Section 3

Empirical research

Overview

Section 3 covers the empirical research that was conducted during this study, and is divided into four chapters.

Chapter 8 discusses the research design and methodology that was utilised in investigating the research objectives and associated postulates.

In Chapter 9, the results obtained from the statistical research are described.

Chapter 10 provides a detailed discussion of the statistical results obtained within the context of the set research objectives.

Finally, in Chapter 11 conclusions obtained from the study are discussed. Recommendations for future research are provided in this chapter, with specific reference to any limitations that could be identified in the study in the process of achieving the established research objectives.

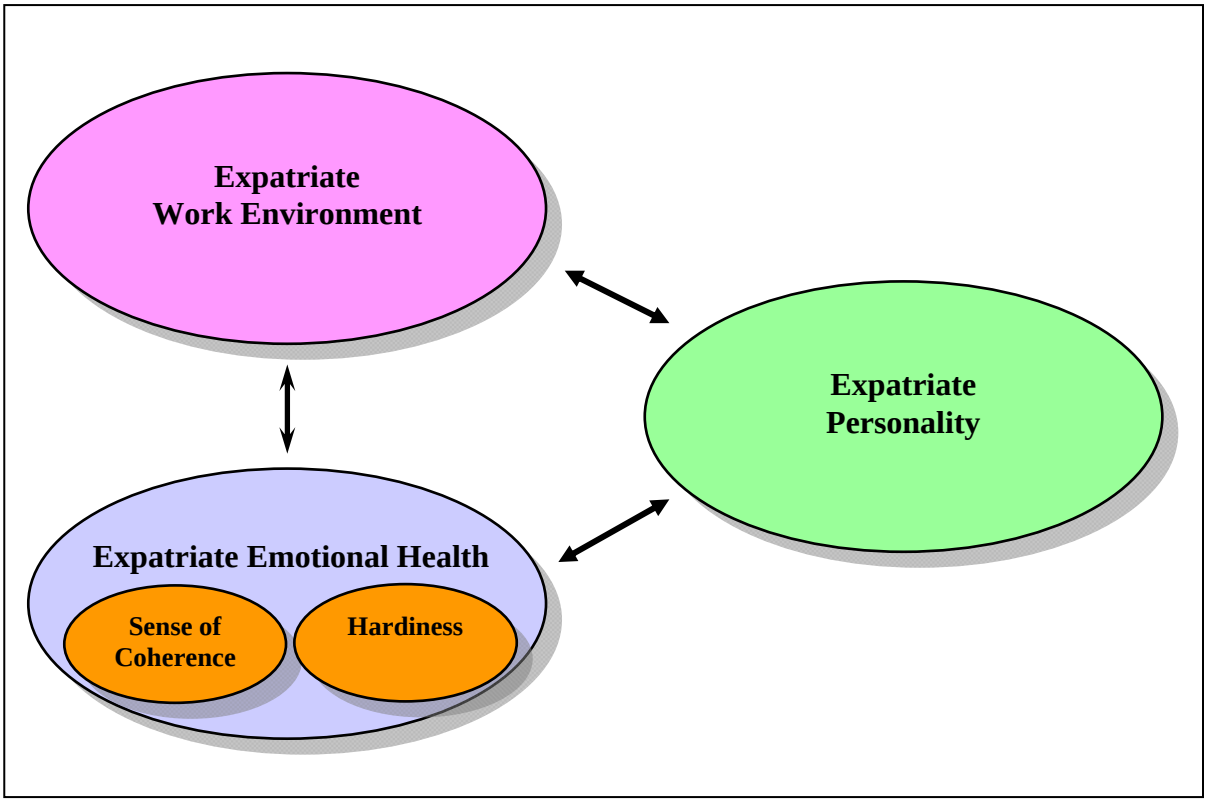
Chapter 8

Research methodology

8.1. Introduction

In Chapter 1 of this study it was postulated that a relationship exists between the expatriate's levels of emotional health, personality, and his perception of the organisational climate while on international assignment in a foreign country, and that this relationship can be incorporated into a model. A graphical layout of the postulated model is presented in Figure 8.1 below:

Figure 8.1: Model displaying possible relationships among expatriate emotional health, personality, and perception of organisational climate while on assignment



In order to investigate the nature of this relationship, the following research objectives were established:

- Objective 1: To establish the impact of the expatriation process on the individual's emotional health;
- Objective 2: To establish the interaction that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process;
- Objective 3: To establish the impact of organisational climate factors on the emotional adjustment of the individual prior to departure on the international assignment, and while on contract;
- Objective 4: To establish the nature of the interaction that exists between the expatriate personality and the individual's perception of the organisational climate.
- Objective 5: To investigate the main personality and organisational climate predictors of the expatriate's levels of emotional health while on an international assignment in a foreign country.

In order to achieve the above mentioned objectives, an experimental group consisting of 84 expatriates was assessed on the following self-assessment instruments prior to their departure on international assignments to foreign countries:

- Antonovsky's Sense of Coherence Scale (Antonovsky, 1993);
- Kobasa's Hardiness Scale (Kobasa, 1982);
- Cattell's Sixteen Personality Factor Questionnaire Version SA-92 (Prinsloo, 1996);
- Organisational Climate Questionnaire (Kossuth, 1998).

A follow-up assessment was conducted on the same individuals after they had been on assignment as expatriates in the foreign countries for a period of six months. The individuals completed the same questionnaires in the host countries as part of a continuous support process that is provided to the expatriates while on assignment. The Sixteen Personality Factor Questionnaire was not included during the follow-up assessment, as the questionnaire formed part of the pre-assignment counselling process conducted with the prospective expatriates prior to their departure on the international assignments.

A final assessment was conducted on the individuals on their repatriation to South Africa as their home country after completing their expatriation contracts. This assessment took place as part of a debriefing process conducted with the returning expatriates between periods of one week to three months after their arrival back in South Africa. On this occasion, returning expatriates were assessed on the Sense of Meaning and Hardiness Scales. The reason for not including the Organisational Climate Questionnaire was that the individuals returning from their international assignments were not formally employed with their companies anymore.

A non-moving control group of 42 individuals who remained in South Africa was also included in the study. The reason for making use of the control group was to compare the results obtained from the expatriates who were exposed to the typical psychological adjustment processes associated with the expatriate international career cycle, with those of the control group who did not go through any planned psychological change processes. The individuals included in the control group were assessed on the same measuring instruments at the same time intervals as the individuals in the experimental group.

Mouton (2001: 123) specifies that the chapter discussing the research design followed during a study needs to highlight the following areas:

- The research hypotheses need to be defined and illuminated;
- The research design utilised in the study needs to be described;
- The sample and sampling process utilised during the study needs to be clarified;
- The variables and measuring instruments utilised in this study need to be described;
- Data capturing and data editing need to be discussed;
- The statistical methods and procedures utilised during the study need to be specified.

In line with the recommendations made by Mouton, the research design in this study was conducted in accordance with the above mentioned steps.

8.2. Research hypotheses

Taylor (2006: 20) defines a hypothesis as a tentative statement about the relationship between two variables. A more comprehensive definition of the term is provided by Porkess (2004: 120), who defines a hypothesis as *"a theory which is put forward either because it is believed to be true or because it is used as a basis for argument, but which has not been proved"*.

According to Taylor (2006: 20), in order for a hypothesis to be valid, it needs to meet two criteria:

- The hypothesis should describe a relationship between two or more variables;
- It must be possible to empirically test the hypothesis.

In accordance with the above mentioned criteria, the following hypotheses were investigated in this study:

Overall postulate (in line with Research Objective 5): Meaningful relationships exist between the expatriate's levels of emotional health, personality, and his perception of the organisational climate while on international assignment. These relationships can be presented in the form of a model.

Postulate 1: The emotional health of the individual expatriate is significantly and negatively influenced during the three phases of the international career cycle.

Hypothesis 1a: The individual's sense of meaning decreases from prior to assignment to six months into the assignment.

Hypothesis 1b: The individual's sense of meaning decreases from six months into the assignment to after completion of assignment.

Hypothesis 1c: The individual's hardiness decreases from prior to assignment to six months into the assignment.

Hypothesis 1d: The individual's hardiness decreases from six months into the assignment to after completion of assignment.

Postulate 2: A direct correlation exists between the individual's personality traits and the individual's emotional adjustment during the assignment.

Hypothesis 2a: Individual personality traits are correlated with sense of coherence during the assignment

Hypothesis 2b: Individual personality traits are correlated with hardiness during the assignment.

Postulate 3: The organisational climate prior to and during the international assignment has a significant influence on the levels of emotional health of the expatriate.

Hypothesis 3a: Organisational climate prior to assignment is correlated with sense of coherence prior to departure on assignment.

Hypothesis 3b: Organisational climate prior to assignment is correlated with hardiness prior to departure on assignment.

Hypothesis 3c: Organisational climate during assignment is correlated with sense of coherence during assignment.

Hypothesis 3d: Organisational climate during assignment is correlated with hardiness during assignment.

Postulate 4: A direct correlation exists between the individual's personality traits and the individual perception of the organisational climate prior to and during assignment.

Hypothesis 4a: Individual personality traits are correlated with organisational climate factors prior to assignment.

Hypothesis 4b: Individual personality traits are correlated with organisational climate factors during assignment.

In order to ensure a scientific evaluation of the above mentioned hypotheses, the following research design was followed during this study:

8.3. Research design

The concept research design refers to how the research is conducted. Taylor (2006: 21) strongly asserts that the design utilised in conducting the research can never be viewed independently from other decisions taken in the research process, such as the nature of the research problem to be investigated. The choice of a research design is determined largely by the research problem. The research problem that needs to be solved determines how the researcher will go about in investigating the question. In achieving the research objective as established in the introductory paragraph of Chapter 8, the research design utilised in this study is discussed below.

8.3.1. Research methodology

During the conduct of this study use was made of quantitative research. The results obtained from the various assessment instruments during the various phases of the expatriation process were utilised to assess the emotional well-being of the expatriate during these phases. An attempt was then made to generalise the results and inferences to the population of individuals involved with expatriation to different foreign countries.

An aspect that has created a significant amount of debate among researchers is the relative value of the qualitative and quantitative approaches towards conducting social research (Jacobs et al, 2003: 15). According to Frandberg & Kjellman (2005: 25), the best approach to utilise depends on the research questions and the purpose of the study.

The purpose of making use of a qualitative research approach is to gain a better understanding of data that is not quantifiable. Quantitative research consists of the gathering of quantitative information by means of questionnaires, the generalisation of the collected information, and the presentation thereof in tables and diagrams. The purpose of the quantitative research approach is to test hypothetical generalisations by making use of experimental methods and quantitative measures (Frandberg & Kjellman, 2005: 25).

On the other hand, qualitative data is based on meanings expressed by means of words, and analysed through the use of conceptualisation. Researchers using the qualitative approach prefer applying a naturalistic approach where they attempt to obtain a better understanding of phenomena within a specific context (Frandberg & Kjellman, 2005: 25).

Each of the two research approaches is therefore based on a fundamentally different investigative paradigm, and the actions taken by the researcher are based on the underlying hypotheses presented by each paradigm. While qualitative researchers attempt to highlight, understand and analyse the conceptual problems at hand, quantitative researchers place their focus on the identification of interactions and causal links among factors, to predict future phenomena, and to generalise these findings to a larger population (Jacobs et al, 1992: 15).

8.3.2. Experimental research design

The specific experimental research design utilised during this study is the quasi-experimental design. The process followed in obtaining the relevant data for this research project formed part of a larger intervention that was utilised to select, prepare, and counsel prospective expatriates prior to their departure on their international assignments, as well as to provide those selected individuals with continuous support as they progressed through the various phases of the expatriation process. The role of the researcher in this larger intervention is to provide professional consulting and support services to the management and expatriates of the multinational companies involved.

The individuals included in the experimental group were identified by their prospective employers as suitable candidates for expatriation prior to their participation in the research project. It was therefore not possible to have any control over the individuals included in the experimental group.

The fact that the members of the experimental group were exposed to a pre-departure preparation prior to their departure on assignment may potentially have had a positive impact on their ability to cope with the demands placed on them while on international assignment, and on their repatriation. This is not viewed as an area of major concern, as it may have ensured the availability of their assessment results while on assignment and on their repatriation. Taking into account the difficulties associated with obtaining a sufficient sample size of individuals when making use of a longitudinal study (Baker, 1988), the actions taken in ensuring the availability of the assessment results during the various phases of the expatriation process were deemed appropriate.

The subjects included in the control group were drawn from applicants who were put through a traditional competence assessment centre to be considered for possible appointment or promotion into managerial positions in domestic companies in South Africa. As in the case with the experimental group, no control could be exerted over the individuals included in the control group.

Taking into account the above mentioned observations, it was not possible to make use of random assignment to allocate the individuals to either the experimental group or the control group. The quasi-experimental design was identified as the appropriate approach to utilise during this study. In order to effectively deal with the limitations of not being able to randomly assign individuals to the experimental and control groups utilised in the study, Baker (1988: 223) recommends that the non-equivalent control group design be utilised as the appropriate quasi-experimental design. Baker (1988) indicates that the non-equivalent control group design has the following characteristics:

- The design consists of two groups, namely an experimental and a control group;
- These two groups are potentially "non-equivalent." This means that they are not necessarily equal at the beginning of the research, because it was not possible for them to be randomly assigned. It is important to note the comparisons conducted on the experimental and control groups in this study (as can be seen in Paragraph 8.4.2), which indicated that the two groups were actually very similar and equal in their demographics prior to the experimental group's departure on assignment;
- An attempt is made to compare the groups by making use of a pre-test to compensate for the fact that they could not be randomly assigned.

In line with the requirements for the non-equivalent control group design, the characteristics of the experimental and control groups included in the study were compared after their initial assessment prior to the departure of the subjects included in the experimental group on their international assignments.

