FIRST-YEAR STUDENTS’ INTENTION TO STAY: ENGAGEMENT AND PSYCHOLOGICAL CONDITIONS

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REMARKS

The reader is reminded of the following:

The referencing as well as the editorial style as prescribed by the *Publication Manual* (6th edition) of the American Psychological Association, otherwise known as the APA style, was used in this dissertation, which is in line with the policy of the Programme of Industrial Psychology of the North-West University (Vaal Triangle Campus) to use the APA style in all scientific documents.

The mini-dissertation is submitted in the form of one research article.
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SUMMARY

**Topic:** First-year students’ intention to stay: Engagement and psychological Conditions

**Keywords:** Social support, academic fit, psychological conditions of meaningfulness and availability, engagement, intention to stay and first-year students.

Students’ intention to stay within the higher education system is decreasing by the year, and even though more students are enrolling at universities annually, the percentage of students completing their studies is not satisfactory. The low completion rate is a concern not only in South Africa, but worldwide. Trends are identified as to why students do not complete their studies. This study seeks to focus on perceived social support, the students’ academic fit, the psychological conditions of meaningfulness and availability as well as the students’ engagement levels, and then to investigate if these constructs will influence their intention to stay. The proposed engagement model of May, Gilson, and Harter (2004) originally designed by George Kahn (1990), was used to determine whether social support and academic fit correlates positively with the psychological conditions, which may lead to engagement and increase a student’s intention to stay.

A quantitative research design was used to investigate the universal challenge at hand, and it was descriptive in nature in order to gather specific information from the first-year students. A cross-sectional design was used. The research method consists of a literature review and an empirical study, presented in one research article. A convenience sample was used, and a total of 304 students completed the questionnaires. These questionnaires were based on the Multidimensional Scale of Perceived Social Support, the Psychological Conditions Scale, Academic Fit Scale, the Work Engagement Scale and the Intent to Leave Scale. Structural equation modelling methods were used, and implemented in AMOS to test the measurement and structural models. The fit-indices used to test if the model fit the data included the absolute fit indices such as Chi-square statistic, the Standardized Root Mean Residual (SRMR), and the Root-Means-Square Error of Approximation (RMSEA). The incremental fit indices which were used included the Tucker-Lewis Index (TLI) and the Comparative Fit Index.

It was found that social support did not have an impact on the psychological conditions of meaningfulness and availability, but it had a direct and indirect (via academic fit) effect on intention to stay. This implies that the amount of support students receive has an influence on their intention to stay, and also increased their sense of belonging in their field of study.
Academic fit was positively associated with the psychological conditions of meaning and availability, which means that if the student’s personality and field of study is aligned the student will feel that the course is meaningful to him, and he will invest more energy in his studies. Academic fit had direct effects on students’ intention to stay, which means that students who feel they belong in their field of study will also be more likely to stay at the educational institution. It was also found that if students experience a sense of psychological meaningfulness and availability they will be more engaged in their studies, which impact their intention to stay.

Recommendations for future research were made.
CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

The mini-dissertation focuses on students’ intention to stay on at university and the possible influences on this intention of social support, academic fit, the psychological conditions of meaningfulness and availability, as well as engagement.

Chapter 1 contains a problem statement as well as a literature review of previous research done on the constructs. Specific research objectives and hypotheses are stated, as well as the method to be employed in the study. Lastly, the proposed division of the chapters is given.

1.2 PROBLEM STATEMENT

The high rate of student dropout between the first and second year of university is a major problem, and not only in South Africa; it has become a major crisis worldwide, especially since the 1990s (Barefoot, 2004). While it is important to understand why students choose to leave, understanding why they choose to stay is even more significant (Fike & Fike, 2008). The increasingly higher dropout rates have negative implications not only for the student, but also for the academic institution, which may suffer the consequences, as well as for the economy of the country (Gouws & van der Merwe, 2004). A further implication is the emotional cost associated with student dropout – some students may experience a shattering of confidence that hinders them from considering further studies (Parker, 1999).

That students remain in university is extremely important to higher education, as the rising costs of education as well as the high costs of programme administration mean that retaining students is a matter of economic survival (Mayo, Helms, & Codjoe, 2004). The importance of keeping existing students is an ongoing concern, as the cost of acquiring new students is five to ten times greater than that of maintaining them (Mayo et al., 2004). It is an ongoing struggle for higher education institutions to provide students with affordable quality education, even without the constant battle of reducing attrition (Mayo et al., 2004).

Student engagement represents both the time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices (Kuh, Cruce, Shoup, Kinzie, & Gonya, 2008). Previous research, according to Fike and Fike (2008), has shown that students who leave university prematurely are less engaged than their counterparts who persist.
Kuh et al. (2008) confirm that research examining the connections between student engagement and university outcomes is based on studies of single institutions; few studies are based on large, multi-institutional data. It is not clear to what extent student engagement contributes to achievement and persistence, over and above student ability (Kuh et al., 2008).

Thomas (2002) has identified key personal and social attributes that have an impact on both retention rates and performance, and include academic preparedness, the academic experience, institutional expectations and commitment, academic and social match, finance and employment, family support and commitments and university support services.

Mcgivney (2004) adds that academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational objectives and post-university performance also play a key role in the retention rates of students.

It is believed that students who receive the social support they need are more likely to be engaged in challenging, task-orientated behaviours (Danielsen, Wium, Wilhelmsen, & Wold, 2010). Students who are engaged are more successful in their academic learning, have better grades, are more likely to achieve and have a sense of academic resilience (Danielsen et al., 2010). It is further argued that if students are engaged in their studies, boredom will decrease, there will be less dissatisfaction, and they are less likely to drop out of the educational institution (Losocco & Spitze, 1990). Social support correlates with well-being, according to Wilcox, Winn and Fyvie-Gauld (2005), as well as with successful transition and adaptation to university life. It is important to have different networks of social support, such as peers, tutors and parents (Danielsen et al., 2010).

Engagement, according to Mostert, Pienaar, Gauche, and Jackson (2007), is a concept that explains why certain students are more likely to engage in their studies with energy and enthusiasm without the risk of becoming burned out (which can be seen as the opposite pole of engagement). Students who are engaged are more likely to demonstrate positive and proactive behaviour (Mostert et al., 2007; Salanova, Agut, & Piero, 2005), and engagement can also be positively related to individual performance (Salanova et al., 2005).

Previous studies have indicated a number of reasons why first-year students may be disengaged in their studies and these reasons may be individual or institutional in nature (Kuh et al., 2008). The reasons may include change of major subject, lack of money, family demands and poor psycho-social fit, among others.
According to Robbins, Lauver, Davis, Langley, and Carlstrom (2004), students are more likely to achieve academically if they have motivation, academic goals, institutional commitment, perceived social support, social involvement, academic self-efficacy, academic-related skills and contextual influences.

Kuh’s model of student engagement states that it is not important what university the student attends, or even who the student is, but that the best predictor for successful learning and development is the time and energy the student invests in purposeful educational activities (Kuh, 2001). Louw and Bitzer (2008) therefore conclude that in order for a higher education institution to be successful, it needs to engage its students in activities that will promote valuable outcomes. There are a number of institutional practices that may lead to increasing student engagement; one of these is titled *Seven principles for good practice in undergraduate education* (Chickering & Gamson, 1987). These principles include (1) student–staff contact, (2) co-operation among students, (3) active learning, (4) feedback without prompting, (5) time spent on learning tasks, (6) high expectations, and (7) respect for diverse talents and ways of learning (Chickering & Gamson, 1987). All these characteristics are important determinants in ensuring higher engagement levels among students (Louw & Bitzer, 2003).

There are indications, according to Wilcox et al. (2005) that social support can be an important contribution to the engagement levels of first-year students. It is believed that the quality of relationships between academic staff and students is an important aspect of student success and engagement (Wilcox et al., 2005). Social support can also be seen as an instrumental aid and it may enhance the well-being of the student (Michel, Mitchelson, Pichler, & Cullen, 2010). Tinto (1975) maintains that if the student has the academic and social support he/she needs, and if both these spheres are successfully integrated, the chances of student engagement will be much greater.

A further indicator of engagement may be the compatibility between the student and the chosen field of study (Wilcox et al., 2010). A study done by Wright and Maree (2007) investigated how a student’s interests and abilities will influence his/her engagement levels. Bennett (2003) also argues that if there is a match between the course and the student’s interest, student dropouts will decrease and engagement levels will thus increase. It is further believed that it is more likely for students to be satisfied and successful in their studies when their interests are congruent with the academic environment (Smart, Feldman, & Ethington, 2000). Based on the theory of Holland, Smart et al., (2000) suggested using the term *interest-major congruence* (which is the alignment between the student’s interest and the course of study). This term has been used worldwide in studies of organisational psychology, human resource management and vocational behaviour (Allen & Robbins, 2010). There are several studies based on Holland’s framework to show the relationship between academic fit and work satisfaction and other work outcomes (Donohue, 2006).
It is also very commonly found in the field of industrial psychology, to integrate constructs of personality and interests in order to better predict work performance and satisfaction within the working environment (Hough, Barge, & Kamp, 2001).

Kahn (1990) studied how people’s experiences of themselves in their work context influenced moments of personal engagement and disengagement. Kahn (1990) states that people ask themselves, whether consciously or unconsciously, three important questions in each role situation: a) How meaningful is it for me to perform? b) How safe it is to perform? c) How available am I to perform? Olivier and Rothmann (2007) stated that these psychological conditions can affect a person’s level of engagement. There have not been any studies with regard to engagement and the psychological conditions in higher education, but there is evidence that these psychological conditions are profound indicators of engagement in the world of work (Kahn, 1990). May et al. (2004) state that someone who feels worthwhile, useful and valuable, as if he/she made a difference and were not taken for granted, will be more engaged in that activity.

Zang, Fang, Wei, and Chen (2010) believe that if psychological safety is high the student will be able to express his emotions freely without fearing negative consequences. But if psychological safety is low the student will not feel safe in expressing his views freely and openly. Kahn (1990) states that if a person experiences high levels of psychological safety his engagement levels will increase, which in turn can facilitate learning behaviours (Zang et al., 2010) and is important when sharing knowledge. Finally, May et al. (2004) also state that availability of resources may lead to greater engagement.

There are numerous resources students may or may not have available; these resources include physical resources and the emotional energy to perform a task, which may be affected by insecurity, lack of self-confidence, heightened self-consciousness and ambivalence about fit between the individual and the course of study, and non-university events (Kahn, 1990).

