

**THE RELATIONSHIP BETWEEN SENSE OF COHERENCE, TIME-TO-DEGREE AND  
ACADEMIC ACHIEVEMENT IN THE NON-TRADITIONAL STUDENT AT A  
DISTANCE LEARNING INSTITUTION**

**by**

**Louise Ley**

**Submitted in part fulfilment of the requirements for the degree of**

**MASTER OF COMMERCE**

**in the subject**

**INDUSTRIAL AND ORGANISATIONAL PSYCHOLOGY**

**at the**

**UNIVERSITY OF SOUTH AFRICA**

**SUPERVISOR: PROF. SANET VAN DER WESTHUIZEN**

**CO-SUPERVISOR: PROF. ANTONI BARNARD**

**NOVEMBER 2013**

## **FOR THE ATTENTION OF THE READER**

### **SCOPE OF THE DISSERTATION**

For this Masters' dissertation of limited scope (50% of the total Masters' degree) the Department of Industrial and Organisational Psychology prescribes an article format. This format involves four chapters - an introductory and literature chapter, followed by a research article (presented as chapter 3) and ending with a conclusion / limitations / recommendations chapter. For this dissertation, the department recommends a boundary of approximately 60 to 80 pages.

### **TECHNICAL AND REFERECE STYLE**

In this dissertation I have chosen the publication guidelines of the South African Journal of Industrial Psychology to structure my dissertation and article. Therefore, the APA referencing style was followed in terms of the technical editing and referencing.

## **DECLARATION**

I, Louise Ley, student number 34954775, declare that 'the relationship between sense of coherence, academic achievement and time-to-degree in the non-traditional student at a distance learning institution' is my own work, and that all the sources that I have used or have quoted from have been indicated and acknowledged by means of complete references.



---

SIGNATURE

---

6 March 2014

DATE

## **ACKNOWLEDGEMENTS**

This dissertation is a milestone in my life and career. Though my name appears on this manuscript it would not have been possible without being part of a remarkable group of professionals within the Department of Industrial and Organisational Psychology at the University of South Africa.

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

Prof Sanet van der Westhuizen and Prof Antoni Barnard are two of the best teachers I have had in my life. The high standards they set encouraged me to meet those standards. I am grateful to them for commenting on my views, helping me to understand and thereby enriching my ideas. Your patience and support were invaluable especially during some of the rough times.

First of all I acknowledge all the hard work I put into this paper, the dedication and commitment it demanded. The many endless hours of sitting alone in front of a computer, conceptualising and writing to bring about this work. My drive to achieve the goal I set myself would have been very difficult, had it not been for the support of Santino Tonelli, my partner in life, who accompanies me on this journey. Pushing and encouraging me in equal measure.

Being personally attached to the topic of this dissertation, as a non-traditional student, I had to face the many challenges that will be discussed in the chapters to follow. That being said, I have amazing children, Aniece and Shani, who understood and supported me through the many years of study to reach this point. **HERE IS TO US!**

To my parents Barry and Sheila van der Merwe who provided a stable childhood and good foundation on which to build my life.

And last, but definitely not least, to God who has put all these people around me and others no less important to enable me to lead a fulfilled life, with great support and love from all those around me while He takes care of the big picture of my life.

## TABLE OF CONTENTS

	PAGE
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	v
SUMMARY	vi

## CHAPTER 1 SCIENTIFIC ORIENTATION TO THE RESEARCH

1.1	BACKGROUND AND MOTIVATION	1
1.2	PROBLEM STATEMENT	4
1.3	AIMS	6
1.4	RESEARCH HYPOTHESES	6
1.5	PARADIGM PERSPECTIVE	7
1.6	RESEARCH DESIGN	8
1.6.1	Research approach	8
1.6.2	Research method	9
1.6.3	Sample	9
1.6.4	Measuring instruments	9
1.6.4.1	<i>Sense of Coherence</i>	9
1.6.4.2	<i>Time-to-degree</i>	10
1.6.4.3	<i>Academic achievement</i>	10
1.6.5	Research procedure	10
1.6.6	Statistical analysis	11
1.7	CHAPTER LAYOUT	11
1.8	CHAPTER SUMMARY	11

## CHAPTER 2 LITERATURE REVIEW

2.1	THE NON-TRADITIONAL STUDENT	12
2.1.1	A contextual background	13

2.1.2	Distinguishing features of the non-traditional student	14
2.2	ACADEMIC SUCCESS	16
2.2.1	Approaches and measures of academic performance	16
2.2.1.1	<i>Time-to-degree</i>	16
2.2.1.2	<i>Grade point average</i>	17
2.3	SALUTOGENESIS	19
2.4	SENSE OF COHERENCE	20
2.4.1	Dimensions of Sense of Coherence	20
2.4.2	Development of Sense of Coherence	22
2.4.3	Sense of Coherence and the challenge of studying	23
2.5	CHAPTER SUMMARY	24

## **CHAPTER 3**

### **ARTICLE**

## **CHAPTER 4**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

4.1	CONCLUSIONS	47
4.2	LIMITATIONS	51
4.3	RECOMMENDATIONS	52
4.4	CHAPTER SUMMARY	54

## **REFERENCES**

## **LIST OF TABLES**

Table 1	Characteristics of Participants in the sample	34
Table 2	Descriptive statistics and alpha coefficients of the OLQ-13	36
Table 3	Descriptive statistics of time-to-degree and academic achievement	37
Table 4	Descriptive statistics of the four groups of time-to-degree	37
Table 5	Analysis of variance of time-to-degree and SOC	37

## **SUMMARY**

Stress in non-traditional students may be associated with psychological stress which could adversely affect academic and job performance. Sense of Coherence a resource enabling people to manage tension in a healthy promoting could positively affect performance. The objective of this study was to investigate how SOC, time-to-degree and academic achievement influence each other in non-traditional students. A cross-sectional survey design was used in this descriptive study. The convenience sample consisted of three hundred and sixty six non-traditional students at a distance learning institution in South Africa.

Secondary data for this research came from students who had completed the short form OLQ-13 as part of the official study material for a research module at a particular distance education institution. No theoretical relationship could be found between SOC, time-to-degree and academic achievement. The empirical relationship proved that SOC could not be used as a predictor of time-to-degree and academic achievement of the particular sample under investigation.

## **KEY TERMS**

Sense of coherence, salutogenesis, non-traditional student, time-to degree, academic achievement, grade point average, distance education institution, student, academic performance, work performance

## **CHAPTER 1. SCIENTIFIC ORIENTATION TO THE RESEARCH**

South Africa ranks as an efficiency-driven economy in the World Economic Forum which is committed to improving the state of the world (Schwab, 2012) therefore South Africa does not operate in isolation to the rest of the world. In competing in the global economy it is part of the policy makers who are struggling to find ways to cooperate and manage the current economic challenges while preparing the South African economy to perform well in an increasingly difficult and unpredictable landscape (Schwab, 2012). Quality higher education and training are particularly crucial for economies which want to move up the value chain beyond simple production processes and products. Today's globalising economy requires countries to nurture pools of well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the economy (Schwab, 2012).

Higher education is one of the pillars of global competitiveness. Schwab (2012) states that the pillar of higher education measures secondary and tertiary enrolment rates as well as the quality of education as evaluated by the business community. A major concern facing educational systems worldwide is students' academic success (Mentz, 2012). Poor educational outcomes and pass rates are disconcerting in general, but of particular concern are the non-traditional students who are entering tertiary education in increasing numbers as the labour market searches for high performers to compete in an increasingly competitive global economy. In gaining an understanding of the characteristics of non-traditional students, this dissertation focuses on the relationship between sense of coherence (SOC), time-to-degree and academic achievement of the non-traditional student at an open distance learning institution.

Chapter 1 contains the background and motivation, the problem statement, the aims, paradigm perspective, research design and method as well as the chapter layout.

### **1.1 BACKGROUND AND MOTIVATION**

The National Executive Committee of the African National Congress (ANC) on the occasion of the centenary celebration of the ANC, January 8<sup>th</sup> 2012, released a statement identifying major challenges in the quality of education. It stated that poor educational outcomes were one of the key challenges to eliminating poverty and reducing inequality in South Africa (National Planning

Committee, 2012). Obtaining a higher education is associated with higher earnings, improved overall quality of life and standard of living (Mentz, 2012). Internationally, statistical data shows that poor educational outcomes increase the risk of unemployment, low earnings and poverty (White, 2013). From the above-mentioned studies by Mentz (2012) and White (2013) it is clear that poor educational outcomes are a major concern for education policy makers, businesses and employers across the world, as obtaining a higher education is directly associated with an improved quality of life (Letseka, Cosser, Breier & Visser, 2010). Poor educational outcomes perpetuate a cycle of increased unemployment risk, low earnings and a society that is trapped in a web of poverty.

There are numerous factors that contribute to poor educational outcomes. Bean and Eaton (2000), Letseka et al. (2010), Roberts (2012) and Tinto (1993) all identify variables such as institutional experiences, social integration, psychological factors, teachers, substandard schooling and financial constraints as possible factors influencing educational outcomes. The changing landscape of higher education is another possible variable that could explain poor educational outcomes. Zubernis, McCoy and Snyder (2011) argue that the changing landscape of higher education is a natural offshoot of our increasingly mobile and diverse world where students often do not have the luxury of focusing one hundred percent of their time and energy on studies, instead dividing their time between school, work and/or parenting. Distance education institutions, which use information technology to reach a broader clientele, cater to this niche in the market. Students sometimes see distance education institutions as a way of enabling them to meet degree requirements despite other claims on their time, as long as they complete the work assigned in the time provided by the distance education institution (Zubernis et al., 2011).

As mentioned above, education is associated with higher earnings and the alleviation of poverty. Ultimately education is an investment where the costs of education balance against future benefits of having a better educated and employable workforce (Marshall, Zenga & Giordano, 2013). Student progression at universities is a concern, particularly due to the costs of prolonged studies as well as stress to the student. Marshall et al. (2013) therefore assert that it is in the best interest of society and the student to shorten the time taken to obtain a degree. Lam (1999) defines time-to-degree as the number of semesters taken to graduation. This could be a significant factor for students attending distance education institutions who cannot spend all of their time on studies (Carnoy, Rabling, Castano-Munoz, Duart Montoliu & Sancho-Vinuesa, 2011).

Carnoy et al. (2011) contend that students attending distance education universities are different from traditional students, suggesting that this university clientele operate under very different constraints from their counterparts in face-to-face universities. Carnoy et al. (2011) define the “non-traditional” nature of these students in distance education institutions as students belonging to the “lifelong learning” category. These students tend to be older, and have a job and family while seeking the flexibility of distance education. Non-traditional students directly associate obtaining a degree with career advancement, according to Chartrand (1992) but they are less likely to obtain a degree than their traditional counterparts. Factors that lead to this are not always clear. Chartrand (1992) suggests that this may be in part a result of the way people conceive student adjustment and persistence. Aina and Casalone (2011) point out that working reduces the amount of time devoted to studies, hampering the learning process. In another study, Katsikas (2012) suggests that these students could be at a disadvantage as they experience high levels of stress and tiredness, which are likely to affect performance.

Performance terminology is not uniform across institutions (Mentz, 2012); performance encompasses a broad range of outcomes that appear from a number of perspectives which include systemic, institutional and individual perspectives. When evaluating performance of universities, a meta-analysis by Robbins et al. (2004) indicates that two outcomes are commonly used; graduation rates as measured by cumulative grade point average (GPA) and persistence. When observing student success more specifically, GPA which is defined as the cumulative measurement of subject matter achievement is often a measure of academic performance (Robbins et al., 2004). Machingambi (2011) suggests that students need sufficient resources and support to ensure an increase in academic performance. Student support is important especially in the case of non-traditional students who cannot devote all their time to studies, which may hamper the learning process. Added to time constraints, students also experience high levels of stress (Aina & Casalone, 2011; Katsikas, 2012). There is a need for universities to develop a deeper understanding of who their students are, according to Machingambi (2011). Understanding how students cope with the stress of studying part-time may aid in the development of students to their full potential, which may surpass predetermined levels and improve on poor academic performance (Machingambi, 2011).

Individuals cope with stress in differing ways (Sardu et al., 2012). Under the influence of stress some may succumb in a pathogenic direction while others may overcome and move towards health. Antonovsky (1987) has proposed the concept “salutogenesis”, meaning the origins of health. The

salutogenic model explains why people in stressful situations stay healthy (Sardu et al., 2012). Lindstrom and Eriksson (2005) suggest that salutogenesis is a dynamic and flexible life approach with the persistent focus on ability and capacity to manage. To explain the movement towards health, Antonovsky (1996) identified general resistance resources, which Wissing et al. (2010) define as psychosocial, biological and material factors that help people to perceive their lives as consistent, structured and understandable, an orientation to life conceptualised as “sense of coherence” (SOC). Naaldenberg, Tobi, van den Esker and Vaandrager (2011) refer to SOC as the ability to use available resources in a health-promoting way, and central to the field of salutogenesis.

Antonovsky (1987) defines SOC as a global orientation that expresses the extent to which a person has a persuasive, enduring, dynamic feeling of confidence: the stimuli deriving from one's internal and external environment in the course of living are structured, predictable and explicable. Resources are available to meet the demands of internal and external stimuli which are deemed worthwhile challenges. Moreover, the challenges are perceived to be worthy of engagement and investment. SOC can affect stress appraisal (Muller & Rothman, 2009). SOC further affects the coping strategies an individual may choose as well as the probability that they will exploit potential resources. For individuals with a weak SOC, balancing resources may become overwhelming, especially in strenuous life situations such as full-time work while also studying (Volanen, Suominen, Lahelma, Koskenvuo & Silventoinen, 2007). Individuals with a strong SOC tend to accept setbacks as normal (Muller & Rothman, 2009).

Academically speaking, non-traditional students adapt to higher education just as well as traditional students, according to Fernandez (2012). The non-traditional students may even display a higher motivation to succeed and have a higher GPA than traditional college students (Fernandez, 2012). A possible reason for this could be the fact that they directly associate obtaining a degree with career advancement (Chartrand, 1992). Salutogenesis may also provide a possible answer to why some students, despite stressful situations and part-time studies, stay healthy, while others succumb to the stressful situation and move towards pathogenesis (Sardu et al., 2012).

## **1.2 PROBLEM STATEMENT**

Traditional and contemporary studies such as those of Bean and Eaton, (2000), Letseka et al. (2010), Roberts (2012) and Tinto (1993) have identified various factors relating to academic

achievement. Dewitz et al. (2009) however argue that none of these models are helpful when attempting to aid students, and there need to be better ways of being able to positively influence students. SOC can affect stress appraisal (Muller & Rothman, 2009). Understanding how it relates to time-to-degree and academic achievement may create a better understanding of students' academic success. Students who perceive their problems as comprehensible and manageable are more likely to achieve academically (Grayson, 2007). Not much research has investigated SOC as a potential factor influencing student performance in traditional and contemporary studies (Grayson, 2007). Dewitz et al. (2009) maintain that although Tinto's model is the most widely cited model concerning student retention, it does not account for individual variables but instead provides a global perspective on student retention. Tinto (1975) related student attrition to social integration. Tinto (1988) later acknowledged that this is not the only factor to take into consideration. Chartrand (1992) has suggested the need to accurately understand the characteristics and requirements of the non-traditional student. Her investigation indicates that career-related academic variables, perceived study skills and support from family and friends are important indicators of psychological adjustment, with institutional commitment and the absence of psychological distress being important predictors of the intention to continue with studies. Her findings differ from research on traditional students where social integration and academic adjustment are important predictors of student persistence.

