EI]	0.368			
6. [Sex] + [PA + NA] + [M1 + M2 + M3] + [EI]	0.374	6-7= 0.014	26.457**	0.02
7. [Sex] + [PA + NA] + [M1 + M2 + M3]	0.360			
8. [Sex] + [EI] + [M1 + M2 + M3] + [PA + NA]	0.374	8-11= 0.204	192.757**	0.33
9. [Sex] + [EI] + [M1 + M2 + M3] + PA	0.316	9-11= 0.146	252.725**	0.21
10. [Sex] + [EI] + [M1 + M2 + M3] + NA	0.303	10-11= 0.133	225.928**	0.19
11. [Sex] + [EI] + [M1 + M2 + M3]	0.170			
12. [EI] + [M1 + M2 + M3] + [PA + NA] + [Sex]	0.374	12-13= 0.006	11.339**	-
13. [EI] + [M1 + M2 + M3] + [PA + NA]	0.368			

Key: PA = Positive Adjustment, NA = Negative Adjustment, EI = Emotional Intelligence, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

\*\*p≤0.01, \*p≤0.05

As illustrated in Table 7, the combination of the independent variables is responsible for 37.4% ( $F_{7;1183} = 100.955$ ;  $p \leq 0.01$ ) of the variance in the Self-acceptance scores of the sample.

The Adjustment subscales as a combination were found to account for 20.4% of the variance in the Self-acceptance scores. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.33$ ) suggests that this is of large practical significance. Negative Adjustment accounts for 13.3% of the variance in the Self-acceptance scores. This finding is statistically significant at the 1% level and the corresponding effect

size ( $f^2 = 0.19$ ) suggests that this is of medium practical significance. Positive Adjustment accounts for 14.6% of the variance in the Self-acceptance scores. This finding is statistically significant at the 1% level, with the corresponding effect size ( $f^2 = 0.21$ ) suggesting that this is of medium practical significance.

Table 3 showed a positive statistically significant correlation between Positive Adjustment and Self-acceptance. Table 3 also indicated a negative statistically significant correlation between Negative Adjustment and Positive Relations.

#### **4.5.5. Hierarchical Regression Analysis with Purpose in Life as Criterion Variable**

The results of the hierarchical regression analysis with Purpose in Life as criterion variable are reported in Table 8.

**Table 8**

*Contributions of Sex, Adjustment, Emotional Intelligence, and MTUAS dimensions to R<sup>2</sup> with Purpose in Life as Criterion Variable*

<i>Variables in equation</i>	<i>R<sup>2</sup></i>	<i>Contribution to R<sup>2</sup>: full minus reduced model</i>	<i>F</i>	<i>f<sup>2</sup></i>
1. [Sex] + [PA + NA] + [EI] + [M1 + M2 + M3]	0.285	1-5= 0.002	1.103	-
2. [Sex] + [PA + NA] + [EI] + M1	0.283	2-5= 0.000	-	-
3. [Sex] + [PA + NA] + [EI] + M2	0.284	3-5= 0.001	1.660	-
4. [Sex] + [PA + NA] + [EI] + M3	0.283	4-5= 0.000	-	-
5. [Sex] + [PA + NA] + [EI]	0.283			
6. [Sex] + [PA + NA] + [M1 + M2 + M3] + [EI]	0.285	6-7= 0.021	34.745**	0.03
7. [Sex] + [PA + NA] + [M1 + M2 + M3]	0.264			
8. [Sex] + [EI] + [M1 + M2 + M3] + [PA + NA]	0.285	8-11= 0.121	100.1**	0.17*
9. [Sex] + [EI] + [M1 + M2 + M3] + PA	0.268	9-11= 0.104	168.248**	0.14*
10. [Sex] + [EI] + [M1 + M2 + M3] + NA	0.221	10-11= 0.057	36.634**	0.07
11. [Sex] + [EI] + [M1 + M2 + M3]	0.164			
12. [EI] + [M1 + M2 + M3] + [PA + NA] + [Sex]	0.285	12-13=0.007	11.581**	-
13. [EI] + [M1 + M2 + M3] + [PA + NA]	0.278			

Key: PA = Positive Adjustment, NA = Negative Adjustment, EI = Emotional Intelligence, M1 = Media usage for social engagement, M2 = Media usage for communication, M3 = Media usage for leisure

\*\*p≤0.01, \*p≤0.05

As illustrated in Table 8, the combination of the independent variables is responsible for 28.5% ( $F_{7;1183} = 67.243$ ;  $p \leq 0.01$ ) of the variance in the Purpose in Life scores of the sample.

The Adjustment subscales as a combination were found to account for 12.1% of the variance in the Purpose in Life scores. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.17$ ) suggests that this is of medium practical significance. Negative Adjustment accounts for 5.7% of the variance in the Purpose in Life scores. This finding is statistically significant at the 1% level, with the corresponding effect

size ( $f^2 = 0.07$ ), indicating that this is of small practical significance. Positive Adjustment accounts for 10.4% of the variance in the Purpose in Life scores. This finding is statistically significant at the 1% level and the corresponding effect size ( $f^2 = 0.14$ ) suggests that this is of medium practical significance. Table 3 showed a positive statistically significant correlation between Positive Adjustment and Purpose in Life.

#### **4.6. Chapter Summary**

This chapter covered the results of the statistical analyses. Firstly, the descriptive statistics of the sample were presented. Following this, the descriptive statistics of the measuring instruments were described. Furthermore, the correlation and hierarchical regression results were displayed.

These analyses showed that the combination of the predictor variables (MTUAS dimensions, Emotional Intelligence, Adjustment, and Sex) statistically significantly predicted the subscales of PWB (Autonomy, Personal Growth, Positive Relations, Purpose in Life and Self-acceptance). Positive and Negative Adjustment were found to be statistically and practically significant predictors of specific subscales of PWB, namely Positive Relations, Self-acceptance, and Purpose in Life. Positive Adjustment as an individual predictor variable statistically and practically significantly predicted Positive Relations, Self-acceptance and Purpose in Life. Positive Adjustment was positively and statistically significantly correlated with Autonomy, Personal Growth, Positive Relations, Purpose in Life, and Self-acceptance. Negative Adjustment as an individual predictor variable statistically and practically significantly predicted Self-acceptance. Lastly, Negative Adjustment was negatively and statistically significantly correlated with Personal Growth, Positive Relations, Purpose in Life, and Self-acceptance. Adjustment thus serves as a valuable predictor of some subscales

of PWB, which will be discussed in detail in Chapter 5 and include a discussion about the results related to relevant literature.