8.3.3. Timeframe of data gathering

Baker (1988) asserts that it is important to determine the timeframe within which the particular study is carried out. According to Baker (1988: 101), there are primarily two approaches to conduct a research study in time, namely the cross-sectional and the longitudinal study.

The cross-sectional study is utilised when all the data relevant to the particular phenomenon under investigation is being observed or gathered at a single point in time, or in a relatively short period of time (Baker, 1988: 101). A disadvantage of this design is that processes and changes that take place over time cannot be established and investigated.

The longitudinal study is typically utilised where a research project has two or more data collection periods which are set at different times for the specific purposes of investigating changes that may or may not have taken place between these points in time (Baker, 1988). The longitudinal study has an advantage over the cross-sectional study, as it indicates changes that occur over time, as opposed to only concentrating at a static score at a particular moment in time. Taking into account the fact that assessment results were obtained from the same group of expatriates on three occasions during the international career cycle (prior to their departure on the international assignment, six months into their assignments, and on their repatriation), the time series longitudinal design was selected as the appropriate approach to be utilised in this study.

8.4. Research sample

8.4.1. Sampling process utilised

The subjects included in the experimental group were all pre-selected by their prospective employers as suitable individuals to be sent on international assignments. Similarly, the individuals included in the control group were drawn from applicants who were referred to the researcher by domestic companies in South Africa for assessment on a traditional assessment centre for possible appointment or promotion into managerial positions.

Taking into account the above mentioned limitations, it was not possible to make use of probability sampling during this study in assigning the individuals to either the experimental group or the control group. It was decided to make use of the Purposive or Judgmental Sampling technique (Baker, 1988: 157) as an appropriate non-probability sampling method. This form of sampling generally considers the most common characteristics of the population it wishes to sample, then attempts to determine where such individuals can be found, and then conducts research on the chosen sample.

Two general approaches or techniques exist for selecting samples: probability methods and non-probability techniques (Frandberg & Kjellman, 2005: 27). The choice of sampling technique to be utilised in a research project depends on the feasibility and sensibility of the collected data to address the research objectives from the entire population.

Probability sampling methods are those in which every item in the population has a known chance of being chosen for the sample. This implies that the selection of sample items is independent of the researcher, and that the sampling process is controlled objectively to ensure that the items are chosen at random (Porkess, 2004: 219).

Non-probability sampling methods are those which do not provide every item in the universe with a known chance of being included in the sample. In the case of the non-probability sampling methods, the selection process is subjective, and is influenced by judgements made by the researcher (Frandberg & Kjellman, 2005: 27).

8.4.2. Description of sample

In total, 84 individuals were included in the experimental group, and 42 in the control group. Table 8.1 provides a layout of the number of individuals included in the experimental and control groups utilised during this research.

Table 8.1.: Experimental versus control group

Category	Frequency	Percentage	Cumulative Percentage
Experimental group	84	66.7	66.7
Control group	42	33.3	100
Total	**126**	**100**	**100**

The subjects included in the experimental group consisted of expatriates that were sent on international assignments in foreign countries. Most of the individuals included in the experimental group were employed on a contractual basis, which means that no employment was guaranteed to them on completion of their contracts. Prior to their initial departure on the foreign assignment, most of them signed an agreement with their company that they would be employed on a contractual basis in the foreign country for a specified period of time. The contract does not stipulate any guarantee of employment on the person's return to South Africa. Consequently, these individuals returning to South Africa were officially unemployed on their return, and therefore needed to search for new employment in South Africa or as expatriates in other countries.

The control group consisted of individuals who were identified as potential candidates for possible appointment or promotion into managerial positions in domestic companies in South Africa. The individuals were referred to the researcher as candidates that needed to be evaluated for their leadership and management competence as assessed on a traditional assessment centre. The individuals included in the control group had never been on international assignments before, and did not indicate any indication of going on an assignment in the foreseeable future.

A possible concern that may be highlighted would be the size of both the experimental and the control groups included in this research. In this regard, Comrey (1988: 759) indicates that a sample size of 200 is reasonably acceptable when factor-analyses are conducted involving 40 or fewer variables. In this study, a total number of 33 variables were included. As discussed by Neuman (2000), one of the difficulties associated with making use of the panel study as the chosen approach in conducting a longitudinal study is that it may not always be practically possible to locate individuals included in the initial assessment during later assessments. This restriction also had an impact on the extent to which it was possible to obtain the appropriate follow-up data at the appropriate times from the individuals included in the experimental group, especially taking into account the distances and practical problems associated with gathering the appropriate data.

Similarly, it was not always practically possible to remain in contact at the exact times with the individuals included in the control group, as the period that was allocated between the first initial assessment and the last assessment corresponding with the repatriation of the expatriate varied between periods of 18 months to three years.

In order to obtain accurate results on the reliability and construct validity of the measuring instruments included in this study, it was decided to increase the number of subjects included in the initial pre-departure assessment to a total number of 308. This was done by adding the results of other individuals from the same companies who were assessed and counselled under very similar circumstances on the measuring instruments prior to their departure on their international assignments. Had the results of these additional people been available after exactly six months into their assignments and on their repatriation, these individuals would also have been included in the sample.

The results of the additional subjects included in the sample for the purposes of determining the reliability and construct validity of the measuring instruments were excluded from the remainder of the statistical analyses conducted during this study.

A breakdown and comparison follows of the experimental and control groups based on their biographical information.

8.4.2.1. Age

Table 8.2 below provides a layout of the age distribution of the subjects included in the experimental and control groups.

Table 8.2.: Age distribution

Age Category	Frequency	%	Cumulative Percentage	Frequency	%	Cumulative Percentage
	Experimental group			Control group		
25 – 29	8	9.5	9.5	5	11.9	11.9
30 – 34	22	26.2	35.7	7	16.7	28.6
35 – 39	24	28.6	64.3	15	35.7	64.3
40 – 44	14	16.7	81	8	19	83.3
45 – 49	12	14.2	95.2	4	9.5	92.8
50 – 54	3	3.6	98.8	1	2.4	95.2
55 – 59	0	0	0	2	4.8	100
60 – 64	1	1.2	100	0	0	100
Average age	**37.5**			**37.9**		
Total	**84**	**100**	**100**	**42**	**100**	**100**

The results included in Table 8.2 indicate that the average age of the individuals included in the experimental group (37.5) and the control group (37.9) are very similar. The average age obtained for the experimental group is very similar to the average age of 37.3 found for expatriates included in international research articles (Anderzen and Arnetz, 1999).

Of interest in this regard would be the findings of a survey conducted with multinational companies by Runzheimer (2000), which indicated that the age of expatriates being sent on international assignments may tend to decrease towards an average of 35.

8.4.2.2. Gender

Table 8.3 below provides the distribution of the expatriates based on gender. As can be seen, the vast majority of subjects included in both the experimental group (86.9 percent) and the control group (83.3 percent) are male. Only 13.1 percent of the subjects included in the experimental group are females, and 16.7 percent in the control group. This distribution is a clear indication that females are very much underrepresented in their appointment in both expatriate and in domestic management positions.

Table 8.3.: Gender distribution

Gender Category	Frequency	%	Cumulative Percentage	Frequency	%	Cumulative Percentage
	Experimental group			**Control group**		
Male	73	86.9	86.9	35	83.3	83.3
Female	11	13.1	100	7	16.7	100
Total	**84**	**100**	**100**	**42**	**100**	**100**

The distribution of male versus female subjects included in the experimental group seems to be very much in line with the distribution found in other expatriate studies, which also indicate that the vast majority of expatriates are male. In a South African study conducted by Van der Bank and Rothman (2002), the ratio between male and female expatriates was 93 to 7.

From an international perspective, Brotchi and Engvig (2006) indicate that 11 percent of expatriates sent on international assignments are female. Similarly, Schumacher (2000) calculates that 13 percent of all expatriates are female. Van Oudenhoven et al (2002) included 5 percent females in their sample of expatriates. In their commentary on the small number of females included in their sample, Van Oudenhoven et al indicate that female expatriate employees are still quite rare. As a result, role models for women being sent on international assignments are almost absent.

Results obtained from earlier publications indicate the following distribution of female expatriates: Caligiuri and Tung (as cited in Beaverstock, 2001) report that, "until the late 1980s, only 5 per cent of all American expatriates, 1 per cent of Japanese expatriates and 9 per cent of Finnish expatriates were women." Florkowski and Fogel (as cited in Guthrie & Ash, 2001) in 1995 found that 11 per cent of the expatriates included in their samples were female. In a study conducted by Tung (as cited in Guthrie & Ash, 2001), 13.9 percent of the assignees were female. Similarly, 14 per cent was reported by Tyler in 1999 (as cited in Guthrie and Ash, 2001).

If the results of recent studies are compared to earlier research, it becomes evident that the situation relating to the female representation among expatriates has not changed significantly. These results indicate that women are still very much underrepresented in global assignments. Tung (2004) identifies the following possible beliefs that may lead to companies limiting the opportunities for females to be considered for international assignments:

- The first possibility is that women may not be as interested in international assignments compared to males. Tung (2004) dismisses this possibility, referring to studies of students graduating with Masters Degrees in Business Administration at well-known management schools in the USA, Canada and Europe, where no gender-based differences could be identified in the interest shown by the two groups in their consideration of international assignments.

- A further possibility is that foreigners' preconceived ideas towards women may lead to them not being as effective as expatriates. Tung shows strong disagreement with this idea, highlighting a study of 160 male and female expatriates from North America showing that women are equally as successful as men in culturally tough environments, including countries where there is low participation of women in the workforce and/ or professional/managerial ranks. Tung makes a strong argument that women appear to possess certain attributes that may render them particularly suited to succeed in culturally tough international assignments.

- The belief may exist that women lack the mental ability and resilience to cope with the stresses and strains associated with living and working in some tough foreign environments. Tung (2004) dismisses this possibility as well, indicating that women may often be better suited for international assignments than men. Guthrie and Ash (2001) agree with Tung in this regard, indicating that gender-based differences in characteristics and natural ability may actually lead to females performing better than their male counterparts in dealing with the demands placed on them while on international assignments.

- Another factor which may have an impact would be the resistance shown by companies towards females as expatriates. Companies may show reluctance towards sending women on assignment. Guthrie and Ash (2001) indicate that companies often express the concern that women may experience more difficulty in being successful as expatriates compared to their male counterparts. As a result, these companies tend to be cautious of selecting women for international assignments.

Despite the fact that several studies have proven the above mentioned beliefs relating to female expatriates to be myths, Tung (2004) highlights a recent survey of 128 managers from the United States of America who are responsible for selecting candidates for international assignments. This survey found that the misperceptions towards female expatriates continued to persist. A further survey mentioned by Tung (2004) investigated the attitudes of women expatriates and their supervisors. The survey indicated a consistent discrepancy between male supervisors and female expatriates about their company's willingness to send women on international assignments, while none existed between the female supervisors and their female subordinates.

Commenting on the above mentioned statistics, Brotchi and Engwig (2006) assert that a "glass ceiling appears to persist" that blocks the international career opportunities available to females. Guthrie and Ash (2001) make a final comment in this regard, indicating: *"… in a ferociously competitive global economy, no company can afford to waste valuable brainpower simply because it's wearing a skirt"*.

8.4.2.3. Race

Table 8.4 indicates the distribution of the subjects included in the sample based on their racial origin.

Table 8.4.: Race distribution

Race Category	**Frequency**	**%**	**Cumulative Percentage**	**Frequency**	**%**	**Cumulative Percentage**
	Experimental group			**Control group**		
White	63	75	75	25	59.5	59.5
Black	9	10.7	85.7	10	23.8	83.3
Indian	10	11.9	97.6	6	14.3	97.6
Coloured	2	2.4	100	1	2.4	100
Total	**84**	**100**	**100**	**42**	**100**	**100**

Of interest in Table 8.4 would be the significantly larger number of whites included in the experimental group (75 percent) versus the 59.5 percent included in the control group. Also of interest would be the significantly smaller number of blacks included in the experimental group (10.7 percent) compared to the control group (23.8 percent). The differences between the two groups could potentially be explained by current developments in the employment market in South Africa. It is the experience of the researcher that the white South African males often view international assignments as an alternative career opportunity. As a result of black empowerment currently being one of the focus areas in South Africa, a number of white males are placed in the difficult position of being retrenched to make way for the appointment of previously disadvantaged individuals. These white males then often cannot find alternative employment in South Africa, and are often forced to consider other opportunities outside South Africa, despite the turmoil and adjustment issues associated with leaving one's family and support structures at home.

On the other hand, it is also the experience of the researcher that appropriately qualified and experienced blacks are currently in a position of having more readily available career opportunities in South Africa. As a result, they may tend to be of the opinion that accepting an international assignment may deprive them of the opportunities available to them within the domestic South African employment market.

8.4.2.4. Company employed

In Table 8.5 is indicated a distribution of the subjects included in the experimental group based on their company of employment.

Table 8.5.: Companies included in experimental group

Company	Frequency	Percentage	Cumulative Percentage
Company 1	60	71.4	71.4
Company 2	20	23.8	95.2
Company 3	4	4.8	100
Total	**84**	**100**	**100**

Companies 1 and 2 included in the experimental group are both multinational companies in the telecommunications industry. This means that 95.2 percent of the subjects included in this experimental group are exposed to the unique demands associated with the telecommunications industry. During the past few years the telecommunications industry has been characterised by a fast growing and competitive market environment, which implies that people employed in this industry are required to be highly flexible, creative, and able to adjust to quickly changing circumstances.

The majority of the subjects included in the sample (71.4 percent) originated from one company in South Africa. A possible concern in this regard may be that the culture and expatriate policies in place in this particular company may have had an impact on the results obtained from the study, taking into account the significant number of subjects included in the sample that originated from this particular company.