1.2.1 Literature review

Social support

According to Etzion (1984), social support can be defined as an informal social network that provides individuals with expressions of emotional concern or empathy, practical assistance, informational support or appraisal. Social support can further be described as the type of support a person receives or is expected to receive from individuals who regularly come into contact with that person in one way or another (Wilcox et al., 2005).
A number of different types of social support have been identified, according to House (1981). Among these are emotional support, which includes verbal and non-verbal cues of caring, apprehensiveness and the expression of feelings (e.g. empathy, care, love, encouragement and trust); instrumental support, which can be described as providing material goods (e.g. time, money and energy); informational support, which is giving information in order to assist and guide a person to decrease the level of uncertainty the person may have (e.g. advice and information); and appraisal support which is giving feedback with regard to performance.

Once the student enters the institution in which he is registered, there needs to be a feeling of social support (Wilcox et al., 2005). For social support to be successful, it is important to understand the six functions of support, or personal relationships, which include: (1) attachment, (2) social integration, (3) opportunity for nurturance, (4) reassurance of worth, (5) a sense of reliable alliance, and (6) the obtaining of guidance (Wilcox et al., 2005).

The relationship between the individual and his or her superiors has a direct impact on how safe the person feels in that environment (Kahn, 1990). Edmondson (1999) argues that if the superior is supportive and non-controlling, the individual is more likely to experience a sense of safety and trust. Superiors who are supportive are concerned for the well-being and development of the individual (Olivier & Rothmann, 2007). Wilcox et al. (2005) also state that in order for successful learning to take place, and for engagement levels to increase, there needs to be a quality relationship between the academic staff and the students.

The perceived organisational support theory can be used to illustrate the importance of having a feeling of trust and acceptance in any given environment (Schepers et al., 2008). This theory states that in order to meet socio-emotional needs, such as feeling safe, the individual creates a perception in his or her mind of what the institution is feeling for him and how this institution respects and cares about his well-being (Loscocco & Spitze, 1990). Students who perceive that the university supports them are more likely to experience high levels of engagement (Schepers et al., 2008). Social support can further be used to investigate the processes through which social integration influences students’ decisions to stay at university or withdraw (Wilcox et al., 2005).

**Academic fit**

It is believed that the fit between an individual and his environment is a fundamental predictor of the person’s attitude and behaviour (Schmitt, Oswald, Friede, Imus, & Merritt, 2008). Over the years, researchers have explored the important relationship between the individual’s personality and the role he or she plays within a specific environment (Kahn, 1990).
When individuals feel useful and valuable they are experiencing psychological meaningfulness, which will influence their “perceived fit” within the environment (Olivier & Rothmann, 2007). May et al. (2004) state that if a person perceives a sense of “fit” within the environment, the person’s self-concept and role will lead to a feeling of meaningfulness. Olivier and Rothmann (2007) argue that such meaningfulness is due to a person’s freedom to express his/her values and beliefs.

Humans are complex beings who want to be creative, experience a sense of meaning in their activities and are not merely goal-orientated in nature (Kahn, 1990). It is important for individuals to have a unique self-concept, be individualistic and express these needs in their work or study environment, and they need roles which can provide them with this sense of belonging (Olivier & Rothmann, 2007). Wilcox et al. (2005) state that if there is incompatibility between the student and the course and institution, the student will not be engaged, because of the lack of academic fit.

There are two types of academic fit, according to Schmitt et al. (2008):

- Complementary fit – a reciprocal relationship, where the individual and the institution have both got something to offer to the other entity.
- Supplementary fit – similarity or alignment between the individual and the values of the institution, and how these values relate to the person’s personality.

According to Allen and Robbins (2010), the academic fit construct has been used to predict student outcomes, where students’ environments are determined by their choice of study field. It is further highlighted that if there is fit between a student and his field of study, the person is more likely to be satisfied with the academic programme and more likely to graduate within the minimum required time frame (because the student is not constantly changing his or her field of study). These consequences follow from student engagement (Allen & Robbins, 2010).

**Psychological conditions**

Kahn (1990) identified three psychological conditions that may have an impact on engagement. These conditions include: (a) psychological meaningfulness, (b) psychological safety and (c) psychological availability. This study will focus only on the psychological conditions of meaningfulness and availability, which translates into the two fundamental questions people tend to ask themselves: (a) How meaningful is it for me to perform in this situation, and (b) how available am I to perform?

Kahn (1990) believed that the way people perceive themselves at work has an influence on their engagement levels. Kahn (1990) defined personal engagement as the behaviours “exerted by employees to bring in or leave out their personal selves during work role exertions”.
Kahn (1990) argues that people react in different ways in order to defend their preferred selves on the basis of their psychological experiences of self-in-role. May et al. (2004) further emphasise that people have critical psychological states that influence their internal work motivations.

People make assumptions based on their perceived benefits or meaningfulness in a situation in order to determine their level of engagement (Kahn, 1990). People will also examine the resources they have available to further determine their level of engagement (May et al., 2004).

**Psychological meaningfulness**

Meaningfulness can be described as the value a person attaches to a certain project, based on the person’s own ideas, standards and perceptions (May et al., 2004). It is believed that as human beings we are constantly striving for some kind of meaning (Frankl, 1992). It is further believed that if people have not found meaning in their work they are more likely to be alienated and disengaged from their work (Kahn, 1990). In order for a person to have meaning in his or her work, there needs to be a constant drive for self-improvement and self-discovery (Spreitzer, Kizilos, & Nason, 1997). May et al. (2004) go on to state that if people have a sense of meaning in their work, they will be more likely to experience personal growth and motivation in their work. Yorke (2004) argues that if students find meaning in their studies, they will be more likely to be committed towards their subject field and are more likely to experience a sense of engagement. If students enter higher education based on a “need to know” basis, they are not engaging in lifelong learning, and may not be as engaged in their studies (Yorke, 2004). When students experience a lack of meaning in their studies, alienation and disengagement can result (Spreitzer et al., 1997).

**Psychological availability**

There are many different aspects that could influence psychological availability, which can include non-academic processes, physical energy and emotional energy as well as insecurity (Olivier & Rothmann, 2007). Psychological availability can be seen as having a sense of physical, emotional or psychological resources to engage in a specific situation (Kahn, 1990), and in order to perform any task, individuals make use of these physical, emotional and cognitive resources (May et al., 2004). We do not use the same amount of energy for every task; e.g. for one task the individual may not use as many physical resources as emotional resources, or vice versa (Kahn, 1990). If students lack the resources they require, they will not be engaged in the task they are performing (Olivier & Rothmann, 2007). Availability also assesses the readiness or confidence of a student to engage in his/her institutional role, given that the person is engaged in many other life activities (May et al., 2004).
Students are more willing to engage themselves in their roles at university if they believe that they have the necessary physical, emotional and cognitive resources to do so (Kahn, 1990).

May et al. (2004) further argue that self-consciousness about the perceptions and views of others can have an influence on one’s level of psychological availability. If students are self-conscious in their academic environment they are more likely to be distracted by external activities, and may change their behaviours in order to fit in with their classmates (May et al., 2004).

**Engagement**

Over the last couple of years engagement has become a buzz word in the literature (Simpson, 2008), especially with regard to work engagement. Student engagement, on the other hand, has not received as much attention (Mostert et al., 2007).

According to Simpson (2008), engagement was first defined by William Kahn. Kahn (1990, p. 694) defined engagement as “the harnessing of organisational members’ selves to their work roles (by which they) employ and express themselves physically, cognitively and emotionally during role performances”.

In the current study, this would imply that students who are engaged in their studies are more likely to become physically involved in their studies, be more cognitively alert and will more easily connect on an emotional level with the people who are performing with them (Olivier & Rothmann, 2007). It is also believed that if students are engaged in their studies, it is not only the students who benefit, but also the university, which will have a competitive advantage as students who drop out create financial problems for universities, both directly and indirectly (Bennett, 2003, Macey & Schneider, 2008). Direct costs include lost fee income, while indirect costs can include lecturing staff, up-front administrative costs such as recruiting new students, and wasted resources (Bennett, 2003). If the students are engaged in their studies, Yorke (2004) argues, they will also experience higher academic success, which will, according to Yorke (2004), decrease student dropout rates.

**Intention to stay**

Student retention can be defined, according to Ashby (2004, p. 66), as “a measure of the percentage of students who gain a course credit or an award, based on the number who registered for a course or an award”. Universities and other colleges have implemented various programmes to respond to retention issues, such as a host of classes, workshops, and orientation or mentoring programmes to aid student retention (Mayo et al., 2004).
There have been numerous studies on higher education which address retention (Mayo et al., 2004). Research that has been done focused especially on African-American males; first generation and low-income college students; and non-traditional students and younger first-time students (Mayo et al., 2004).

Other studies, according to Woodley (2004), confirm that dropout rates are also influenced by the number of students in the course, whether the course has a residential, intensive, or block course associated with it, and how long the course itself has been on offer. There are a number of reasons why students drop out of university, but research finds that the most profound reasons are wrong course choice and poor support from family and friends (Ashby, 2004).

ACT (2004) has suggested interventions that institutions can utilise in order to decrease retention rates; these interventions include the following suggestions:

- Develop and implement a comprehensive set of social support services that meet students’ needs.
- Align the academic environment so that it is congruent with the academic and non-academic needs of students.
- Implement a monitoring system looking at key student characteristics linked to likelihood of success and continue to update profiles of students at risk of dropping out.
- Determine the cost benefit of retention activities to assist in decision-making relating to interventions.

Research has shown that student engagement is generally acknowledged as a key factor in student retention, and enhancing student engagement is a fundamental strategy for improving student retention, success and outcomes (Thomas, 2009). Although a lot of literature already exists on the engagement of students, this study, in attempting to understand the influence of the psychological conditions of meaningfulness and availability on student engagement, will investigate the problem of student engagement according to the model proposed by May et al. (2004). Krause and Coates (2008) state that for students to be successful in their studies later on in their lives, universities need to make sure those students are engaged in order to ensure a solid foundation for student success.
The following research questions emerged from the above-mentioned description of the research problem:

• How are social support, academic fit, the psychological conditions of meaningfulness and availability, engagement and intention to stay conceptualised in literature?
• What is the relationship between the above constructs?
• Does the model proposed in the study fit?