## CHAPTER FIVE

### DISCUSSION

#### 5.1. Chapter overview

Chapter five discusses the results presented in Chapter Four and link the results to relevant literature. The internal consistencies of the measuring instruments will be discussed briefly, including the results of the correlations and hierarchical regression analyses within the context of relevant literature. This will be followed by the limitations of the study as well as the contributions of the study. Lastly, the recommendations for future research will be explored.

#### 5.2. Discussion of Measuring Instruments

This study utilised four measuring instruments: Ryff's *Scales of Psychological Well-being* (SPWB), the *Student Adaption to College Questionnaire* (SACQ), the *Schutte Emotional Intelligence Questionnaire* (SEIS), and the *Media and Technology Usage Attitude Scale* (MTUAS). Almost all of the scales displayed acceptable to exceptional levels of internal consistency. However, Environmental Mastery, a core dimension of PWB, was not included in the statistical analyses due to its unacceptable level of internal consistency. Table 2 illustrated the Cronbach alpha coefficients for the SPWB core dimensions, SACQ subscales, SEIS, and MTUAS dimensions ranging from 0.60 to 0.95.

##### 5.2.1. Ryff's Scales of Psychological Well-being (SPWB)

In order to assess PWB, Ryff's *Scales of Psychological Well-being* (SPWB) was administered (Appendix D). This study reported the following Cronbach alphas for the core dimensions of PWB: Autonomy (0.60), Environmental Mastery (0.40), Self-acceptance

(0.71), Positive Relations (0.63), Purpose in Life (0.60), and Personal Growth (0.61). The Cronbach alphas of Autonomy, Self-acceptance, Positive Relations, Purpose in Life, and Personal Growth were acceptable as their internal consistencies were all above 0.60 (Aiken, 2009; Ponterotto & Ruckdeschel, 2007; Robinson et al., 1999; Vaske et al., 2017). These findings correspond with previous literature that reported similar internal consistencies ranging from 0.60 to 0.78 for the six core dimensions (Carreno et al., 2020; Gao & McLellan, 2018; Li, 2014; Lindfors et al., 2006; Saajanah et al., 2021).

### **5.2.2. The Student Adaption to College Questionnaire (SACQ)**

The *Student Adaption to College Questionnaire* (SACQ) was used to measure the adjustment of the participants (Appendix F). Exceptional Cronbach alphas were found for the subscales of the SACQ, namely Negative Adjustment (0.90) and Positive Adjustment (0.89). These findings correspond with a previous study that found the internal consistency to be 0.92 (Negative adjustment) and 0.93 (Positive adjustment) (LaBrie et al., 2012).

### **5.2.3. The Schutte Emotional Intelligence Questionnaire (SEIS)**

In order to measure the Emotional Intelligence of the participants, the *Schutte Emotional Intelligence Questionnaire* (SEIS) was used (Appendix E). Past literature has identified the internal consistency of this measure to be between 0.84 and 0.93 (Austin et al., 2004; Cakan & Altun, 2005; Cronje, 2019; Petrides & Furnham, 2000; Saklofske et al., 2003; Schutte et al., 1998). This study identified a similar Cronbach alpha of 0.93.

#### **5.2.4. The Media and Technology Usage and Attitude Scale (MTUAS)**

Lastly, the *Media and Technology Usage and Attitude Scale* (MTUAS) was administered to measure the Media and Technology Usage of the participants. This study found exceptional Cronbach alphas for the three dimensions of the MTUAS, namely 0.89 for Media Usage for Social Engagement, 0.95 for Media Usage for Communication, and 0.96 for Media Usage for Leisure. This confirms previous studies that found the three dimensions' internal consistencies between 0.89 and 0.96 (Cronje, 2019; Van Tonder, 2017, 2020).

### **5.3. Discussion of the significant correlations in this study**

Correlations were determined between the predictor variables and the criterion variables. This included correlations between the five subscales of SPWB and Adjustment, Emotional Intelligence, Media and Technology Usage, and Sex.

#### **5.3.1. Correlations between Adjustment and Psychological Well-being**

This study found that Positive Adjustment is statistically and practically significantly correlated with Personal Growth, Positive Relations, Purpose in Life, Self-acceptance, and Autonomy. Furthermore, this study found that Negative Adjustment is statistically and practically significantly correlated with Personal Growth, Positive Relations, Purpose in Life, and Self-acceptance. These correlations will be discussed in more detail.

##### **5.3.1.1. Correlations between Adjustment and Autonomy**

A positive statistically and practically significant correlation was found between Positive Adjustment and Autonomy. According to Chickering (1969), there are seven core developmental tasks or vectors of emerging adulthood. Autonomy is outlined as one of the key developmental tasks needed for university students (Chickering, 1969). Well-adjusted

university students tend to have higher levels of autonomy (Girelli et al., 2018; Lamborn & Groh, 2009), as explained by the Self-Determination Theory of Ryan and Deci (2000), indicating that intrinsic or autonomous motivated individuals engage in activities for their own pleasure, interest, and satisfaction. This motivation is often found in self-determined students and is related to greater academic performance and adjustment to university (Girelli et al., 2018; Ryan & Deci, 2000, 2017). Similarly, individuals with higher levels of autonomy tend to be better adjusted to university (Lamborn & Groh, 2009; Girelli et al., 2018).

#### **5.3.1.2. Correlations between Adjustment and Personal Growth**

A statistically and practically significant positive correlation was found between Positive Adjustment and Personal Growth. This is in line with previous research, which has found that well-adjusted university students tend to have deeper relationships that provide a sense of belonging, fostering an ideal environment for individual or personal growth (Ball et al., 2020; Young et al., 2013). This is also in line with Alfred Adler's theory of Social Interest which states that individuals depend on social interactions to find meaning in life and engage in personal growth (Ball et al., 2020; Crandall, 1980). Personal Growth has furthermore been linked to better adjustment and acts as a buffer against psychological distress (Dweck et al., 1995; Schroder et al., 2017; Staudinger & Kessler, 2009; Yeager et al., 2014). Personal Growth also has a statistically significant negative correlation with Negative Adjustment. Increased levels of maladjustment and increased psychological distress tend to lead to decreased levels of personal growth (Schroder et al., 2017).