Only four subjects included in the sample were from a company in the banking industry. The company's main source of revenue is situated in South Africa, and has a few relatively small subsidiaries in Europe. Traditionally, the banking sector was characterised by a more formal, structured, predictable environment. However, this has changed drastically during the recent few years, to the extent that the researcher found the pressures and demands being placed on the employees in the banking and telecommunications industries to be very similar.

Table 8.6.: Companies included in control group

Company	Frequency	Percentage	Cumulative Percentage
Company 4	24	57	57
Company 5	18	43	100
Total	**42**	**100**	**100**

The subjects included in the control group originate from two companies in the retail industry in South Africa. The subjects are quite well distributed in their representation of their respective companies. 57 percent of the subjects were employed with Company 4, and 43 percent of them with Company 5.

8.4.2.5. Host countries

Table 8.6 provides an indication of the host countries the expatriates were sent to during their international assignments.

Table 8.7.: Distribution of host countries

Host Country	Frequency	Percentage	Cumulative Percentage
Nigeria	39	46.4	46.4
Uganda	15	17.8	64.2
Tanzania	5	6	70.2
Democratic Republic of the Congo	5	6	76.2
Cameroon	10	11.9	88.1
Mozambique	6	7.1	95.2
Country in Europe	4	4.8	100
Total	**84**	**100**	**100**

The vast majority of the expatriates (95.2 percent) were sent to other African countries outside of South Africa. A significant number of the expatriates were sent specifically to Nigeria (46.4 percent). The strong presence of expatriates in Nigeria is not surprising, taking into account the recent expansion and growth of Nigeria as a market for international companies seeking business opportunities in Africa.

Nigeria has built up a very negative image across the world as a result of the extremely high prevalence of poor management, fraud, and corruption in the country. The Transparency International Corruption Perception Index (as cited in Shelley, 2004: 30) indicates that Nigeria was listed in 2003 as the 132nd most corrupt country out of a possible 133 countries included in the survey.

However, Nigeria also offers substantial business opportunities for international companies who are able and willing to manage the risks involved. The Gross Domestic Product (GDP) of Nigeria in 2002 was 43.5 billion US dollar, which makes it by far the largest economy and potential market in sub-Saharan Africa (excluding South Africa with a Gross Domestic Product of 104.235 billion US dollar in 2002). In comparison, the second largest sub-Saharan economy is Kenya with a Gross Domestic Product of 12.1 billion US dollar. With a population of 130 million, Nigeria also has by far the largest population in sub-Saharan Africa. Ethiopia has the second largest population with 66 million people (World Bank as cited in Shelley, 2004: 28). In the words of Shelley (2004: 180): *"The challenges you will face while doing business in Nigeria are immense, but so are the rewards. It is the biggest sub-Saharan market* (excluding South Africa). *If you can get in it now, you'll be ahead of the game"*.

The remainder of the subjects included in the experimental group are distributed relatively equally across five other African countries, namely Uganda, Tanzania, Democratic Republic of the Congo, Cameroon, and Mozambique. Of interest in this regard would be that four of these five countries (with the exception of Cameroon) are mentioned by Shelley (2004) as countries with high potential for international business opportunities on one or more of the following criteria: Gross Domestic Product, population, Gross Domestic Product per capita, and economic growth rate.

Only four (4.8 percent) of the subjects included in the sample were sent to a non-African country in Europe (in order to protect the identity of the company involved, it was decided to exclude the name of the specific country). In this regard, the ideal would have been to compare the results obtained from the people sent to the country in Europe with the rest of the subjects sent to Africa. However, taking into account the very small sample of subjects sent to the European country, the results would not have been accurate and reliable. As a result, it would not have been feasible to generalise the results obtained to the larger population of expatriates being sent from South Africa to European countries.

8.4.2.6. Job levels

From Table 8.8 it becomes evident that the breakdown of the job levels included in the experimental and control groups are very similar. The number of managers and senior managers included in the experimental group seemed to be the significant majority, while the distribution of subjects included in the control group seemed to be slightly more equally spread among senior managers, managers, and engineers. The comparative spread of senior managers, managers, and engineers included in the experimental group (75 percent) and the control group (81 percent) also seem to be very similarly distributed.

Table 8.8.: Distribution of job levels

Job level Category	**Frequency**	**%**	**Cumulative Percentage**	**Frequency**	**%**	**Cumulative Percentage**
	Experimental group			**Control group**		
Senior management	25	29.8	29.8	11	26.2	26.2
Management	32	38.1	67.9	11	26.2	52.4
Engineer	6	7.1	75	12	28.6	81
Technician	2	2.4	77.4	8	19	100
Support staff	19	22.6	100	0	0	100
Total	**84**	**100**	**100**	**42**	**100**	**100**

As can be expected during a competence assessment, support staff would typically not be included in a traditional assessment centre, as their positions would not require a very high level of managerial competence. It is therefore not surprising to note that no support staff was included in the control group.

The distribution of job levels included in the experimental group seems to be very similar to the typical distribution of expatriate positions in general across the world as highlighted by international research. In this regard, a survey conducted by Runzheimer (2000) indicated that the most common job classifications for expatriates are executive management (65 percent), sales/marketing (57 percent), engineer/scientist (44 percent), and technician/programmer (23 percent).

8.4.2.7. Representation from different departments

The representation from different departments can be viewed in Table 8.9.

Table 8.9.: Distribution per department

Department Category	Frequency	%	Cumulative Percentage	Frequency	%	Cumulative Percentage
	Experimental group			Control group		
Networks/Production	22	26.2	26.2	9	21.4	21.4
Sales/Distribution	37	44	70.2	21	50	71.4
Finance	14	16.7	86.9	10	23.8	95.2
Human Resources	2	2.4	89.3	2	4.8	100
Information Systems	2	2.4	91.7	0	0	100
Marketing	7	8.3	100	0	0	100
Total	**84**	**100**	**100**	**42**	**100**	**100**

The majority of the individuals in both the experimental group (44 percent) and the control group (50 percent) seem to be working in the Sales or Distribution departments, followed by the Networks or Production departments (26.2 percent and 21.4 percent respectively). Taking into account the strong focus on sales and achievement of financial targets in a highly mobile customer-orientated industry within which companies in both the telecommunication industry and the retail industry find themselves, it is not surprising to see Sales/Distribution being the best represented departments in both the groups.

8.4.2.8. Length of assignment

Table 8.10 provides the distribution of the subjects included in the experimental group in terms of the duration of their international assignments.

Table 8.10.: Distribution of assignment length

Assignment Length Category	Frequency	Percentage	Cumulative Percentage
18 months	22	26.2	26.2
2 years	36	42.8	69
3 years and longer	26	31	100
Total	**84**	**100**	**100**

The majority of the subjects included in the experimental group were sent on two year assignments (42.8 percent). This is in line with the outcomes of a survey conducted by Van Heerden and Wentzel (2002), which indicates that the average length of time spent by expatriates sent on international assignments by South African companies varies between two to three years. The results also reflect the legal approach taken by most African countries towards foreigners, who typically grant work permits to expatriates for a period of two years (Shelley, 2004: 42).

Dependent on the availability of the skills offered by the expatriates among the local nationals in the host country, work permits may be extended for a longer period of time. The skills required during the implementation of a telecommunications network tend to be highly specialised in nature. As a result, these skills are seldom available among the local nationals, and therefore use is mostly made of the specialised skills and knowledge offered by the expatriates. The tendency to extend contracts based on the unavailability of specialised skills is reflected in the 31 percent of assignments that lasted for three years and longer.

Of interest would be the significant number of assignments with a length of 18 months. The 18 month contracts normally apply to people in technical specialist positions who are tasked with very specific projects in building the new telecommunications network in the foreign country. On completion of the specific project, the individual's skills are not required anymore at the specific operations, and the person moves on to a new project (either in South Africa, or on another project in another country).

The trends observable in the length of assignments in this study correlate with international findings. Aoun et al (2006) predict that the expatriate function within multinational companies will develop from being a managerial role towards becoming much more strategically orientated in its focus on trouble-shooting and project work. As a result of this, Aoun et al (2006) expect that expatriate assignments will become much shorter in duration. However, international managers will travel much more regularly, as they will be required to carry out short-term assignments, rotations and cross-national boundary commuting. Schumacher (2000) observes similar trends, indicating that 38 percent of current international assignments last two years or less, and only 23 percent last longer than three years.

8.4.2.9. Previous expatriate experience

As can be seen in Table 8.11, the vast majority of subjects included in the experimental group have never been on an international assignment before, and therefore have no previous expatriate experience. The reason for this may be that South African companies have only recently started exploring business opportunities outside of South Africa on a large scale as a result of serious restrictions inhibiting the opportunities for international growth until 1994. Therefore, it is not surprising that the majority of the individuals included in the sample do not have any previous international experience, especially taking into account their relatively young average age as indicated in Table 8.11.

Table 8.11.: Distribution of expatriate experience

Experience Category	Frequency	Percentage	Cumulative Percentage
No previous experience	61	72.6	72.6
1 year	5	6.0	78.6
2 years	15	17.8	96.4
3 years	0	0	96.4
4 years and longer	3	3.6	100
Total	**84**	**100**	**100**

Of interest would be the 15 subjects who have two years of international experience. On further investigation it became evident that these individuals were previously assigned to other subsidiaries with the same company in other African countries. In order to avoid unnecessary breach of local laws in the host country relating to two-year work permits, these individuals were, on completion of their two-year assignments in the specific African country, transferred to subsidiaries in other African countries where their skills were required.

Also noticeable in Table 8.11 would be the three subjects included in the experimental group who have four years or longer experience as expatriates. These individuals were identified as so-called "professional expatriates" who have decided to make a career of being sent on international assignments. They tend to be highly qualified and experienced in very specific areas of technical expertise, and tend to be utilised by international companies during the initial start-up phases of new operations to complete clearly defined projects of a specialist or technical nature.

8.4.2.10. Marital status at commencement of assignment

Table 8.12 provides a breakdown of the marital status of the subjects included in both the experimental and the control group.

Table 8.12.: Distribution of marital status

Marital Status	**Frequency**	**Percentage**	**Cumulative Percentage**	**Frequency**	**Percentage**	**Cumulative Percentage**
	Experimental group			**Control group**		
Married	58	69	69	24	57.1	57.1
Single	19	22.6	91.6	7	16.6	73.7
Engaged	3	3.6	95.2	1	2.4	76.1
Divorced	4	4.8	100	10	23.9	100
Total	**84**	**100**	**100**	**42**	**100**	**100**

Most of the individuals included in both the experimental group (69 percent) and in the control group (57.1 percent) were married at the time when their initial assessments were conducted prior to their departure on assignment. These results seem to be very similar to the findings of Brotchi and Engvig (2006) who indicated that 71 percent of expatriates are married. Similarly, Schumacher (2000) states that 69 percent of people sent on international assignments are married.

It is important to note that the data relating to marital status was obtained during the initial assessments conducted on both the experimental and the control group. In the case of the expatriates, the data gathering took place prior to their departure on their international assignments. Taking into account the average divorce rate of expatriates which is estimated at approximately 55 percent (Hawley, 1997), the strong possibility exists that the marital status of a significant number of the subjects included in the experimental group could have changed during the course of the period of study.

Despite the researcher's involvement in supporting a significant number of expatriates in dealing with issues in their personal lives, no official records could be kept on the change that took place from a marital perspective during the assignments (the researcher had no official involvement with the subjects included in the control group during the period of study). The reason for the lack of records would be that expatriates tend to be very sensitive and private on issues relating to their personal lives. It therefore quite often occurs that the news of an expatriate marriage breaking up only reaches the official channels in the companies a few months after the expatriates have already left the employment of the company on completion of their assignments.

In the opinion of the researcher, the phases during which expatriates experience most difficulty in dealing with issues in their personal lives, are during their initial arrival and settling down in the foreign country, and a few months after their repatriation back into South Africa as their original home country.

Of interest would be the findings of Gomez-Mejia and Balkin (as cited in Punnett, 2002) that only 33 percent of the expatriate spouses included in their study indicated that they wanted to accompany the expatriates on another international assignment. Punnett (2002) comments that these statistics are not surprising, taking into account the fact that the adjustment process in the host country tends to be highly frustrating and traumatic for expatriate spouses. The expatriate spouses are required to cope on their own without the familiar support of their family and friends. They are also required to adjust to a new country with a different language, culture, and social infrastructure.

8.4.2.11. Spouse or significant other party accompanying expatriate

Table 8.13 provides information on the distribution of individuals included in the experimental group whose spouses or significant others accompanied them while on assignment, versus those whose spouses or significant others remained behind in South Africa.

Table 8.13.: Distribution of spouses accompanying expatriates on assignment

Spouse accompanying	Frequency	Percentage	Cumulative Percentage
Yes	41	48.8	48.8
No	43	51.2	100
Total	**84**	**100**	**100**

Table 8.13 indicates a relatively equal spread of spouses (48.8 percent) accompanying the expatriates on assignment, versus 51.2 percent of the spouses who remained behind in South Africa.

The results obtained from this particular sample seem to be slightly lower than the average indicated in international research. Research conducted by Brotchi and Engvig (2006) indicates that 65 percent of spouses accompany expatriates on assignment, while Schumacher (2000) found that 77 percent of expatriates' spouses accompany them. Reasons mentioned by Schumacher (2000) why expatriates leave their families in the home country when going on international assignments are:

- The spouse's career at home
- The remote location to where the expatriate is seconded
- The lack of suitable educational facilities for the children
- Expatriates are often sent to hazardous locations that are not conducive towards a normal family lifestyle.

Of interest in this regard would be the outcomes of a study conducted by Tung (as cited in Punnett, 2002) which indicated that expatriates whose spouses accompanied them on assignment were more likely to explore the host country culture and learn the local language than those whose spouses remained behind in the home country.

The researcher agrees with the findings of Tung in this regard. The researcher's experience with expatriates whose spouses remain behind in the home country is that the expatriates tend to spend significantly more time at work after hours and during weekends compared to their colleagues whose spouses have accompanied them. The reason for this occurrence is that the single expatriate does not really have a good enough reason to return to an empty apartment where there is nobody home. As a result, the expatriate also does not really make any major attempts to explore the host country culture and other areas of interest.