1.2.2 Expected contributions of the study

Contributions for the individual

• If students are more engaged in their studies they are more likely to graduate within the minimum allocated time frame
• Students will save on tuition fees if they graduate within the minimum required time period
• Students whose personalities are congruent with their course of study are more likely to graduate within the minimum time period

Contributions for the organisation

• If the research identifies the reasons for engagement costs will be reduced with regard to student dropouts and graduating within the minimum time frame
• If the lecturers support the students in their academic work the students will be more engaged in their studies
• The time and effort spent by students are invested in educationally purposeful activities which will result in effective educational practices
• If the reasons why some students intend to stay and complete their degrees can be identified, the university will save costs and have a better reputation for success
• If the student’s personality is congruent with his subject field, the student will be more likely to have a successful career after graduation

Contributions for I/O psychology literature

• Little research exists on higher education students and the impact of the psychological conditions
• There is also little research done on student engagement and the intention to stay
• Industrial psychologists as well as institutions of higher education can implement interventions on how to create social support systems for the students
• This study will assist in understanding how student engagement contributes to achievement and persistence (over and above learning ability)

1.3 RESEARCH OBJECTIVES

The research objectives are divided into a general objective and specific objectives.

1.3.1 General objective

The general objective of this research is to investigate students’ intention to stay by focusing on social support, academic fit, the psychological conditions of meaningfulness and availability and engagement with regard to first-year students.

1.3.2 Specific objectives

The specific research objectives are as follows:

• To conceptualise social support, academic fit, the psychological conditions of meaningfulness and availability, engagement and intention to stay in the literature.
• To explore the relationship between the above constructs.
• To test the model (adapted from May et al., 2004) used in the study.

The author will be using the model of engagement by May et al. (2004) as the foundation for developing a conceptual framework for this research article. The researcher wants to investigate whether the psychological conditions of meaningfulness and availability will mediate the relationship between social support and academic fit mediate with engagement, and whether there is a positive correlation between the psychological conditions of meaningfulness and engagement with engagement, and whether the engagement levels of first-year students correlate with the intention to stay at the university.

Firstly, the engagement model suggested by May et al. (2004) suggests three approaches towards engagement, namely (a) psychological meaningfulness, (b) psychological safety and (c) psychological availability. For the purpose of this study, only two approaches will be investigated, namely (a) psychological meaningfulness, and (b) psychological availability.
The extrapolated part of the model between psychological meaningfulness and engagement suggests that if the student feels worthwhile and valued in academia, he is more likely to develop himself and have a sense of motivation in his studies (May et al., 2004). Psychological availability can be seen as a sense of having the physical, emotional or psychological resources to engage in a specific situation (Kahn, 1990), which can be influenced by emotional energy, insecurity and non-work events (Olivier & Rothmann, 2007). Lastly, the researcher wants to test the model by identifying whether there is a correlation between the engagement levels of students and their intention to leave or stay at the university.

![Conceptual model for the research](image)

Figure 1. Conceptual model for the research

1.4 RESEARCH DESIGN

1.4.1 Research approach

A quantitative research design will be conducted, and can be defined according to de Vos, Strydom, Fouche, and Delport (2003) as an investigation into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed by statistical procedures in order to establish whether the prognostic generalisations of the theory hold true. This research can be seen as descriptive in nature as there has been no research on the relationship between engagement and psychological conditions among first-year students in South Africa.

The aim of this research is to gather information about the current state of first-year students. A cross-sectional design will be used to obtain the data and the research objectives.
Welman and Kruger (2001) describe a cross-sectional design as a research design where subjects are assessed at a single time in their lives. Shaughnessy, Zechmeister, and Zechmeister (2003) describe a cross-sectional design as most popular and allow that multiple samples can be drawn from the population at one point in time.

### 1.4.2 Research method

The research method for this research consists of a literature review and an empirical study. The results will be presented in the form of one research article.

### 1.4.3 Literature review

The literature review will focus on previous research carried out with regard to social support, academic fit, psychological conditions, engagement, and intention to stay.

Relevant articles published between 1950 and 2011 will be identified using article databases such as EBSCOHOST, Emerald, Science Direct, Google Scholar, WEBfet, SAEPublications, Proquest, ISI web of knowledge, Sabinet Online, Jstor, SpringerLink and Metacrawler. The following terms will be used as search terms: social support, academic fit, psychological meaningfulness, psychological safety, psychological availability, engagement, intention to stay and first-year students.

1.4.4 Research participants

A convenience sample \((n = 304)\) will be taken from the first-year students of the North-West University. The participants will include first-year students from Educational Sciences, Management Sciences and Behavioural Sciences. The sample will be representative of first-year students and will include participants of different genders, races, and ages and speaking various languages.

1.4.5 Measuring instruments

The following questionnaires will be used in the empirical study:

The Multidimensional Scale of Perceived Social Support

Social support will be measured by 11 items based on the MSPS, which measures social support on three levels, namely family (e.g. “My family really tries to help me.”), friends (e.g. “I can count on my friends when things go wrong.”) and significant other (e.g. “There is a special person who is around me when I am in need.”). A 7-point rating scale ranging from “very strongly disagree” (1) to “very strongly agree” (7) will be utilised (Zimet, Dahlem, Zimet, & Farley, 1988). The Cronbach’s coefficient alpha for the total scale is 0,88; these values indicate good internal consistency for the scale as a whole and for the three subscales (0,91, 0,87 and 0,85).

Academic Fit Scale

Academic fit will be measured by a six-item scale. Students will respond to the items on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items reflected academic fit items of a supplementary nature related to the academic context. The alpha coefficient of this measure was 0,75. Items that are included in this scale include: “The courses available at this school university match my interest” and “I know other students here whose academic interests match my own” (Schmitt et al., 2008).

Psychological conditions

Psychological conditions will be measured by eight adapted items based on the questionnaire of May et al. (2004), including three items measuring psychological meaningfulness (e.g. “The things I learn in my studies are very important to me”) and five items measuring psychological availability (e.g. “I am confident in my ability to deal with problems that come up in my study environment”).
For all items, a 5-point agreement–disagreement Likert format from 1 (never) to 5 (always) will be used. According to May et al. (2004), the internal consistency of these scales varies between 0.85 and 0.90.

**Work Engagement Scale (WES)**

The Work Engagement Scale (WES) was developed by May et al. (2004) to measure psychological engagement. For the purpose of this study, five adapted items based on this scale will be used (e.g. “Time passes quickly when I am busy with my studies”). Items answered on a 5-point agreement-disagreement Likert format from 1 (never) to 5 (always) will be used. The WES has a Cronbach alpha coefficient of 0.77. Although the UWES-S is an available measure for student engagement, the proposed scale would be used as it fits with the model used in this project.

**Intent to Leave Scale**

An adapted version of this scale was used to measure the reported intention of students with regard to their return to the institution. Two items are included in the scale: “How certain are you that you will be enrolled in the Fall?” [1 = I am certain I will be back in the fall; 8 = I am certain that I will not be at any college in the fall] and “How certain are you that you will be enrolled one year from today?” [1 = I am certain I will be here next spring; 8 = I will definitely not be at any college next year] Mean = 1.19; SD = 1.53; Range = 1.0–8.0. The measurement had average reliability coefficients of 0.67 (Eaton & Bean, 1995).

**1.4.6 Research procedure**

Permission from the university will be obtained before data will be gathered. Informed consent forms will be given to all the first-year students before continuing with the testing in order to make sure all the students participate in this study voluntarily. The study will be explained to the students in order to make sure they understand the reason for testing. The measuring instruments will also be explained to the students. The researcher will also explain to the students the ethical considerations as well as possible contributions to be made by this study. Confidentiality will be a top priority.

The researcher will also be available for personal discussions if there are any concerns or questions that the individual student may have. The data will be gathered immediately as the students will complete the questionnaire on a specific day and at a specific venue organised by the department.
1.4.7 Statistical analysis

Using SPSS (SPSS Inc., 2009), descriptive statistics will be calculated to explore the data. Exploratory factor analyses and Cronbach alpha coefficients will be computed to assess the validity and reliability of the constructs which will be measured in this study. Structural equation modelling (SEM) methods as implemented in AMOS (Arbuckle, 2008) will be used to test the structural model and to assess mediating effects.

The following indices produced by AMOS will be used in this study: the Chi-square statistic, which is the test of absolute fit of the model, the Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Normed Fit Index (NFI), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI) and the Root-Means-Square Error of Approximation (RMSEA).

Following the procedure explained by Hayes (2009), bootstrapping will be used to construct two-sided bias-corrected confidence intervals so as to evaluate mediation effects. The statistical significance of bootstrap-estimated indirect effects of social support on engagement will be assessed for statistical significance (Preacher & Hayes, 2008). Furthermore, 90 percent bootstrap confidence intervals (2000 trials) for all indirect effects will be computed to assess whether they include zeros. The significance of mediation steps is stated in terms of zero and nonzero coefficients, not in terms of statistical significance. Because trivially small coefficients can be statistically significant with large sample sizes and very large coefficients can be non-significant with small sample sizes, the steps should not be defined in terms of statistical significance.

1.4.8 Ethical considerations

It is of utmost importance for this research to be fair and ethical. Whenever this is not the case the consequences could be serious, leading to (a) the exploitation of the participants, (b) researchers disregarding the ethical considerations of legislation and councils such as the APA and HPCSA and (c) the law being broken, and thus violating the protection of the participants in the research. Ethical considerations are important for social, legal and statutory requirements, and for providing guidelines to researchers for behaving in the expected manner (APA, 2003; Cummings & Worley, 2005). During this time the roles and responsibilities of all the parties involved will be outlined and the participants will be made aware of the fact that the researcher will be actively involved in the entire process. The participants would be informed that their participation in the project is completely voluntary and that they can remove themselves from the proceedings at any time.
Once this has been done, the researcher will provide the participants with a consent form which states that the information obtained via the research will be used only for educational purposes and that they will in no way be negatively influenced by the information obtained during the process of the proceedings. The researcher will also be available to the participants at any time, should they want to discuss issues manifested during the course of the project. To protect the individual’s identity, the participants will not be asked to provide their names on the surveys.

1.5 CHAPTER DIVISION

The chapters in this thesis are presented as follows:

Chapter 1  Introduction.
Chapter 2  Research article.
Chapter 3  Conclusions, limitations and recommendations.