#### **5.3.1.3. Correlations between Adjustment and Positive Relations**

A statistically and practically significant positive correlation was found between Positive Adjustment and Positive Relations. Positive Relations also has a statistically and practically

significant negative correlation with Negative Adjustment. According to Erikson's theory of psychosocial development, individuals in their early 20s face the critical developmental task of establishing intimate relationships with others (Fleming & Erikson, 2004; Goguen et al., 2008; Knight, 2017). Developing mature relations with others is considered one of Chickering's developmental tasks for undergraduate university students (Chickering, 1969). Therefore, relationships with others are considered vital to our development (Fleming & Erikson, 2004; Goguen et al., 2008; Knight, 2017). Close or positive relations with others can be seen as a marker of adjustment in university students (Baker, 2006; Fass & Tubman, 2002; Laursen & Mooney, 2008). Positive Relations with parents and university peers are associated with improved adjustment amongst university students (Fass & Tubman, 2002; Goguen et al., 2008; Laursen & Mooney, 2008; Wintre & Yaffe, 2000).

#### **5.3.1.4. Correlations between Adjustment and Purpose in Life**

A statistically and practically significant positive correlation was found between Positive Adjustment and Purpose in Life. Purpose in Life also has a statistically and practically significant negative correlation with Negative Adjustment. Developing a sense of purpose is another vector of development identified by Chickering (1989). Finding one's purpose in life is considered the driving force in life (Frankl, 1969; Wong, 2014). The university environment provides opportunities for self-exploration, which is important for developing one's purpose in life (Pfunda et al., 2020). The literature shows that well-adjusted university students tend to have a higher sense of purpose in life (DeWitz et al., 2009; Liter, 1987; Wesley & Booker, 2021). Well-adjusted individuals can shift their mindset from what they cannot control onto what they can control and thus has better control over their meaning or purpose in life. Therefore, better adjustment can increase life purpose (Dollinger, 1986; Park & Folkman, 1997; Thompson et al., 2003).

### **5.3.1.5. Correlations between Adjustment and Self-acceptance**

Lastly, a statistically and practically significant positive correlation was found between Positive Adjustment and Self-acceptance. Self-acceptance also has a statistically and practically significant negative correlation with Negative Adjustment. According to Maslow's hierarchy of needs, self-acceptance is crucial for all self-actualising individuals (Compton, 2018). The university environment and opportunities that the university provides, such as establishing close relationships and developing self-awareness, tend to contribute to the development of self-acceptance (Ceyhan & Ceyhan, 2011). Ceyhan and Ceyhan (2011) found that self-acceptance increases throughout students' undergraduate degrees. Well-adjusted university students are more likely to accept the more unflattering aspects of themselves and thus have higher levels of self-acceptance (Taylor & Combs, 1952; Williams & Lynn, 2010).

### **5.3.2. Correlations between Emotional Intelligence and Psychological Well-being**

This study found that Emotional Intelligence is statistically and practically significantly correlated with Personal Growth, Positive Relations, Purpose in Life, Self-acceptance, Autonomy. These correlations will be discussed in more detail.

#### **5.3.2.1. Correlation between Emotional Intelligence and Autonomy**

A statistically and practically significant positive correlation was found between Emotional Intelligence and Autonomy. Research has similarly found emotional intelligence and autonomy to be positively correlated in university students (Alsharari & Alshurideh, 2020; Buvoltz et al., 2008; Valizadeh, 2016). This may be explained by the fact that the qualities associated with emotional intelligence, such as self-confidence, achievement drive, adaptability, and communication, are also associated with autonomy (Buvoltz et al., 2008).

### **5.3.2.2. Correlation between Emotional Intelligence and Personal Growth**

A statistically and practically significant positive correlation was found between Emotional Intelligence and Personal Growth. This is in line with the literature, which has found that individuals with higher levels of emotional intelligence tend to have higher levels of personal growth (Kugbey et al., 2018; Landa et al., 2010). Emotional intelligence has been conceptually linked to personal growth. Salovey et al. (2003) defined emotional intelligence as the ability to manage emotions in order to foster personal growth (Zeidner et al., 2011). Individuals with higher levels of emotional intelligence tend to search for deeper meanings in life which aid their personal growth (Akerjordet & Severinsson, 2004).

### **5.3.2.3. Correlation between Emotional Intelligence and Positive Relations**

Emotional Intelligence had a statistically and practically significant positive correlation with Positive Relations. Emotional intelligence is defined as the ability to perceive, understand, utilise, and manage emotions (Salovey & Mayer, 1990; Schutte et al., 1998). Regulating emotions is a useful interpersonal skill that has been associated with positive relationships (Brown & Schutte, 2006; Lopes et al., 2003; Schutte et al., 2001). Emotional intelligence is related to other interpersonal skills such as greater empathy and greater relationship satisfaction (Brown & Schutte, 2006; Lopes et al., 2003).

### **5.3.2.4. Correlation between Emotional Intelligence and Purpose in Life**

Emotional Intelligence was found to have a statistically and practically significant positive correlation with Purpose in Life. This may be explained by the fact that emotional intelligence is linked to self-confidence, achievement drive, and adaptability, which are needed for an individual to fulfill their purpose in life (Buvoltz et al., 2008; Martela & Steger, 2016).

### **5.3.2.5. Correlation between Emotional Intelligence and Self-acceptance**

Lastly, Emotional Intelligence was found to have a statistically and practically significant positive correlation with Self-acceptance. Carmeli et al. (2009) found that individuals with higher levels of emotional intelligence tend to have higher levels of self-acceptance (Carmeli et al., 2009). This may be explained by individuals with higher emotional intelligence's ability to regulate emotions with more ease (Schutte et al., 2002). Better regulation of emotions tends to lead to a more positive self-evaluation, leading to increased self-esteem and, ultimately, self-acceptance (Ciarrochi et al., 2001; Schutte et al., 2002).