Bean and Eaton (2000) have criticised Tinto's model of longitudinal departure for focusing only on academic and social integration. They maintain that students are psychological beings whose coping behaviours such as SOC need to be included in the model. Sagy (2000) in her study on factors influencing early dropout added SOC as a background factor affecting persistence. The impact of SOC was small but significant in understanding factors related to coping in an academic institution. Grayson (2007) included SOC into traditional models as a possible contributor to academic achievement and found that it provided a better fit for international and commuter students. While the effect of SOC on academic achievement was small it was larger than the effects of some institutional experiences. Grayson (2007) concluded that SOC could be used to explain academic achievement.

Understanding how students cope in academic institutions may add to the success of academic programmes as non-completion results in financial penalties for universities who need to meet retention and completion benchmarks (Dewart & Rowan, 2008). In light of the limited research on SOC, time-to-degree and academic achievement, the present research attempts to explore whether

SOC is a predictor of success. If a relationship can be found between SOC, time-to-degree and academic achievement, it could inform student development and support on an institutional and individual level, adding to the body of knowledge that is relevant to coping behaviours amongst non-traditional students in a distance learning institution.

### **1.3 AIMS**

The following general and specific aims have been formulated.

The general aim of this research is to empirically determine whether there is a relationship between SOC, time-to-degree and academic achievement experienced by the non-traditional student at a distance learning institution.

The specific aims relating to the literature review are to:

- Conceptualise the construct of SOC within the field of positive psychology.
- Conceptualise the characteristics of the non-traditional student from a theoretical perspective.
- Conceptualise time-to-degree and academic achievement.
- Conceptualise the theoretical relationship between SOC, time-to-degree and academic achievement for non-traditional students.

The specific aims relating to the empirical study are to:

- Investigate the empirical relationship between SOC, time-to-degree and academic achievement in the non-traditional student.
- Determine if SOC can be used as a predictor of time-to-degree and academic achievement for the non-traditional student.

### **1.4 RESEARCH HYPOTHESES**

In light of the stated research objectives, the following hypotheses are formulated for this study:

H<sub>1</sub> There is a statistically significant relationship between SOC, time-to-degree and academic achievement in the non-traditional student.

H<sub>2</sub> SOC can be used as a predictor of time-to-degree and academic achievement of the non-traditional student.

## **1.5 PARADIGM PERSPECTIVE**

Terre Blanche, Durrheim, and Painter (2006) point out that paradigms are central to research design as they impact on the nature of research and the manner in which the research question will be studied.

The hypothesis of this research within the disciplinary perspective of Industrial and Organisational Psychology, conceptualised within the salutogenic paradigm and investigated within the positivist paradigm is discussed below.

In achieving the final aim of this research, the findings and conclusions will be within the disciplinary perspective of Industrial and Organisational Psychology defined as the scientific study of the workplace according to the United States' Society for Industrial and Organisational Psychology (SIOP, 2013). Career Psychology constitutes a sub-field within Industrial and Organisational Psychology which is a specialised area of psychology studying normal behaviour in the work context (Koopman, 2012). Career Psychology is concerned with career and organisational choice as well as career issues that affect individuals in the course of their careers (Bergh & Theron, 2000). The psychological contract between the organisation and employees is its core focus. Career Psychology is about optimising the respective expectations of the organisation and its employees. What both are prepared to give to ensure the integrity of the psychological contract (Coetze & Schreuder, 2010). Regarding the non-traditional student, Coetze and Roythorne-Jacobs (2012) state that an individual's career does not only include occupation but also pre- and post-vocational concerns reflecting a person's self-development through an integration of work and other life roles. As careers are becoming more cyclical, re-skilling is often something which can lead to career growth and to an individual becoming essential to an organisation (Coetze & Roythorne-Jacobs, 2012). The labour market demands this increase in skill which has resulted in an increase in non-traditional student numbers, according to Gregory and Kurisky (2011) in the changing landscape of higher education (Zubernis et al., 2011).

The paradigm of salutogenesis applied in this research conceptualises the construct of SOC. Salutogenesis aims to understand why people stay healthy in the face of adversity (Antonovsky, 1996). It is a dynamic and flexible approach with the persistent focus on the ability and capacity to manage (Lindstrom & Eriksson, 2005). Within the salutogenic paradigm Antonovsky (1987) suggested looking at data differently by considering those who succeed, trying to find out why they

are doing well, and asking what factors relate to success, not only factors that relate to problems. Non-traditional students experience time constraints and high levels of stress, according to Aina and Casalone (2011) and Katsikas (2011). To improve poor academic performance, understanding how some students cope with the stress of studying part-time may aid in the development of students to their full potential (Machingambi, 2011).

The empirical paradigm for this study will be the positivist paradigm. The ontological dimension of the positivist paradigm requires an accurate description of the laws and mechanisms operating in social life. The epistemological dimension requires objective observation and measurement, which relies on control. (Terre Blanche et al., 2006). The researcher will therefore remain objective and detached. Methodologically, the present study will follow a quantitative approach (Terre Blanche et al., 2006). Relational research will enable an investigation into the relationship between SOC, time-to-degree and academic achievement, while descriptive research will describe the sample. The positivist paradigm will therefore satisfy the empirical aims of this research.

## **1.6 RESEARCH DESIGN**

The research approach, method, participants, measuring instruments, procedure and statistical analysis are as follows:

### **1.6.1 Research approach**

The research will follow a non-experimental quantitative design (Terre Blanche et al., 2006). A cross-sectional survey design is used which refers to “a criterion group design in which the different criterion groups are typically comprised of different age groups which are examined in terms of one or more variables at approximately the same time” (Huysamen, 1994, p. 98). Such research is interested in observing the relationships between the variables. The current study is a snapshot of the population in order to make deductions about relationships to possibly support further research (Lavrakas, 2012).

### **1.6.2 Research method**

The research method consists of two phases: a literature review and an empirical study.

## Phase 1: Literature review

Once the conceptualising of the constructs of SOC, time-to-degree, academic achievement and the non-traditional student is done, the integration of the theoretical findings follows in order to make assumptions about the theoretical relationship between them. Information was obtained from publications such as journals, textbooks, theses, dissertations, and reports from research institutions. The internet was a secondary source to research general topics associated with the non-traditional student, time-to-degree, academic achievement and SOC.

## Phase 2: Empirical study

This phase consists of a quantitative empirical study, and encompasses the gathering of cross-sectional data, analyses with SPSS and interpretation of the results. The empirical part of the research is encapsulated in the sections that follow.

### **1.6.3 Sample**

The target population consisted of non-traditional students, meaning those who had at least one of the following characteristics: being over the age of twenty five, delayed enrolment, working full-time, being a non-resident student and being a student from one of the race groups previously excluded from higher education (Gilardi & Guglielmetti, 2011; Smit, 2012). The sample included the characteristics of the non-traditional student studying in an open distance learning tertiary institution. The student population consisted of all honours students registered for a course in research methodology at a distance education institution between 2009 and 2011. A convenience sample was taken from a population of 899 students. Only 366 of these students' academic scores and number of years registered were available from the student information system.

### **1.6.4 Measuring instruments**

#### *1.6.4.1 Sense of Coherence*

The students completed the short form 13-item Orientation to Life Questionnaire (OLQ-13) (Antonovsky, 1987). Four items measuring manageability (e.g. "Has it ever happened that people you counted on disappointed you?") four items measuring meaningfulness (e.g. "How often do you have a feeling that there is little meaning in the things you do in your daily life?") and five items measuring comprehensibility (e.g. "Do you have the feeling that you are in an unfamiliar situation

and do not know what to do?”). The participant answers each item on a seven-point Likert scale, with extremes that range from 1 = never to 7 = always.

In a meta-analysis of 127 studies, Eriksson and Lindstrom (2005) found the face validity of the OLQ-13 to be acceptable. The OLQ-13 has been used in many countries and among many different populations (Naaldenberg et al., 2011). Antonovsky (1993) reported alpha coefficients of the OLQ-13 varying between 0.74 and 0.91. Studies in South Africa indicate alpha coefficient variance in the range of 0.84 to 0.93 (Coetze & Rothmann, 1999).

#### *1.6.4.2 Time-to-degree*

The concept time-to-degree was measured as elapsed time between registration and achieving the degree, or the total length of time starting from the beginning of the postgraduate study to completion of the study, which is in line with the approach followed by Lam (1999).

#### *1.6.4.3 Academic Achievement*

The average final score achieved at the end of the degree for the postgraduate studies for which students enrolled was chosen as the criterion score for academic achievement.

### **1.6.5 Research procedure**

The secondary data for this research came from students who had registered for a research methodology course for the period 2009-2011. The short form OLQ-13 was part of the official study material of the students, together with instructions on how to complete the questionnaire. The first requirement was ethical clearance to use this data for research from the Ethics Committee of the College of Economic and Management Sciences of the open distance learning institution at which the students had registered. The committee granted ethical clearance as students had provided written consent to use their individual results for training and research purposes. In providing their consent the students knew that their results were confidential and only for research purposes as part of the bigger groups results. The student information system of the particular distance education institution was accessed. Grade points of each module the student had completed together with the first year and last year of registration were obtained. Mean scores of both academic achievement and number of years registered for the honours courses were calculated. The data set was then sent to a statistician for analysis.

### **1.6.6 Statistical analysis**

Descriptive statistics (frequencies, mean, minimum and maximum values) were used to describe the sample and variables. Cronbach alpha coefficients are used to determine the reliability of the OLQ13. Relational statistics looked at the relationships between the variables of SOC and academic achievement. Spearman's rho correlation coefficient was used in this regard. ANOVA was used to determine if there is a significant difference in students' SOC depending on their time-to-degree score.

### **1.7 CHAPTER LAYOUT**

The chapters of this M1 Dissertation follow those of Master's Degree Option 1, and the chapters are structured as follows:

Chapter 1: Scientific orientation to the research

Chapter 2: Literature review

Chapter 3: Research article

Chapter 4: Conclusions, limitations and recommendations

### **1.8 CHAPTER SUMMARY**

Chapter 1 discussed the scientific orientation to the research. This contained the background and motivation, the research problem, the aims, the paradigm perspective, the research design and method. The chapter concluded with the chapter layout of the dissertation.

## **CHAPTER 2. LITERATURE REVIEW**

As more employees ascribe to the notion of life-long learning, the full-time employed student, or the studying employee – a non-traditional student who needs to be managed and looked after in the workplace – is joining the traditional full-time student in increasing numbers. Organisations invest in aiding their employees to study, and would like to see an effective return on this investment. The study of aspects that help the non-traditional student to cope and achieve success is imperative for any strategic intention to manage organisational talent. Well-being and performance are similar to salutogenic functioning in particular, and may contribute to the non-traditional student's academic success.

In light of the above, the objective of this study was to explore the potential relationship between academic success and the salutogenic functioning of the non-traditional student. In working towards achieving this objective, it is important to understand the unique context and characteristics of the non-traditional student as well as to explicate the value of salutogenic functioning as an underlying aspect of well-being. This chapter aims to present an integrative background to aspects of academic success and the salutogenic coping of the non-traditional student. It presents first a distinctive description of the non-traditional student and the challenges he or she faces, followed by a discussion of possible criteria explicating academic success, as well as a contextual conceptualisation of the construct of SOC within the fields of positive psychology and salutogenesis.

### **2.1 THE NON-TRADITIONAL STUDENT**

The literature often refers to studying employees or graduate students as “non-traditional students”. Gregory and Kurisky (2011) contend that the labour market’s demand for increased skill together with employees’ pursuit of career advancement and life-long learning has resulted in an increase in non-traditional student numbers as well as a change in the landscape of higher education. Zubernis et al. (2011) maintain that the change in higher education is a natural offshoot of our increasingly mobile and diverse world. This section will discuss contextual aspects that have given rise to increasing non-traditional student numbers and a consequent stronger focus on their functioning, as well as their distinctive features and the challenges they face.

### **2.1.1. A contextual background**

McCune and Entwistle (2011) note that rapid changes in society and employment are resulting in new demands facing universities. The non-traditional setting of the education system is, however, not a recent phenomenon (Wasike & Munene, 2012). Students have learned away from formal settings for many years, studying primarily on their own initiative in apprenticeships and on-the-job training. The sponsoring of correspondence courses followed a “Literacy and Scientific Programme” initiated in New York in 1878, according to a historical background study by Wasike and Munene (2012). This event led to several generations of correspondence courses throughout the world (Wasike & Munene, 2012). In the 1960s, educational officials of the United Kingdom met to determine ways to open education more widely to adults. A fully autonomous Open University was then established which various other countries throughout the world emulated (Wasike & Munene, 2012). From 1870 to 1970 the field known as correspondence study or home study led to the development of distance education as another form of the educational system (Wasike & Munene, 2012). Africa and specifically South Africa have kept pace with providing alternatives to traditional higher education. Wasike and Munene (2012) observe that the University of South Africa has trained more than 80 000 adult basic education practitioners since the 1980s.

The 21<sup>st</sup> century technology-driven knowledge economy mobilises many employees to seek a tertiary education for career advancement, personal development, job requirements and transformation initiatives (Coetzee & Potgieter, 2012). In a longitudinal study, the United States of America department of education, National Centre of Education Statistics (NCES, 2003) sought reasons why studying employees enrolled. The study found that 85% of adult employees who studied reported gaining skills to advance their current job or future career as important considerations for post-secondary education. Personal enrichment and completing a degree were additional reasons for pursuing degree certification. An interesting finding was that only 36% of employees who studied had enrolled to obtain additional education as a requirement of their job (NCES, 2003). In South Africa an additional reason for the above in respect of the increase in non-traditional student numbers could be the transformation of the South African education system, where inequalities of the past dispensation are being addressed by a more inclusive education system (Machingambi, 2011).

In today's world of work, employment remains uncertain even after obtaining a tertiary education. Positions that people could obtain a decade ago with a high school or college certificate now require

a minimum of a bachelor's degree (Madison, 2013). With careers becoming more cyclical, Coetzee and Roythorne-Jacobs (2012) note that re-skilling is a requirement for potential career growth. In the pursuit of career advancement, which is directly associated with obtaining a degree, together with the need for re-skilling, many employees look to distance learning institutions as they seek to advance their careers (Chartrand, 1992). Distance learning institutions that use technology to reach a broader clientele enable employees to acquire degree certification in spite of employment constraint of seldom having the luxury to focus all of their time and energy on studies, but instead having to divide their time between schools, work and/or parenting (Zubernis et al., 2011).

### **2.1.2 Distinguishing features of the non-traditional student**

The NCES (2003) profile of working adult undergraduates has characterised two groups. Two thirds of the working adult group considered employment as their main activity while a third characterised themselves as students who worked. In sum, those who characterised their primary activity as employment were older, worked more, attended school less, and were likely to have family responsibilities, in contrast to their peers whose primary activity was being a student while working. Vincent Tinto, a noted theorist in the field of higher education particularly concerning student retention Tinto (1988), suggested, that mature or non-traditional students and those staying at home while attending college, do not necessarily make the same disaffiliations as traditional-aged students who go away to college. Non-traditional students also do not take full advantage of the new communities to which they belong because of the level at which they integrate into college and university (Tinto, 1988). The very different issues non-traditional students contend with may therefore connect with their integration into an education institution and the labour market's demand for increased skill (Gregory & Kurisky, 2011).