8.4.2.12. Children accompanying parents on assignment

The number of expatriates whose children accompanied them while on assignment can be viewed in Table 8.14.

Table 8.14.: Distribution of children accompanying expatriates on assignment

Children accompanying	Frequency	Percentage	Cumulative Percentage
Yes	21	25	25
No	63	75	100
Total	**84**	**100**	**100**

The majority of expatriate children (75 percent) remained behind in South Africa while the expatriates were on assignment. This is viewed as a very high percentage of children remaining behind, especially taking into account statistics provided by Brotchi and Engvig (2006) who indicate that 73 percent of expatriate children accompany their parents while on assignment. Schumacher (2000) also indicates that 61 percent of married expatriates take their children with on assignment. Three potential reasons can be identified for the low number of children accompanying their parents on assignments in this sample:

Firstly, nearly 40 percent (38.6 percent) of the individuals included in the experimental group did not have any children at the time when they went on assignment.

A second factor to be considered would be the fact that a significant number of the individuals included in the experimental group were required to leave on assignment at very short notice due to operational pressures. While on assignment, they were also required to be very flexible in moving to either other distant locations within the host country, or to a totally different country at short notice. As a result of the unpredictability caused by these sudden changes, a significant number of the expatriates decided to leave their families behind in South Africa while on assignment.

Thirdly, a particular problem experienced by the children of South African expatriates who are sent on international assignments, is the fact that the children are normally placed in international schools in the host country. These international schools function according to the northern hemisphere school calendar which commences each year during August and ends in September the following year. On their repatriation to South Africa, these children are often required to either advance or repeat a grade due to the fact that the South African educational system functions according to the southern hemisphere school calendar that commences in January and ends in December. In order to avoid any disruption in the education of their children as a result of the different educational systems, a number of expatriates decided to place their children in the care of relatives or in boarding schools in South Africa.

According to Punnett (2002), scientific research focusing specifically on the adjustment of expatriate children in foreign countries is scarce. Punnett refers to studies conducted by Forster (1997) and Gaylord (1979), who found that expatriate children experience the expatriation process to be most stressful during the ages of 3 to 5 years, and 14 to 16 years. Children between the ages of 3 to 5 years often experience difficulty coping on an emotional level, while those aged 14 to 16 are more likely to experience symptoms of social frustration as a result of having to move to a foreign country. According to their parents, children experienced most difficulty either in adapting to the new schools or making friends four months after their arrival in the foreign country.

Similar trends were found for children who remain behind in the home country while their parents went on assignment. De Leon and McPartlin (as cited in Punnett, 2002) found that the majority of the children staying behind believed that their parents did not support them sufficiently from an emotional perspective.

Tung (as cited in Punnett, 2002) also provides relevant trends regarding family demographics and adjustment to the host country. Expatriates whose children accompany them in the host country tend to have a stronger desire to spend time at home compared expatriates whose children remained behind in the home country. They also tend to be more willing to interact with other expatriates on a social level. Expatriates with children are also more likely to explore the host country culture and language, by means of sightseeing and visiting museums. In his response to the trends identified by Tung, Punnett's (2002) asserts that the underlying reason for the expatriates' stronger interest in the host country may be a stronger desire to engage in activities that involve the entire family.

8.4.2.13. Summary

As was laid out in the above mentioned discussions, the biographical details obtained on the subjects included in the experimental and control groups are very similar. This similarity in the inherent characteristics of the two groups makes them suitable as comparative samples that can be utilised to validate any changes that may take place in the experimental group as postulated in the original hypotheses.

A strong similarity also seems to exist between the characteristics of the individuals included in the experimental group of this study, compared to the characteristics of expatriates in general as indicated by international research. This is viewed as a positive indication, as this close similarity between the subjects included in this sample and the average expatriate provides the opportunity for the results obtained from this study to be generalised towards the general expatriate population.

8.5. Scales of measurement

All the variables utilised in this study made use of ordinal scales of measurement. Porkess (2004: 177) defines an ordinal scale as a scale that ranks and classifies respondents according to some specific characteristic. The scale makes no attempt to measure the degree of favourability of the different rankings. As a result, the distances between the different rank positions may vary widely.

According to Boyd et al (1985: 319), the ordinal scale is the most widely used measuring scale utilised in the social sciences. The most common forms of ordinal variables are attitudinal items where the level of agreement with specific statements is assessed.

Specifically, the Likert scale was utilised as a rating scale in the questionnaires utilised in this study, where respondents were required to indicate the extent to which they agreed or disagreed with each of the statements. In the Likert scale, a numerical score is allocated to each degree of agreement. The respondent's total score is calculated by adding these scores from all the statements (Boyd et al, 1985: 332). Examples of questions included in the various questionnaires utilised in this study are the following:

Table 8.15.: Sense of Coherence Scale

In the past, when I had to do something which depended upon co-operation with others, I had the feeling that it:		
Surely would not get done	1 2 3 4 5 6 7	Surely would get done

(Antonovsky, 1993)

Table 8.16.: Hardiness Scale

I feel that it is impossible to change my spouse's mind about something.					
False	1	2	3	4	True

(Kobasa, 1982)

Table 8.17.: Sixteen Personality Factor Questionnaire

I like watching team games.		
a. Yes	b. Occasionally	c. No

(Prinsloo, 1996)

Table 8.18.: Organisational Climate Questionnaire

I require clarification regarding the main objectives of my job.				
Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

(Kossuth, 1998)

Due to copyright restrictions, it was not possible to include the above mentioned questionnaires as appendices to this study.

8.6. Variables measured during research

For the purposes of this research project, the following variables were included to be investigated:

- Antonovsky's Sense of Coherence Scale (Antonovsky, 1993)
- Kobasa's Hardiness Scale (Kobasa, 1982)
- Cattell's Sixteen Personality Factor Questionnaire (Prinsloo, 1996)
- Organisational Climate Questionnaire (Kossuth, 1998).

According to Boyd et al (1988: 166), measurement is the central concern of all sciences. Without effective measurement, the goals of scientific research are unattainable. When conducting research in the social sciences, the researcher must make use of variation to make comparisons and to test hypotheses. In order to measure a particular phenomenon, specific variables need to be identified. Boyd et al (1988: 117) define "variable" as a term that is used to describe something that varies. Within the context of the social sciences, a more practical definition of the term is provided by Taylor (2006: 13), who defines a variable as any attribute that could vary from one person or situation to the next.

A more detailed discussion follows on each of the variables included in the research:

8.6.1. Sense of Coherence Scale

The first variable included in this study is sense of coherence. The Sense of Coherence Scale (also referred to as the Orientation to Life Questionnaire) was developed by Antonovsky (1993). Antonovsky developed the questionnaire based on the outcomes of 51 qualitative interviews held with people who were probed to talk about their lives. The interviewees were people who had been subjected to the severe trauma of being placed in concentration camps. However, they were still able to live relatively healthy lives after surviving the very difficult circumstances.

Three components are assessed on the Sense of Coherence Scale. These components are comprehensibility, manageability, and meaningfulness (Antonovsky, 1993).

- Comprehensibility measures *"the extent to which an individual perceives the stimuli that confront him or her from the internal and external environments as making cognitive sense, as information that is ordered, consistent, structured, and clear"*;
- Manageability provides an indication of *"the extent to which an individual perceives that resources at his or her disposal are adequate to meet the demands posed by the stimuli from the environment"*;
- Meaningfulness reflects *"the feeling that one has of being a participant in shaping one's destiny"*. The construct explains the motivational element in life in that life has meaning emotionally and not only cognitively. Antonovsky considered the sense of meaningfulness to be the most important of the three factors (Antonovsky, 1993).

A more detailed discussion on each of the Sense of Coherence components was provided in Paragraph 7.5.1 of Chapter 7.

The Sense of Coherence Scale is a self-reporting instrument, and consists of 29 items rated on a seven-point scale (agreement to disagreement) to indicate the extent to which a respondent agrees or disagrees with the meaning of its items (Kossuth, 1998: 222). A score of 1 and 7 represent the outer limits of the continuum. A score of 4 is in the middle and suggests that both poles apply equally.

Antonovsky made the assumption that it is not possible for an individual to obtain an extremely high score on the Sense of Coherence scale. An extremely high score could be indicative of an underlying pathological problem, *"as a person who consistently perceives everything as being comprehensible and predictable may be poorly adapted to reality"* (Pott, 1998: 39).

The following questions are included in each of the Sense of Coherence components:

Comprehensibility	:	Questions 1, 3, 5, 10, 12, 15, 17, 19, 21, 24, 26.
Manageability	:	Questions 2, 6, 9, 13, 18, 20, 23, 25, 27, 29.
Meaningfulness	:	Questions 4, 7, 8, 11, 14, 16, 22, 28.

8.6.1.1. Validity of the Sense of Coherence Scale

The validity of an assessment instrument concerns the extent to which the instrument actually measures what it was intended to measure (Baker, 1988: 26; Boyd et al, 1985: 30). The most basic method of testing for validity is to examine whether the measurement instrument really measures the underlying concept (Baker, 1988: 119). Antonovsky (1993) assessed the content validity of the Sense of Coherence Scale by making use of the facet design as a basis for questionnaire construction. After establishing the questions to be included in the questionnaire, Antonovsky involved three colleagues familiar with the theory to evaluate each item for its appropriateness. They each recorded a facet profile, ensuring that the 29 items indeed covered the three important components that comprise the sense of meaning construct.

Construct validity refers to whether or not an assessment instrument measures what it claims to measure (Pott, 1998: 39). In order to test the construct validity of the instrument, it is compared with instruments measuring similar constructs. A strong correlation between the two concepts confirms the similarity between them, and therefore confirms the validity of the construct. However, caution needs to be taken in the case where the correlations between the two concepts are too high, which may indicate that the construct lacks independence (Pott, 1998: 39).

The construct validity of the Sense of Coherence was determined by correlating it with other similar constructs. Kossuth (1998: 225) refers to a study conducted by Rumbaut who administered his 22-item sense of coherence scale and Antonovsky's 29-item questionnaire to 336 undergraduates. The correlation between the two scales was 0.64, which Antonovsky suggests "is a more respectable indication that the two scales are measuring a similar construct".

Pott (1998) also reports very high correlations between sense of coherence and the constructs of anxiety and depression. Specifically, the Sense of Coherence Scale correlated negatively with the State-Trait Anxiety Inventory-Trait and the Beck Depression Inventory (Van der Bank & Rothmann, 2002; Pott, 1998).

Kossuth (1998: 225) found a correlation of 0.50 between sense of coherence and hardiness, the other measurement of emotional health included in this study. This confirms Antonovsky's assertion (as discussed in Chapter 7), that the hardiness concept has a close relationship with sense of coherence.

The above mentioned studies indicate that Antonovsky's Sense of Coherence Scale is a valid measurement instrument in determining the sense of coherence construct.

8.6.1.2. Reliability of the Sense of Coherence Scale

Baker (1988: 123) defines reliability as the extent to which the measuring instrument produces similar outcomes when it is repeated. A more comprehensive definition for the term is provided by Taylor (2006): *"Whether the measurement would lead to sufficiently consistent outcomes, were it to be repeated, that one could have some confidence in the results"*.

Two general procedures can be utilised to determine the reliability of an assessment instrument: measuring for equivalence (also referred to as internal consistency), and measuring for stability (also referred to as test-retest reliability) (Baker, 1988: 124).

The measurement used to measure the internal consistency of an instrument is referred to as the Cronbach's alpha. Antonovsky (1993) reports that the Cronbach's alpha measurement of internal consistency obtained for the Sense of Coherence Scale varied between 0.83 to 0.95. These high reliability coefficients were achieved amongst a variety of populations and for different languages and cultures. In the research conducted by Kossuth (1998: 264), he found a Cronbach's alpha of 0.85 for the Sense of Coherence Scale.

The test-retest reliability of the Sense of Coherence Scale was investigated by a study conducted among Israeli retirees in a kibbutz, where a test-retest correlation 0.54 was found after a period of one year (Pott, 1998). A similar study conducted amongst Israeli medical students by Carmel and Bernstein (as cited in Kossuth, 1998: 224) revealed test-retest correlations of 0.76 after an interval of one year. From a South African perspective, Wissing et al (1992) reported a test re-test reliability score of 0.97 after five weeks.

The above mentioned results indicate that Antonovsky's Sense of Coherence Scale is a reliable measurement of sense of coherence, both from an internal consistency and a test-retest reliability perspective.

8.6.2. Hardiness

The construct of hardiness was assessed by making use of the third version of the Hardiness Scale as developed by Kobasa (Harrisson et al, 2002). The Hardiness Scale assesses three sub-scales:

- Control versus Powerlessness: The extent to which an individual's circumstances are seen to be related to his own activities, planning and effort, rather than to chance or unfair advantage;

- Commitment versus Alienation: The extent to which life and work are seen to be meaningful, interesting and worth committing to;
- Challenge versus Threat: The extent to which change, uncertainty, new ideas and new expectations are seen to be challenging rather than threatening.

A more detailed discussion on each of the above mentioned dimensions was provided in Paragraph 7.6.1 in Chapter 7.

The Hardiness Scale contains 50 items; each rated on a 4-point scale (from 1 'not true' to 4 'completely true'). Global and sub-scale scores are calculated from the three subscales of commitment (16 items), control (17 items), and challenge (17 items).

8.6.2.1. Validity of the Hardiness Scale

In order to determine the construct validity of the Hardiness Scale utilised in this study, it was correlated with the longer seventy-six item Hardiness Scale developed by Bartone. A correlation of 0.93 was obtained between the two instruments (Gonella, 1999).