## **5.4. Discussion on the predictors of Psychological Well-being**

Hierarchical regression analyses were utilised to investigate the proportion of variance explained by the predictor variable(s) or combination of predictor variables in the five core dimensions of PWB. The combination of the predictor variables statistically significantly predicted the following core dimensions of PWB: Autonomy, Personal Growth, Positive Relations, Self-Acceptance, and Purpose in Life. Adjustment was the only individual predictor variable that explained a statistically and practically significant percentage of the variance in PWB amongst university students. Adjustment seems to be a significant predictor of PWB.

### **5.4.1. Prediction of Positive Relations**

The Adjustment subscales as a combination accounted for 12.7% of the variance in the Positive Relations scores of the sample. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.18$ ). Positive Adjustment accounted for 9.9% of the variance in the Positive Relations scores of the sample. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.14$ ).

Close friendships or positive relations with others provide several benefits such as acceptance, feedback, and a sense of belonging (Hartupp & Stevens, 1997; Tokuno, 1983; Weiss, 1974). Furthermore, friendships during the first year of study serve many purposes: (1) providing a sense of belonging, (2) providing tangible assistance such as helping with work, (3) advice, (4) act as models of appropriate behaviour, (5) helping expand their social circle, (6) managing stress and (7) normalising their experience (Buote et al., 2007).

A positive correlation has been found between university students' adjustment and positive relations (Buote et al., 2007). Well-adjusted university students tend to use social support provided by their friends. When students leave high school and start attending university, their social network decreases, especially if they leave their home to study at university (Buote et al., 2007). Therefore, university students need to build up their social network by making new friends at university. Well-adjusted first-year students, therefore, tend to have more quality friendships or positive relations (Buote et al., 2007).

#### **5.4.2. Prediction of Purpose in Life**

The Adjustment subscales as a combination accounted for 12.1% of the variance in the Purpose in Life scores of the sample. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.17$ ). Positive Adjustment accounted for 10.4% of the variance in the Purpose in Life scores of the sample. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.14$ ). Purpose in life has been linked to the activities that university students partake in (Molasso, 2006). Well-adjusted university students tend to study more, spend more time with friends, exercise, and socialise at parties, ultimately leading to a higher sense of purpose in life (Molasso, 2006; Terezini & Pascarella, 1991). Finding one's purpose in life is a vital developmental challenge for university students (Chickering, 1969). University students have to make important

decisions about their future, such as what they want to study. Adjustment to university is a broad concept that can include practical things such as financial management and more broad concerns such as one's purpose or direction in life (Bowman, 2010).

### **5.4.3. Prediction of Self-acceptance**

The Adjustment subscales as a combination accounted for 20.4% of the variance in the Self-acceptance scores of the sample. This finding is statistically significant at the 1% level with a large corresponding effect size ( $f^2 = 0.33$ ). Positive Adjustment also accounted for 14.6% of the variance in the Self-acceptance scores of the sample. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.21$ ). Negative Adjustment accounted for 13.3% of the variance in the Self-acceptance scores. This finding is statistically significant at the 1% level with a medium corresponding effect size ( $f^2 = 0.19$ ). Self-acceptance entails unconditional acceptance of oneself as an infallible human being who makes mistakes (Ellis, 1977; MacInnes, 2006). Self-acceptance has been linked to lower levels of depression and anxiety and higher levels of psychological health (Macinnes, 2006). Individuals who have higher levels of self-acceptance are more likely to know their strengths and weaknesses, possess personal resources and have better adjustment to university (Balakrishnan, 2019; Raines & Lewandowski, 2009).

### **5.5. Study limitations**

This study is limited because the results cannot be generalised to different university student populations across South Africa. This is due to the particular sample of Faculty of the Humanities undergraduate university students at the University of the Free State. As a result, the findings cannot be generalised to students in other faculties or to young adults not at tertiary education institutions. Additionally, as a result of using non-probability sampling,

random selection did not occur; thus it is not possible to know how well the population is represented in the sample (Acharya et al., 2013; Sharma, 2017).

Secondly, this study used self-reported questionnaires, which are by nature subjective to the participant (Lucas, 2018). This can lead to the limitation of participants not answering truthfully, especially to more sensitive questions (Demetriou et al., 2015). Social desirability bias refers to the phenomenon in which participants respond in a more socially acceptable way rather than being truthful in their responses to questions (Demetriou et al., 2015). Furthermore, even though the data was collected anonymously, participants may have still felt the need to respond in a more socially desirable manner.

Lastly, the data was collected in a short period of time in a cross-sectional study. This, therefore, limits the understanding of PWB across a lifespan. Consequently, it only provides findings relevant during a specific time in one's life and does not extend past the age of an undergraduate university student. Furthermore, due to the quantitative nature of this study, an understanding of the participants' experience is limited to the quantitative data collected. This has limited the understanding of how these variables influence the participants' psychological well-being on a more personal level.

## **5.6. Research Contribution**

The main contribution of this study is the identification of Adjustment as a statistically and practically significant predictor of PWB in university students. Furthermore, this study contributes to the internationally growing body of research dedicated to PWB. In addition, it contributes more specifically to the understanding of PWB in a South African context and within a university student population. This study also contributes to a better understanding of Emotional Intelligence, Adjustment to University and Media and Technology Usage in South African undergraduate university students as predictors of psychological well-being.

Lastly, as previously discussed, PWB influences the academic, emotional and mental well-being of university students. It is, therefore, worth measuring and intervening with the PWB of university students. The findings of this study can be used to inform workshops, interventions and psycho-educational programmes aimed at improving the psychological well-being of university students.

### **5.7. Future recommendations**

While this research has made significant contributions to the understanding of psychological well-being in South African university students, further research is needed. In order to better the understanding of PWB, it is recommended that further research is conducted at various universities across South Africa as well as in other tertiary education contexts such as FET colleges. This will increase the generalisability of the results across students in South Africa. Furthermore, research should also be conducted on postgraduate university students as they may have different experiences. It is recommended that further studies make use of probability sampling to ensure the generalisability of the results. In addition, a longitudinal or qualitative approach would be beneficial in contributing to a more in-depth understanding of PWB.