In a review of recent literature, the most defining characteristic of the non-traditional student appears to be age, which is usually over the age of twenty five (Calcagno & Crosta, 2007; Diaz-Chaviano, n.d.; Fernandez, 2012; Gilardi & Guglielmetti, 2011; Gregory & Kurisky, 2011; Holley & Oliver, 2010; Smit, 2012; Swan, Ed, Bland & Lemke, 2009; Wasike & Munene, 2012). However, this is not the only defining characteristic. Calcagno and Crosta (2007) concur with the NCES (2003) profile that older students are more likely to be working, married with children and to be commuter students. Non-traditional students have characteristics that do not normally appear in entrants to higher education (Tlupova, 2008). Typically, non-traditional students will come from lower socio-economic backgrounds, be first-generation undergraduates, come from ethnic

minorities, possess non-standard qualifications, and be students with disabilities, according to Tlupova (2008) and Holley and Oliver (2010).

Gilardi and Guglielmetti (2011) mention another approach to defining the non-traditional student. They emphasise the risk factors for non-completion. The US Department of Education (NCES, 2003) identifies non-traditional students as having at least one of the following characteristics: enrolment is delayed (post-secondary education is not entered into the same calendar year that the student finishes high school); works full time; attends part time; is financially independent; is a single parent; has dependents other than a spouse; does not have a high school diploma, and is a non-resident student. In some places, non-traditional students are known as “minority students” or “underprepared” (Smit, 2012). There is no universal definition of an at-risk student as defined in the United States which includes the aforementioned characteristics, in addition to the student being lesbian, gay or disabled (Mentz, 2012). In the United Kingdom these students are defined as non-traditional students and are similar to disadvantaged students in South Africa (Smit, 2012). There is no formal definition of an at-risk student in South Africa, according to Mentz (2012). However, a large proportion of students currently enrolled in higher education are first-generation, of low socio-economic status, commute to campus, come from race groups previously excluded from higher education, and are under-prepared (Mentz, 2012). Students’ unpreparedness for tertiary education may be a factor resulting in poor academic performance (Smit, 2012). Non-traditional students’ subject choice is another aspect to consider and may depend on: their socio-economic status, inability to finance certain programmes, the quality of their secondary education, the range of subjects open to them when choosing their school subjects, and the extent of career guidance open to them (Letseka et al., 2010). The sub-standard schooling system of South Africa and a lack of financial resources add to students being ill prepared for tertiary education (Letseka et al., 2010).

However, Fernandez (2012) notes that academically speaking; non-traditional students adapt to higher education just as well as traditional students. Non-traditional students may also display a higher motivation to succeed, and have a higher GPA than traditional college students. Nevertheless, they are less likely to obtain a degree than their traditional counterparts (Chartrand, 1992; NCES, 2003). The benefits of non-traditional students earning a graduate degree could be higher earnings and a higher degree of job satisfaction (Wyland, Lester, Mone & Winkel, 2013). However, non-traditional students face many challenges such as decreasing employment opportunities, decreasing job security, fast-changing technology, and an increasing personal responsibility to keep up with changes in employment, up-skilling and lifelong learning (Coetzee &

Potgieter, 2012; Lent, 2013). Madison (2013) thus ponders the question of what price some students pay in pursuit of future success through tertiary education, and the risk of their potential non-completion requires continued attention (Gilardi & Guglielmetti, 2011).

## **2.2 ACADEMIC SUCCESS**

The benefits of earning a graduate degree in the South African context may be one factor which has led to an increase in the numbers of non-traditional students. A more inclusive education system is addressing the past dispensation, but Machingambi (2011) cautions that the massification of higher education and the phenomenal increase in the number of students participating in higher education are inadequate to bring about the ideal of equality and a competitive labour force. A higher education system that achieves only access and rates of participation remains largely ineffective unless, success is measured by graduation rates and the quality of graduate students completing tertiary education (Machingambi, 2011).

Numerous factors contribute to academic performance. Dewitz et al. (2009); note that Tinto's model is the most widely cited and criticised model of student retention. Tinto (1975) himself alluded to the complexity of defining and describing characteristics that result in poor academic performance. The terminology used for describing academic success both nationally and internationally is not uniform across institutions (Mentz, 2012). This is due to the fact that student success encompasses a broad range of outcomes that one can view from a number of perspectives, both systemic, institutional and individual (Mentz, 2012). GPA is the most commonly used measure of academic performance (Becker, Glascoff & Felts, 2010; Kosor, 2009; Robbins et al., 2004). GPA, together with time-to-degree, are measures that the present study has explored in order to understand academic success, as it is contingent on both academic performance and completion of studies (Machingambi, 2011).

### **2.2.1 Approaches and measures of academic performance**

#### *2.2.1.1 Time-to-degree*

The literature defines the amount of time students have on hand to complete their studies as “time-to-degree” and measures it the number of semesters taken to graduation (Lam, 1999).

Tinto (1975) formulated a theory to explain the processes of interaction between the individual and the institution that lead to different individuals giving up their studies. He indicated these as being: background characteristics (social status, high school achievement, community, sex, ability and race

etc.) and expectational and motivational attributes (such as those measuring career and educational expectations). Tinto (1988) later conceded that student attrition was not the result of social integration alone. Bean and Eaton (2000) argued that students are psychological beings and that collective issues such as sociology would play a secondary role. Roberts (2012) has found that while institutional experiences are contextually relevant, they are not always the most significant factor in non-completion. Interpersonal factors can be dominant elements in the withdrawal or persistence process. Factors such as lack of confidence, low self-efficacy, perfectionism, weak coping strategies, learning styles and study skills, can prevail over positive academic, social and professional experiences, leading to withdrawal from educational institutions.

Wyland et al. (2013) have taken another approach and investigated what they define as the physical elements of school involvement, such as the time students invest in obtaining a tertiary education while working. These authors find that school involvement may take away time and energy from work, while work involvement can also take away time from studies.

Many non-traditional students turn to distance education institutions where they may complete the work assigned in the time provided by the institution (Zubernis et al., 2011). The flexibility of studying at distance education institutions enables non-traditional students to divide their time between school work and parenting. Completing studies may, however, be a dubious outcome for the non-traditional student (Aina & Casalone, 2011; Wyland et al., 2013). Diaz-Chaviano (n.d.) points out that low completion rates are noticeable, especially if compared to the growth in enrolment of the non-traditional student.

The limited amount of time that non-traditional students have on hand for studies does not always lead to poor academic performance. Wyland et al. (2013) comment that it is unlikely that individuals who pursue advanced degrees will reduce the time and effort they expend on their studies, because they often need strong academic performance to take advantage of tuition reimbursement benefits. One can conclude that choices of withdrawal or persistence usually involve personal decision making (Roberts, 2012).

#### *2.2.1.2 Grade point average (GPA)*

Past academic performance as measured by GPA, which is defined as “the cumulative measurement of subject matter achievement” significantly predicts future academic achievement (Robbins et al., 2004). Even though conceptual confusion exists when defining student success and its determinants,

there has been a great deal of research into cognitive factors, and because of their high predictive validity, are the most commonly used measure of academic performance (Robbins et al., 2004).

Despite the impressive predictive validity of GPA with regard to academic achievement, research is now turning to non-cognitive factors in a bid to reduce adverse impact in the admissions process as students, faculties, universities and society have a vested interest in successful students (Credé & Kuncel, 2008). In cognitive psychology, there is a wide range of cognitive constructs which include self-efficacy beliefs, outcome expectancies, achievement and performance goals, not only standardised academic achievement, aptitude tests, and school-based academic performance (GPA) (Robbins et al., 2004).

Chartrand (1992) found that institutional commitment and the absence of psychological distress were important predictors of the intention to continue with college. These findings differ from research on traditional students, where social integration and academic adjustment are important predictors of student persistence. Taylor and House (2010) examined student motivations, identity, and different concerns of adult students in different stages of higher education. It was found that non-traditional students from lower socio-economic backgrounds were concerned with the financial implication of furthering their studies and relearning how to learn. Bean and Eaton (2000) found that intra-personal factors such as confidence, application of coping strategies, determination and perseverance, were evident in the continuation of all persistors. Becker et al., (2010) found that those individuals, who found their work inspiring, important, enjoyable and meaningful, had high GPAs. Students who were obtaining higher grades were also less likely to withdraw from further studies (Kosor, 2009).

South Africa has achieved a great deal in the area of equality of access into higher institutions, but sufficient resources and support need to be provided for students to ensure that student performance meets or surpasses predetermined levels (Machingambi, 2011). There is a need for universities to develop a deeper understanding of who students are, to be able to develop their full potential. Machingambi (2011) argues that a new perspective is necessary on students as individuals with their own identity and potential to thrive. Institutions need to provide students with conditions conducive to success. Students are not only black boxes of input/output. There need to be mediating mechanisms that translate into what “an effective student” is (Astin, 1999). Understanding the psychological characteristics of students who may be vulnerable to stress is important because stress in university students can adversely affect academic performance (Austin, Saklofske &

Mastoras, 2010). Students may experience mental and physical health problems which can lead to a substantial risk of poor academic performance. Increasing academic stress will then perpetuate a cycle of stress, maladaptive coping and compromised health.

### **2.3 SALUTOGENESIS**

Human life is inherently stressful (Wiesmann & Hannich, 2012). Antonovsky (1987) coined the word salutogenesis – the origins of health. The focus lies on those phenomena that are effective in combating a wide variety of stressors (Antonovsky, 1987, p. 12). Salutogenic theory starts to unravel the mystery of why some individuals cope better with stressors than others. Wiesmann and Hannich (2012) suggest that the salutogenic approach represents a promising theoretical approach for mental health promotion. Individuals as living systems are self-creating, self-organising and self-preserving, but these authors point out that at the same time the person must face heterostasis, where there is a need to overcome negative forces in everyday life. Sardu et al. (2012) believe that when individuals are coping with the negative forces of ordinary life or under the influence of stress, they will either succumb in the pathogenic direction on the ease/disease continuum, or overcome towards health, and move in a salutogenic direction. Creating positive health or salutogenesis is an approach which provides a particular perspective on the way health is viewed (Billings & Hashem, 2009). The salutogenic approach centers on the use of internal and/or external resources that maintain a healthy status. Salutogenesis attempts to explain why some people fall ill under stressful conditions and others do not. Lindstrom and Eriksson (2005) suggest that salutogenesis is a dynamic and flexible orientation to life, with the persistent focus on ability and the capacity to manage. The theory of salutogenesis recognises an individual's ability to manage a number of positive or negative factors in an everyday context, as being good for individual health. Managing such positive and negative factors in everyday life is, however, not enough. Sardu et al. (2012) point out that it is the ability to use resources such as finance, knowledge, expertise, self-esteem, culture, healthy lifestyles and social support for well-being that may be more important than the resources themselves. Lindstrom and Eriksson (2005) agree that the key factor is not what is available, but it is an individual's ability to use and re-use the available resources for an intended purpose, that can explain the movement in a salutogenic direction.

Antonovsky (1996) identified Generalised Resistance Resources (GRRs) as possible indicators of movement in a salutogenic direction. Volanen, Lahelma, Silventoinen, & Suominen (2004) note that to fully understand SOC and its development, knowledge of GRRs is necessary. Lindstrom and

Eriksson (2005) add that GRRs provide a person with a set of meaningful and coherent life experiences owing to the resources at the person's disposal. Wissing et al. (2010) refer to GRRs as psychosocial, biological and material factors that help people to perceive their lives as consistent, structured and understandable. Typical internal and external GRRs are: intelligence, commitment, ego identity, constructive coping behaviour, social support, money, cultural stability, religion, and view of life (Wissing et al., 2010). Antonovsky (1996) proposed that the movement towards a salutogenic direction was a property of a person and a situation, and that logic indicated which would facilitate successful coping with the inherent stressors of human existence. Antonovsky (1996) wondered what united these GRRs, and suggested that GRRs fostered repeated life experiences which helped individuals see the world as making sense cognitively, emotionally and instrumentally. He put together these strands of thought leading to the concept of SOC.

## 2.4 SENSE OF COHERENCE

Antonovsky (1996, p. 15) defines SOC as follows: "When confronted with a stressor a person with a strong SOC would wish; to be motivated; to cope (meaningfulness); believe that the challenge is understood (comprehensibility) and believe that resources to cope are available (manageability)". Sardu et al. (2012) define SOC as a way of seeing life with the ability to successfully manage the many stressors that one encounters through the course of it. SOC is a resource that enables people to manage tension, reflect on internal and external resources, identify and mobilise these resources to promote effective problem solving, and thereby resolve tension in a health-promoting way. SOC is a global orientation which is not culture-bound, according to Antonovsky (1987). What matters is that an individual has had life experiences which may lead to a strong SOC (Antonovsky, 1996).

### 2.4.1 Dimensions of SOC

GRR's which are characteristics of a person, group or environment are necessary for the full development of SOC (Volanen et al., 2004). GRR's facilitate effective tension management, contributing to life experiences, which are characterised by consistency, participation in the shaping of outcomes and to under load and overload balance (Volanen et al., 2004). These life experiences are key to the areas of comprehensibility, manageability and meaningfulness in which SOC is born (Volanen et al., 2004). Antonovsky (1996) stated that the particular combination of the concepts of the cognitive (comprehensible), behavioural (manageable) and motivational (meaningful) aspects of SOC were unique. In a chaotic situation an individual will be able to clearly see the effects of

decisions in specific situations and how a situation will affect decision making; in other words, there would be a certain amount of comprehensibility or understanding (Varga et al., 2012). However, it is this same clarity or understanding that can bring about the realisation that there may not be sufficient resources available to address the situation or stressor. Can the person manage the situation or stressor (manageability)? The individual will then ponder the question whether there is any meaning in the situation and how much value it holds for them to address (meaningfulness). Should the individual attach meaning to the situation, they will search for resources to address the stressor and increase comprehensibility and manageability. Antonovsky (1996) refers to this as "a strong SOC". Alternatively, an individual cannot find meaning, they will not seek resources and the situation or stressor will seem incomprehensible and unmanageable, which Antonovsky (1996) refers to as "a low SOC", The third element of SOC, meaningfulness, will permit an individual to decide either positively or negatively whether there is any value in addressing a particular situation or stressor (Varga et al., 2012).

In Antonovsky's (1996) definition of SOC, the motivational construct of meaningfulness is the extent to which people feel that life makes sense. Meaningfulness therefore arises from the challenges encountered from stimuli seem to be worth addressing (Barnard, Peters & Muller, 2010; Varga et al., 2012). According to Antonovsky (1987, p. 18) "Life makes emotional sense", even more so if "disastrous experiences are willingly accepted as challenges to search for sense and to overcome them in dignity". Varga et al. (2012) allude to meaningfulness as a decision-making concept. As individuals make decisions both cognitively and emotionally, they link meaningfulness to the emotional meaning of the word and not only the cognitive meaning. Meaningfulness is the most important concept of SOC because it motivates people to make sense of their environment, empowering them to cope successfully (Korotkov, 1998). It may be argued that students who find meaning in the pursuit of tertiary education because of long-term career goals may decide to commit a substantial amount of their time and finances to a particular educational institution, as Tinto (1975) suggested.