Certain concerns have been raised regarding independence of the three sub-dimensions included in the Hardiness Scale. In a study conducted by Funk and Housten on male college students (as cited in Bissonette, 1999), they were not able to obtain the exact three hardiness dimensions of control, challenge and commitment as established by Kobasa. Based on the outcomes of their research, Funk and Housten argue that hardiness provides a reflection of general emotional adjustment, a construct that can be measured more accurately by asking questions about depression. Despite these concerns, Bissonette (1999) maintains that the hardiness concept should still be utilised as a composite score. Moran (2002) agrees with Bissonette in this regard, asserting that the concept of hardiness *"deserves further investigation to determine if it can provide a meaningful input in assisting to predict effective coping and subsequent good health"*.

8.6.2.2. Reliability of the Hardiness Scale

Kobasa (as cited in Harrisson et al, 2002) reports an overall Cronbach's alpha coefficient of 0.90 for internal consistency, with an average alpha of 0.70 for commitment, control, and challenge. Subsequent research conducted by Harrisson et al (2002) confirms Kobasa's findings that the internal consistency of the Hardiness Scale is adequate. They measured an overall alpha coefficient of 0.85 for the instrument. Cronbach's alpha coefficients for the three subscales included in the Hardiness Scale were as follows: Commitment - 0.64; Control - 0.70; Challenge - 0.70.

The above mentioned results indicate that the Hardiness Scale utilised in this study is reliable as a measurement of the hardiness construct.

8.6.3. Global five factor model of personality

The global five factor model of personality as derived by Cattell (Institute for Personality and Ability Testing, 2007) from the Sixteen Personality Factor Questionnaire (16PF) was utilised in this study to obtain an accurate and scientific indication of the personality traits of the individuals that were sent on international assignments during this study.

The personality factors included in Cattell's global five personality factor model are the following:

- Extraversion
- Anxiety proneness
- Openness
- Independence
- Self-control.

The reasoning behind including the global five factors of personality as a measurement into the study was to determine the influence personality traits have as moderators or mediators on the way in which the expatriates view their adjustment to the external work environment during the various phases of the international assignment. Harrisson et al (2002) define a mediator as a "*qualitative or quantitative variable which represents the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest, and which might explain how certain external events take on psychological significance*".

The Sixteen Personality Factor Questionnaire (16PF) was originally developed by Dr. Raymond Cattell. Cattell made use of factor analysis to identify the underlying characteristics that lead to human behaviour. The 16PF scales provide an indication of temperament, which Cattell defines as "*a person's characteristic style of thinking, perceiving, and acting over a relatively long period of time and in a wide range of different situations. These personality traits are manifested in a set of attitudes, preferences, social and emotional reactions, and habits*" (Institute for Personality and Ability Testing, 2007).

The Sixteen Personality Factor Questionnaire in its various forms is one of the most widely used personality assessment instruments in the world (Institute for Personality and Ability Testing, 2007). Extensive research has already been conducted on the validity and reliability of the instrument. Internationally, the 16PF is available in several different forms: the 16PF Fifth Edition (16PF-5), the Fourth Edition (16PF-4), and the original Forms A and B. The latest and most updated version of the instrument is the 16PF-5 (Van Rooyen, 2007).

The 16PF South African 1992 Version 92 as derived from the 16PPF-4 was utilised in this study (Prinsloo, 1996). The 16PF SA92 measures the following sixteen primary personality factors:

- Introvert versus Extrovert
- Unstable versus Stable
- Concrete versus Abstract
- Humble versus Assertive

- Serious versus Enthusiastic
- Undependable versus Conscientious
- Shy versus Adventurous
- Tough minded versus Sensitive
- Trusting versus Suspicious
- Practical versus Imaginative
- Unpretentious versus Shrewd
- Confident versus Apprehensive
- Conservative versus Liberal
- Group dependent versus Self-sufficient
- Uncontrolled versus Controlled
- Calm versus Tense

8.6.3.1. Global five personality factors

Herewith, a layout of the global five personality factors as established by Cattell (Institute for Personality and Ability Testing, 2007; Lord, 2000; Cattell et al, 1988). A detailed discussion on each of the five global factors and their underlying primary personality factors was provided in Paragraph 7.7.2 in Chapter 7.

i. Extraversion

The first global five personality factor identified by Cattell is referred to as Extraversion. Extraversion refers to the degree to which an individual enjoys being around other people, likes excitement and stimulation, and is cheerful by nature (Cattell et al, 1988: 117). Typical dimensions included in the Extraversion dimension would be being sociable, gregarious, assertive, etcetera. In addition to liking people and preferring large groups and gatherings, extraverts also tend to be assertive, active, and talkative.

In Table 8.19 a layout is provided of the primary 16PF personality factors included in the Extraversion factor, as well as the weighting attached to each of the primary factors in calculating the Extraversion factor:

Table 8.19: Primary factors included in Extraversion

Factor		Weight	Influence on Extraversion Domain
A	Extrovert	+0.3	Level of readiness to become involved with others
F	Enthusiastic	+0.3	Spontaneity of expression
H	Adventurous	+0.2	Level of ease in social situations
N	Shrewd	-0.3	Likelihood of disclosing personal information
Q2	Self-sufficient	-0.3	Strength of tendency to want to be around people and involved in group activities

(Lord, 2000: 62)

ii. Anxiety

Anxiety refers to a person's tendency towards experiencing neuroticism, anxiety, angry hostility, vulnerability, and to experience negative emotions in response to their environment (Cattell et al, 1988: 118).

The opposite of Anxiety proneness is Stability, which refers to a person's emotional stability, and the general tendency to experience negative emotions in response to their environment (Institute for Personality and Ability Testing, 2007). The primary 16PF personality factors included in the Anxiety factor, and the weighting attached to each of these factors in calculating the Anxiety factor, are indicated in Table 8.20 below:

Table 8.20: Primary 16PF factors included in Anxiety

Factor		Weight	Manner of Influence on the Domain
C	Stable	-0.4	Perception of current level of coping with the daily demands of life
O	Apprehensive	+0.4	Level of self-criticism and apprehension
L	Suspicious	+0.3	Extent to which people are generally perceived as trustworthy and sincere
Q4	Tense	+0.4	Level of physical tension as expressed by irritability and impatience with others

(Lord, 2000: 62)

iii. Openness

The Openness construct refers to the extent to which the individual is willing to experience new or different things, and is curious about him- or herself and the world Cattell et al (1988). This dimension focuses on the person's preference for concrete realities and facts versus abstract ideas and possibilities.

Table 8.21 provides a layout of the primary 16PF personality factors included in the Openness factor, as well as the weighting attached to each factor in calculating the factor.

Table 8.21: Primary 16PF personality factors included in Openness

Factor		Weight	Manner of Influence on the Domain
A	Extrovert	+0.2	Extent to which warm involvement with others may influence judgement
M	Imaginative	+0.3	Balance between attending to the external environment and attending to the thought processes that are triggered by it
I	Sensitive	+0.5	Extent to which subjective feelings about issues influence judgement
Q1	Liberal	+0.5	Openness to new ideas and experiences

(Lord, 2000: 62)

iv. Independence

Independence refers to the extent to which an individual is able to effectively interact and get along with other people, and has compassion for others (Institute for Personality and Ability Testing, 2007). Typical dimensions included in the Independence dimension would be being persuasive, straightforward, wilful, etcetera. Independence incorporates the following 16PF primary factors:

Table 8.22.: Primary 16PF personality factors included in Independence

Factor		Weight	Manner of Influence on the Domain
E	Assertive	+0.6	Strength of tendency to attempt to exert influence over others
H	Adventurous	+0.3	Likelihood of feeling intimidated by people
L	Suspicious	+0.2	Likelihood of expecting people to have a hidden agenda
Q1	Liberal	+0.3	Openness to new ideas and new ways of doing things

(Lord, 2000: 62)

v. Self-control

Cattell also refers to the Self-control dimension as Conscientiousness. Self-control relates to the degree of effectiveness and efficiency with which a person plans, organises, and carries out tasks (Institute for Personality and Ability Testing, 2007). In Table 8.23 a layout is provided of the primary 16PF personality factors included in Self-control.

Table 8.23.: Primary 16PF personality factors included in Self-control

Factor		Weight	Manner of Influence on the Domain
F	Enthusiastic	-0.2	Control exerted over impulses to speak and act
G	Conscientious	+0.4	Degree to which societal demands of behaviour and externally imposed rules are valued and followed
M	Imaginative	-0.3	Control of attention
Q3	Control	+0.4	Importance attached to behaving in line with clearly defined personal standards and being organised

(Lord, 2000: 62)

8.6.3.2. Validity of the Sixteen Personality Factor Questionnaire

Validity refers to whether or not an assessment instrument measures what it claims to measure (Taylor, 2006). In order to test the construct validity of the instrument, it is compared with instruments measuring similar constructs. A strong correlation between the two concepts confirms the similarity between them, and therefore confirms the validity of the construct. In this regard, extensive research conducted on the five-factor models of personality as presented by Costa and McCrae (1992), and Goldberg (Institute for Personality and Ability Testing, 2007) indicated very similar structures to the global five personality factors of Cattell.

A summary of the three most commonly accepted five-factor personality models is provided in Table 8.24 below:

Table 8.24.: Summary of commonly accepted big-five personality factor models

Cattell	Goldberg	Costa and McCrae
1. Extraversion	1. Surgency	1. Extraversion
2. Anxiety proneness	2. Emotional stability	2. Neuroticism
3. Openness	3. Intellect	3. Openness
4. Independence	4. Agreeableness	4. Agreeableness
5. Self-control	5. Conscientiousness	5. Conscientiousness

(Institute for Personality and Ability Testing, 2007)

As can be seen in Table 8.24, a strong similarity exists among the three models, despite the differences observed in the names provided to the individual dimensions.

Based on the above mentioned discussions, the global five factor model of personality as derived by Cattell was found a valid measurement of the personality traits of the individuals that were sent on international assignments during this study.

The South African 1992 Version of the 16 Personality Factor Questionnaire (16PF-SA92) (Prinsloo, 1996) was utilised during this study as instrument to assess the global five factors of personality. Certain concerns may potentially be raised regarding the advisability of making use of an older version of the 16PF and its validity in assessing individuals from culturally diverse backgrounds in South Africa. The reason for making use of the 16PF-SA92 in this study is that the collection of data for the study had already commenced during 1997 when the first individuals included in the sample were expatriated to foreign countries. At that point in time, the 16PF-SA92 was still the most recently developed and the most commonly utilised version of the 16PF.

Karson et al (1997: 143) recommend that the latest 16PF-5 be utilised when conducting assessments on individuals. However, they also indicate that the 16PF-4 is still considered appropriate for assessment purposes until the 16PF-5 has been accepted by the general psychological testing community as the latest version of the 16PF to be utilised. The 16PF-SA92 is similar to the 16PF-4 utilised internationally, and was standardised for South African conditions (Prinsloo, 1996).

Table 8.25 presents the validity coefficients obtained for the 16PF-SA92 (Prinsloo, 1996).

Table 8.25.: Validity coefficients obtained for 16PF-SA92

A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
0.79	0.35	0.70	0.63	0.83	0.67	0.92	0.70	0.49	0.44	0.41	0.71	0.62	0.70	0.68	0.57

(Prinsloo, 1996)

8.6.3.3. Reliability of the Sixteen Personality Factor Questionnaire

Reliability coefficients for the 16PF-SA92 as calculated by Prinsloo (1996) are presented in Table 8.26 below:

Table 8.26.: Reliability coefficients for 16PF-SA92

A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
0.86	0.79	0.82	0.83	0.90	0.81	0.92	0.90	0.78	0.75	0.77	0.83	0.82	0.85	0.80	0.82

(Prinsloo, 1996)

As can be seen in Table 8.26, the Cronbach alpha coefficients of the personality traits vary from 0.75 (Factor M) to 0.92 (Factor H). Taking into account the suggestion by Nunnally (1978: 261) that a Cronbach alpha of between 0.5 and 0.6 is satisfactory for research purposes, the above mentioned coefficients are regarded as acceptable for the instrument to be included in this research.

8.6.4. Organisational Climate Questionnaire

Organisational climate refers to perceptions of organisational policies, practices, and procedures that are shared by individuals within organisations (Reichers & Schneider, 1990). Individuals are assumed to evaluate organisational attributes in terms of their own values and the significance of those attributes for their own well-being. These evaluations are termed "psychological climate" at the individual level. When these evaluations are shared by a sufficiently large number of people within a workplace, they are referred to as "organisational climate" (Neal et al, 2000).

The Organisational Climate Questionnaire utilised in this study was developed by Kossuth (1998). The instrument is used to measure the psychological climate in an organisation. There are certain measurable properties of climate which determine how individuals perceive this psychological atmosphere. It is the measurement of these properties which forms the basis for the development of the climate questionnaire in this research (Kossuth, 1998: 207).

The Organisational Climate Questionnaire was designed for the purpose of recording the perceptions of an individual with respect to the psychological atmosphere of the organisation. These perceptions influence the behaviour of the individual and have an effect on his performance. Therefore, the instrument is capable of measuring the properties of climate as a mechanism for determining and predicting behaviour and performance (Kossuth, 1998: 207). High scores on the items indicate that the perception of climate is positive, with the exception of items in job tension and propensity to leave where low scores are desirable.

The original Organisational Climate questionnaire developed by Kossuth (1998) consists of 16 dimensions of organisational climate, each dimension being measured by five statements or questions. Each individual responds to each statement or question in relation to how he perceives the situation. The questionnaire consists of 80 items. These are answered on a 5-point Likert type scale from very positive (definitely agree) = 5, to very negative (definitely disagree) = 1 (Kossuth, 1998: 207).