1.6 SUMMARY

In this chapter the problem was stated and relevant research on the constructs was mentioned. The research process was described, as well as the measuring instruments. In the next chapter the empirical findings of the research will be discussed, followed by the final chapter on recommendations and limitations of the study.
1.7 REFERENCES


CHAPTER 2

RESEARCH ARTICLE
FIRST-YEAR STUDENTS’ INTENTION TO STAY: ENGAGEMENT AND PSYCHOLOGICAL CONDITIONS

ABSTRACT
The aim of this study was to identify whether social support, academic fit, the psychological conditions of meaningfulness and availability and engagement can predict first-year students’ intention to stay in their educational environment. A quantitative, cross-sectional design was used to achieve the specific research objectives, making use of a convenience sample ($n = 304$). The measuring instruments were based on the Multidimensional Scale of Perceived Social Support, the Psychological Conditions Scale, the Academic Fit Scale, the Work Engagement Scale, and the Intent to Leave Scale. The results indicated that social support did not impact the psychological conditions of meaningfulness and availability, but had direct and indirect (via academic fit) effects on intention to stay. Academic fit was positively related to the psychological conditions of availability and meaningfulness, and also had a positive relationship with intention to stay. Furthermore, the psychological conditions of availability and meaningfulness had a strong positive relationship with the engagement levels of the first-year students, and engagement was positively related to the students’ intention to stay. Lastly, it was found that the psychological conditions of meaningfulness and availability mediated the relationship between academic fit and engagement, and engagement mediated the relationship between the psychological conditions of meaningfulness and availability with intention to stay.
Higher education institutions all over the world realise the importance of student retention; nevertheless, many students fail to persevere until graduation (Roberts & Styron, 2010). Even though South Africa’s higher education system has increased considerably in scope and intake over the last 15 years, only 15% of students have successfully graduated, which gives South Africa one of the lowest graduation retention rates worldwide (National Plan for Higher Education, 2001).

Students’ intention to stay in their higher education environment has become a major area of focus across the world, and the minister of Education, Naledi Pandor, states “that the very low throughput rates of our universities are a serious cause of concern, because it appears as if institutions are happy to admit failure, but few devote deliberate attention to supporting and rewarding success” (Lotkowski, Robbins, & Noeth, 2004). Higher education institutions need to increase their retention rates as university dropout is costing tax-payers in South Africa R4.5 billion in lost grants and subsidies each year. Higher retention rates, which can be seen as direct indicators of institutional success, will improve the image of the university (Lotkowski, et al., 2004).

Retention rates, successful completion of studies, university dropout and intention to stay are all direct indicators of why it is important to research this phenomenon (Seidman, 2005). Factors influencing the students’ intention to stay include academic self-confidence, academic goals, institutional commitment, social support, and involvement (Lotkowski et al., 2004). Seidman (2005) has identified some major reasons why it is important for students to stay within their educational institution: (1) it can be seen as a waste of time for the students as well as the university if the students do not complete their studies, (2) the economy may lose potential and productivity, (3) it may increase the quality of life for the student and his/her family, (4) university graduates usually earn more money over a lifetime, and (5) it may help with students’ self-esteem. According to Retief and Thata (2008), some reasons for successful completion of studies may include good career choices, competent academic staff, sufficient support, and a comprehensive retention strategy at institutional or faculty level. Academic success is closely linked to retention, persistence and graduation.

The Human Sciences Research Council (HSRC) conducted a study between 2006 and 2007 on seven South African public universities. In this study, 34 000 students across South Africa were researched and the HSRC found that 20 000 (58,8%) of the students dropped out of university, and only 14 000, or 41,2% students graduated within five years. Letseka and Maile (2008) argue that, even when the movement of students between institutions is taken into account, approximately 50% of undergraduates drop out. They also observed that one in three university students dropped out between 2000 and 2004. The main aim of this study was to investigate why certain factors could explain why students did not drop out, and why they continued with their studies.
Research on higher education indicates that the best predictors of student success are academic preparedness, motivation and student engagement (Pascarella & Terenzini, 2005). Student engagement has an influence on three key components: (1) the amount of time and effort students spend on academic activities, (2) the way the institutions use and allocate resources and learning opportunities to help students participate and benefit from such activities (Roberts & Styron, 2010), and (3) the increased likelihood of returning to their second year of study (Strydom & Mentz, 2010).

If students perceive a sense of social support, there will be an increase in their overall well-being, which will in turn help the students to adapt more easily to student life (Wilcox, Winn & Fyvie-Gauld, 2005). Social support can include support from peers, tutors and family, and can thus be seen as a successful predictor of engagement (Danielsen et al., 2010).

If there is a match between the student and his subject field it is believed to increase the student’s intention to stay and increase his/her levels of satisfaction; it may also better predict performance and increase the overall well-being of the student (Hough, Barge, & Kamp, 2001).

Kahn (1990) studied how people’s experiences of themselves in their work context influenced moments of personal engagement. Kahn (1990) states that people ask themselves, whether consciously or unconsciously, three important questions in each role situation: a) How meaningful is it for me to perform? b) How safe is it to perform? c) How available am I to perform? Olivier and Rothmann (2007) state that these psychological conditions can affect a person’s level of engagement. If one feels worthwhile, useful and valuable, as though one makes a difference and is not taken for granted, one will be more engaged in that activity (May et al., 2004).

If students perceive what they are doing as meaningful, they will put in more effort to succeed. If psychological safety is high, the student will be able to express his emotions freely without fearing negative consequences (Zang, Fang, Wei, & Chen, 2010), but if psychological safety is low, the student will not feel safe in expressing his views freely and openly. Kahn (1990) states that if a person experiences high levels of psychological safety, his/her engagement levels will increase, which in turn can facilitate learning behaviours (Zang et al., 2010) and is important when sharing knowledge. Finally, May et al. (2004) also state that availability of resources may lead to greater engagement.

There are numerous resources (as identified by Kahn) students may or may not have available; these resources include physical resources and the emotional energy to perform a task, which may be affected by insecurity, lack of self-confidence, heightened self-consciousness and ambivalence about fit between the individual and the course of study, and non-university events.
No studies have been conducted with regard to engagement and the psychological conditions in higher education, but there is evidence that these psychological conditions are profound indicators of engagement in the world of work (Kahn, 1990). In a recent article published by ScienceDaily it was evident to see that if a person perceives to feel worthwhile and valuable, and have physical, emotional and psychological resources to successfully complete their tasks, they will experience personal engagement (Gruman & Saks, 2011).

**Social support**

Universities all over the world rely heavily on the persistence of each student to integrate socially and academically into campus life (Hurtado & Carter, 1997). If a student integrates well at university he/she will experience a sense of belonging, which will in turn increase persistence to stay (Hausmann, Schofield, & Woods, 2007).

Social support is “an interpersonal transaction involving one or more of the following: (1) emotional concern, such as liking, loving and empathy, (2) instrumental aid, such as goods or services, (3) information, which is about the environment, or (4) appraisal, information relevant to self-evaluation” (House, 1981, p. 39). Social support can be perceived as being valued, respected, cared about and loved by others who are present in one’s life (Gurung, 2006).

Social support may come from different sources, such as family, friends, lecturers, the community and any other social group one may be affiliated with (Gurung, 2006). Positive peer relationships, faculty and staff mentors, and family and community support are all types of social support, and are critical in the process of familiarising the student with university life (Zajacova, Lynch, & Espenshade, 2005). Furthermore, social support can be seen as the tangible assistance that others can provide a person in different situations; it can also ensure more effective coping mechanisms (Yasin & Dzulkifli, 2010).

Research has shown that when one experiences social support, one is likely to experience less stress and may cope better in stressful situations, and that social support correlates positively with physical and mental health (Nahid & Sarkis, 1994). DeBerard, Spielmans, and Julka (2004) found that the level of social support was a significant independent predictor of academic achievement, and that it decreased the stress associated with the transition process from high school to university. DeBerard et al. (2004) further argued that social support may be a useful way of insulating the student from the harmful impact of stress, and that certain outreach programmes must be implemented to encourage students to attain and utilise social support during this transition phase.
Social support was found to be one of the most important protective factors for students (Tao, Dong, Pratt, Hunsberger, & Pancer, 2000). In addition, social support can help students to cope with everyday life stressors such as academic workload (Wentzel, 1998). Gloria, Castellanos, Lopez, and Rosales (2005) argue that, for students, it is very important to have perceived social support, such as friendships and peer mentoring, as this has a direct influence on deciding to leave or to stay at the institution. Family and community support has a positive influence on the persistence of first-year students, and students with high family interaction not only report higher performance, but are also more likely to complete their studies (Turner, Chandler, & Heffer, 2009). The absence of social support can present a challenge to even the brightest students in higher education institutions (Turner et al., 2009).

**Academic fit**

Non-completion of studies, according to Tinto (1987), is a result of a mismatch between the student’s social and academic background, and specific career choice goals. Yorke (2000) and Christie, Munro, and Fisher (2004) add that choosing the wrong field of study and the lack of commitment to the chosen programme were the major causes of dropout, according to a study. A shocking 21.6% of students reported dropping out of university at the end of the first year owing to wrong course decisions (Long, Ferrier, & Heagney, 2006). The available evidence indicates that students’ perception of fit significantly increases their performance and satisfaction, which will increase the students’ levels of engagement (Furrer & Skinner, 2003).

Academic fit is described as the matching of or compatibility between the student’s personal characteristics and those characteristics of the course and institution (Kristof-Brown, Zimmerman, & Johnson, 2005). Research studying fit has been derived from various psychological domains and there is a large body of career and vocational literature that focuses on the degree to which an occupation fits the individual’s interest, the most familiar of these being the theory of Holland (Schmitt, Oswald, Friede, Imus and Merritt, 2008). One component of Holland’s theory of vocational preferences (1997) indicates that individuals seek environments based on activity types as well as personality types, which suggests that a match between a student’s interest and subject choices will have a positive impact on intention to stay and the likelihood of graduating (Holland, 1997).

There are many different ways students choose a career path, which include (1) parental influence, (2) friends and peer influences, (3) teachers’ influence, (4) ethnic-gender expectations, (5) high school academic experiences and self-efficacy, and (6) negative social events (Allen & Robbins, 2010).
For some students this may have a positive outcome, but for the rest of the students there may be common pitfalls, such as the lack of academic awareness, lack of career awareness, lack of personal awareness, inability to integrate information, and premature decisions (Fisher & Griggs, 1995). In studies investigating persistence it has been found that those students who are confident in their abilities to make appropriate career decisions are more likely to be successful in completing their studies (Sandler, 2000).

With reference to academic preparedness, it was found that greater academic fit was associated with higher retention rates (Allen & Robbins, 2008), and that the intention to stay at the institution was predictive of graduation status. If there is congruence between the student and the environment it will result in greater satisfaction, lower levels of stress, a higher level of achievement and successful completion of studies (Hutz, Martin, & Beitel, 2007).