Comprehensibility is the extent to which individuals perceive confronting environmental stimuli as understandable, although Varga et al. (2012) argue that understanding the environment can also result in the person realising that they may not have sufficient resources. Having access or not to resources, however, is not important. Lindstrom and Erikson (2005) point out that the key factor is the ability to use and re-use resources for the intended purpose that will lead to a positive outcome. McCune and Entwistle (2011) suggest that manageability is the extent to which individuals will feel

that the resources they have at hand are adequate to meet the demands posed by external stressors and challenges.

#### **2.4.2 Development of SOC**

SOC develops throughout a person's life from infancy and childhood through to adulthood (Antonovsky, 1987). The child encounters comprehensibility through day-to-day consistencies. Meaningfulness will depend on the quality of the consistency encountered, and manageability comes from their experience of load balance, such as for example being physically ready for toilet training. Adolescence is a period in life full of turbulence, confusion and self-doubt, but Antonovsky (1987) states that it is still possible to build a strong SOC even in the light of this. Entering adulthood, childhood experiences become stronger and weaker in both directions. Early adulthood is where an individual's location on the continuum becomes more or less fixed (Antonovsky, 1987).

A number of studies have indicated a relationship between individual differences and SOC. Antonovsky (1987) described SOC as being a global orientation not influenced by cultural differences. Eriksson and Lindstrom (2006) in their review of the literature on SOC found some contradictory evidence concerning SOC being a global orientation, because studies of Finnish municipal workers and technical designers failed to support SOC as a salutogenic resource. This has led to a warning not to regard SOC as a global orientation within a causal context. More research is needed to define changes in the SOC measure and what factors in the external environment bring about these changes. Volanen et al. (2004) were particularly interested in the interaction of GRR and gender. Their study indicated that males and females differed in relation to education attainment, but the higher the education level, the higher SOC appeared to be. Individuals with a higher education level displayed a higher SOC. Volanen et al. (2004) mentioned that earlier studies on SOC had found that social class as well as age were related to SOC. Wainwright et al. (2006) investigated whether there was an association between SOC and socio-economic status independent of social class and education, and found that a strong SOC occurred together with a healthier behaviour choice independent of social class and education. This independence from social class and education led them to believe that SOC may aid in the design of future health promotion interventions. Middle-aged white-collar employees and entrepreneurs scored highest on SOC, while blue-collar workers and farmers had a higher than average risk for a poor SOC, and education level was independent of SOC (Volanen et al., 2004). Life control and life satisfaction related to strong

social integration, a high socio-economic position, and a low level of perceived strain at work and active leisure time (Volanen et al., 2004).

Liukkonen et al. (2010) suggest that SOC strengthens throughout life, though stressful life events may weaken SOC irrespective of its previous level. Hochwälter and Forsell (2010) contradict Liukkonen et al. (2010) as their study on female nurses in Sweden found no empirical evidence that SOC was affected by negative life events irrespective of their level of SOC. Antonovsky (1987) did hypothesise that SOC may not only protect individuals from negative life events, but may create mechanisms by which individuals with a high SOC may be able to avoid some stressors and cope with others, so that they do not transform into what seem to be negative life events (Hochwälter & Forsell, 2010). The results of this study indicated that people who experienced a negative life event had a lower SOC than those who did not experience any negative life events.

More importantly, SOC seems to be more stable in individuals over the age of 30 than in younger adults. Grayson (2007) agrees with Antonovsky (1987) that high SOC becomes fixed during the period of early adulthood, which is a time that corresponds with post-secondary education. Conversely Ying and Akutsu (1997) refer to generalised resistance deficits such as life stressors which may weaken SOC. This is possible for those with low a SOC according to Antonovsky (1987) but Grayson (2007) maintains that differentiations do not always appear between individuals with low and high SOC, and notes that some studies indicate that SOC may actually increase with age. Later studies show that SOC may not be as stable as Antonovsky assumed (Eriksson & Lindstrom, 2006; Liukkonen et al., 2010).

#### **2.4.3 Sense of Coherence and the challenge of studying**

The stability of SOC is an individual's perception of seeing the world as balanced and not chaotic (Antonovsky, 1987), where an individual's experiences are consistent (comprehensible), there is a good load balance (manageability) and the individual participates in shaping the outcome (meaningful). Antonovsky (1987) further suggests that a person with a strong SOC will select a particular coping strategy which seems to be appropriate to deal with a stressor. A person with a strong SOC is more likely to assess a particular situation as challenging, and thus maintain good health even under strenuous conditions that a person with a low SOC may perceive as dangerous and uncontrollable (Volanen et al., 2004). An individual with a strong SOC tends to experience environmental stimuli in a manner sufficiently structured to enable him to anticipate events and

have resources required to meet those demands (Rothman & Muller, 2009). Research has shown that SOC is positively related to job satisfaction, work engagement, competence, life satisfaction, general well-being and active coping with stressors (Rothman & Muller, 2009).

A person's self-development appears in an integration of work and other life roles which include pre- and post-vocational concerns (Coetzee & Roythorne-Jacobs, 2012). The challenges that non-traditional students face in studying do not appear in the isolation of studying alone. How successfully people manage the many stressors that they encounter in the course of life (Sardu et al. 2012) can affect career decision-making (Austin & Cilliers, 2011) which may or may not take place in times of change in the working environment, and may result in different career trajectories (Liukkonen et al., 2010). Cohen, Ben-Zur and Rosenfeld (2008) suggest that SOC is a personal resource that facilitates effective coping with negative life events and life stressors, shaping an individual's reactions to stressful stimuli. Individuals with a strong SOC are more likely to have better coping resources and express more confidence in their ability to cope than their counterparts with a low SOC. Cohen et al. (2008) state that individuals with a lower SOC will most likely use more avoidant and emotion-focused coping strategies. These authors investigated the relationship between coping strategies, anxiety and performance during examinations, and found that SOC was a factor that may motivate people to use effective coping strategies during stressful encounters such as examinations.

Grayson (2007) found that the impact of SOC on academic achievement was small, particularly for undergraduate resident students. This was a conclusion based on the small impact found on institutional experiences as well. Grayson (2007) added that all else being equal, one could expect that students with a high SOC would have less difficulty in coping with academic difficulties than those with a weak SOC, as they would most likely take appropriate steps to deal with stressors. Because of these findings, Grayson (2007) noted that there would be equal warrant for including SOC in future studies, particularly for commuter students. Van der Westhuizen, de Beer and Bekwa (2011) contradicted Grayson (2007) and found that SOC was not significantly related to academic achievement in postgraduate students at a distance education institution.

## **2.5 CHAPTER SUMMARY**

This chapter presented an integrative background to aspects of academic success and the salutogenic coping of the non-traditional student. A distinctive description of the non-traditional

student and the challenges they face was presented, followed by a discussion on possible criteria explaining academic success as well as a contextual conceptualisation of the construct of SOC in the fields of positive psychology and salutogenesis.

While the literature review was inconclusive as to the relationship between SOC and academic achievement, there was evidence that working and excessive stress negatively affect academic success (Wyland et al., 2011). Work, as the primary domain of non-traditional students, results in the non-traditional student not having the same amount of time to study as the traditional student (Wyland et al., 2011). The time it takes the non-traditional student to complete their degree may affect their academic success as the costs of study and stress increase (Zubernis et al., 2011).

In conclusion, the non-traditional student faces many challenges that their counterpart, the traditional student, may not face. Stress increases for the non-traditional student by having to balance many life roles such as work, family, and being a studying employee. SOC as a stress appraisal concept within the paradigm of salutogenesis, which considers individuals' capacity to manage stressors in a flexible manner, may enhance the individual's physical, mental and social well-being (Becker et al., 2010; Lindstrom & Eriksson, 2005).

Understanding the relationship between SOC and academic performance may lead to a better understanding of a student's potential to succeed or fail academically in a tertiary institution. Understanding the relationship between SOC, time-to-degree and academic achievement in the non-traditional student at a distance learning institution, may add to the body of knowledge of contemporary studies of effective student retention and talent management in educational organisations.

## **CHAPTER 3 ARTICLE**

### **SENSE OF COHERENCE, TIME-TO-DEGREE AND ACADEMIC ACHIEVEMENT IN THE NON-TRADITIONAL STUDENT**

**Author:** Louise Ley, Department of Industrial and Organisational Psychology, UNISA.  
[stn@telkomsa.net](mailto:stn@telkomsa.net), P.O. Box 54527 Nina Park, 0157, Tel: 0825745784

**Orientation:** As organisations invest in the lifelong learning of their employees expecting a return on investment, the increasing numbers of studying employees/non-traditional students need assisted management in the workplace. Aspects that help the non-traditional student cope and to achieve success are therefore essential to organisational talent management.

**Research purpose:** The purpose of the study was to investigate the relationship between SOC, time-to-degree and academic achievement in the non-traditional student at a distance learning institution.

#### **Motivation for the study:**

Research has found numerous factors relating to academic achievement, but very few models are helpful when attempting to aid or influence students positively in achieving success. There appears to be a paucity of information on how SOC may help a student to achieve success, particularly how SOC relates to time-to-degree and academic achievement.

**Research design:** A cross-sectional survey design was conducted, using honours students ( $N=366$ ) who had registered for a course in research methodology at a distance education institution between 2009 and 2011. Secondary data was analysed by means of descriptive and relational statistics.

**Main findings:** No statistically significant correlation could be found between SOC time-to-degree and academic achievement.

**Practical managerial implications:** While organisations invest in aiding their employees to study and expect an efficient return on investment, human resource practitioners and talent managers need to recognise the pressures of full time employed students, or non-traditional students, while maintaining jobs and academic performance as they manage their career development.

### **Contribution/value add:**

The findings add to the existing body of knowledge on coping strategies of employees and lifelong learning students. Understanding the unique characteristics of non-traditional students could help organisations improve business performance by addressing the entire employee lifecycle.

## **INTRODUCTION**

Human life is inherently stressful (Wiesmann & Hannich, 2012). People differ in their response and their ability to cope with stress. Antonovsky (1987) studied this phenomenon and coined the phrase “salutogenesis” meaning the origins of health, with the focus on how people effectively combat a wide variety of stressors. How people cope and manage the stressors in various life roles such as school, work, play and love, is key to the positive outcomes of challenges they may encounter during their lifetimes (Antonovsky, 1987).

One possible challenge could be for an employee to remain employable in the labour market. Coetzee and Roythorne-Jacobs (2012) suggest that reskilling will be necessary for career advancement, because positions that a decade ago required a high school or college certificate will require in today’s labour market a minimum of a bachelor’s degree (Madison, 2013). The need for a skilled workforce has caused many employees to connect obtaining a degree with career advancement (Chartrand, 1992; Gregory & Kurisky, 2011).

As more employees ascribe to the notion of lifelong learning, the traditional full time student is joined in increasing numbers by the full time studying employee (Machingambi, 2011). Employees need assisted management and care in the workplace as organisations expect an efficient return on investment in aiding their employees to study. On the other hand, employees expect career advancement from the achievement of a degree (Chartrand, 1992). These reciprocal expectations may lead to increased academic stress, which can perpetuate a cycle of stress, maladaptive coping and compromised health in both the work and study domain (Katsikas, 2012; Wyland, Lester, Mone

& Winkel, 2013). Both organisations and learning institutions therefore have a vested interest in assisting in the academic success of the studying employee.

The literature often refers to the studying employee as a “non-traditional student”. These students tend to be older, and to have a job and family while seeking the flexibility of distance education. One of the distinguishing factors between non-traditional and traditional students is that the former consider employment to be their primary activity (NCES, 2003). Non-traditional students may have to divide their time between schools, work and/or parenting, which may result in increased time constraints which, their traditional counterparts may not experience (Gregory & Kurisky, 2011).

Despite these challenges, there is an increase in the numbers of non-traditional students and a changing landscape for educational institutions. Zubernis McCoy and Snyder (2011) note that the changing landscape of education is a natural offshoot of our increasingly mobile and diverse world. A major concern facing educational systems worldwide is students’ academic success. Poor educational outcomes and pass rates are disconcerting, especially in light of non-traditional students entering tertiary education in increasing numbers to meet the demands of the knowledge economy. Machingambi (2011) points out that an over-supply of students as measured by rates of participation alone is insignificant if not matched by student success. Academic success may be a dubious outcome for many studying employees (Aina & Casalone, 2011; Garibaldi, Giavazzi, Ichino & Rettore, 2007). Work being the dominant domain in most adult lives reduces the amount of time that studying employees have at their disposal in pursuit of tertiary education (Wyland et al., 2013). However, the limited time that non-traditional students have to complete their studies does not always lead to poor academic performance (Wyland et al., 2013).

Student success may encompass a broad range of outcomes which include systemic, institutional and individual perspectives (Mentz, 2012). A number of studies have shown that factors such as institutional experiences, social integration, psychological factors, teachers, substandard schooling and financial constraints influence academic success (Bean & Eaton, 2000; Letseka, Cosser, Breier & Visser, 2010; Roberts, 2012; Tinto, 1993). Researchers evaluating performance of universities use graduation rates (Robbins et al., 2004). Grade point average (GPA) is the most commonly used measure of student success because extensive research has shown that past academic performance as measured by GPA predicts future performance (Robbins et al., 2004). In addition to the impressive predictive validity of GPA, research is turning to non-cognitive factors in a bid to increase the success of students (Credé & Kuncel, 2008).

A worrying trend in the world today is that many students enrolled in education programmes take too long to complete their studies (Garibaldi et al., 2007). The slow progression of students is a concern, as many students may be experiencing higher stress as they fail to graduate out of the system (Marshall, Zenga & Giordano, 2013). There is evidence to suggest that increasing academic stress perpetuates a cycle of stress, maladaptive coping and compromised health in both the work and study domain (Wyland et al., 2013). Machingambi (2011) suggests that students should get sufficient support and resources to increase academic performance. Understanding how students cope with stress while studying part time could aid in the development of students to their full potential. Sardu et al. (2012), note that individuals cope with stress in different ways. Sense of coherence (SOC) is a global orientation within the salutogenic paradigm which may aid in understanding how some students succeed in the face of challenges and others do not (Antonovsky, 1987). SOC is a resource that enables people to manage tension by reflecting on internal and external resources, thereby resolving problems in an effective way to ease the tension in a health-promoting way (Sardu et al., 2012). SOC as a stress appraisal concept may affect the coping strategies and resources that individuals will choose in strenuous life situations, such as obtaining a tertiary education (Muller & Rothman, 2009; Volanen, Suominen, Lahelma, Koskenvuo & Silventoinen, 2007).

### **The non-traditional student**

The most defining characteristic of a non-traditional student found in the literature is their age which is usually over the age of 25 years (Calcagno & Crosta, 2007; Diaz-Chaviano, n.d.; Fernandez, 2012; Gilardi & Guglielmetti, 2011; Gregory & Kurisky, 2011; Holley & Oliver, 2010; Smit, 2012; Swan, Ed, Bland & Lemke, 2009; Wasike & Munene, 2012). In the United Kingdom the common term for these students is “non-traditional students”. The United States of America defines them as “at risk” students as the likelihood of their completing studies is slim. In the South African context these “at risk” students may be similar to “disadvantaged students”.