The dimensions included in the original Organisational Climate Questionnaire are the following (Kossuth, 1998: 208):

- Decision making: The extent to which decision making is effective and whether or not individuals can contribute to the decision making process;

- Job and organisational structure: The extent to which jobs are properly structured, organisational structures are clear and the formal authority is determined;

- Role clarity: The extent to which employees understand what is expected of them in their work;

- Standards: The extent to which employees feel that high standards are set and maintained in the organisation;

- Conflict handling: The extent to which individuals are encouraged to present their own ideas, and whether or not disagreements are confronted and worked through rather than avoided;

- Supervisory effectiveness: The extent to which supervisors manage their work properly in terms of delegation, providing feedback on performance, planning and co-ordinating the work of their subordinates, and giving them guidance and assistance;

- Communication: The extent to which employees are able to obtain the information necessary to do their jobs properly, as well as the extent to which both upward and downward communication exists in the workplace;

- Team building: The extent to which employees in the work teams assist each other and provide the necessary psychological support to assist colleagues in their work;

- Responsibility: The extent to which individuals are allowed to make decisions in their work without being constantly checked or hindered by red tape, as well as the extent to which initiative is encouraged in decision making;

- Reward: The extent to which the appropriate reward systems operate in the organisation;

- Satisfaction: The extent to which the individual enjoys his/her life and work, in that he is able to exercise his skills in the performance of his function;

- Job tension: The extent to which an individual worries about aspects of his/her work environment that impose on his time, family, situation or personal grievances. The extent to which these issues are not satisfactory resolved will reflect in job tension.

- Propensity to stay : The extent to which the individual is likely to want to stay with the organisation, as opposed to searching for alternative employment;

- Contribution to company profits: The extent to which individuals feel that they contribute meaningfully to the setting of department and organisation goals, and have some say in how these are to be achieved;

- Development of supervisory skills: The extent to which individuals feel and believe that they are receiving adequate management and supervisory skills training;

- Leadership: The extent to which individuals view the management team in the organisation as being competent, credible, and trustworthy.

8.6.4.1. Organisational Climate variables included in research

Based on the detailed literature study conducted in Chapters 4, 5 and 6 of this research, it was decided to select from the original 16 Organisational Climate factors those that are most applicable and relevant to the expatriate work environment. The results obtained from the initial analyses conducted in this research were also utilised as guidelines in selecting factors that were sufficiently reliable to be included in the research. As a result of the elimination process, the following six key factors were identified and included as organisational climate factors in the study:

- Role clarity
- Communication
- Leadership
- Satisfaction
- Tension
- Propensity to stay

A discussion follows on each of the factors included in the research, as well as the reasoning behind their inclusion in the study.

i. Role clarity

During his validation of the Organisational Climate Questionnaire, Kossuth (1998: 47) categorised the following factors together, referring to them as *"directive dimensions of climate"* that reflect the rules and norms of the organisation:

- Role clarity
- Structure
- Job standards
- Supervisory effectiveness

Kossuth (1998: 42) gives specific attention to role clarity as a key dimension that has a direct impact on the individual's perception of the climate in the organisation. According to Kossuth, the concept of role clarity can be operationalised in two ways.

Firstly, role clarity can refer to the presence or absence of adequate role relevant information. Kossuth (1998: 42) also refers to this concept as objective role clarity.

Secondly, role clarity or role ambiguity can also refer to the subjective feeling of having as much, or not as much, job-relevant information as the person would like to have during the conduct of his work (Kossuth, 1998: 42). Neal et al (2000) also specifically refer to the lack of role clarity as "role stress", and include it as part of four first order factors that directly impact on the climate of an organisation.

From an expatriate climate perspective, five sub-dimensions were referred to in Chapter 5 under the concept of role clarity as having a significant impact on the adjustment of the expatriate:

- Role clarity (ambiguity)
- Role discretion
- Role novelty
- Role conflict
- Role overload.

A detailed discussion on the impact of role clarity on the expatriate and his performance while on international assignment can be found in Paragraph 5.5.2 in Chapter 5 of this research.

Based on the above mentioned observations, it was decided to include role clarity in this research as a factor that has a significant impact on the adjustment of the expatriate while on international assignment.

ii. Communication

Communication is included by Kossuth (1998: 47) as a critical interactive dimension having an impact on the climate in the organisation. Interactive dimensions refer to those dimensions of organisational climate that comprise the social interactions between employees and other parties in their external environment (Kossuth, 1998: 38). Other dimensions included by Kossuth as interactive dimensions of climate are reward, team building, contribution to profits, and conflict handling.

From an expatriate perspective, communication was found one of the most important factors having an impact on the expatriate during all three phases of the international career cycle. Detailed discussions in this regard can be seen in Paragraph 5.5.3 in Chapter 5, and Paragraph 6.3.1.2 in Chapter 6 of this research.

Based on the above mentioned observations, it was decided to incorporate communication as a critical dimension as part of this research.

iii. Leadership

Leadership was also included as an Organisational Climate factor during this research. Kossuth (1998: 47) identifies leadership as a critical factor for determining the psychological atmosphere or climate of the organisation. Kossuth (1998: 48) refers to Blake and Mouton, who suggest that leadership style is a major determinant of behaviour in organisations. Solomon et al (2001) concur with the above mentioned authors, asserting that the leader in the organisation has a critical role to play in his role as agent, effecting employees directly or indirectly through the climate in the organisation.

These observations are in accordance with research conducted by Litwin and Stringer (as cited in Kossuth, 1998: 48), which indicates that the leader who is able to establish clear goals, provide sufficient support, set achievable objectives, provide good communication, and establish clear structures and standards is most likely to achieve the best results in establishing a so-called “achieving” organisational climate.

From an expatriate perspective, a detailed discussion was conducted in Paragraph 5.5.3 in Chapter 5 on the impact of leadership on the expatriate and his performance while on international assignment, with the specific reference to the impact of different leadership styles that exist at the head office in the home country, and the subsidiary in the host country.

iv. Satisfaction

Satisfaction was the fourth Organisational Climate factor included in this research. Kossuth (1998: 47) includes job satisfaction as a so-called "interactive dimension" that influences organisational climate. According to Kossuth (1998: 51), there is a direct relationship between satisfaction and work performance.

Of importance in this regard would be the assertion by Forehand and Gilmer (as cited in Kossuth, 1998) that satisfaction is an outcome variable influenced by environmental factors such as role clarity and the structure of the organisation, as well as personal variables such as attitudes and motives that the person brings with him into the work situation. Organisational climate can therefore be viewed as an interaction of environmental and personal variables that leads to satisfaction and work performance.

From an expatriate perspective, Yavas and Bodur (1999) indicate that satisfaction refers to three specific aspects: general job satisfaction, satisfaction with the expatriation process, as well as satisfaction with the personal aspects of expatriation. In their research, Yavas and Bodur (1999) found a direct relationship between the satisfaction experienced by expatriate managers, and their commitment towards their assignments and companies of employment. These results are confirmed by similar research conducted by Stahl et al (2002), who found that the levels of satisfaction experienced by the expatriate while on international assignment also provide some indication of the expatriate's levels of commitment towards the company on their repatriation after completing their assignments. A detailed discussion on expatriate satisfaction as both an outcome and an influence on expatriate performance is provided in Paragraph 3.8.4 in Chapter 3, as well as in Paragraphs 5.4 and 5.5 in Chapter 5.

v. Tension

Kossuth (1998: 47) includes tension as both a directive and an interactive dimension in his Organisational Climate questionnaire. Kossuth defines tension as the extent to which the individual experiences tension concerning aspects of his work environment that impose on his time, family, situation or personal grievances.

From an expatriate perspective, tension is viewed from a broader perspective and incorporates the extent to which the individual experiences his personal, work, and social environment as being stressful. The purpose of this research is to determine the extent to which the expatriate is able to remain emotionally healthy, despite being faced with a multitude of external pressures and demands exerted on him from the external environment in the foreign country - both at a professional and a personal level.

A detailed discussion on the pressures being placed on the expatriate during the various phases of the international career cycle that lead to him experiencing significant levels of tension can be seen in Paragraph 3.8.4 in Chapter 3, Paragraph 5.4 in Chapter 5, and Paragraph 7.2 in Chapter 7.

Based on the above mentioned observations, it was decided to include tension as an organisational climate factor in this research.

vi. Propensity to stay

Kossuth (1998: 47) also includes propensity to stay as both a directive and an interactive dimension in his Organisational Climate questionnaire, and defines the concept as the extent to which the individual is likely to want to remain with the organisation, as opposed to searching for alternative employment.

Within the broader expatriate perspective, Van der Bank and Rothman (2002) refer to propensity to leave (the opposite of propensity to stay) as the individual's "desire to terminate his assignment". They describe desire to terminate the assignment as the most basic behavioural criterion for assessing the outcome of an expatriate assignment. The desire to terminate the assignment refers to an expatriate requesting to return to his home country before the assignment is completed. Detailed discussions on expatriates' desire to terminate their assignments early can be found in Paragraph 3.8 in Chapter 3, as well as Paragraphs 5.5.1 and 5.5.2 in Chapter 5.

Within the framework of the above mentioned observations, it was viewed of critical importance to include propensity to stay as an organisational climate factor in this research.

8.6.4.2. Validity of the Organisational Climate Questionnaire

Construct validity refers to whether or not an assessment instrument measures what it claims to measure (Taylor, 2006). In order to test the construct validity of the instrument, it is compared with instruments measuring similar constructs. Measurements of organisational climate dimensions included in this research correlate with other valid measurements of team building and supervisory support. Kossuth (1998) found an average correlation coefficient of 0.48 between organisational climate and teamwork, and 0.53 between organisational climate and supervisory support dimensions. These results confirm the construct validity of the Organisational Climate Questionnaire.

8.6.4.3. Reliability of the Organisational Climate Questionnaire

Kossuth (1998: 253) found the overall Cronbach alpha of the Organisation Climate Questionnaire to be 0.86. This indicates that the questionnaire is a reliable measuring instrument for the purposes of this research project.

8.7. Statistics to be utilised during study

8.7.1. Introduction

The following steps and statistical techniques will be utilised in order to achieve the objectives set in Chapter 1 of this research:

Firstly, the psychometric properties of each of the instruments included in the study will be investigated.

Secondly, descriptive statistics for the measurement instruments will be calculated and discussed.

Thirdly, the differences between means of variables as obtained by the experimental and control groups will be determined, as well as mean differences in variables over time.

Correlations existing among the variables included in the study will be investigated to obtain an indication of possible relationships.

Lastly, a discussion will be conducted on the results obtained from the regression analysis conducted to determine which aspects of organisational climate and personality predict emotional health.

Herewith, a more detailed discussion on the statistical analyses that will be conducted in this research:

8.7.2. Psychometric properties of assessment instruments

The reliability of the measurement instruments will be determined by making use of Cronbach's (1951) Alpha coefficient for internal consistency. An item analysis will also be conducted in order to determine the item-total correlation and the frequency distribution of responses on the measurement instruments.

In order to determine the factorial structure and therefore the validity of the measurement instruments, a maximum likelihood factor analysis with Promax rotation will be conducted (Taylor, 2006).

Inter-correlations among dimensions assessed in the various instruments will also be analysed by making use of Pearson's Product Moment Correlation Coefficient (*r*) in order to determine their interdependence (Neuman, 2000: 331).

8.7.3. Descriptive statistics for measurement instruments

Descriptive statistics will be calculated in order to describe, display, and arrange the numerical data (Porkess, 2004: 76). The following descriptive statistical measures will be utilised during this study:

- Means: the average score of all the scores included in the sample;
- Standard deviations to determine the spread or dispersion of the data;
- Skewness as an indication of the deviation of the distribution of responses from symmetry.
- Kurtosis to determine the sharpness of the peak of a distribution.

8.7.4. Comparison of mean scores

Objective 1 established during this research was to establish the impact of the expatriation process on the individual's emotional health. In order to achieve this objective, a postulate was set that the emotional health of the individual expatriate is directly and significantly influenced during the three phases of the international assignment.

In proving this postulate, the Sense of Coherence and Hardiness mean scores of the experimental and control groups before departure will be compared with their Sense of Coherence and Hardiness mean scores after six months on assignment. The Sense of Coherence and Hardiness mean score of the experimental and control groups after six months on assignment will also be compared with their Sense of Coherence and Hardiness mean scores after completion of their assignments.

Further comparisons will be made between the Sense of Coherence and Hardiness mean scores of the experimental and control groups before departure on international assignment. This comparative exercise will be repeated six months after arrival on the international assignment, as well as after their completion of their assignments. All of the mean comparisons will be done by using a General Linear Model procedure to perform a factorial ANOVA with one between subjects variable (experimental versus control group) and one within subjects variable (Before / During / After, or Before / During depending on the variables involved).

8.7.5. Correlation analysis

Correlation analysis will be utilised to achieve Objectives 2, 3, and 4 of this research. A discussion follows on the processes to be utilised:

8.7.5.1. Objective 2

The second objective of this study is to establish the relation that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process. In achieving this objective, the second postulate set is that a direct correlation exists between the individual's personality traits and the individual's emotional adjustment during the assignment.

In proving this postulate, correlations between the five global personality factors and the Sense of Coherence and Hardiness mean scores of the experimental group before departure and after six months of assignment will be investigated.

Correlations emerging between the primary 16PF personality factors and the Sense of Coherence and Hardiness mean score of the experimental group before departure and after six months of assignment will also be investigated.

The above mentioned analyses will be conducted by making use of Pearson's Product Moment Correlation Coefficient (*r*) (Neuman, 2000: 331).

An important factor that needs to be taken into consideration during the examination of inter-correlations would be the extent to which the inter-correlations are reliable (how probable it is that a similar relation would be found if the experiment was replicated with other samples drawn from the same population). This reliability is calculated by making use of a standard measure called the p-level or statistical significance level. The *p*-level represents the probability of error that is involved in accepting the observed result as valid, that is, as representative of the population. The *p*-level of a result is an estimated measure of the degree to which it is true in the sense of being representative of the population. The higher the *p*-level, the less the probability is that the observed relation between variables in the sample is a reliable indicator of the relation between the respective variables in the population (Statistica, 1994).