Whether in the classroom or in the organisation, individuals need to be creative and experience a sense of meaning in their daily activities in order to feel appreciated (Kahn, 1990). If students do not feel useful and valuable within the educational environment their perceived fit will be negatively influenced, which may influence their self-concept and role, leading to a feeling of meaninglessness (Allen & Robbins, 2008).

**Psychological conditions**

Psychological meaningfulness, psychological safety and psychological availability can predict student engagement (Kahn, 1990). For the purpose of this study, only the psychological conditions of meaningfulness and availability will be discussed, as psychological safety was not found to be reliable in this study in the education context.

Psychological meaningfulness can be defined as “the value of a work goal or purpose, judged in relation to an individual’s own ideas or standards” (May et al., 2004, p. 14), and this experience may lead to a positive outcome such as personal growth, motivation, and even engagement (Pratt & Ashfort, 2003). Individuals primarily seek meaning in their work, and will evaluate this feeling of meaningfulness according to their own set of values and standards (Hackman & Oldham, 1980). Psychological meaningfulness will increase when individuals experience respect and dignity from their interactions, and if their contributions are seen as valued (Rothmann & Rothmann, 2010).

Psychological meaningfulness is influenced by several factors, but for the purpose of this study, academic fit and social support were the focus.
Thus, individuals will seek roles in which they can express themselves authentically and creatively (Shamir, 1991), and where they have a positive self-concept in their roles to express their values and beliefs.

Individuals will experience more meaning in their roles when they have rewarding interpersonal interactions among fellow students, lecturers and even family members (Locke & Taylor, 1990). The level of interaction an individual has with his/her social support systems will foster a stronger sense of social identity, a sense of belonging, and even greater meaningfulness (Kahn, 1990).

Psychological availability “is partly a matter of security in abilities and status and maintaining a focus on tasks rather than anxieties” (Kahn, 1990), and refers to a “sense of having the physical, emotional, or psychological resources to personally engage at a particular moment” (Kahn, 1990, p. 714). A lack of psychological availability decreases an individual’s energy levels, which could have been used to complete the necessary tasks.

If individuals were to cultivate a sense of psychological availability, it would enable them to think more clearly and spend their energy on the particular work task (Kahn, 1990). For students to engage in their work tasks they need to have the cognitive resources, such as the ability to generate ideas; psychological resources, which is the ability to cope with failures and resistance; and social resources, which is the ability to generate and implement ideas, in order to proactively engage in their work (Vinarski-Peretz, Binyamin, & Caremeli, 2011). If students lack the resources they require, they will not be engaged in the task they are performing (Olivier & Rothmann, 2007). People will tend to focus their energy on managing impression, and not necessarily on the work or activity itself, which will leave them with little space and energy to engage with the specific task at hand (Vinarski-Peretz et al., 2011).

Psychological availability can be influenced by many different things in our environment, and according to Olivier and Rothmann (2007), these aspects could include non-academic processes, the physical energy we use in order for us to complete our daily tasks, our emotional energy, and our own insecurities. In order for individuals to perform an activity, the individual must make use of these physical, emotional and cognitive resources (May et al., 2004). Availability also considers the readiness or confidence of students to engage in their educational role, given that each person is engaged in many other life activities (May et al., 2004). Students are more willing to engage themselves in their roles at university if they believe that they have the necessary physical, emotional and cognitive resources to do so (Kahn, 1990).
May et al. (2004) go on to state that self-consciousness about the perceptions and views of others can have an influence on one’s level of psychological availability. If students are self-conscious in their academic environment they are more likely to be distracted by external activities, and may change their behaviours in order to fit in with their classmates (May et al., 2004). It is believed that when individuals experience positive relationships in their environment, their sense of psychological availability is increased, so that they can free resources to channel into their work and engage in innovative behaviours (Vinarski-Peretz et al., 2011). Positive relational experiences encourage a secure atmosphere for individuals and enable them to articulate themselves without social and psychological distractions. Positive social interactions build people's physiological resourcefulness, which is an additional bodily source for the effort needed to engage in work roles (Heaphy & Dutton, 2008), and also expand the cognitive capacity that broadens one's range of options, and promotes creative solutions for work-related problems.

**Engagement**

The first-year experience at university is known to be an important predictor of retention, persistence, completion and achievement (Hillmann, 2005). One of the most important factors influencing the first-year experience is engagement, which is a broad phenomenon that includes academic as well as certain non-academic and social aspects of the student experience (Coates, 2006). For students to be engaged it is important that they feel accepted and affirmed; they need to have a sense of belonging (Zepke & Leach, 2010).

Student engagement has been a growing research topic, and it is believed that students who are engaged are more likely to persist, achieve academic success and complete their qualifications (Zepke & Leach, 2010). Engagement can be conceptualised as the persistent and affective-motivational state which is not necessarily focused on a specific event, behaviour, individual or object, and can be identified by vigour, dedication and absorption (Schaufeli, Salanova, & González-Romá, 2002).

For the purpose of this study we defined engagement as “the harnessing of organisation members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance” (Kahn, 1990, p. 693). The cognitive aspect of employee engagement is the employees’ beliefs about the organisation, the leaders and the working conditions (Kular, Gatenby, Rees, Soane, & Truss, 2008). The emotional aspect is how the employees feel about the organisation, the leaders and the working conditions, and whether they have a positive or negative attitude concerning the above-mentioned aspects (Kular et al., 2008); and the physical aspect is the physical energy to accomplish their goals. According to Kahn (1990), engagement means to be psychologically as well as physically present when performing our daily activities.
This translates to how students “connect” with the tertiary education environment, including the academic expectations, fellow students and academic staff, as well as how they express this in their actions, thoughts and feelings. Students who are engaged in their studies are more likely to become physically involved in their roles, will be more cognitively alert and will more easily connect on an emotional level with the people who are performing with them (Kular et al., 2008).

**Intention to stay**

There are three primary reasons for universities to address the issue of retention: (1) The economy – a decline in the number of students who enrol each year will result in a decrease in tuition income: a practical example is that the income produced by four first-year students who leave after one year is equal to one student who remains at the institution for four years (Bean, 1986); (2) the university has an ethical responsibility to demonstrate good faith in student success (Bringle, Hatcher, & Muthiah, 2010), and (3) it involves costs to the university, and not only monetary costs, but costs in administration and demoralised faculty and staff as well (Bringle et al., 2010).

Intention to stay can be defined as “the degree to which a person has consciously formulated plans to perform or not perform some behaviour and the level of commitment to and contentment with the decision after it has been made” (Bienvenu, 2000). Intentions are indicators of how hard people are willing to try and how much they are willing to give in order to perform a specific behaviour (Ajzen, 1991). It is important to understand that student retention is a measure of the percentage of students who gain enough credit to graduate at university, based on the number of students who registered at the beginning of the course (Ashby, 2004).

Tinto (1975) identified three dominant factors which influence why students choose to leave or stay at an institution: (1) individual characters, such as family background, personality, past educational experiences and goal commitment; (2) institutional characteristics, which include size, type and quality; and (3) students’ interaction with the university’s environment, such as social interactions, academic integration and academic fit.

There are numerous studies done on student retention rates, and the key concept constantly appearing is the level of student engagement (Crosling, Heagney, & Thomas, 2009). It has been found that student engagement can be seen as a fundamental strategy for improving the success of students, their intention to stay as well as student achievements (Krause & Coates, 2008).
All the above constructs can be adapted to fit in the proposed model of May et al. (2004) as indicated below. According to this model, social support (which replaced supervisor support) and academic fit (which replaced work-role fit) both influence the psychological conditions of meaningfulness and availability, which in turn mediates the relationship between social support and academic fit with engagement, which predicts intention to stay on at a tertiary institution.

![Conceptual model for the research](image)

*Figure 1. Conceptual model for the research*

Based on the above model and literature review, the following hypotheses are formulated:

**Hypothesis 1:** Social support of first year students is positively related to the psychological conditions of meaningfulness and availability. If students feel supported, they will feel obligated to become cognitively, emotionally and physically involved in their work roles, they will feel they are wanted (Saks, 2006).

**Hypothesis 2:** Academic fit of first year students is positively related to the psychological conditions of meaningfulness and availability. Individuals need to be creative and experience a sense of meaning in their daily activities in order to feel appreciated (Kahn, 1990). If students do not feel useful and valuable within the educational environment their perceived fit will be negatively influenced, which may influence their self-concept and role, leading to a feeling of meaninglessness (Allen & Robbins, 2008).

**Hypothesis 3:** The psychological conditions of meaningfulness and availability are positively related to the engagement of first year students. For students to be engaged it is important that they feel accepted and affirmed; they need to have a sense of belonging (Zepke & Leach, 2010).
Hypothesis 4: The engagement of first year students is positively relayed to their intention to stay. Student engagement is a fundamental strategy for improving the success of students, their intention to stay as well as student achievements (Krause & Coates, 2008).

Hypothesis 5: The psychological conditions of meaningfulness and availability mediate the relationship between social support and engagement. If people have not found meaning in their work they are more likely to be alienated and disengaged from their work (Kahn, 1990). When students experience a lack of meaning in their studies, alienation and disengagement can result (Spreitzer et al., 1997).

Hypothesis 6: The psychological conditions of meaningfulness and availability mediate the relationship between academic fit and engagement. If students are self-conscious in their academic environment they are more likely to be distracted by external activities, and may change their behaviours in order to fit in with their classmates (May et al., 2004).

Hypothesis 7: Engagement mediates the relationship between the psychological conditions of meaningfulness and availability and intention to stay. Engagement means to be psychologically as well as physically present when performing our daily activities, feeling meaningful, having the resources to complete your activities and choosing to stay in the environment.

**RESEARCH METHOD**

Research design

The study was conducted by means of a quantitative research design, which can be defined, according to de Vos, Strydom, Fouche, and Delport (2003), as an investigation into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed by statistical procedures in order to establish whether the prognostic generalisations of the theory hold true. The research was descriptive in nature, as the research presented us with a picture of specific details of a situation, social setting and/or relationship, and focused on “how” and “why” questions (de Vos et al., 2003). The aim of this research was to gather information about the current state of first-year students.

A cross-sectional design was used to obtain the data and the research objectives. Welman and Kruger (2001) describe a cross-sectional design as a research design where subjects are assessed at a single time in their lives. This is a very popular method and allows multiple samples to be drawn from the population at one point in time (Shaughnessy, Zechmeister, & Zechmeister, 2003).