The risk factors for non-completion may include one or more of the following: delayed enrolment (not attending a university directly after school completion), working full time, attending part time, financial independence, being a single parent, having dependents other than a spouse, not having a high school qualification, belonging to an ethnic minority, being a first-generation undergraduate non-resident student, being a student with disability, and being gay or lesbian (Calcagno & Crosta, 2007; Gilardi & Guglielmetti, 2011; Holley & Oliver, 2010; Mentz, 2012; Smit, 2012; Tlupova, 2008).

Zubernis et al., 2011) note that the landscape of education has changed. Transformation initiatives and the technology-driven knowledge economy have seen a rise in non-traditional student numbers as they pursue career advancement, personal development and skills as per job requirements (Coetzee & Potgieter, 2012). Distance learning institutions which use technology to reach a broader clientele are often what non-traditional students use as a means of acquiring an education (Zubernis et al., 2011). These institutions allow for flexibility and an increase in the amount of time a student may need to complete their qualifications.

### **Time-to-degree**

Time-to-degree is defined as the number of semesters taken toward graduation (Lam, 1999). Increasing numbers of non-traditional students entering higher education institutions leave higher education systems with a cohort of students who take too long to graduate (Machingambi, 2011). Increasing student numbers cause a systemic impasse and financial strain on institutions as they cannot account for the failure of students to graduate out of the system (Machingambi, 2011). Diaz-Chaviano (n.d.) observes that low completion rates are especially noticeable when compared to the growth and enrolment of non-traditional students. Excessive time-to-degree affects universities who are required to meet retention and completion benchmarks to avoid funding cuts (Dewart & Rowan, 2008).

Focusing specifically on individual differences of the non-traditional student, Chartrand (1992) includes career-related academic variables, perceived study skills and support from family and friends as important indicators of psychological adjustment, with institutional commitment and the absence of psychological distress important predictors of the intention to continue with studies. Roberts (2012) concurs with Letseka et al. ( 2010 ) whose research found that intra-personal factors (such as lack of confidence, low self-efficacy, perfectionism, weak coping strategies, learning styles and study skills) could prevail over positive academic, social and professional experiences, leading to withdrawal from educational institutions. Wyland et al., (2013) investigated the time that students invest in pursuit of a qualification, defining time as a physical element of university involvement. In their study they concluded that university involvement takes away time from work, which may lead to poor work performance. Conversely job involvement takes away time from university, which may lead to poor academic performance.

## **Academic achievement**

GPA, which is defined as the cumulative measurement of subject matter achievement is the most common measure of academic performance (Robbins et al., 2004). In addition, GPA as a measure of standardised academic achievement and school-based academic performance has impressive predictive validities which researchers have investigated extensively (Credé & Kuncel, 2008). This is however not the only measure of academic performance.

Traditional and contemporary research has identified numerous factors relating to academic achievement (Bean & Eaton, 2000; Letseka et al., 2010; Roberts, 2012; Tinto, 1993). Tinto (1975) related student attrition to students' social integration into academic institutions, which Dewitz et al. (2009) later argued was a global perspective on student attrition that did not account for individual differences.

Letseka et al. (2010) identify students' unpreparedness for tertiary education as a key factor of poor academic performance in South Africa. In particular, students' choice of subjects can be dependent on their socio-economic status, inability to finance certain programmes, quality of their secondary education, range of school subjects open for choice, and the extent of career guidance opportunities (Letseka et al., 2010). Examining student motivations, identity, and different concerns of adult students at different stages of higher education, Taylor and House (2010) find that non-traditional students from lower socioeconomic classes are concerned with the financial implication of furthering their studies and relearning how to learn. Decisions to persist or withdraw from tertiary education usually involve personal decision making (Austin & Cilliers, 2011). On the other hand, intra-personal factors (such as confidence, application of coping strategies, determination and perseverance) are evident in the continuation of all students who complete their education (Bean & Eaton, 2000).

## **Sense of coherence**

Antonovsky (1996) referred to the salutogenic model not as a theory which focuses on keeping people well, but rather as the study of people's strengths and weaknesses to promote health in human beings. A continuum model which viewed people at any given point in time somewhere along the "health/dis-ease continuum" (Antonovsky, 1996). He identified generalised resistance resources (GRRs) as possible indicators for movement towards a salutogenic direction. Lindstrom and Eriksson (2005) note that, GRRs would provide a person with a set of meaningful and coherent life experiences from the resources at the person's disposal. Antonovsky (1996) developed SOC

which explained what GRRs had in common and how they worked. Antonovsky (1996) then defined SOC as comprising three components: meaningfulness ,which referred to the value an individual would place on a particular resource – how motivated they would then be to cope; comprehensibility, referring to how well the challenge was understood by the individual; and manageability, which referred to the individual's belief that they had the necessary resources to cope. SOC is an individual's perception of seeing the world as balanced and not chaotic where an individual's experiences are consistent (comprehensible), there is a good load balance (manageable) and the individual participates in shaping the outcome (meaningful) according to Antonovsky (1996).

People's SOC develops as they age and stabilises over the age of thirty, becoming fixed during a time that corresponds with post-secondary education (Antonovsky, 1987; Grayson, 2007; Liukkonen et al., 2010).

The challenges that non-traditional students face cannot be viewed in isolation of studying alone. A person's self-development shows in many life roles. These include pre-vocational concerns, being a part-time student while working, and post-vocational concerns (Coetzee & Roythorne-Jacobs, 2012; Wyland et al., 2013). How well individuals manage the many stressors during the course of life may affect career decision making (Austin & Cilliers, 2011; Sardu et al., 2012).

Early research indicated that students who found meaning in the pursuit of tertiary education because of long-term career goals committed a substantial amount of their time and finances to a particular educational institution (Tinto, 1975). Current research by Wyland et al., (2013) indicates that time spent in other life roles may have to be limited for non-traditional students. It may be necessary to increase the amount of time to study because a strong academic performance may be necessary to take full advantage of tuition benefits. The meaning and effort that non-traditional students apply to their studies will then be in line with Antonovsky (1987) who suggested that a person with a strong SOC would select a particular coping strategy which was appropriate to deal with the particular stressor. A person with a strong SOC is more likely to assess a particular situation as challenging and thus maintain good health, even under strenuous conditions, than a person with a low SOC, who may perceive the same situation as dangerous and uncontrollable (Volanen, Lahelma, Silventoinen& Suominen, 2004). Sagy (2000) included SOC as a background factor affecting persistence in striving for a degree. While the research indicated a small impact, it was significant to understand factors related to coping in an academic institution. Research

conducted by Grayson (2007) found that the effect of SOC on academic achievement was small but it was larger than some effects of institutional experiences. Grayson (2007) concluded that including SOC in future studies would be warranted as one could expect that students with a high SOC would have less difficulty coping with academic challenges than students with a weak SOC.

In light of the above, the value of studying the relationship between SOC, time-to-degree and academic achievement, specifically in the non-traditional student context, is evident.

### **Research objectives**

The aim of the present study was to explore the relationship between SOC, time-to-degree and academic achievement and to determine whether SOC could predict time-to-degree and academic achievement of the non-traditional student. The authors formulated the following research hypotheses:

H1 There is a statistically significant relationship between SOC, time-to-degree and academic achievement of the non-traditional student.

H2 SOC can be used as a predictor of time-to-degree and academic achievement by the non-traditional student.

## **RESEARCH DESIGN**

### **Research approach**

A non-experimental cross-sectional survey design was used, in which different criterion groups, comprising of the number of years students took to complete their studies, were examined in terms of various variables at a specific point in time (ADA Research Committee, 2011; Huysamen, 1994). A secondary data analysis (SDA) was performed on the SOC results of a 13-item Orientation to Life scale (OLQ-13). The OLQ-13 was completed by non-traditional students as part of an honours research methodology course, at a distance education institution between 2009 and 2011. Students' academic scores and the number of years they were registered was accessed from the student system of the particular learning institution they had enrolled at.

### **Research method**

#### *Sample*

The target population consisted of non-traditional students, meaning those who had at least one of the following characteristics: being over the age of twenty five, delayed enrolment, working full time, being a non-resident student, and being a student from one of the race groups previously

excluded from higher education (Gilardi & Guglielmetti, 2011; Smit, 2012). The sample contained three of the above characteristics – mean age, working full time and being previously disadvantaged.

**TABLE 1:** Characteristics of the participants

Category	Frequency	Percentage
<b>Gender</b>		
<b>Female</b>	298	81.4
<b>Male</b>	64	17.5
<b>Age</b>		
<b>20-29</b>	3	0.8
<b>30-39</b>	222	60.7
<b>40-49</b>	100	27.3
<b>50-59</b>	28	7.7
<b>Employment status</b>		
<b>Work full-time</b>	260	71
<b>Work part-time</b>	41	11.2
<b>Full-time student</b>	61	16.7
<b>Cultural group</b>		
<b>African</b>	168	45.9
<b>White</b>	114	31.1
<b>Indian</b>	51	13.9
<b>Coloured</b>	28	7.7
<b>Other</b>	2	0.5
<b>1<sup>st</sup> language</b>		
<b>English</b>	159	43.4
<b>Afrikaans</b>	61	16.7
<b>isiZulu</b>	38	10.4
<b>Sepedi</b>	28	7.7
<b>Setswana</b>	21	5.7
<b>isXhosa</b>	15	4.1
<b>siSwati</b>	9	2.5
<b>Other</b>	9	2.5
<b>Tshivenda</b>	7	1.9
<b>Sesotho</b>	7	1.9
<b>Xitsonga</b>	6	1.6
<b>isiNdebele</b>	3	0.8

The sample consisted mainly of females (81.4%) and fewer males (17.5%). Almost half the participants were African (45.9%). Whites constituted 31.1% , Indians 13.9%, Coloured 7.7% ,with the remainder indicating other nationalities (0.5%). 71% of the sample were employed full time, while 11.2% were employed part time. 16.7% of the sample were full time students. The sample indicated the following as a first language: English (43.4%), Afrikaans (16.7%) and isiZulu (10.4%). Sample characteristics are in Table 1 above.

#### *Measuring instruments*

Data were collected on students' demographics, SOC, time-to-degree and academic achievement (GPA).

A 13-item measure of SOC derived from the original Orientation to life questionnaire (OLQ) (Antonovsky, 1993) was used to assess SOC. The OLQ-13 assesses the three SOC sub-components namely comprehensibility, manageability and meaningfulness. Cronbach alphas ranging from 0.74 to 0.91 indicate that the OLQ-13 has a high degree of internal consistency (Antonovsky, 1993). Studies in South Africa indicate alpha coefficient variance in the range of 0.84 to 0.93 (Coetzee & Rothmann, 1999). In a meta-analysis of 127 studies Eriksson and Lindstrom (2005) found the face validity of the OLQ-13 to be acceptable. The OLQ-13 has been used across many countries and many populations (Naaldenberg et al, 2011).

Academic success was measured with time-to-degree and academic achievement. Student data in this regard was retrieved from the student system in the period 2009-2011. Time-to-degree was measured as elapsed time between registrations and achieving the degree, or the total length of time starting from the beginning of the postgraduate study to completion of the postgraduate studies (Lam, 1999). The average final score achieved at the end of the degree for the postgraduate studies that students were enrolled for, were chosen as the criterion for academic achievement.

### *Research Procedure*

The secondary data used for this research was obtained from students who had registered for a research methodology course. The short form 13-item OLQ (OLQ-13) was part of the official study material of the students, together with instructions on how to complete the questionnaire and an explanation of the anonymous and confidential use of the data for research purposes. Questionnaire completion and submission thus constituted informed consent. Ethical clearance to use the data for this research was obtained from the Ethics Committee of the College of Economic and Management Sciences of the open distance learning institution at which the students had registered. The student system of the distance education institution was accessed and grade points of each module the student had completed together with the first year and last year of registration was obtained. Mean scores for both academic achievement and number of years registered for the honours course were calculated.

### *Statistical analysis*

Cronbach alphas were obtained to determine the reliability of the measuring instruments. Descriptive statistics (means and standard deviations) were used to determine the degrees to which the variables exist in the sample where after the correlation between the variables were determined by means of Spearman rho correlation. The statistical significance was set at 0.05. The cut-off point

for practical significance as determined by Cohen (1992) was applied and indicates 0.10 for a small effect, 0.30 for a medium effect and 0.50 for a large effect. For the purposes of this research, small, medium and large effects will be reported on. Relational statistics investigated the relationship between the variables of SOC, time-to-degree and academic achievement. Regression analysis determined whether SOC could be used as a predictor of time-to-degree and academic achievement of the non-traditional student.

## RESULTS

### Descriptive and reliability statistics

In Table 2 it is clear the Cronbach alpha coefficients of the OLQ-13 for the dimensions of SOC were not acceptable compared to the guideline of  $\alpha > 0.70$  (Nunnally & Bernstein, 1994). The dimensions comprehensibility, manageability and meaningfulness are therefore not very reliable on their own in this sample. Only the SOC total score which does meet  $\alpha > 0.70$  will therefore be part of the rest of the analysis.

**TABLE 2:** Descriptive statistics and alpha coefficients of OLQ-13

Item	N	Mean	SD	Skewness	Kurtosis	$\alpha$
Time-to-degree	366	2.90	2.13	2.18	6.67	
Academic achievement	366	60.58	6.86	1.03	1.10	
Sense of coherence						
Comprehensibility	365	21.76	5.62	-.11	-.15	0.66
Manageability	364	17.80	4.44	-.41	.33	0.64
Meaningfulness	365	21.36	3.99	-.49	-.15	0.50
SOC total	364	60.93	11.90	-.39	.24	0.82

Time-to-degree (Table 3) which was highly skewed as a result of a number of students exceeding four years to complete their studies, is in four categories, based on the number of years the students took to complete their degree. In addition, academic achievement (Table 3) is not normally distributed.

**TABLE 3:** Descriptive statistics of time-to degree and academic achievement

Item	N	Mean	SD	Skewness	Kurtosis
Time-to-degree	366	2.90	2.13	2.18	6.68
Academic achievement	366	60.58	6.86	1.03	1.09

Table 4 indicates: 1 year; 2 years; 3 years and 4+ years respectively. The 4+ years are those students who completed their degrees in 4 to 16 years.

**TABLE 4:** Descriptive statistics of the four groups of time-to-degree

Category	Frequency	Percentage
<b>Time-to-degree</b>		
1 year	84	23
2 years	125	34.2
3 years	70	19.1
4+ years	87	23.8

### Correlation statistics

Academic achievement data was not normally distributed. A Spearman rho correlation was then run. No significant correlation between academic achievement and SOC could be found.

An analysis of variance (ANOVA) was run on the categorical data of time-to-degree to ascertain whether there was a difference between the four groups of time-to-degree and their SOC scores.

From Table 5 it is clear that the analysis yielded no statistically significant *F* ratios ( $F (3, 360) = 2.169, p = 0.91$ ).

**TABLE 5:** Analysis of variance of time-to-degree and SOC

Independent variable	Source of variation	df	Sum of squares	Mean sum of squares	F	p
SOC	Between groups	3	913.37	304.46	2.17	0.91
	Within groups	360	50537.05	140.38		
	Total	363	51450.41			

\* Statistically significant at the 0.10 level

+ Statistically significant at the 0.01

The results do not provide supportive evidence for Hypothesis 1 (There is a statistically significant relationship between SOC, time-to-degree and academic achievement in the non-traditional student) or Hypothesis 2 (SOC can be used as a predictor of time-to-degree and academic achievement of the non-traditional student) and therefore both hypotheses are rejected.