In areas of research, the *p*-level of 0.05 is considered as a "border-line acceptable" error level (Statistica, 1994). Results that are significant at the $p < 0.01$ level are commonly considered statistically significant, and $p < 0.005$ or $p < 0.001$ levels are often called "highly" significant (Kerlinger, 1986: 188).

8.7.5.2. Objective 3

The third objective of this study is to establish the impact of organisational climate factors on the emotional adjustment of the individual prior to departure on the international assignment, and after six months on assignment. In line with the above mentioned objective, the third postulate set in this research is that the organisational climate prior to and during the international assignment has a significant influence on the expatriate's levels of emotional health.

In proving this postulate, the correlations between the Climate variables and the Sense of Coherence and Hardiness mean score of the experimental group before departure on assignment will be investigated. A further investigation will be conducted to investigate the correlations between the Climate variables and the Sense of Coherence and Hardiness mean scores of the experimental group during assignment.

Pearson's Product Moment Correlation Coefficient (*r*) will be applied again during the above mentioned analyses.

8.7.5.3. Objective 4

Objective 4 set during this study was to establish the nature of the relationship that exists between expatriate personality and the individual's perception of the organisational climate. In line with this objective, it is postulated that a direct correlation exists between the individual's personality traits and the individual perception of the organisational climate prior to and during assignment.

The above mentioned postulate will be tested by investigating the correlations that exist between the five global personality factors and the climate variables of the experimental group before their departure on assignment and after being on assignment for six months.

An investigation will also be conducted on correlations emerging between the primary 16PF personality factors and the climate variables of the experimental group before their departure on assignment, as well as six months after arrival on their assignments.

As was the case during the previous investigations, Pearson's Product Moment Correlation Coefficient (*r*) will be utilised during the above mentioned analyses.

8.7.6. Regression analysis

The fifth objective of the study is to establish the main predictors of emotional health of expatriates. In order to achieve this postulate, a multiple regression analysis will be conducted where the impact of personality and climate factors on emotional health is determined.

8.8. Statistical programme utilised

The Statistical Analysis Software (SAS) and SPSS Version 15.0 statistical packages were used for the analysis of the data in this study.

8.9. Summary

In Chapter 8 the methodology utilised during the conduct of the empirical research in this study was highlighted. In line with the criteria established by Mouton (2001: 123), the following specific areas were discussed. The research hypotheses were defined and illuminated. The research design utilised in the study was described. The sampling process utilised during the study was clarified. The variables and measuring instruments utilised in this study were described. The statistical methods and procedures utilised at the various phases of the study were also specified.

The discussions conducted in Chapter 8 provide the basis for the results obtained from the empirical research. These results are investigated in Chapter 9.

Chapter 9
Results

9.1. Introduction

After applying the methodology and statistical procedures discussed in Chapter 8, the results obtained from the study are presented in Chapter 9. The results obtained from the statistical analyses are presented in the following sequence:

- The psychometric properties of each of the instruments included in the study;
- Descriptive statistics for the measurement instruments;
- Comparative analyses of the differences between means of variables as obtained by the experimental and control groups over time by making use of a General Linear Model procedure and an independent samples t-test;
- The possible relationships among the variables included in the study. Correlations calculated by making use of Pearson's Product Moment Correlation Coefficient (*r*);
- The results of the regression analysis conducted to determine which climate and personality variables are the main predictors of emotional health of expatriates.

9.2. Psychometric properties of measuring instruments

9.2.1. Introduction

In order to obtain more accurate results on the reliability and construct validity of the instruments included in this study, the number of participants included in the initial pre-departure assessment was increased from 126 (84 included in experimental group plus 42 included in control group) to a total number of 308 (185 included in experimental group and 123 included in control group). This was done by adding the data of other individuals who were assessed and counselled under similar circumstances as the sample on the measuring instruments prior to their departure on their assignments.

Unfortunately these individuals could not be included in the sample for the remainder of the calculations. In order to have been included in the sample, their follow-up data should have been available after six months on assignment, as well as on their return on completion of their assignments (refer to discussion of the sample and method of data gathering in Paragraph 8.4.2 in Chapter 8). Had results of these additional participants been available after six months into their assignments and on their repatriation, they would also have been included in the sample. These subjects included in the sample for the purposes of determining the reliability and construct validity of the measuring instruments were therefore not included in the remainder of the statistical analyses conducted during this study.

This section describes the psychometric properties of the measurement instruments included in this study. The reliability, factor structure, inter-scale correlations of the Sense of Coherence, Hardiness, and Organisational Climate questionnaires are presented below. The Sixteen Personality Factor Questionnaire could not be included in these analyses, as only sten scores were available. Individual raw scores were not available for the purposes of statistical analysis.

9.2.2. Sense of Coherence Scale

9.2.2.1. Reliability of the Sense of Coherence Scale

i. Internal consistency

The reliability of the Sense of Coherence Scale was determined by making use of Cronbach's Alpha coefficient for internal consistency (Clark & Watson, 1995; Cronbach, 1951). Nunnally (1978: 261) states that a Cronbach alpha of between 0.5 and 0.6 is satisfactory for research purposes. A summary of the Cronbach Alpha coefficients obtained for the Sense of Coherence Scale can be seen in Table 9.1.

Table 9.1.: Cronbach Alpha coefficients for Sense of Coherence dimensions

Dimension	Number of items	Cronbach Alpha
Overall Sense of Coherence	29	0.88
Comprehensibility	11	0.75
Manageability	10	0.71
Meaningfulness	8	0.74

As can be seen in Table 9.1, the Cronbach Alpha coefficients for the three Sense of Coherence factors were found to be satisfactory. These results are in line with the levels of reliability indicated for the Sense of Coherence Scale by Antonovsky (1993: 727) in his studies, which varied between 0.86 and 0.95.

From the above mentioned results it becomes evident that the overall Sense of Coherence score is a more reliable measurement of the sense of coherence construct (Cronbach Alpha = 0.88) compared to its underlying three dimensions.

ii. Item-total correlations

An item analysis was also conducted in order to determine the individual item-to-overall scale correlation and the frequency distribution of responses on the Sense of Coherence Scale. The table displaying the item analysis for the Sense of Coherence Scale is presented in Appendix A.

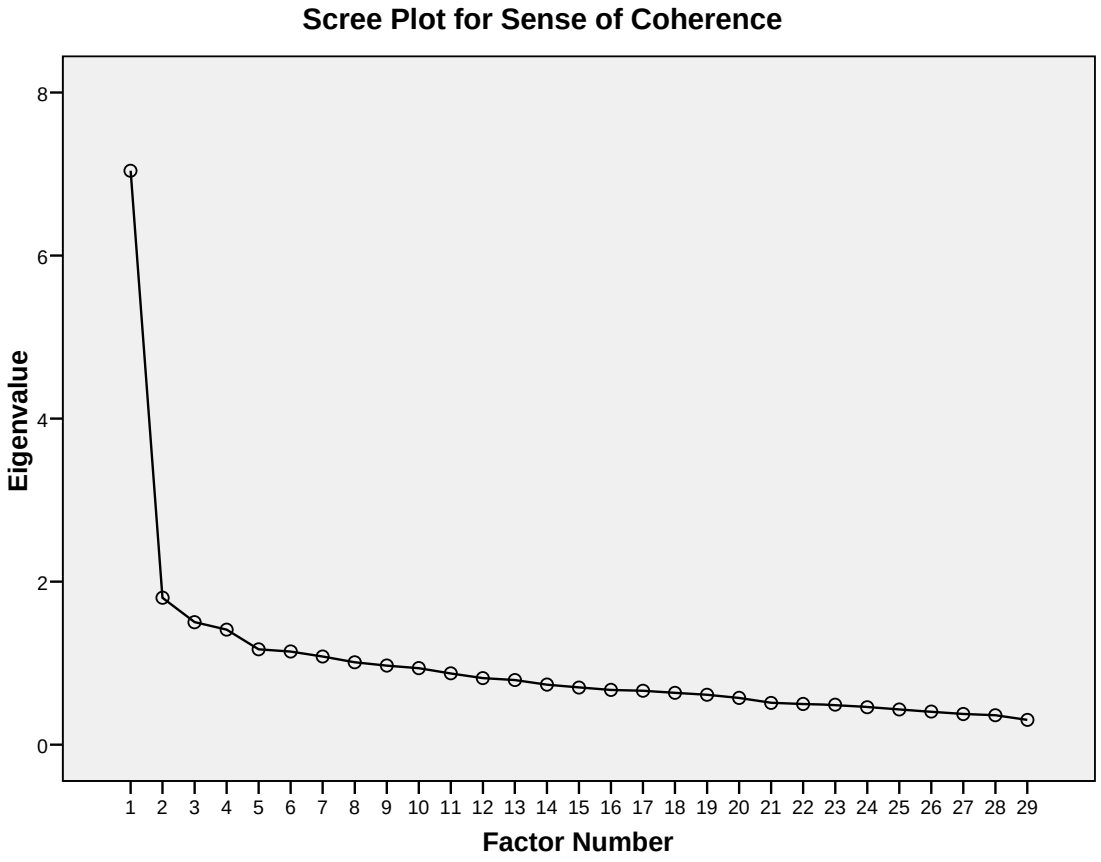
Clark and Watson (1995: 316) indicate that an individual item should have a correlation of between 0.15 and 0.5 with the overall scale in order to be considered a reliable and valid contributor to the assessment instrument. As can be seen in the table in Appendix A, the lowest item-scale correlation obtained for the Sense of Coherence scale during this study was 0.36 (Item 13). The highest item-scale correlation obtained in this study was for item 16, which indicated an item-scale correlation of 0.70. The average item-scale correlation obtained for the Sense of Coherence scale during the study was 0.55.

These correlations therefore indicate that most of the items included in the Sense of Coherence scale meet the requirements to be considered representative of the specific dimensions they are intended to assess. The reliability of the Sense of Coherence Scale was therefore found to be acceptable.

9.2.2.2. Factor structure of Sense of Coherence Scale

A maximum likelihood factor analysis with Promax rotation (k = 4) was conducted on the Sense of Coherence Scale items in order to determine the factorial structure of the questionnaire. The scree plot obtained is presented in Figure 9.1.

Figure 9.1.: Scree plot for Sense of Coherence Scale



During his validation of the Sense of Coherence Scale, Antonovsky (1979) identified three clearly definable sub-dimensions. In line with Antonovsky's model, three factors were extracted in this factor analysis. These three factors accounted for 35.68 percent of the variance in the factor correlation matrix.

In Figure 9.1 the scree plot indicates the existence of three to four factors that explain most of the variance in the data. However, the scree plot also indicates evidence of a possible latent factor (Factor 1) that explains 24.28 percent of the variance in the data. Taking into account the strong presence of Factor 1, the inference can be made that a higher order factor is assessed in the Sense of Coherence Scale.

The factor pattern matrix for the Sense of Coherence Scale is presented in Table 9.2.

Table 9.2.: Factor pattern matrix for Sense of Coherence Scale

		Factor		
	Item	**1**	**2**	**3**
Comprehensibility	Q1	-0.227	**-0.412**	-0.105
	Q3	0.217	-0.163	**-0.330**
	Q5	**-0.633**	0.134	-0.010
	Q10	**0.292**	0.049	-0.116
	Q12	**0.402**	-0.057	-0.250
	Q15	**0.309**	0.154	-0.158
	Q17	0.149	-0.007	-0.125
	Q19	**0.518**	0.236	0.011
	Q21	**0.516**	0.140	0.151
	Q24	**0.471**	0.130	0.017
	Q26	0.184	**0.508**	0.091
Manageability	Q2	**0.271**	**0.258**	0.046
	Q6	**-0.501**	-0.174	-0.152
	Q9	**0.523**	-0.077	-0.061
	Q13	0.103	**-0.311**	**0.258**
	Q18	0.122	**0.366**	0.039
	Q20	**-0.434**	0.034	**0.326**
	Q23	-0.010	**-0.369**	-0.019
	Q25	**-0.604**	0.025	-0.019
	Q27	-0.021	**-0.504**	0.066
	Q29	**0.423**	0.037	**-0.288**
Meaningfulness	Q4	-0.047	**-0.335**	0.101
	Q7	-0.151	0.146	**0.468**
	Q8	-0.189	0.283	**-0.483**
	Q11	0.202	-0.114	**0.624**
	Q14	0.061	-0.161	**0.481**
	Q16	-0.234	0.058	**0.553**
	Q22	-0.153	**0.629**	-0.101
	Q28	0.148	0.286	-0.265

As displayed in Table 9.2, the factor analysis conducted on the Sense of Coherence Scale confirms the existence of three separate dimensions included in the scale. A concern in this regard would be that the items included in the three dimensions identified in the factor analysis do not correspond with the formal scale dimensions as specified by Antonovsky (1993) in his Sense of Coherence Scale. A possible reason for this phenomenon would be that the responses of both the experimental and the control group to the individual items included in the Sense of Coherence Scale tended to be negatively skewed (a more detailed discussion in this regard will be provided in Paragraph 9.4.).

In this study, Questions 1 and 26 included in the Comprehensibility dimension (Factor 1) of Antonovsky's Sense of Coherence Scale loaded on Factor 2 in the rotated factor matrix. Questions 6, 9, and 25 included in the Manageability dimension (Factor 2) of Antonovsky's Sense of Coherence Scale loaded on Factor 1 in the rotated factor matrix. Questions 4 and 22 included in the Meaningfulness dimension (Factor 3) of Antonovsky's Sense of Coherence Scale loaded on Factor 2 in the rotated factor matrix.

More than 20 percent of the items (6 items of the 29) included in the Sense of Coherence Scale loaded on more than one factor. Items 2, 8, 13, 20, 28 and 29 each had dual factor loadings. This means that the factors identified in the factor analysis of the Sense of Coherence Scale do not clearly correspond to the dimensions as identified by Antonovsky (1993). This gives weight to the argument that a single overall Sense of Coherence score should be utilised in this study.