Research procedure
The research method for this research consisted of a literature review and an empirical study. The literature review was conducted by consulting various search engines and journals. The empirical study consisted of several phases: firstly ethical approval was obtained from the NWU Ethics committee, whereafter lecturers from the Educational Sciences, Management Sciences and Behavioural Sciences were contacted to get permission to administer the questionnaires during class times. The questionnaires were administered by registered psychologists, whereafter it was captured and statistical analysis was done. The results are presented in the form of one research article.

Participants

A convenience sample \((n = 304)\) was taken from the first-year students of the North-West University. The participants included first-year students from Educational Sciences, Management Sciences and Behavioural Sciences. According to Table 1, the majority of participants were female (65.5%), of African race (59.2%) and between the ages of 18 and 24 (92.4%), while 87.5% were historical first years.
Table 1

**Characteristics of the Participants (n = 304)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>101</td>
<td>33,2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>199</td>
<td>65,5</td>
</tr>
<tr>
<td></td>
<td>Missing values</td>
<td>4</td>
<td>1,3</td>
</tr>
<tr>
<td>Race</td>
<td>African</td>
<td>180</td>
<td>59,2</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>103</td>
<td>33,9</td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>5</td>
<td>1,6</td>
</tr>
<tr>
<td></td>
<td>Coloured</td>
<td>10</td>
<td>3,3</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>0,7</td>
</tr>
<tr>
<td></td>
<td>Missing values</td>
<td>4</td>
<td>1,3</td>
</tr>
<tr>
<td>Age</td>
<td>18–24</td>
<td>281</td>
<td>92,4</td>
</tr>
<tr>
<td></td>
<td>25–30</td>
<td>12</td>
<td>3,9</td>
</tr>
<tr>
<td></td>
<td>31–40</td>
<td>5</td>
<td>1,6</td>
</tr>
<tr>
<td></td>
<td>41+</td>
<td>2</td>
<td>0,7</td>
</tr>
<tr>
<td></td>
<td>Missing values</td>
<td>4</td>
<td>1,3</td>
</tr>
<tr>
<td>Historical first year</td>
<td>1</td>
<td>266</td>
<td>87,5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>12</td>
<td>3,9</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>0,7</td>
</tr>
<tr>
<td></td>
<td>Missing values</td>
<td>24</td>
<td>7,9</td>
</tr>
</tbody>
</table>

**Measuring instruments**

The following questionnaires were used in the empirical study:

Social support was measured by 11 items based on the Multidimensional Scale of Perceived Social Support (MSPS), which measures social support on three levels, namely family (e.g. “My family really tries to help me”), friends (e.g. “I can count on my friends when things go wrong”) and significant other (e.g. “There is a special person who is around me when I am in need”). A 7-point rating scale ranging from “very strongly disagree” (1) to “very strongly agree” (7) was utilised (Zimet, Dahlem, Zimet, Farley, 1988). Items included: “There is a special person who is around when I am in need” and “I get the emotional help and support I need from my family”.

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A study conducted in South Africa by Louw and Viviers (2010), who also used the MSPSS scale, found that the measurement is reliable in the South African context, with a Cronbach Coefficient alpha of 0.87 (and the three sub-scales were also reliable, with support from significant others 0.81, family support 0.83, and friend support 0.86).

Psychological conditions were measured by eight adapted items based on the questionnaire of May et al. (2004), including three items measuring psychological meaningfulness (e.g. “The things I learn in my studies are very important to me”) and five items measuring psychological availability (e.g. “I am confident in my ability to deal with problems that come up in my study environment”). For all items, a 5-point agreement-disagreement Likert format from 1 (never) to 5 (always) was used.

No supporting evidence was found for the use of the Psychological Conditions Scales in higher education, but Rothmann and Rothmann (2010) researched the predictors of employee engagement in South Africa, and found psychological availability had a Cronbach alpha of 0.84, and psychological meaningfulness had a Cronbach alpha of 0.91. Above-average alpha coefficients were found on both subscales when tested in this study, with psychological availability 0.85 and psychological meaningfulness 0.93.

The Academic Fit Scale was used to test the fit between the student and his/her/the environment. The measurement consisted of six items, measured on a five-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). Examples of items are “The courses available at this university match my interests” and “All things considered, my current major subjects suit me” (Schmitt et al., 2008).

The Work Engagement Scale (WES) was developed by May et al. (2004) to measure psychological engagement. For the purpose of this study, five adapted items based on this scale were used (e.g. “Time passes quickly when I am busy with my studies”). Items answered on a 5-point agreement-disagreement Likert format from 1 (never) to 5 (always) were used. Engagement originally had three subscales, namely cognitive, emotional and physical engagement, but with the implementation of the structural equation model it was found that engagement would fit better if measured as only one component. A South African study by Buys and Rothmann (2010) also used the WES to research engagement, and found that the measurement is reliable in the South African context, with a Cronbach alpha of 0.81.

The Intent to Leave Scale was developed by Eaton and Bean (1995) and was used to measure the students’ intention to stay or to leave the educational institution. The measurement consisted of three items. The questions were rated on a five-point rating scale from 1 (strongly disagree) to 5 (strongly agree).
The items included: “I will register again for this course in January at this institution”, “I consider giving up my studies” (reverse scored) and “I frequently think of quitting my studies” (reverse scored). This questionnaire was originally used in the USA, but was reviewed and adapted by a panel of psychologists to fit within the South African context. Eaton and Bean (1995) report a Cronbach alpha of 0.67, and in this study reliability was found to be acceptable, with a Cronbach alpha of 0.71.

Statistical analysis

Cronbach alpha coefficients (α) were calculated and were used in order to determine the validity and reliability of the measuring instruments. Structural equation modelling (SEM) methods as implemented in AMOS (Arbuckle, 2009) were used to test the measurement and structural models. The following indices produced by AMOS were used in this study: a) absolute fit indices, including the Chi-square statistic, which is the test of absolute fit of the model, the Standardized Root Mean Residual (SRMR), and the Root-Means-Square Error of Approximation (RMSEA); and b) incremental fit indices, including the Tucker-Lewis Index (TLI) and the Comparative Fit Index (Hair, Black, Babin, & Andersen, 2010). The TLI and CFI values higher than 0.90 are considered acceptable. RMSEA values lower than 0.05 and a SRMR lower than 0.08 indicate a close fit between the model and the data (Hair, et al., 2010).

RESULTS

Testing the measurement model

Structural equation modelling (SEM) methods, as implemented by AMOS (Arbuckle, 2006), were used to test the measurement model. Global assessments of model fit were based on several goodness-of-fit statistics (CFI, TLI, RMSEA and RMSR).

Hypothesised models

In the hypothesised models, each of the observed variables loaded on only one latent factor. The observed variables in the model were treated as continuous variables. Errors of measurement associated with observed variables are uncorrelated. Latent variables were allowed to correlate.

The following measurement models were tested:

- Model 1: This model consisted of five latent factors: engagement (five items); psychological conditions, including psychological availability (five items) and psychological meaningfulness (six items); social support, including support from significant others (four items), friends (three items) and family (four items); academic fit (six items); and intention to stay (three items).
Model 2: This model consisted of five latent factors: engagement (five items); psychological conditions (11 items); social support, including support from a special person (four items), friends (three items) and family (four items); academic fit (six items); and intention to stay (three items).

Model 3: This last model consisted of five latent factors, namely engagement (five items), psychological conditions (11 items), social support (11 items), academic fit (six items) and intention to stay (three items).

Table 2 presents fit statistics for the test of the various models.

Table 2
Fit Statistics of Competing Measurement Models (n = 304)

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>1106.31</td>
<td>579</td>
<td>0.90</td>
<td>0.91</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Model 2</td>
<td>1469.52</td>
<td>581</td>
<td>0.83</td>
<td>0.85</td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Model 3</td>
<td>2277.72</td>
<td>584</td>
<td>0.68</td>
<td>0.71</td>
<td>0.10</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Comparison of the fit indices indicates that Model 1 fitted the data best. The other two models showed a poor fit to the data. Table 2 shows that a \( \chi^2 \) value of 1106.31 (\( df = 579 \)) was obtained for Model 1, which was subsequently used as a baseline model to decide whether the other two models represented a statistically significant improvement. The following changes in chi-square (\( \Delta \chi^2 \)) were found when the competing models were compared: Models 1 and 2 (\( \Delta \chi^2 = 363.21, \Delta df = 2, p \leq 0.01 \)); and Models 1 and 3 (\( \Delta \chi^2 = 1171.41, \Delta df = 5, p \leq 0.01 \)). These results show that Model 1 indeed fitted the data statistically significantly better than the other two models.

The first model hypothesised that a student’s intention to stay at an educational institution consists of three latent first-order factors, namely engagement (five items), academic fit (six items) and intention to stay (three items). The model further hypothesised two latent second-order factors, namely psychological conditions, consisting of psychological availability (five items) and psychological meaningfulness (six items) and social support, consisting of support from a special person (four items), support from friends (three items) and support from family (four items). It was assumed that the errors of items are uncorrelated. The model was over-identified: It had 666 distinct sample moments, 81 distinct parameters to be estimated, and 579 degrees of freedom.
Testing the structural model

The descriptive statistics and cronbach alpha coefficients of the measuring instruments in the measurement model are reported in Table 3. The results in Table 3 show that all the scales had acceptable cronbach alpha coefficients ($\geq 0.70$) (Nunnally & Bernstein, 1994), except for engagement ($\alpha = 0.69$).
Table 3

Descriptive Statistics and Cronbach Alpha Coefficients and Pearson Correlations of the Scales (n = 304)

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological availability</td>
<td>19,10</td>
<td>3,25</td>
<td>0,85</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Psychological meaningfulness</td>
<td>25,41</td>
<td>4,22</td>
<td>0,93</td>
<td>0,46**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Engagement</td>
<td>19,73</td>
<td>3,12</td>
<td>0,69</td>
<td>0,40**</td>
<td>0,64**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Social support (others)</td>
<td>22,94</td>
<td>5,30</td>
<td>0,88</td>
<td>0,14*</td>
<td>0,05</td>
<td>0,16**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Social support (family)</td>
<td>21,34</td>
<td>5,41</td>
<td>0,88</td>
<td>0,18**</td>
<td>0,11</td>
<td>0,15*</td>
<td>0,40**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Social support (friends)</td>
<td>15,34</td>
<td>4,13</td>
<td>0,87</td>
<td>0,20**</td>
<td>0,00</td>
<td>0,06</td>
<td>0,44**</td>
<td>0,45**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7. Academic fit</td>
<td>23,08</td>
<td>4,65</td>
<td>0,80</td>
<td>0,36**</td>
<td>0,38**</td>
<td>0,29**</td>
<td>0,22**</td>
<td>0,20**</td>
<td>0,23**</td>
<td>-</td>
</tr>
<tr>
<td>8. Intention to stay</td>
<td>16,81</td>
<td>3,32</td>
<td>0,71</td>
<td>0,29**</td>
<td>0,35**</td>
<td>0,31**</td>
<td>0,22**</td>
<td>0,22**</td>
<td>0,17**</td>
<td>0,55**</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.01 level (2-tailed)

** Correlation is significant at the 0.05 level (2-tailed)
Figure 2 shows the standardised path coefficients estimated by AMOS for the proposed theoretical model.