## DISCUSSION

The general aim of this study was to investigate whether there is a relationship between SOC, time-to-degree and academic achievement in the non-traditional student at a distance learning institution, and if SOC could be used as a predictor of time-to-degree and academic achievement.

The sample consisted of three hundred and sixty-six non-traditional students who had completed an honours research module at a distance education institution. Two hundred and twenty-two were adults between the ages of thirty and thirty-nine years of age. More than two-thirds of the sample were full-time working students. The characteristics of the sample seem to mirror the findings of the NCES (2003) who found that the working adult group of students characterised their main activity as "employment" rather than "students who worked". Africans who could be viewed as those students who were previously disadvantaged in South Africa constituted almost half of the sample. Three characteristics of the non-traditional student such as age, working full-time and coming from the previously disadvantaged groups were strongly representative of the sample.

The Cronbach alpha coefficients of the dimensions of SOC, namely comprehensibility, manageability and meaningfulness, were lower than expected according to the guideline of 0.70 from Nunnally and Bernstein (1994). The total score of SOC did however meet this guideline. The total score was therefore considered in further analysis of the data. Correlation statistics found no statistically significant correlation between SOC and academic achievement. These results appear to concur with the results of a study by van der Westhuizen, de Beer and Bekwa (2011) who found no statistically significant correlation between SOC and academic achievement in their sample of post-graduate students at a distance education institution. Finding no statistically significant correlation in this particular sample may be a result of the restriction in range for academic achievement. The sample consisted only of those students who had achieved their degrees, with a GPA ranging between fifty percent and seventy-five percent. These students could be seen as those who had achieved academically.

Fifty-seven percent of non-traditional students in this sample completed their qualifications in two years. The remainder took between three and sixteen years to complete their qualifications. An ANOVA found no difference between the four groups and their SOC scores. Only those students who had completed their qualifications were included in the sample, and not those who were currently registered. This restriction in range could imply that the particular sample of students were those who were coping with the challenges of studying, while those students who were not included could be seen as those who were not coping as well. Grayson (2007) suggested that students with a high SOC would have less difficulty coping at an academic institution. Seventy-one percent of this sample consisted of full-time employed students. The fact that this particular sample could be seen as coping with the challenges of studying confirms the results of a study by Wyland et al. (2013)

who indicated that the lesser time students have at their disposal for studies does not always lead to poor academic performance.

Intervening or moderating variables which were not part of this study could have had an influence on the results. Both Grayson (2007) and Sagy (2000) who found a statistically significant correlation between SOC and academic achievement, mentioned that the effect of SOC was small but significant in relation to other factors that influenced coping in learning institutions. The present study did not include any factors other than SOC, time-to-degree and academic achievement. This study does however demonstrate the complexity of defining and describing characteristics that result in academic success, which Tinto (1975) alluded to. Various other factors such as background characteristics (social status, high school achievement, community, sex, ability and race, etc.) evident in the non-traditional students, expectational and motivational attributes (such as those measured by career and educational expectations) and working while studying, may play a stronger role in who finishes and who does not (Bean & Eaton, 2000; Roberts, 2012; Tinto, 1975; Wyland, 2013).

The empirical aim of this study was to ascertain whether SOC could be used as a predictor of time-to-degree and academic achievement. As no relationships could be found between the variables, no predictions could be made.

### **Limitations**

The cross sectional survey design chosen for this study had a number of limitations. It is difficult to draw conclusions about cause and effect with a cross sectional survey design as the measurement was taken at a specific point in time.

The second limitation concerned the non-probability sampling technique where the sample was chosen based on its convenient accessibility. The results of this study are therefore not representative of the general population, as some elements had no chance of being included, for instance qualifications other than the honours degree of the sample, and different students in different learning institutions. Another limitation was sampling bias, in that only non-traditional students who had completed their studies were included.

### **Recommendations**

It is recommended that the current study be duplicated to include both the students who had achieved academically and those who were still struggling to complete their qualifications. This could be extended to different groups of students and different qualifications within a learning

institution. An investigation across a wide range of learning institutions may also add to the body of knowledge in understanding SOC, time-to-degree and academic achievement.

The definition of non-traditional students is not uniform across all countries (Mentz, 2012; Smit, 2012). While there are some similarities, further research may be needed to understand exactly who non-traditional students are. Universities have a large number of students who fail to graduate out of the system (Machingambi, 2011). Understanding the characteristics of non-traditional students may aid universities in creating interventions that could cater to the unique needs of this particular group of students.

Individuals cope with stress in different ways (Sardu et al., 2012). SOC as a stress appraisal concept may affect the coping strategies and resources that individuals would choose in strenuous life situations. The challenges that non-traditional students face cannot be seen only as studying alone. Organisations could consider these challenges when developing wellness programmes in the workplace. Providing resources such as financial aid, workplace support coaching and counselling may be insufficient if the employee does not know how to use all or a combination of these resources to cope with the stresses of achieving both academically and professionally.

## REFERENCES

- ADA Research Committee. (2011). Cross- sectional Study Designate *Research Toolkit*. Retrieved from <http://ada.portalxm.com/vault/rtk/Docs/20110601%20ADA%20RTK%20CrossSectional.pdf>
- Aina, C., & Casalone, G. (2011). Does time-to-degree matter? The effect of delayed graduation on employment and wages. *Bologna, Alma Laurea* Working Paper. Retrieved from [http://www.internet.it/aisre/minisito/CD2011/pendrive/Paper/AinaBaiciCasalone\\_AISRE2011.pdf](http://www.internet.it/aisre/minisito/CD2011/pendrive/Paper/AinaBaiciCasalone_AISRE2011.pdf)
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well.* San Francisco United States: The Jossey-Bass Health Series.
- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36(6), 725-733.
- Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International*, 11(1), 11-18.
- Austin, E., Saklofske, D., & Mastoras, S. (2010). Emotional intelligence, coping and exam-related stress in Canadian undergraduate students. *Australian Journal of Psychology*, 62(1), 42–50.
- Austin, K., & Cilliers, F. (2011). The psychometric relationship between career thinking and salutogenic functioning amongst unemployed adults. *SA Journal of Industrial Psychology*, 37(1), 1–11.
- Bean, J., & Eaton, S.B. (2000). The psychology underlying successful retention practices. *Journal of College Student Retention*, 3(1), 73-89.
- Calcagno, J., & Crosta, P. (2007). Does age of entrance affect community college completion probabilities? Evidence from a discrete-time hazard model. *Educational Evaluation and Policy Analysis*, 29(3), 218-235.

- Chartrand, J. M. (1992). An empirical test of a model of non-traditional student adjustment. *Journal of Counseling Psychology*, 39(2), 193–202.
- Credé, M., & Kuncel, N. R. (2008). Study Habits, Skills, and Attitudes: The Third Pillar Supporting Collegiate Academic Performance. *Perspectives on Psychological Science*, 3(6), 425–453.
- Coetzee, M., & Potgieter, I. (2012). Undergraduate ODL students' graduateness in relation to their employability attributes and examination preparation styles. *Proceedings of the first Unisa International ODL Conference*. Pretoria Gauteng: University of South Africa.
- Coetzee, M., & Roythorne-Jacobs, H. (2012). *Career Counselling and Guidance in the workplace: A manual for career practitioners* (2nd ed.). Cape Town, South Africa: Juta.
- Cohen, J. (1992). Quantitative Methods in Psychology, A power primer. *Psychological bulletin*, 112(1), 155–159.
- Dewart, B., & Rowan, L. (2008). Improving tertiary student outcomes in the first year of study: What your students may not tell you. *Journal of College Student Retention: Research, Theory & Practice*, 9(3), 259-271.
- Dewitz, S. J., Woolsey, M. L., Walsh, W. B., Gates, B., Ellison, L., & Gerry, A. (2009). College Student Retention: An Exploration of the Relationship between Self-Efficacy Beliefs and Purpose in Life among College Students. *Journal of College Student Development*, 50(1), 19–34.
- Diaz-Chaviano, B. (n.d.). The Missing Link Targeting Non-traditional Students: A Descriptive Content Analysis of University Websites. Retrieved from [http://www.csus.edu/McNair/Cohort\\_Journals\\_and\\_Photos/13\\_2011\\_2012/jounal\\_2011-12/Betty\\_Chaviano.pdf](http://www.csus.edu/McNair/Cohort_Journals_and_Photos/13_2011_2012/jounal_2011-12/Betty_Chaviano.pdf)
- Eriksson, M., & Lindstrom, B. (2005). Validity of Antonovsky sense of coherence scale: A systematic review. *Journal of Epidemiology and Community Health*, 59(6), 460-466.

Eriksson, M. & Lindstrom, B. (2006). Antonovsky's sense of coherence scale and the relation with health: a systematic review. *J Epidemiol Community Health*, 60, 376-381.

Fernandez, S. (2012). College Adaptation among Traditional and Non-traditional College Students Self-esteem *McNair Scholars Research Journal*, 8(1) 19–28.

Garibaldi, P., Giavazzi, F., Ichino, A., & Rettore, E. (2007). College Cost and Time to Complete a Degree: Evidence from Tuition Discontinuities. *NBER Working Paper No. 12863 January 2007, Revised April 2007*.

Gilardi, S., & Guglielmetti, C. (2011). University Life of Non-Traditional Students: Engagement Styles and Impact on Attrition. *The Journal of Higher Education*, 82(1), 33–53.

Grayson, J.P. (2007). Sense of Coherence and academic achievement of domestic and international students: a comparative analysis. *Higher Education*, 56(4), 473-492.

Gregory, D. E., & Kurisky, B. D. (2011). Retention Issues of Mature Students : A Comparative Higher Education Analysis of Programs in the United States and Ireland. *Journal of Counselling and Development in Higher Education Southern Africa*, 1(1), 59-76.

Holley, D., & Oliver, M. (2010). Student engagement and blended learning: Portraits of risk. *Computers & Education*, 54(3), 693–700. doi:10.1016/j.compedu.2009.08.035

Huysamen, G.K. (1994). *Methodology for the social and behavioural sciences*. Pretoria: Southern Book Publishers.

Katsikas, E. (2012). The impact of students' working status on academic progress: assessing the implications of policy change in Greece. *Journal of Education and Work*, (September), 1–31.

Lam, L. (1999). *Assessing financial aid impacts on time-to-degree for non-transfer undergraduate students at a large urban public university*. Paper presented at the Annual Forum of the Association for Institutional Research. Retrieved from <http://www.asu.edu/uoria/pubs/papers/lam.pdf>

Letseka, M., Cosser, M., Breier, M., & Visser, M. (2010). *Student retention & Graduate destination: Higher education &labor market access &success*. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/cbdv.200490137/abstract>

Lindstrom, B., & Erikson, M. (2005). Salutogenesis, *Journal of Epidemiology and Community Health*, 59(6), 440-442.

Liukkonen, V., Virtanen, P., Vahtera, J., Suominen, S., Sillanmäki, L., & Koskenvuo, M. (2010). Employment trajectories and changes in sense of coherence. *European journal of public health*, 20(3), 293–8. doi:10.1093/eurpub/ckp171

Machingambi, S. (2011). Is Access to Higher Education a Sufficient Condition for Social Equity in South Africa? A Critical Analysis. *Journal of Social Science*, 28(1), 13–20.

Madison, A. (2013). *Madison 16': What is the value of higher education?* Retrieved from <http://www.browndailyherald.com/2013/03/12/madison-16-what-is-the-value-of-higher-education/>

Marshall, A.H., Zenga, M., & Giordano, S. (2013). Modelling Students' Length of Stay at University Using Coxian Phase-type Distributions. *International Journal of Statistics and Probability*, 2(1). doi:10.5539/ijsp.v2n1p73

Mentz, M. (2012). *Measuring and using pre-university levels of student engagement*. (Unpublished doctorate thesis). University of the Free State, Bloemfontein, South Africa.

Muller, Y., & Rothman, S. (2009). Sense of coherence and employees perceptions of helping and restraining factors in organisations. *SA Journal of Industrial Psychology*, 35(1), 10 pages.

Nunnally, J., & Bernstein, I.H. (1994). *Psychometric theory* (3<sup>rd</sup>ed.). New York, NY: McGraw-Hill.

Robbins, S.B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do Psychosocial and Study Skill Factors Predict College Outcomes? A Meta-Analysis. *Psychological Bulletin*, 130(2), 261–288.

Roberts, D. (2012). Modelling withdrawal and persistence for initial teacher training: revising Tinto's Longitudinal Model of Departure. *British Educational Research Journal*, 38(6), 953–975.

Rothmann, S., & Muller, Y. (2009). Sense of coherence an employee's experience of helping and restraining factors in the working environment. *SA Journal of Industrial Psychology*, 35(1), 89–98. doi:10.4102/sajip.v35i1.731

Sagy, S. (2000). Factors influencing early dropout: The case of Russian immigrant students attending an Israeli university. *The Journal of Applied Behavioral Science*, 36(3), 362-375.

Sardu, C., Mereu, A., Sotgiu, A., Andriassi, L., Jacobson, M. K., & Contu, P. (2012). Antonovsky's Sense of Coherence Scale : Cultural Validation of SOC Questionnaire and Socio-Demographic Patterns in an Italian Population, *Clinical Practice & Epidemiology in Mental Health*, 8, 1-6.

Smit, R. (2012). Higher Education Research &Development Towards a clearer understanding of student disadvantage in higher education : problematizing deficit thinking. *Higher Education Research & Development*, 31(3), 369-380.

Swan, K., Ed, D., Bland, A., & Lemke, C. (2009). Blended Learning in the classroom. *Journal of the Research Center for Educational Technology (RCET)*, 5(1), 1-4.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of educational research*, 45(1), 89–125.

Tinto, V. (1993) Rethinking College: The causes and cures of student attrition (2nd ed.). Chicago, University of Chicago Press.

Tlupova, D. (2008). Student Finance and Choice of University: Analysis of a survey of 2006/7 Entrants. *Institute for Education Policy Research*, 44(February), 1–52. Retrieved from <http://web.staffs.ac.uk/schools/business/iepr/docs/workingpaper42.pdf>

U.S Department of Education, National Center for Education statistics (NCES, 2003). *Work first, study second. Adult undergraduates who combine employment and postsecondary enrolment, Postsecondary Education Descriptive Analysis Reports*. Retrieved from <http://nces.ed.gov/>

Van Der Westhuizen, S., de Beer, M. & Bekwa, N. (2011). Psychological strengths as predictors of postgraduate student's academic achievement. *Journal of Psychology in Africa, 21*(3), 473–478.

Volanen, S.-M., Lahelma, E., Silventoinen, K., & Suominen, S. (2004). Factors contributing to sense of coherence among men and women. *European journal of public health, 14*(3), 322–30. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15369042>

Volanen, S.-M., Suominen, S., Lahelma, E., Koskenvuo, M., & Silventoinen, K. (2007). Negative life events and stability of sense of coherence: a five-year follow-up study of Finnish women and men. *Scandinavian journal of psychology, 48*(5), 433–41.