This study and previous research have highlighted the need to support South African university students due to the unique challenges they face. As such, the findings of this study and future research should be used to inform workshops, interventions, and psycho-education programmes for university students to improve their PWB. Interventions can now focus on Adjustment to improve the PWB of university students. Information from this study and future research can be included in both student and lecturers' curriculum to better aid individuals' understanding of PWB.

While this research shows how Adjustment, Emotional Intelligence, Sex and Media and Technology predict PWB, further research can be conducted to better understand other variables that contribute to PWB.

## **5.8. Conclusion**

In summary, this study found that the combination of the predictor variables (Adjustment, Emotional Intelligence, Media and Technology Usage, and Sex) statistically significantly predicted the following subscales of PWB: (i) Autonomy, (ii) Self-acceptance, (iii) Positive relations with others, (iv) Purpose in Life and (v) Personal Growth. Positive Adjustment as an individual predictor variable statistically and practically significantly predicted Positive Relations, Self-acceptance and Purpose in Life. Negative Adjustment as an individual predictor variable statistically and practically significantly predicted Self-acceptance. Overall, Adjustment was found to be the only predictor variable to statistically significantly predict three dimensions of PWB with varying practical significance.

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## APPENDIX A:

### GENERAL HUMAN RESEARCH ETHICS COMMITTEE: APPROVAL LETTER



#### GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

05-Oct-2020

Dear Ms Emma Nel

#### **Application Approved**

Research Project Title:

**Emotional intelligence, adjustment, media and technology usage, and gender as predictors of psychological well-being amongst undergraduate university students.**

Ethical Clearance number:

**UFS-HSD2020/1134/0510**

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

**Dr Adri Du Plessis**

**Chairperson: General/Human Research Ethics Committee**

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## APPENDIX B: INFORMED CONSENT



### RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

#### DATE

2017-08-01

#### TITLE OF THE RESEARCH PROJECT

Predictors of psychological well-being amongst university students

#### PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Dr. Jacques Jordaan	0777920	051-4012890
<i>Name of student/researcher</i>	<i>Student number</i>	<i>Contact number</i>
<i>Name of student/researcher</i>	<i>Student number</i>	<i>Contact number</i>
<i>Name of student/researcher</i>	<i>Student number</i>	<i>Contact number</i>

#### FACULTY AND DEPARTMENT:

Humanities  
*Psychology*

#### STUDYLEADER(S) NAME AND CONTACT NUMBER:

Dr. Jacques Jordaan  
051-4012890

#### WHAT IS RESEARCH?

Research is something we do to find new knowledge about the way things and people work. We use research projects or studies to help us find out more about children and teenagers and the things that affect their lives, their schools, their families and their health. Research also helps us to find better ways of helping, or treating children who are sick. We do this to try and make the world a better place!

#### WHAT IS THE AIM / PURPOSE OF THE STUDY?

University students are unique as they serve as the future for their own families, communities and next generations. However, university students usually experience stress due to the academic and social demands and burdens they face during their studies. Being a university student entails that students need to take responsibility for their lives and to start facing the challenges that emerging adulthood hold for them. The psychological well-being of students is therefore crucial to enable them to deal with these various demands and challenges. Psychological well-being is a concept that is multi-dimensional and that includes special aspects such as optimism, loneliness, self-control,



happiness, sense of interests, anxiety, and being free of failures. Seeing that the psychological well-being of university students is so important it is essential to determine what variables are the best predictors of psychological well-being amongst university students. The proposed study can be valuable in the South African context for several reasons. Firstly, the findings of this study will contribute to the larger body of South African research which aims to understand psychological well-being amongst student populations. This study will also help to determine which variables are the best predictors of psychological well-being and can thus be used to inform future research and decide whether extra resources are needed to assist university students. Thus, the aim of this research study is to determine which variables are the best predictors of psychological well-being amongst university students. The following research questions will be investigated: Can the combination of adjustment, coping strategies, depression, emotional intelligence, life satisfaction, decision-making and self-esteem explain a significant percentage of variance in the psychological well-being of university students? Which set of predictors as well as the individual predictors explain the most significant percentage of variance in the psychological well-being of university students?

#### **WHO IS DOING THE RESEARCH?**

I am a lecturer in the Department of Psychology of the University of the Free State. I am conducting this study as I am interested in the psychological well-being of university students.

#### **HAS THE STUDY RECEIVED ETHICAL APPROVAL?**

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

**Approval number:** *Insert approval number*

#### **WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?**

The data will be obtained from a sample of approximately 800 university students (N=800) within the Faculty of the Humanities of the University of the Free State. The students will be approached during Psychology lectures and requested to voluntarily participate in the study. Students of all ages, ethnic groups, study years, languages or otherwise will be included to form part of the sample. Psychology students are chosen

as the researcher is a lecturer within the Psychology Department and have easy access to students studying Psychology although these students may have different majors.

#### **WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?**

The participants will be requested to complete nine self-report questionnaires in their own time. The questionnaires will focus on psychological well-being and variables that have been found to be indicators of psychological well-being such as adjustment, depression, coping, self-esteem, decision-making, etc. The questionnaires should take about an hour and a half to complete, but the participants may complete the questionnaires in their own free time and provide the completed questionnaires back to the researcher.

#### **CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?**

Participation in this study is on a voluntary basis and participants may withdraw from the study at any point in time. Participants who are willing to participate will be provided with the information sheet and the relevant questionnaires. All participants will have to provide informed consent before participating in this study.

#### **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

One benefit of participation is that the participants (students) will learn about research and research procedures. Another benefit is that students might learn more about certain concepts as some of the concepts that they study in Psychology will be measured through the self-report questionnaires. The identities of the participants will be kept anonymous and all information and inputs received from the participants will be kept confidential

#### **WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?**

Completing the questionnaires might be time consuming, but the researcher attempts to counter this by allowing the participants to complete the questionnaires in their own free time and to provide the questionnaires back once completed. A possible risk might be that participants might identify that they struggle with a certain aspect linked to psychological well-being and the researcher will ensure that such participants are referred to the necessary and relevant intervention services.

#### **WILL WHAT I SAY BE KEPT CONFIDENTIAL?**

All information and inputs received from the participants will be kept confidential. A coding system will be used to keep the identities of the participants anonymous and confidential. The identities of the participants will not be revealed to the public and the study will not be published in any article other than in an academic article for the purpose

of this research study. Only the researcher will have access to the data including possible future researchers who might want to use the data. However, these researchers will not be able to identify the participants due to the coding system and these researchers will also sign confidentiality forms.

**HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?**

The completed questionnaires will be kept within a locked cabinet (to which only the researcher has access) for a period of five years. All digital documents will be password protected. After five years the physical questionnaires will be destroyed by shredding them. The researcher will make use of a coding system to ensure the anonymity of the participants.

**WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

No financial rewards will be received for participation in this study. Participants will however learn more about research and the research process. This study might be time consuming due to the number of questionnaires involved in the study. Participants might identify from the questionnaires that they struggle with psychological well-being, but the researcher will ensure that these participants are referred for the appropriate interventions.

**HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?**

If you would like to be informed of the final research findings, you are welcome to contact Dr. Jordaan at 051-4012890 or [jordaanj1@ufs.ac.za](mailto:jordaanj1@ufs.ac.za). If you have any concerns or questions you are welcome to contact Dr. Jordaan.

**Thank you for taking time to read this information sheet and for participating in this study.**

### CONSENT TO PARTICIPATE IN THIS STUDY

I, \_\_\_\_\_ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable). I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the *insert specific data collection method*.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: \_\_\_\_\_

Signature of Participant: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name(s) of Researcher(s): \_\_\_\_\_

Signature of Researcher: \_\_\_\_\_ Date: \_\_\_\_\_



**APPENDIX C:**  
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:	

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:	

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

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

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

**THANK YOU FOR YOUR PARTICIPATION IN THIS QUESTIONNAIRE – PLEASE PAGE TO THE  
NEXT QUESTIONNAIRE**

## APPENDIX D:

### RYFF'S SCALES OF PSYCHOLOGICAL WELL-BEING

#### Psychological Well-Being

Please indicate your degree of agreement (using a score ranging from 1-6) to the following sentences.

No	Statement	Strongly disagree			Strongly agree		
		1	2	3	4	5	6
1.	I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people	1	2	3	4	5	6
2.	In general, I feel I am in charge of the situation in which I live	1	2	3	4	5	6
3.	I am not interested in activities that will expand my horizons	1	2	3	4	5	6
4.	Most people see me as loving and affectionate	1	2	3	4	5	6
5.	I live life one day at a time and don't really think about the future	1	2	3	4	5	6
6.	When I look at the story of my life, I am pleased with how things have turned out	1	2	3	4	5	6
7.	My decisions are not usually influenced by what everyone else is doing	1	2	3	4	5	6
8.	The demands of everyday life often get me down	1	2	3	4	5	6
9.	I think it is important to have new experiences that challenge how you think about yourself and the world	1	2	3	4	5	6
10.	Maintaining close relationships has been difficult and frustrating for me	1	2	3	4	5	6
11.	I have a sense of direction and purpose in life	1	2	3	4	5	6
12.	In general, I feel confident and positive about myself	1	2	3	4	5	6

<b>13.</b>	I tend to worry about what other people think of me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>14.</b>	I do not fit very well with the people and the community around me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>15.</b>	When I think about it, I haven't really improved much as a person over the years	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>16.</b>	I often feel lonely because I have few close friends with whom to share my concerns	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>17.</b>	My daily activities often seem trivial and unimportant to me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>18.</b>	I feel like many of the people I know have gotten more out of life than I have	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>19.</b>	I tend to be influenced by people with strong opinions	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>20.</b>	I am quite good at managing the many responsibilities of my daily life	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>21.</b>	I have the sense that I have developed a lot as a person over time	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>22.</b>	I enjoy personal and mutual conversations with family members or friends	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>23.</b>	I don't have a good sense of what it is I'm trying to accomplish in life	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>24.</b>	I like most aspects of my personality	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>25.</b>	I have confidence in my opinions, even if they are contrary to the general consensus	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>26.</b>	I often feel overwhelmed by my responsibilities	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>27.</b>	I do not enjoy being in new situations that require me to change my old familiar ways of doing things	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>28.</b>	People would describe me as a giving person, willing to share my time with others	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

<b>29.</b>	I enjoy making plans for the future and working to make them a reality	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>30.</b>	In many ways, I feel disappointed about my achievements in life	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>31.</b>	It's difficult for me to voice my own opinions on controversial matters	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>32.</b>	I have difficulty arranging my life in a way that is satisfying to me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>33.</b>	For me, life has been a continuous process of learning, changing, and growth	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>34.</b>	I have not experienced many warm and trusting relationships with others	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>35.</b>	Some people wander aimlessly through life, but I am not one of them	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>36.</b>	My attitude about myself is probably not as positive as most people feel about themselves	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>37.</b>	I judge myself by what I think is important, not by the values of what others think is important	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>38.</b>	I have been able to build a home and a lifestyle for myself that is much to my liking	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>39.</b>	I gave up trying to make big improvements or changes in my life a long time ago	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>40.</b>	I know that I can trust my friends, and they know they can trust me	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>41.</b>	I sometimes feel as if I've done all there is to do in life	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>42.</b>	When I compare myself to friends and acquaintances, it makes me feel good about who I am	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

## APPENDIX E:

### THE SCHUTTE EMOTIONAL INTELLIGENCE QUESTIONNAIRE (SEIS)

#### Emotional Intelligence

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

<b>16.</b>	I present myself in a way that makes a good impression on others.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>17.</b>	When I am in a positive mood, solving problems is easy for me.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>18.</b>	By looking at their facial expressions, I recognize the emotions people are experiencing.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>19.</b>	I know why my emotions change.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>20.</b>	When I am in a positive mood, I am able to come up with new ideas.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>21.</b>	I have control over my emotions.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>22.</b>	I easily recognise my emotions as I experience them.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>23.</b>	I motivate myself by imagining a good outcome to tasks I take on.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>24.</b>	I compliment others when they have done something well.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>25.</b>	I am aware of the non-verbal messages other people send.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>26.</b>	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.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>27.</b>	When I feel a change in emotions, I tend to come up with new ideas.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>28.</b>	When I am faced with a challenge, I give up because I believe I will fail.*	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>29.</b>	I know what other people are feeling just by looking at them.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>30.</b>	I help other people feel better when they are down.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>31.</b>	I use good moods to help myself keep trying in the face of obstacles.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>32.</b>	I can tell how people are feeling by listening to the tone of their voice.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

<b>33.</b>	It is difficult for me to understand why people feel the way they do.*	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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## APPENDIX F:

### THE STUDENT ADAPTION TO COLLEGE QUESTIONNAIRE (SACQ)

#### Adjustment to college

The 55 statements describe college experiences. Read each one and decide how well it applies to you at the present time. Please mark only one response for each statement.