* \( p \leq 0.05 \)

**Figure 2.** Maximum likelihood estimates for the hypothesised model

**Hypothesis 1:** Social support is positively related to the psychological conditions of meaningfulness and availability. Social support did not have a significant relationship with the psychological conditions of meaningfulness and availability. This result does not provide support for Hypothesis 1.

**Hypothesis 2:** Academic fit is positively related to the psychological conditions of meaningfulness and availability. Academic fit had a significant positive relationship with the psychological conditions of meaningfulness and availability. The ML-estimated equation accounted for a moderate proportion of the variance in the psychological conditions of meaningfulness and availability \((R^2 = 0.28)\). This result provides support for Hypothesis 2.

**Hypothesis 3:** The psychological conditions of meaningfulness and availability are positively related to the engagement of first-year students. The psychological conditions of meaningfulness and availability had a significant positive relationship with engagement.
The ML-estimated equation accounted for a substantial proportion of the variance in engagement \((R^2 = 0.86)\). This result provides support for Hypothesis 3.

**Hypothesis 4:** The engagement of first-year students is positively related to their intention to stay. Engagement of first years had a significant positive relationship with their intention to stay. The ML-estimated equation accounted for a small portion of the variance in intention to stay \((R^2 = 0.19)\). This result provides support for Hypothesis 4.

To test hypothesis 5, 6 and 7, which investigates mediation, competing models and the value of indirect effects were calculated. **Hypothesis 5:** The psychological conditions of meaningfulness and availability mediate the relationship of social support and engagement. **Hypothesis 6:** The psychological conditions of meaningfulness and availability mediate the relationship of academic fit and engagement. **Hypothesis 7:** Engagement mediate the relationship between the psychological conditions of meaningfulness and availability and intention to stay.

To meet the conditions for mediation (as described by Baron & Kenny, 1986), three different models using the AMOS18 program (Arbuckle, 2009) were analysed. The three competing models were as follows: a) Model 1 (‘Indirect effects’ model) estimated paths from the independent variables to the hypothesised mediator and from the mediator to engagement and intention to stay; b) Model 2 (‘Direct effects’ model) estimated direct paths from the independent variables to intention to stay; c) Model 3 (‘Full’ model) estimated direct and indirect paths from the independent variables to its proposed mediator and intention to stay.

Path analysis was used to examine the fit of these models to the data. Because the indirect effects model and the direct effects model are both hierarchically nested within the full model, differences in fit can be determined using the chi-square (i.e. \(\Delta \chi^2\)) test described by Kline (2010). The fit statistics for the different models are reported in Table 4. The significant \(\chi^2\) difference tests indicate that the hypothesised model (Model 1) has a better overall fit with the data than the direct effects model \((\Delta \chi^2 = 116.08, \Delta df = 3, p \leq .01)\). However, the full model (Model 3) has a better overall fit than the hypothesised model \((\Delta \chi^2 = 75.68, \Delta df = 6, p \leq .01)\).
Table 4
Initial Framework Fit Indices and Standardised Path Coefficients

<table>
<thead>
<tr>
<th>Measures</th>
<th>Indirect effects (Model 1)</th>
<th>Direct effects (Model 2)</th>
<th>Direct and indirect effects (Model 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fit indices</strong></td>
<td><strong>χ²</strong></td>
<td><strong>Df</strong></td>
<td><strong>TLI</strong></td>
</tr>
<tr>
<td></td>
<td>1181,99</td>
<td>585</td>
<td>0,89</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1298,07</td>
<td>582</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1106,31</td>
<td>579</td>
</tr>
<tr>
<td><strong>CFI</strong></td>
<td>0,90</td>
<td>0,87</td>
<td>0,91</td>
</tr>
<tr>
<td><strong>RMSEA</strong></td>
<td>0,06</td>
<td>0,06</td>
<td>0,06</td>
</tr>
<tr>
<td><strong>SRMR</strong></td>
<td>0,09</td>
<td>0,14</td>
<td>0,06</td>
</tr>
<tr>
<td><strong>Direct effects on</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td>0,43*</td>
<td>0,07</td>
<td>0,00</td>
</tr>
<tr>
<td><strong>Psychological conditions</strong></td>
<td></td>
<td>0,16</td>
<td>0,17</td>
</tr>
<tr>
<td><strong>Social support</strong></td>
<td>0,16*</td>
<td>0,16</td>
<td></td>
</tr>
<tr>
<td><strong>Academic fit</strong></td>
<td>0,43*</td>
<td>0,40*</td>
<td></td>
</tr>
<tr>
<td><strong>Direct effects on</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social support</strong></td>
<td>0,08</td>
<td>-0,02</td>
<td></td>
</tr>
<tr>
<td><strong>Academic fit</strong></td>
<td>0,52*</td>
<td>0,55*</td>
<td></td>
</tr>
<tr>
<td><strong>Direct effects on</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Psychological conditions</strong></td>
<td></td>
<td>0,93*</td>
<td>0,99*</td>
</tr>
<tr>
<td><strong>Social support</strong></td>
<td>0,10</td>
<td>0,12</td>
<td></td>
</tr>
<tr>
<td><strong>Academic fit</strong></td>
<td>0,38*</td>
<td>-0,18</td>
<td></td>
</tr>
<tr>
<td><strong>Direct effects on</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social support</strong></td>
<td>0,34*</td>
<td>0,34*</td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05

*Revised model*

Given that the full model (including both direct and indirect effects) does not fit the data better than the originally theorised model, the model was revised further by removing all the paths which were not statistically significant. The revised model showed acceptable fit: χ² = 1111,26, df = 583, CFI = 0,91, TLI = 0,90, RMSEA = 0,06 and SRMR = 0,06.
The chi-square difference tests after these paths were deleted indicated that removal of these paths did not significantly impact the model’s degree of overall fit ($\Delta \chi^2 = 4.95, \Delta df = 4, p \leq 0.01$), when compared with Model 3. Compared with the hypothesized model, the revised model was also not significantly different ($\Delta \chi^2 = 4.95, \Delta df = 4, p \geq 0.01$).

Figure 3 shows the standardised path coefficients estimated by AMOS for the revised model

* $p \leq 0.05$

*Figure 3. Maximum likelihood estimates for the revised model*

Following the procedure explained by Hayes (2009), bootstrapping was used to construct two-sided bias-corrected confidence intervals so as to evaluate indirect effects (see Table 5).
Table 5

Indirect (Mediation Effects) of Psychological conditions of Psychological conditions, Engagement and Academic fit

<table>
<thead>
<tr>
<th>Psychological conditions</th>
<th>Engagement</th>
<th>Academic fit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
</tr>
<tr>
<td>Academic fit</td>
<td>0.45*</td>
<td>0.07</td>
</tr>
<tr>
<td>Psychological conditions</td>
<td>0.14*</td>
<td>0.07</td>
</tr>
<tr>
<td>Social support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.05

According to the revised model, social support has a direct and indirect effect on intention to stay. Hypothesis 5 stated that the psychological conditions of meaningfulness and availability have a mediating effect on the relationship between social support and engagement, but this was not found in the revised model. Hypothesis 5 is therefore rejected.

Table 5 shows that the bootstrap estimate of the indirect effect of psychological conditions of meaningfulness and availability in the relationship between academic fit and engagement, was statistically significant (*p ≤ 0.05) and the 95% confidence intervals did not include zero, which suggests that the psychological conditions of meaningfulness and availability do mediate the relationship between academic fit and engagement. Hypothesis 6 is thus accepted.

Table 5 also shows that the bootstrap estimate of the indirect effect of engagement in the relationship between the psychological conditions of meaningfulness and availability and the intention to stay, was statistically significant and the 95% confidence intervals did not include zero, which suggests that engagement mediate the relationship between the psychological conditions of meaningfulness and availability with intention to stay. Hypothesis 7 is thus accepted.

Other possible mediation paths that are part of the revised model which shows to be significant include the indirect effect of academic fit on intention to stay, as well as the indirect effect of social support on intention to stay.
DISCUSSION

The aim of this study was to investigate first years’ intention to stay and the role played in this regard by social support, academic fit, psychological conditions of meaningfulness and availability and engagement. The theoretical model stated that the psychological conditions of meaningfulness and availability will mediate the relationship between social support and academic fit with engagement. Furthermore, engagement will mediate the relationship between the psychological conditions of meaningfulness and availability with intention to stay.

In the empirical study, the revised model differed from the theoretical model in that the psychological conditions of meaningfulness and availability did not mediate the relationship between social support and engagement, but social support had a direct and indirect effect (via academic fit) on intention to stay. Academic fit also showed an additional direct effect on intention to stay.

Social support did not have a significant relationship with the psychological conditions of availability and meaningfulness. May et al. (2004) emphasised the importance of a supportive environment to better engagement levels, and as a result it was concluded that if students felt supported and were given constructive feedback, this would motivate them to solve their study-related problems and increase their levels of engagement. Previous research relating to social support and the psychological conditions of engagement proved that a supportive environment was especially important to antecedents of psychological safety (Edmondson, 2002). It was found that if the students felt that the lecturers, significant others and family members cared about their well-being, they perceived their study environment to be safer (Edmondson, 2002). Psychological safety was not investigated in this study, and that could be a possible reason for not finding a strong relationship between social support and psychological conditions, as expected.