Wasike, J. M., & Munene, S. (2012). Information needs and study behaviour of non-traditional students with particular reference to university libraries in Kenya. *International Journal of Library and Information Science, 3*(6) 94-103.

Wiesmann, U., & Hannich, H.-J. (2012). The Contribution of Resistance Resources and Sense of Coherence to Life Satisfaction in Older Age. *Journal of Happiness Studies*. DOI: 10.1007/s10902-012-9361-3

Wyland, R. L., Lester, S. W., Mone, M. A., & Winkel, D. E. (2013). Work and School at the Same Time? A Conflict Perspective of the Work School Interface. *Journal of Leadership & Organizational Studies*. DOI: 10.1177/1548051813484360

Zubernis, L., McCoy, V. A., & Snyder, M. (2011). Starting over again: Counseling considerations for transfer students in higher education. Paper presented at the 2010 American College Counseling Association Conference, St Louis. Retrieved from [http://counselingoutfitters.com/vistas/vistas11/Article\\_11.pdf](http://counselingoutfitters.com/vistas/vistas11/Article_11.pdf)

## **CHAPTER 4**

### **CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

Chapter 4 contains the conclusions, limitations and recommendations.

#### **4.1 CONCLUSIONS**

This dissertation has investigated the relationship between SOC time-to-degree and academic achievement in non-traditional students at a distance education institution. An additional focus was to establish whether SOC could be used as a predictor of time-to-degree and academic achievement. Research conclusions from the literature review and the empirical study for each of the research aims as stated in 1.3 in Chapter 1 will be formulated below.

The specific literature objective was to conceptualise SOC, the non-traditional student, time-to-degree and academic achievement, as well as to investigate the theoretical relationship between the concepts. This objective was achieved by means of the literature review regarding the non-traditional student, academic achievement, time-to-degree and SOC.

Studying while being a full-time employee is one of the distinguishing factors between non-traditional and traditional students. Wyland et al. (2011) conclude that work being the dominant domain in most adult lives reduces the amount of time working employees have at their disposal for studying. Non-traditional students need to balance various life roles (Aina & Casalone, 2011; Wyland et al., 2013; Zubernis et al., 2011). This distinguishing characteristic of non-traditional students as opposed to their counterparts, traditional students, may lead to higher levels of stress (Aina & Casalone, 2011; Katsikas, 2012). In addition, the number of challenges employees encounter in the labour market in particular in South Africa, where skilling and reskilling of the labour force are demanded for organisations to stay competitive in the global market, are compounded by the additional stress of achieving academically for those employees who seek career advancement (Chartrand, 1992; Rothmann & Muller, 2009). Non-traditional students therefore experience stress not only in the workplace but also in the "classroom". The stress that university students experience can be associated with psychological stress, which could adversely affect academic and job performance (Austin et al., 2010; Wyland et al., 2013).

The most commonly used measure of academic performance, GPA, was used in this study as a measure of academic success because of its high predictive validity (Robbins et al., 2004). Even though conceptual confusion exists in the literature when defining student success, cognitive factors such as GPA have been researched extensively (Robbins et al., 2004). In spite of the high predictive validities of GPA, the focus of academic achievement is not only being investigated in relation to standardised academic achievement, aptitude tests and school-based academic performance, but also, using constructs such as self-efficacy beliefs, outcome expectancies and achievement and performance goals amongst others as factors to measure academic performance (Credé & Kuncel, 2008). In a bid to reduce adverse impact in the admissions process, recent studies by Wyland et al. (2013) have investigated the time students invest in obtaining a tertiary education while working, as a physical element of university involvement.

When investigating academic success of non-traditional students, the amount of time they require to complete their qualifications was included as a variable, because these students do not use all of their time to study (Zubernis, McCoy, & Snyder, 2011). The worrying trend in the world today is that students take too long to complete their studies (Garibaldi et al., 2007). Added to this, non-traditional students in particular run the risk of not completing their studies (Aina & Casalone, 2011). Research by Sagy (2000) added SOC as a background factor affecting persistence. She found a small significant relationship which could explain factors related to coping in an academic institution. Wyland et al. (2013) note that students do not necessarily reduce the amount of time spent on obtaining a tertiary qualification as they strive for academic success, which is often linked to financial incentives from organisations. However, balancing their various life roles would most likely mean that they would take longer to graduate out of the system. However, taking longer to complete their qualifications does not necessarily mean that they experience poor academic performance (Wyland et al., 2013).

Antonovsky (1987) suggested looking at data differently, by considering those who succeed and not only those factors that relate to problems. Why do some succeed in the face of challenges? The current study investigated how non-traditional students cope with challenges and stress from a salutogenic perspective – the origins of health (Antonovsky, 1987). The salutogenic perspective considers individuals' capacity to manage inherent stressors in a flexible manner. Some will succumb in a pathogenic direction and others will overcome and move towards health (Sardu et al., 2012). How people cope and manage the stressors in various life roles such as school, work, play and love, is key to the positive outcomes of challenges they may encounter during their lifetimes

(Antonovsky, 1987). The current study seems to suggest that these particular non-traditional students coped successfully with academic stress, resulting in a positive outcome. Individuals cope with stress in differing ways (Sardu et al., 2012) There are those that successfully cope with academic stress as this study suggests, while in others, increased academic stress may perpetuate a cycle of stress, maladaptive coping and compromised health in both the work and study domains (Wyland et al., 2013). An education system with low academic performance and a cohort of students who fail to graduate out of the system may be indicative of the aforementioned maladaptive coping behaviours of students (Machingambi, 2011; Wyland et al., 2013).

Antonovsky (1987) in his deliberations about why people react to stress in differing ways developed the concept of SOC within the salutogenic perspective. He defined SOC as global orientation in which, if a person with a strong SOC is confronted by a stressor, they will find it meaningful to cope with the stressor, believe they have the resources available to address the stressor (manageability) and view the stressor as a challenge which is understood (comprehensible). SOC develops throughout an individual's life, becoming stable in individuals over the age of thirty, which is often a time which corresponds with post-secondary education (Antonovsky, 1987; Grayson, 2007). It could then be expected that students with a high SOC will have less difficulty with coping with academic difficulties than those with a weak SOC (Grayson, 2007). While there is some evidence that academic success is impacted negatively through working and excessive stress (Wyland et al., 2011). Research seems to be inconclusive in respect of the relationship between SOC and academic achievement. Grayson (2007) included SOC into traditional models as a possible contributor to academic achievement, and found a small effect of SOC on academic achievement. Van der Westhuizen et al., (2011) on the other hand disagree, as their study of postgraduate students at a distance learning institution found no relationship between SOC and academic achievement. The current study concurs with van der Westhuizen et al. (2011) because no relationship was found between SOC and academic achievement in this sample of non-traditional students at a distance learning organisation.

The objective of the empirical study was to determine whether or not there is a relationship between SOC, time-to-degree and academic achievement, as well as whether SOC can be used as a predictor of time-to-degree and academic achievement in the non-traditional student. By reporting, interpreting and integrating the results, certain conclusions can be drawn from the results.

The sample included some of the characteristics of the non-traditional student as defined in the literature (NCES, 2003). The sample had a mean age of thirty years, in line with literature which views age as a defining characteristic of the non-traditional student (Calcagno & Crosta, 2007; Diaz-Chaviano, n.d.; Fernandez, 2012; Gilardi & Guglielmetti, 2011; Gregory & Kurisky, 2011; Holley & Oliver, 2010; Smit, 2012; Swan, Bland & Lemke, 2009; Wasike & Munene, 2012). Seventy-one percent of the sample were full-time employed (Wyland et al., 2013). A third characteristic of those students who Smit (2012) noted could be viewed as previously disadvantaged (Africans 45.9%) were included in this sample to represent the non-traditional student, as described in the literature.

The sample also only consisted of those students who had completed their qualifications with a GPA score ranging between fifty and seventy-five percent. In addition fifty-seven percent of the sample had completed their qualification in the required time as per the learning institution's requirements. This sample may then be viewed as those non-traditional students who were coping with the challenges of acquiring a tertiary education. The sample did not include those students who were currently registered and might therefore be seen as those who were not coping as well as the participants of this sample. Nevertheless, the empirical study found no relationship between SOC, time-to-degree and academic achievement. This study concurs with van der Westhuizen et al. (2011) who found no statistically significant relationship between SOC and academic achievement in their sample of postgraduate students at a distance learning institution.

The present study also found no relationship between SOC and time-to-degree. The amount of time students took to complete their qualifications ranged between one and sixteen years. Based on this data, the sample was divided into four groups. An ANOVA could not find any statistically significant differences between the groups and their total SOC score. However, forty-three percent of the students in this sample took longer than the required two years to complete the particular qualification for which they were enrolled. The current study found that while some of these non-traditional students had taken longer to complete their qualifications, a mean GPA of 60.5% was achieved, resulting in academic success for this sample, which would substantiate Wyland et al. (2013) findings that the smaller amount of time students have at their disposal for studies does not always lead to poor academic performance.

In light of these conclusions, based on the empirical study, no prediction can be made on whether SOC could be used as a predictor of time-to-degree and academic achievement, as no statistically significant difference could be found between the groups and their total SOC score.

Early research by Tinto (1975) noted the complexities of defining and describing characteristics that result in academic success. Almost forty years on, in 2013, the current study highlights some of these complexities.

With the focus on understanding how students cope with stress, there have been a number of studies such as those by Sagy (2000) and Grayson (2007) who have investigated the relationship between SOC and academic achievement, and have found relationships between these variables. Other studies have not been able to find relationships between these variables (van der Westhuizen et al., 2011). SOC is a resource that enables individuals to successfully manage the many stressors of their lifetime (Sardu et al., 2012). Managing stress is important for academic success (Sardu et al., 2012; Wyland et al., 2013). However, this is not the only factor that would determine student success. Other factors that could also play a role could be background characteristics such as social status, high school achievement, community, sex, ability, race, and expectational and motivational attributes such as those measured by career and educational expectations, as mentioned in the research by Bean and Eaton (2000), Roberts (2012), Tinto (1975), and Wyland (2013). Any one or all of these factors could also have an effect on an individual's SOC (Volanen et al., 2004; Wainwright et al., 2006).

In conclusion, the current study could not find evidence that there was any relationship between SOC, time-to-degree and academic achievement in this particular sample. The literature therefore remains inconclusive as to the relationship between SOC and academic success, confirming the complexities of defining and describing characteristics related to academic success.

## **4.2 LIMITATIONS**

A number of important limitations need to be considered with regard to this empirical study.

The research design was cross-sectional. A cross-sectional design makes it difficult to establish causality of obtained results as it measures data at a single point in time (ADA Research Committee, 2011; Huysamen, 1994).

The sample consisted of those non-traditional students who had completed their qualifications and not those who were currently registered with incomplete qualifications – a restriction in range in the sample that may have inadvertently led to the hypotheses not being substantiated. In addition, the sample only included those students registered at one particular distance education institution who had completed a specific honours research module, and therefore findings cannot be generalised to other students, qualifications or institutions.

The definition of a non-traditional student is not uniform across all countries (Mentz, 2012; Smit, 2012). The most defining characteristic is their age, this being over 25, probably working, with dependents, commuter students and students from previously disadvantaged groups (Calcagno & Crosta, 2007; NCES, 2003; Smit, 2012). The current study only included three characteristics, namely age, working full-time and students previously disadvantaged. The study by Grayson (2007) included students over the age of thirty, commuter students, international and domestic. In a study by Sagy (2000) the sample consisted of international students with a mean age of twenty years. All these studies including the current study did not include all the characteristics of non-traditional students, which may have inadvertently led to inconsistencies in the results.

The current study focused on three variables only – SOC, time-to-degree and academic achievement. Intervening or moderating variables were not part of this study. Bean and Eaton (2000), Roberts (2012), Tinto (1975) and Wyland (2013) mention a number of other variables that could play a stronger role in academic success.

#### **4.3 RECOMMENDATIONS**

When taking the conclusions and limitations into account, they generate several application-orientated suggestions and recommendations regarding future research on SOC, time-to-degree and academic achievement in non-traditional students at distance education institutions.

It is clear from the literature that there are two distinct groups of students (Gregory & Kurisky, 2011; NCES, 2003) – those who enter tertiary education institutions immediately after secondary schooling, and those who join a tertiary education institution for a number of reasons at a later stage, perhaps remaining at these institutions for a longer period than traditionally accepted (Machingambi, 2011). Research is recommended to gain an understanding of exactly what the distinguishing characteristics of the different student groups really are, especially in the South

African context where there is no clear definition of non-traditional students, who are entering tertiary institutions in increasing numbers.

It is recommended that the current study be duplicated by increasing the sample size to include students with incomplete degrees, different qualifications, and attending a number of different tertiary education institutions for a comparison study into the two groups, to gain a better understanding of the relationship between SOC, time-to-degree and academic achievement.

Further research might want to explore which factors influence students' GPA and time-to-degree, and whether these differ between traditional and non-traditional students.

On an individual level, further research might explore the implications of non-traditional students not completing qualifications even though they have invested substantial time and resources in the endeavour, and what implications these have for the individual in terms of job satisfaction and career aspirations, should they come to the realisation that the goal of obtaining a tertiary education may not be met.

Learning institutions may need to evaluate performance of non-traditional students in ways other than the traditional cumulative measurement of subject matter achievement (GPA). This highly predictive cognitive factor needs to be supplemented by non-cognitive factors such as how individuals cope with the stressors of attending a tertiary education institution while working and balancing various other life roles. Universities could play a crucial role in the lives of students by aiding them to find coping strategies that would be suited to their individual needs.

On an organisational level, further research might explore how an organisation may assist non-traditional students who bring their knowledge and expertise to the work environment while adding value to the organisation with an incomplete qualification.

Interventions on an organisational and learning institution level are necessary to help non-traditional students to become aware of their coping strategies, and how these may affect their academic achievement and concurrent job performance. While organisations and learning institutions do have a number of resources such as financial aid, wellbeing initiatives, coaching and counselling and social/community support initiatives available to assist their employees and students, it may be necessary to bring awareness to some students of how they might effectively combine and use the

resources for academic success.

#### **4.4 CHAPTER SUMMARY**

In chapter 4 the conclusions, limitations and recommendations were formulated.

## **REFERENCE**

- ADA Research Committee. (2011). Cross- sectional Study Designate *Research Toolkit*. Retrieved from <http://ada.portalxm.com/vault/rtk/Docs/20110601%20ADA%20RTK%20CrossSectional.pdf>
- Aina, C., & Casalone, G. (2011). Does time-to-degree matter? The effect of delayed graduation on employment and wages. *Bologna, Alma Laurea* Working Paper. Retrieved from [http://www.internet.it/aisre/minisito/CD2011/pendrive/Paper/AinaBaiciCasalone\\_AISRE2011.pdf](http://www.internet.it/aisre/minisito/CD2011/pendrive/Paper/AinaBaiciCasalone_AISRE2011.pdf)
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well.* San Francisco United States: The Jossey-Bass Health Series.
- Antonovsky, A. (1993). The structure and properties of the sense of coherence scale. *Social Science and Medicine*, 36(6), 725-733.
- Antonovsky, A. (1996). The salutogenic model as a theory to guide health promotion. *Health Promotion International*, 11(1), 11-18.
- Astin, A. (1999). Student involvement: A developmental theory for higher education. *Journal of college student personnel*, 40(5), 518–529.
- Austin, E., Saklofske, D., & Mastoras, S. (2010). Emotional intelligence, coping and exam-related stress in Canadian undergraduate students. *Australian Journal of Psychology*, 62(1), 42–50.
- Austin, K., & Cilliers, F. (2011). The psychometric relationship between career thinking and salutogenic functioning amongst unemployed adults. *SA Journal of Industrial Psychology*, 37(1), 1–11.
- Barnard, A., Peters, D., & Muller, H. (2010). Financial health and sense of coherence. *SA Journal of Human Resource Management*, 8(1), 1–12.
- Bean, J., & Eaton, S.B. (2000). The psychology underlying successful retention practices. *Journal of College Student Retention*, 3(1), 73-89.