No	Statement	Does not apply to me at all					Applies very closely to me				
		1	2	3	4	5	6	7	8	9	
1.	I feel that I fit in well as part of the college environment.	1	2	3	4	5	6	7	8	9	
2.	I haven't been able to control my emotions very well lately.	1	2	3	4	5	6	7	8	9	
3.	I have been keeping up to date on my academic work.	1	2	3	4	5	6	7	8	9	
4.	I am finding academic work at college difficult.	1	2	3	4	5	6	7	8	9	
5.	I am meeting as many people and making as many friends as I would like at college.	1	2	3	4	5	6	7	8	9	
6.	I feel I am very different from other students at college in ways that I don't like.	1	2	3	4	5	6	7	8	9	
7.	I know why I am in college and what I want out of it.	1	2	3	4	5	6	7	8	9	
8.	I have felt tired much of the time lately.	1	2	3	4	5	6	7	8	9	
9.	I am very involved with social activities in college.	1	2	3	4	5	6	7	8	9	
10.	Lately, I have been feeling blue and moody a lot.	1	2	3	4	5	6	7	8	9	
11.	I am adjusting well to college.	1	2	3	4	5	6	7	8	9	
12.	I'm not working as hard as I should at my coursework.	1	2	3	4	5	6	7	8	9	
13.	I am satisfied with the level at which I am performing academically.	1	2	3	4	5	6	7	8	9	

14.	Lately I have been giving a lot of thought to transferring to another college.	1	2	3	4	5	6	7	8	9
15.	I have had informal, personal contact with college professors.	1	2	3	4	5	6	7	8	9
16.	I am having difficulty feeling at ease with other people at college.	1	2	3	4	5	6	7	8	9
17.	I am pleased now about my decision to go to college.	1	2	3	4	5	6	7	8	9
18.	I have been having lots of headaches lately.	1	2	3	4	5	6	7	8	9
19.	I am pleased now about my decision to attend this college in particular.	1	2	3	4	5	6	7	8	9
20.	I am having a lot of trouble getting started on homework assignments.	1	2	3	4	5	6	7	8	9
21.	I am satisfied with the extent to which I am participating in social activities at college.	1	2	3	4	5	6	7	8	9
22.	I'm not really smart enough for the academic work I am expected to be doing right now.	1	2	3	4	5	6	7	8	9
23.	My academic goals and purposes are well defined.	1	2	3	4	5	6	7	8	9
24.	I worry a lot about my college expenses.	1	2	3	4	5	6	7	8	9
25.	Getting a college degree is important to me.	1	2	3	4	5	6	7	8	9
26.	I have been feeling tense or nervous lately.	1	2	3	4	5	6	7	8	9
27.	My appetite has been good lately.	1	2	3	4	5	6	7	8	9
28.	I wish I were at another college or university.	1	2	3	4	5	6	7	8	9
29.	I am satisfied with the extracurricular activities available at college.	1	2	3	4	5	6	7	8	9
30.	Recently I have had trouble concentrating when I try to study.	1	2	3	4	5	6	7	8	9
31.	I feel I have enough social skills to get along well in the college setting.	1	2	3	4	5	6	7	8	9

32.	I'm not doing well enough academically for the amount of work I put in.	1	2	3	4	5	6	7	8	9
33.	I am attending classes regularly.	1	2	3	4	5	6	7	8	9
34.	I've put on (or lost) too much weight recently.	1	2	3	4	5	6	7	8	9
35.	I have several close social ties at college.	1	2	3	4	5	6	7	8	9
36.	I haven't been sleeping very well.	1	2	3	4	5	6	7	8	9
37.	I am enjoying my academic work at college.	1	2	3	4	5	6	7	8	9
38.	I have been getting angry easily lately.	1	2	3	4	5	6	7	8	9
39.	I feel I have good control over my life situation at college.	1	2	3	4	5	6	7	8	9
40.	I really haven't had much motivation for studying.	1	2	3	4	5	6	7	8	9
41.	I have been feeling in good health lately.	1	2	3	4	5	6	7	8	9
42.	Sometimes my thinking gets muddled up too easily.	1	2	3	4	5	6	7	8	9
43.	I have some good friends of acquaintances at college with whom I can talk about any problems I may have.	1	2	3	4	5	6	7	8	9
44.	Most of the things I am interested in are not related to any of my coursework at college.	1	2	3	4	5	6	7	8	9
45.	I am quite satisfied with my social life at college.	1	2	3	4	5	6	7	8	9
46.	I have been feeling lonely a lot at college lately.	1	2	3	4	5	6	7	8	9
47.	I am quite satisfied with my academic situation at college.	1	2	3	4	5	6	7	8	9
48.	I haven't been very efficient in the use of study time lately.	1	2	3	4	5	6	7	8	9
49.	I feel confident that I will be able to deal in a satisfactory manner with future challengers here at college.	1	2	3	4	5	6	7	8	9
50.	I have given a lot of thought lately to whether I should ask for help from the Psychological/Counseling Services Centre or from a psychotherapist outside of college.	1	2	3	4	5	6	7	8	9
51.	Being on my own, taking responsibility for myself has not been easy.	1	2	3	4	5	6	7	8	9
52.	Lately, I have been having doubts regarding the value of a college education.	1	2	3	4	5	6	7	8	9

<b>53.</b>	Lately, I have been giving a lot of thought to dropping out of college altogether and for good.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>54.</b>	I find myself giving considerable thought to taking time off from college and finishing later.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>55.</b>	I am experiencing a lot of difficulty coping with the stresses imposed upon me in college.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>

## APPENDIX G:

### THE MEDIA AND TECHNOLOGY USAGE AND ATTITUDES SCALE (MTUAS)

This scale includes 44 items which comprise 11 subscales: Smartphone Usage (9 items), General Social Media Usage (9 items), Internet Searching (4 items), E-Mailing (4 items), Media Sharing (4 items), Text Messaging (4 items), Video Gaming (3 items), Online Friendships (2 items), Facebook Friendships (2 items), Phone Calling (2 items) and TV Viewing (2 items)

10--point frequency scale for items 1–40 (with scoring in parentheses):

- Never (1)
- Once a month (2)
- Several Times a Month (3)
- Once a week (4)
- Several times a week (5)
- Once a day (6)
- Several times a day (7)
- Once an hour (8)
- Several times an hour (9)
- All the time (10)

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

1. (E-mailing subscale) Send, receive and read e-mails (not including spam or junk mail).
2. (E-mailing subscale) Check your personal e-mail.
3. (E-mailing subscale) Check your work or school e-mail.