The results showed there was a strong relationship between social support and academic fit, as well as between social support and intention to stay. This implies that students who experiences social support in their study environment will identify more easily with their field of study, and will perceive their fit in their study environment more positively. Social support also had a direct effect on intention to stay, which implies that students who receive support from their family, friends and significant others will be more likely to stay on at university (Wilcox et al., 2005). The indirect effect of social support on intention to stay was mediated by academic fit.
This implies that students who receive social support will experience academic fit and have a sense of belonging and will most likely stay within the educational environment (Hausmann, Schofield, & Woods, 2007).

The results showed that the academic fit had a strong relationship with the psychological conditions of meaningfulness and availability, and this in turn was strongly related to engagement, which in turn related to intention to stay. Academic fit also had a direct effect on intention to stay. Previous research done by Allen and Robins (2010) confirmed that higher levels of academic fit lead to a greater possibility of graduating in a timely fashion. There is no previous research relating to academic fit and psychological conditions of meaningfulness and availability, but there is clear evidence suggesting that students need to make effective career decisions before deciding on a career path, which will increase the likelihood of completing their degrees within the allocated time frame. What was interesting was that academic fit predicted intention to stay in two different ways. Firstly academic fit had an indirect effect via psychological conditions and engagement, but the second effect was a direct effect on intention to stay. This implies that if more is done to ensure that students fit academically in their proposed field of study, the likelihood of an increase in their intention to stay will multiply.

This study wanted to explore the relationships between the psychological conditions of meaningfulness and availability, and how these relate to engagement, and it was found that the psychological conditions of availability and meaningfulness related well to engagement. May et al. (2004) also found that the psychological conditions predicted engagement. Students who feel that their contributions are meaningful and that the environment in which they study is safe, are thus more likely to be engaged and so more likely to stay at the institution.

The relationship between engagement and intention to stay was also significant. This support research that students who are engaged in their studies will stay on at university and most likely completes their studies (Christenson, Reschly, Appleton, Berman, Spanjers, & Varro, 2008).

The findings of this study emphasise the important influence of social support and academic fit on intention to stay. Students who experience social support are more likely to stay on at university (Wilcox et al., 2005).
Social support is also strongly linked to academic fit, which in turn has a direct and indirect effect on intention to stay. It is therefore imperative that institutions invest in programs to promote social support and academic fit in order to improve intention to stay.
REFERENCES


CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter, conclusions will be drawn regarding the research objectives which were identified in this study, and the research questions presented in Chapter 1 will be answered. The limitations will also be identified, and recommendations will be made for institutions of higher education.

3.1 CONCLUSIONS

In the following section conclusions are drawn regarding the specific research objectives set in Chapter 1, and the empirical findings obtained in the present study.

The general aim of this study was to investigate the relationship between social support, academic fit, psychological conditions and engagement of the first-year student’s intention to stay at the university.

The first objective was to conceptualise social support, academic fit, psychological conditions, engagement and intention to stay in the literature.

Social support was defined by House (1981, p. 39) as “an interpersonal transaction involving emotional support, [and] instrumental aid, [which] provides environmental information and appraisal”. It was found that social support is a predominant factor to help students cope better with everyday life stressors (Wentzel, 1998). It was further emphasised that perceived social support by family, friends and significant others can influence a student’s decision to stay at the university (Gloria, Castellanos, Lopez & Rosales, 2005).

Academic fit was characterised by Kristof-Brown, Zimmerman and Johnson (2005) as the compatibility between the student’s personality and the chosen course, career and institution. Numerous studies have shown how crucial it is for the student to match his personality with his career path, and studies done by Tinto (1987) emphasised that the mismatch can lead to non-completion of studies. Another study done by Long, Ferrier and Heagney (2006) found that 21.6% of students dropped out of their educational institution because of their poor career choices.
**Psychological conditions** of meaningfulness and availability are believed to predict engagement. Psychological meaningfulness was defined as “the value of a work goal or purpose, judged in relation to an individual’s own ideas and standards” (May, Gilson & Harter, 2004). Previous studies have indicated that psychological meaningfulness is influenced by social support and academic fit, and that individuals will seek roles where they can express themselves more freely and authentically (Shamir, 1991). Strong interpersonal relationships allow students to experience more meaning in their work, foster a greater sense of social identity, and mean that they experience belongingness within the group and ever greater meaningfulness. Psychological availability, on the other hand, was defined as “a sense of having the physical, emotional, or psychological resources to personally engage at a particular moment” (Kahn, 1990).

For students to engage in their tasks, they need to have the cognitive, psychological and social resources to complete their tasks accurately and clearly (Vinarski-Peretz, Binyamin & Caremeli, 2011). In order for students to be engaged in their daily activities, they need to be ready to accomplish the task at hand and confident in their ability to do so (May et al., 2004).

**Engagement** is the primary theoretical model when focusing on students’ intention to stay or to leave the institution (Christenson, Reschly, Appleton, Berman, Spanjers & Varro, 2008), and can be defined, according to Kahn (1990), as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance”. For students to have a sense of belonging, they need to feel accepted and actively involved in the academic environment (Roberts & Styron, 2010). Previous research done by Leach and Zephe (2010) indicated that students who are engaged in their studies are more likely to persist and to graduate within the required time frame.

**Intention to stay** was defined by Bienvenu (2000) as “the degree to which a person consciously formulates plans to perform or not to perform some behaviour, as well as the level of commitment to and contentment with the decision after it has been made”. Studies done by Crosling, Heagney and Thomas (2009) identified level of engagement as the key indicator of a student’s staying at the educational institution, and this can be seen as a significant indicator of student success and retention.

The second aim was to explore the relationships between the above constructs. It was found that social support did not have a significant relationship with the psychological conditions of meaningfulness and availability.
This could possibly be explained by the fact that psychological safety was not investigated in this study, which has a very strong link with social support. It was thus concluded that psychological safety needs to be investigated to better understand the working of social support in enhancing engagement of students. Social support did however had a direct and indirect (via academic fit) effect on intention to stay. This implies that students, who perceive their environment as supportive, will most likely stay on at the education institution. Academic fit also mediated the effect of social support on intention to stay, indicating that students who experience social support will have a stronger sense of belonging, which will also increase their intention to stay on at the educational institution.

Academic fit had a significant positive relationship with the psychological conditions of meaningfulness and availability, which in turn had a significant positive relationship with engagement. Engagement was also positively related to intention to stay, as was academic fit. This relationships explains the interwoven effect of the feeling of fit in the academic environment. Not only will the student who perceive their field of study as one that they can relate to, experience their studies as more meaningful, but they will also be more available to take on challenges posed by the environment. This will also impact their level of engagement in their studies and will experience that they are more involved on a cognitive, emotional and physical level with their studies, which will increase intention to stay. Academic fit also had a direct effect on intention to stay, again emphasizing how important it is for a student to study in the field that they are interested in.

The last aim was to test the model used in the study. The revised model had great similarities with the hypothesised model, with the only differences being that social support had a direct and indirect (via academic fit) effect on intention to stay, and academic fit also had a direct effect on intention to stay.

3.2 LIMITATIONS

The following limitations can be identified in this study.

The data were retrieved from a cross-sectional research design that used a self-report survey instrument. Thus, causal inferences could not be made. Furthermore there was a total of 304 participants, which may have been too few for the number of items in the questionnaires. The study was conducted among first-year students, and the results obtained from this study may therefore be used only in the educational context. Furthermore, the study was conducted at the Vaal Triangle Campus of the North-West University, and might therefore not apply to first-year students from other universities.
Even though the students may be in an English-speaking environment, cultural differences between the students may have affected the results, as some respondents’ first language may not be English. This can result in respondents not fully understanding the questionnaires; translation of the questionnaires might have helped in obtaining more reliable results.

A possible danger may also exist that some students felt obliged to complete the questionnaire, as they were instructed by the lecturers to do so. Some students may have felt that the information would not be kept confidential, and that their identity might become known. This may have caused them to answer the questionnaire more positively, which may have skewed the results.

3.3 RECOMMENDATIONS

Recommendations are made for this specific profession, as well as for future research in South Africa.

3.3.1 Recommendations for the profession

This study provided distinctive insights relating to the relationships between social support, academic fit, the psychological conditions, engagement, and the student’s intention to stay. Even though social support did not correlate positively with engagement in this study, various studies have shown the importance of social support to engagement; further research could focus on the direct effect between social support and engagement, and its effect on the student’s intention to stay.

Academic fit should be researched in more detail. There are numerous studies relating to work-related fit, but limited research on the student’s personality and academic environment. The university should improve its accountability internally by comparing the results of faculties with each other and identifying areas that can be improved to maximise the students’ chances of success, which could include compulsory psychometric tests to identify career choices, and giving the students increased support by ensuring better mentoring and coaching opportunities. Interventions should be developed based on the survey results to increase the engagement levels of the students.

Deeper understanding is necessary regarding the effect of psychological conditions on students. Understanding the impact of the psychological conditions on first-year students and their engagement levels could have a colossal positive impact on the student, the university and broader society.
The psychological safety questionnaire was neither reliable nor valid in this study, and it is recommended that future research should improve the reliability of the questionnaire in the South African context. Even though there is a mediating effect between intention to stay and psychological conditions, it would be beneficial if the direct effects between the intention to stay and psychological conditions could be researched.

It is important to communicate with students about their interests, experiences and feelings regarding their career choices. University life can be very overwhelming for students, as there are many careers to choose from, which emphasises the importance of career guidance. Retention strategies should be implemented to monitor students proactively. This would increase students’ feeling of perceived social support, and identify their intentions to leave the university. Further studies regarding research on institutions of higher education should be promoted.

### 3.3.2 Recommendations for future research

Although there are several limitations in this study, the findings may have some important implications for future research within the higher education setting.

Longitudinal research should be undertaken regarding social support, academic fit, the psychological conditions of engagement and intention to stay, as causal relationships cannot be established owing to the cross-sectional design that has been used.

Factors that have been taken into consideration are social support, academic fit and the psychological conditions of meaningfulness and availability, but according to numerous researchers there are many other factors, which have not been taken into consideration, such as academic achievement, income, gender, race, first-generation students and high school achievements, to name a few. Little research exists on the relationship between students, especially first-year students, and the psychological conditions, academic fit and intention to stay/leave. Future research should identify the gaps that exist in this area of study.

More research is needed regarding the improvement of item content of the different measuring instruments within the South African context, such as the Psychological Conditions Scale, to ensure higher reliability and validity within other educational institutions in South Africa.
Follow-up studies are recommended with students who did not enrol for classes in the following semester, or students who changed to another university. Additionally, future research should include retention factors beyond those mentioned in this specific study, and studies should go beyond traditional, face-to-face classrooms.
3.4 REFERENCES