Becker, C. M., Glascoff, M. A., & Felts, W. M. (2010). Salutogenesis 30 Years Later : Where do we go from here? Origins of Salutogenesis. *International Electronic Journal of Health Education*, 13, 25–32.

Bergh, Z. C., & Theron, A. L. (2000). *Psychology in work context*. Cape Town: Oxford University Press.

Billings, J., & Hashem, F. (2009). Literature Review: Salutogenesis and the Promotion of Positive Mental Health in Older People. ... *Mental Health* ..., (April). Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Literature+Review+Salutogenesis+and+the+Promotion+of+Positive+Mental+Health+in+Older+People#0>

Calcagno, J., & Crosta, P. (2007). Does age of entrance affect community college completion probabilities? Evidence from a discrete-time hazard model. *Educational Evaluation and Policy Analysis*, 29(3), 218-235.

Carnoy, M., Rabling, B.J., Castano-Munoz, J., Duart Montoliu, J.M., & Sancho-Vinuesa, T. (2011). Who attends and completes virtual universities: the case of the Open University of Catalonia (UOC). *Higher Education*, 63(1), 53–82.

Chartrand, J. M. (1992). An empirical test of a model of non-traditional student adjustment. *Journal of Counseling Psychology*, 39(2), 193–202.

Coetzee, M., & Potgieter, I. (2012). Undergraduate ODL students' graduateness in relation to their employability attributes and examination preparation styles. *Proceedings of the first Unisa International ODL Conference*. Pretoria Gauteng: University of South Africa.

Coetzee, M., & Roythorne-Jacobs, H. (2012). *Career Counselling and Guidance in the workplace: A manual for career practitioners* (2nd ed.). Cape Town, South Africa: Juta.

Coetzee, M., & Schreuder, S. (2010). *Personnel Psychology an applied perspective*. Cape Town: Oxford University Press.

Coetze, S.C. & Rothmann, S. (1999). Die verband tussen koherensein en werkstevredenheid by bestuurders. *Journal of Industrial Psychology*, 25(3), 31-38.

Cohen, M., Ben-Zur, H., & Rosenfeld, M. J. (2008). Sense of coherence, coping strategies, and test anxiety as predictors of test performance among college students. *International Journal of Stress Management*, 15(3), 289–303.

Credé, M., & Kuncel, N. R. (2008). Study Habits, Skills, and Attitudes: The Third Pillar Supporting Collegiate Academic Performance. *Perspectives on Psychological Science*, 3(6), 425–453.

Dewart, B., & Rowan, L. (2008). Improving tertiary student outcomes in the first year of study: What your students may not tell you. *Journal of College Student Retention: Research, Theory & Practice*, 9(3), 259-271.

Dewitz, S. J., Woolsey, M. L., Walsh, W. B., Gates, B., Ellison, L., & Gerry, A. (2009). College Student Retention: An Exploration of the Relationship between Self-Efficacy Beliefs and Purpose in Life among College Students. *Journal of College Student Development*, 50(1), 19–34.

Diaz-Chaviano, B. (n.d.). The Missing Link Targeting Non-traditional Students: A Descriptive Content Analysis of University Websites. Retrieved from [http://www.csus.edu/McNair/Cohort\\_Journals\\_and\\_Photos/13\\_2011\\_2012/journal\\_2011-12/Betty\\_Chaviano.pdf](http://www.csus.edu/McNair/Cohort_Journals_and_Photos/13_2011_2012/journal_2011-12/Betty_Chaviano.pdf)

Eriksson, M., & Lindstrom, B. (2005). Validity of Antonovsky sense of coherence scale: A systematic review. *Journal of Epidemiology and Community Health*, 59(6), 460-466.

Eriksson, M., & Lindstrom, B. (2006). Antonovsky's sense of coherence scale and the relation with health: a systematic review. *J Epidemiol Community Health*, 60, 376-381.

Fernandez, S. (2012). College Adaptation among Traditional and Non-traditional College Students Self-esteem. *McNair Scholars Research Journal*, 8(1) 19–28.

Garibaldi, P., Giavazzi, F., Ichino, A., & Rettore, E. (2007). College Cost and Time to Complete a Degree: Evidence from Tuition Discontinuities. *NBER Working Paper No. 12863 January 2007, Revised April 2007*

Gilardi, S., & Guglielmetti, C. (2011). University Life of Non-Traditional Students: Engagement Styles and Impact on Attrition. *The Journal of Higher Education*, 82(1), 33–53. doi:10.1353/jhe.2011.0005

Grayson, J.P. (2007). Sense of Coherence and academic achievement of domestic and international students: a comparative analysis. *Higher Education*, 56(4), 473-492.

Gregory, D. E., & Kurisky, B. D. (2011). Retention Issues of Mature Students : A Comparative Higher Education Analysis of Programs in the United States and Ireland. *Journal of Counselling and Development in Higher Education Southern Africa*, 1(1), 59-76.

Hochwälter, J., & Forsell, Y. (2010). Is Sense of Coherence Lowered by Negative Life Events? *Journal of Happiness Studies*, 12(3), 475–492.

Holley, D., & Oliver, M. (2010). Student engagement and blended learning: Portraits of risk. *Computers & Education*, 54(3), 693–700.

Huysamen, G.K. (1994). *Methodology for the social and behavioural sciences*. Pretoria: Southern Book Publishers.

Katsikas, E. (2012). The impact of students' working status on academic progress: assessing the implications of policy change in Greece. *Journal of Education and Work*, (September), 1–31.

Koopman, S.G. (2012). The experience of senior leaders driving large scale change in a construction company. (Unpublished master's thesis).University of South Africa, Pretoria, SA.

Korotkov, D. (1998). *The Human quest for meaning: A handbook of psychological research and clinical applications*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Kosor, M. M. (2009). Leaving Early: The Determinants of Student Non-Completion in Croatian Higher Education. *Faculty of Economics University of Split Split* 197–214.

Lavrakas, P.J. (2012). *Encyclopaedia of Survey Research Methods*. Retrieved from <http://srmo.sagepub.com/view/encyclopedia-of-survey-research-methods/n120.xml>

Lam, L. (1999). *Assessing financial aid impacts on time-to-degree for non-transfer undergraduate students at a large urban public university*. Paper presented at the Annual Forum of the Association for Institutional Research. Retrieved from <http://www.asu.edu/uoria/pubs/papers/lam.pdf>

Lent, R. W. (2013). Career-Life Preparedness: Revisiting Career Planning and Adjustment in the New Workplace. *The Career Development Quarterly*, 61(1), 2–14.

Letseka, M., Cosser, M., Breier, M., & Visser, M. (2010). *Student retention & Graduate destination: Higher education &labor market access &success*. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/cbdv.200490137/abstract>

Lindstrom, B., & Erikson, M. (2005). Salutogenesis, *Journal of Epidemiology and Community Health*, 59(6), 440-442.

Liukkonen, V., Virtanen, P., Vahtera, J., Suominen, S., Sillanmäki, L., & Koskenvuo, M. (2010). Employment trajectories and changes in sense of coherence. *European journal of public health*, 20(3), 293–8. Doi:10.1093/eurpub/ckp171

Machingambi, S. (2011). Is Access to Higher Education a Sufficient Condition for Social Equity in South Africa? A Critical Analysis. *Journal of Social Science*, 28(1), 13–20.

Madison, A. (2013). *Madison 16': What is the value of higher education?* Retrieved from <http://www.browndailyherald.com/2013/03/12/madison-16-what-is-the-value-of-higher-education/>

Marshall, A.H., Zenga, M., & Giordano, S. (2013). Modelling Students' Length of Stay at University Using Coxian Phase-type Distributions. *International Journal of Statistics and Probability*, 2(1).

McCune, V., & Entwistle, N. (2011). Cultivating the disposition to understand in 21st century university education. *Learning and Individual Differences*, 21(3), 303–310.

Mentz, M. (2012). *Measuring and using pre-university levels of student engagement*. (Unpublished doctorate thesis). University of the Free State, Bloemfontein, South Africa.

Muller, Y., & Rothman, S. (2009). Sense of coherence and employees perceptions of helping and restraining factors in organisations. *SA Journal of Industrial Psychology*, 35(1), 10 pages.

Naaldenberg, J., Tobi, H., Van den Esker, F., & Vaandrager, L. (2011). Psychometric properties of the OLQ-13 scale to measure Sense of Coherence in a community-dwelling older population. *Health and quality of life outcomes*, 9(1), 37.

National planning committee of the African National Congress (2012). *Statement of the National Executive Committee*. Retrieved from <http://www.wwfsassi.co.za/?m=6&s=1&idkey=1261>

Robbins, S.B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do Psychosocial and Study Skill Factors Predict College Outcomes? A Meta-Analysis. *Psychological Bulletin*, 130(2), 261–288.

Roberts, D. (2012). Modelling withdrawal and persistence for initial teacher training: revising Tinto's Longitudinal Model of Departure. *British Educational Research Journal*, 38(6), 953–975.

Rothmann, S., & Muller, Y. (2009). Sense of coherence an employee's 'experience of helping and restraining factors in the working environment. *SA Journal of Industrial Psychology*, 35(1), 89–98. doi:10.4102/sajip.v35i1.731

Sagy, S. (2000). Factors influencing early dropout: The case of Russian immigrant students attending an Israeli university. *The Journal of Applied Behavioral Science*, 36(3), 362-375.

Sardu, C., Mereu, A., Sotgiu, A., Andriassi, L., Jacobson, M. K., & Contu, P. (2012). Antonovsky's Sense of Coherence Scale : Cultural Validation of SOC Questionnaire and Socio-Demographic Patterns in an Italian Population. *Clinical Practice & Epidemiology in Mental Health*, 8, 1-6.

Schwab, K. (2012). *The Global Competitiveness Report 2012-2013*. Retrieved from <http://reports.weforum.org/global-competitiveness-report-2012-2013/>

Smit, R. (2012). Higher Education Research &Development Towards a clearer understanding of student disadvantage in higher education : problematizing deficit thinking. *Higher Education Research & Development*, 31(3), 369-380.

Society of Industrial and Organisational Psychology (SIOP).What is I-O?  
Retrieved from <http://www.siop.org/>

Swan, K., Ed, D., Bland, A., & Lemke, C. (2009).Blended Learning in the classroom. *Journal of the Research Center for Educational Technology (RCET)*, 5(1), 1-4.

Taylor, J., & House, B. (2010). An Exploration of Identity, Motivations and Concerns of Non-Traditional Students at Different Stages of Higher Education. *Psychology Teaching Review*, 16(1), 46-57.

Terre Blanche, M., Durrheim, K., & Painter, D. (2006).*Research in practice: Applied methods for the social sciences* (2nd ed.).Cape Town: University of Cape Town Press.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of educational research*, 45(1), 89–125.

Tinto, V. (1982). Limits of Theory and Practice in Student Attrition, *Journal of Higher Education*, 53(6), 687–700.

Tinto, V. (1988). Stages of student departure: Reflections on Longitudinal character of student leaving. *The Journal of Higher Education*, 59(4), 438-455.

Tinto, V. (1993) Rethinking College: The causes and cures of student attrition (2nd ed.) Chicago, University of Chicago Press.

Tlupova, D. (2008). Student Finance and Choice of University: Analysis of a survey of 2006/7 Entrants. *Institute for Education Policy Research*, 44(February), 1–52. Retrieved from <http://web.staffs.ac.uk/schools/business/iepr/docs/workingpaper42.pdf>

U.S Department of Education, National Center for Education statistics (NCES). (2003). *Work first, study second. Adult undergraduates who combine employment and postsecondary enrolment, Postsecondary Education Descriptive Analysis Reports*. Retrieved from <http://nces.ed.gov/>

Van Der Westhuizen, S., de Beer, M., & Bekwa, N.(2011). Psychological strengths as predictors of postgraduate student's academic achievement. *Journal of Psychology in Africa*, 21(3), 473–478.

Varga, K., Tóth, Á. Roznár, J., Oláh, A., Betlehem, J., & Jeges, S. (2012). The Salutogenic Revolution of Question-Setting in Health Science and Occupational Psychology. *European Journal of Mental Health*, 7(1), 72–89. doi:10.5708/EJMH.7.2012.1.4

Volanen, S.-M., Lahelma, E., Silventoinen, K., & Suominen, S. (2004). Factors contributing to sense of coherence among men and women. *European journal of public health*, 14(3), 322–30. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15369042>

Volanen, S.-M., Suominen, S., Lahelma, E., Koskenvuo, M., & Silventoinen, K. (2007). Negative life events and stability of sense of coherence: a five-year follow-up study of Finnish women and men. *Scandinavian journal of psychology*, 48(5), 433–41.

Wainwright, N.W.J., Surtees, P.G., Welch, A.A., Luben, R.N., Khaw, K., & Bingham, A. (2006). Healthy lifestyle choices: Could sense of coherence aid health promotion? *Journal of Epidemiology and community health*, 61(10), 871-876.

Wasike, J. M., & Munene, S. (2012). Information needs and study behaviour of non- traditional students with particular reference to university libraries in Kenya. *International Journal of Library and Information Science*, 3(6) 94-103.

Wyland, R. L., Lester, S. W., Mone, M. A., & Winkel, D. E. (2013). Work and School at the Same Time? A Conflict Perspective of the Work School Interface. *Journal of Leadership & Organizational Studies*. DOI: 10.1177/1548051813484360

White, M. (2013). BCTF Research Report, Retrieved from  
<http://bctf.ca/uploadedFiles/Public/Publications/ResearchReports/RR2013-02.pdf>

Wiesmann, U., & Hannich, H.-J. (2012). The Contribution of Resistance Resources and Sense of Coherence to Life Satisfaction in Older Age. *Journal of Happiness Studies*. DOI: 10.1007/s10902-012-9361-3

Wissing, M. P., Thekiso, S. M., Stapelberg, R., Van Quickelberge, L., Choabi, P., Moroeng, C., Nienaber, A., et al. (2010). Validation of three Setswana measures for psychological wellbeing. *SA Journal of Industrial Psychology*, 36(2), 1–8.

Ying, Y., & Akutsu, P. D. (1997). Psychological adjustment of Southeast Asian refugees: The contribution of sense of coherence. *Journal of community Psychology*, 25(2), 125–139.

Zubernis, L., McCoy, V. A., & Snyder, M. (2011). Starting over again: Counseling considerations for transfer students in higher education. Paper presented at the 2010 American College Counseling Association Conference, St Louis. Retrieved from [http://counselingoutfitters.com/vistas/vistas11/Article\\_11.pdf](http://counselingoutfitters.com/vistas/vistas11/Article_11.pdf)