4. (E-mailing subscale) Send or receive files via e-mail.

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

5. (Text messaging subscale) Send and receive text messages on a mobile phone.

6. (Phone Calling subscale) Make and receive mobile phone calls.

7. (Text messaging subscale) Check for text messages on a mobile phone.

8. (Phone calling subscale) Check for voice calls on a mobile phone.

9. (Smartphone usage subscale) Read e-mail on a mobile phone.

10. (Smartphone usage subscale) Get directions or use GPS on a mobile phone.

11. (Smartphone usage subscale) Browse the web on a mobile phone.

12. (Smartphone usage subscale) Listen to music on a mobile phone.

13. (Smartphone usage subscale) Take pictures using a mobile phone.

14. (Smartphone usage subscale) Check the news on a mobile phone.

15. (Smartphone usage subscale) Record video on a mobile phone.

16. (Smartphone usage subscale) Use apps (for any purpose) on a mobile phone.

17. (Smartphone usage subscale) Search for information with a mobile phone.

18. (Text messaging subscale) Use your mobile phone during class or work time.

How often do you do each of the following activities?

19. (TV viewing subscale) Watch TV shows, movies, etc. on a TV set.

20. (TV viewing subscale) Watch video clips on a TV set.

21. (Media sharing subscale) Watch TV shows, movies, etc. on a computer

22. (Media sharing subscale) Watch video clips on a computer.

23. (Media sharing subscale) Download media files from other people on a computer.

24. (Media sharing subscale) Share your own media files on a computer.

25. (Internet searching subscale) Search the Internet for news on any device.
26. (Internet searching subscale) Search the Internet for information on any device.
27. (Internet Searching Subscale) Search the Internet for videos on any device.
28. (Internet Searching subscale) Search the Internet for images or photos on any device.
29. (Video Gaming subscale) Play Games on a computer, video game console or smartphone  
BY YOURSELF.
30. (Video Gaming Subscale) Play Games on a computer, video game console or smartphone  
WITH OTHER PEOPLE IN THE SAME ROOM.
31. (Video gaming subscale) Play 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. How often do you do each of the following activities on social

Networking sites such as Facebook?

32. (General social media usage subscale) Check your Facebook page or other social networks.
33. (General social media usage subscale) Check your Facebook page from your smartphone.
34. (General social media usage subscale) Check Facebook at work or school.
35. (General social media usage subscale) Post status updates.
36. (General social media usage subscale) Post photos.
37. (General social media usage subscale) Browse profiles and photos.
38. (General social media usage subscale) Read postings.
39. (General social media usage subscale) Comment on postings, status updates, photos, etc.

40. (General social media usage subscale) Click “Like” to a posting, photo, etc.

Please answer the following questions about your Facebook and other online friends. NOTE:

In items 41 and 42, the words “social media” (or any specific social media site) may be substituted for Facebook.

9-point scale for items 37–40 (with scoring in parentheses):

- 0 (1)
- 1–50 (2)
- 51–100 (3)
- 101–175 (4)
- 176–250 (5)
- 251–375 (6)
- 376–500 (7)
- 501–750 (8)
- 751 or More (9)

41. (Facebook friendships subscale) How many friends do you have on Facebook?

42. (Facebook friendships subscale) How many of your Facebook friends do you know in person?

43. (Online friendships subscale) How many people have you met online that you have never met in person?

44. (Online friendships subscale) How many people do you regularly interact with online that you have never met in person?

## Attitudes subscales

These subscales include 16 items, which comprise four subscales: Positive Attitudes Toward Technology (6 items), Anxiety About Being Without Technology or Dependence on Technology (3 items), Negative Attitudes Toward Technology (3 items) and Preference for Task Switching (4items)

5-point Likert scale for all items (with scoring in parentheses):

Strongly agree (5), Agree (4), Neither agree nor disagree (3), Disagree (2), Strongly disagree (1).

1. (Positive attitudes) I feel it is important to be able to find any information whenever I want online.
2. (Positive attitudes) I feel it is important to be able to access the Internet any time I want.
3. (Positive attitudes) I think It is important to keep up with the latest trends in technology.
4. (Anxiety/dependence) I get anxious when I don't have my cell phone.
5. (Anxiety/dependence) I get anxious when I don't have the Internet available to me.
6. (Anxiety/dependence) I am dependent on my technology.
7. (Positive attitudes) Technology will provide solutions to many of our problems.
8. (Positive attitudes) With technology, anything is possible.
9. (Positive attitudes) I feel that I get more accomplished because of technology.
10. (Negative attitudes) New technology makes people waste too much time.
11. (Negative attitudes) New technology makes life more complicated.
12. (Negative attitudes) New technology makes people more isolated.

13. (Preference for task switching) I prefer to work on several projects in a day rather than completing one project and then switching to another.
14. (Preference for task switching) When doing a number of assignments, I like to switch back and forth between them rather than do one at a time.
15. (Preference for task switching) I like to finish one task completely before focusing on anything else.
16. (Preference for task switching) When I have a task to complete, I like to break it up by switching to other tasks intermittently.

\*Scoring for item 15 is reversed with strongly agree = 1 and strongly disagree =5.

**Appendix H:**  
Plagiarism Report

# Emma Nel - TurnItIn report

*by Emma Nel*

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**Submission date:** 29-Jun-2021 10:45AM (UTC+0200)

**Submission ID:** 1613337563

**File name:** Turn\_it\_in\_final.docx (86.57K)

**Word count:** 19081

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## Emma Nel - TurnItIn report

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