9.2.2.3. Inter-correlations between Sense of Coherence subscales

Table 9.3 reflects the correlations obtained among the Sense of Coherence dimensions.

Table 9.3.: Inter-correlations among the three Sense of Coherence factors

Correlations	Comprehensibility	Manageability	Meaningfulness
Comprehensibility	1		
Manageability	0.702	1	
Meaningfulness	0.567	0.612	1

Note. $p < 0.05$ for all correlations

According to Clark and Watson (1995: 316), the inter-scale correlations among the dimensions should be between 0.15 and 0.5. The correlation between the two dimensions should not be too high, as they will then evaluate the same construct. The correlation must also not be too low, as two totally unrelated factors would then be included in the same measuring instrument.

Correlations among the three Sense of Coherence factors were found to be higher than 0.5. Considering the guidelines provided by Clark and Watson (1995), the strong correlations observed among the three Sense of Coherence factors indicate that they could probably be measuring the same underlying construct.

9.2.2.4. Summary

From the analyses conducted on the Sense of Coherence Scale it is evident that utilising one overall Sense of Coherence scale would provide a more reliable and valid reflection of the construct, as opposed to utilising the three separate sub-dimensions. Based on these observations, only the overall Sense of Coherence score will be included in this research. These findings are in line with Antonovsky's (1993: 731) findings that the three separate Sense of Coherence scales could not be clearly confirmed by means of factor analysis. As a result, Antonovsky declares that it may therefore not make much sense to interpret the three Sense of Coherence scales separately, and that it would be more appropriate to use the overall Sense of Coherence score.

9.2.3. Hardiness Scale

9.2.3.1. Reliability of Hardiness Scale

i. Internal consistency

The reliability of the dimensions included in the Hardiness Scale was determined by calculating the Cronbach Alpha coefficients for each of the dimensions. The results obtained in this regard can be seen in Table 9.4 below:

Table 9.4.: Cronbach Alphas for Hardiness dimensions

Dimension	Number of items	Cronbach Alpha
Overall Hardiness	50	0.865
Comprehensibility	16	0.752
Manageability	17	0.713
Meaningfulness	17	0.738

As depicted in Table 9.4, the Cronbach Alpha coefficients for the three separate Hardiness factors were found to be satisfactory. The reliability obtained for the three Hardiness factors compare well with the results obtained from research conducted by Kobasa (1979), which indicated an average alpha coefficient of 0.70 for Commitment, Control, and Challenge. Subsequent research conducted by Harrisson et al (2002) indicated Cronbach Alpha coefficients for the three subscales included in the Hardiness Scale as follows: Commitment (α = 0.64); Control (α = 0.70); and Challenge (α = 0.70).

The Cronbach Alpha Coefficient obtained for the overall Hardiness factor was 0.865. This result is in line with the overall alpha coefficient of 0.90 reported by Kobasa (1979), as well as with the coefficient of 0.85 obtained during a study conducted by Harrisson et al (2002).

Based on the results obtained from this study, the three sub-dimensions included in Kobasa's Hardiness Scale were found reliable. However, the overall Hardiness factor was found to be a more reliable indicator of the hardiness construct.

ii. Item-total scale correlations

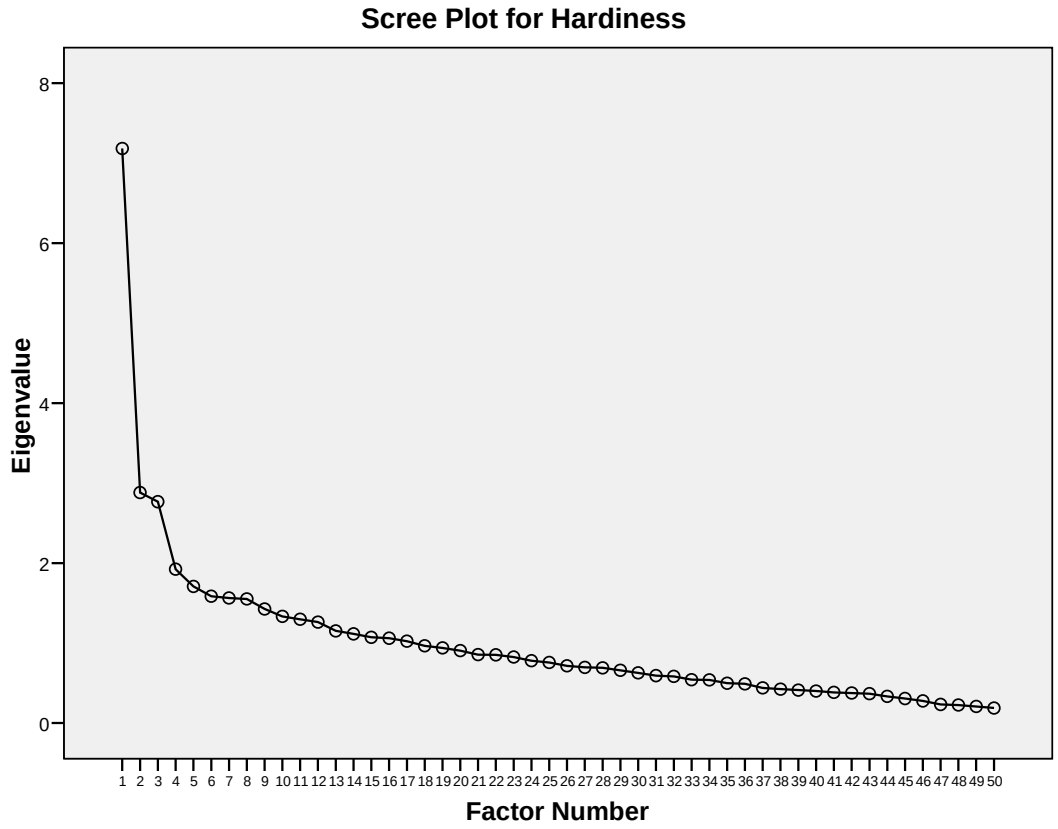
In order to determine the item means, variance, individual item-to-overall scale correlations, and the frequency distribution of responses on the Hardiness Scale, an item analysis was conducted. The outcomes of the item analysis are presented in Appendix B.

The results of the item analysis indicate that most of the individual items included in the Hardiness scale meet the 0.15 to 0.5 item-scale correlation requirement as suggested by Clark and Watson (1995: 316). The lowest correlations were found for items 46 (r = 0.24), 12 (r = 0.28), and 26 (r = 0.29). The highest item-scale correlation was found for question 17 (r = 0.64). The average item-scale correlation obtained for the Hardiness Scale during this research was 0.44. The results obtained from the item analysis indicate that most of the items included in the Hardiness Scale reliably contribute to the particular scales they were intended to assess.

9.2.3.2. Factor structure for Hardiness Scale

Figure 9.2 reflects the outcomes of the scree plot analysis for the Hardiness data.

Figure 9.2.: Scree plot analysis for Hardiness Scale



The scree plot obtained from the factor analysis conducted on the Hardiness Scale found that three factors explain 25.67 percent of the variance observed in the data. However, the scree plot also indicates the existence of a latent factor (Factor 1) that carries a substantial weight in explaining 14.37 percent of the variance in the data.

Taking into account the strong presence of Factor 1, the inference can be made that a higher order factor is assessed in the Hardiness Scale.

A maximum likelihood factor analysis with Promax rotation (k = 4) was conducted on the Hardiness Scale data. The factor pattern matrix obtained from this analysis is presented in Table 9.5.

Table 9.5.: Factor pattern matrix for Hardiness Scale

		Factor		
Scale	**Item**	**1**	**2**	**3**
Commitment	Q1	-0.203	0.082	**0.256**
	Q8	**0.379**	0.078	-0.073
	Q11	**0.487**	-0.011	0.027
	Q14	**0.407**	0.026	-0.124
	Q17	**0.674**	-0.031	-0.019
	Q20	**0.379**	-0.098	0.178
	Q23	-0.080	-0.131	**0.504**
	Q26	-0.014	-0.175	**0.239**
	Q29	**0.475**	0.043	-0.072
	Q32	**0.365**	-0.060	-0.129
	Q38	**0.288**	0.090	-0.160
	Q39	0.186	-0.017	-0.134
	Q41	**0.444**	-0.121	-0.022
	Q44	**0.473**	-0.009	0.007
	Q47	**0.536**	-0.053	0.038
	Q50	**0.421**	0.058	0.058

Table 9.5 continued: Factor pattern matrix for Hardiness Scale

		Factor		
Scale	**Item**	**1**	**2**	**3**
	Q2	0.062	**-0.363**	0.275
	Q6	0.084	**0.483**	0.050
	Q9	0.195	**0.452**	0.267
	Q12	**0.305**	-0.083	0.101
	Q15	0.273	0.224	0.278
	Q18	0.081	**0.319**	0.009
	Q21	0.078	0.134	0.363
	Q24	0.028	**-0.401**	0.129
	Q27	0.349	**-0.616**	0.056
	Q30	0.069	**0.521**	-0.001
	Q33	-0.067	**0.323**	**0.477**
	Q36	0.049	**0.630**	0.024
	Q37	**0.426**	0.108	0.244
	Q40	0.232	0.189	0.118
	Q43	-0.115	**0.692**	-0.141
	Q46	**0.418**	-0.077	-0.268
	Q49	0.220	0.248	0.044
Challenge	Q3	-0.095	-0.281	0.209
	Q4	0.096	-0.029	**0.566**
	Q5	-0.185	-0.032	**0.455**
	Q7	**0.362**	0.170	-0.066
	Q10	**0.305**	0.042	-0.114
	Q13	0.282	0.000	-0.138
	Q16	**0.347**	0.091	0.042
	Q19	**0.541**	0.038	-0.039
	Q22	0.007	-0.090	**0.427**
	Q25	0.117	-0.243	**0.391**
	Q28	0.197	0.026	-0.256
	Q31	**0.373**	0.060	-0.095
	Q34	**0.490**	-0.111	-0.037
	Q35	0.214	0.161	-0.098
	Q42	**0.338**	-0.005	0.078
	Q45	**0.397**	0.059	-0.084
	Q48	0.278	0.136	-0.050

The analysis presented in Table 9.5 confirms the existence of three separate factors included in the Hardiness scale. A concern in this regard would be that the items loading on the three dimensions identified in the factor analysis do not correspond with the formal Hardiness scale dimensions specified by Kobasa (1979).

As was presented in Table 9.5., items 1, 23 and 26 included in the Commitment dimension (Factor 1) of Kobasa's Hardiness Scale loaded on Factor 3 in the rotated factor matrix. Item 21 loaded on the Control dimension (Factor 2) of the Hardiness Scale. Items 7, 10, 13, 16, 19, 31, 34, 42, 45 and 48 of Kobasa's Challenge dimension (Factor 3) loaded on Factor 1, and item 3 loaded on Factor 2 in the rotated factor analysis. This means that 11 out of the 17 questions included in the Challenge dimension correlated more strongly with the other dimensions included in the questionnaire. Four of the items included in the Hardiness Scale had dual factor loadings, namely items 2, 9, 15 and 46.

As a consequence to the high number of items that either did not load on the intended factor, or did not load on any specific factor, it would be more appropriate to make use of the overall score as a valid measure of the Hardiness construct, rather than the three sub-dimensions.

9.2.3.3. Inter-correlations among Hardiness scales

Table 9.6 displays the inter-scale correlations among the three Hardiness dimensions. The inter-scale correlations between Commitment and Control were found to be high (r = 0.608). Significant correlations were found between Challenge and both Commitment (r = 0.401) and Control (r = 0.448). Based on the inter-correlations observed among the three factors, the inference can be made that all three dimensions may be assessing the same underlying construct.

Table 9.6.: Inter-correlations among three Hardiness factors

Correlations	Commitment	Control	Challenge
Commitment	1		
Control	0.608	1	
Challenge	0.401	0.448	1

Note. $p < 0.05$ for all correlations

9.2.3.4. Summary

The statistical analyses conducted on the factor structuring of the Hardiness Scale indicate that it would be more appropriate to make use of the overall Hardiness score as an indication of expatriate emotional health, as opposed to making use of the three sub-factors included. This finding is in line with the meta-analysis conducted by Pott (1998), which indicates that the three components of Hardiness overlap with each other, and should therefore be calculated as a single factor.

Kobasa herself (as cited in Kosaka, 1996) summarised the scores of the three Hardiness components in her own studies and divided them by 3 to obtain an overall trait during the studies she conducted on the Hardiness scale.

9.2.4. Organisational Climate Questionnaire

9.2.4.1. Reliability of Organisational Climate Questionnaire

i. Internal consistency

The Cronbach Alpha coefficients obtained for the overall Climate Questionnaire and the six selected Climate factors included in the research can be viewed in Table 9.7.

Table 9.7.: Cronbach Alpha coefficients obtained for Climate variables

Dimension	Number of items	Cronbach Alpha
Climate Questionnaire	30	0.923
Role clarity	5	0.695
Communication	5	0.728
Satisfaction	5	0.758
Tension	5	0.529
Stay	5	0.787
Leadership	5	0.827

The Cronbach Alpha coefficient of the overall Climate Questionnaire is 0.923, which indicates that the questionnaire is a reliable measuring instrument for the purposes of this research.

Nunnally (1978) suggests that a Cronbach Alpha of between 0.5 and 0.6 is satisfactory for research purposes, and 0.8 for selection purposes. As the Climate questionnaire was not included in this research to be utilised for selection purposes, all six selected Climate factors were found sufficiently reliable to be included in this research.

ii. Item-total scale correlations

An item analysis was conducted in order to determine the item-total scale correlation and the frequency distribution of responses on the Organisational Climate Questionnaire. The table displaying the item analysis for the Organisational Climate Questionnaire can be seen in Appendix C.

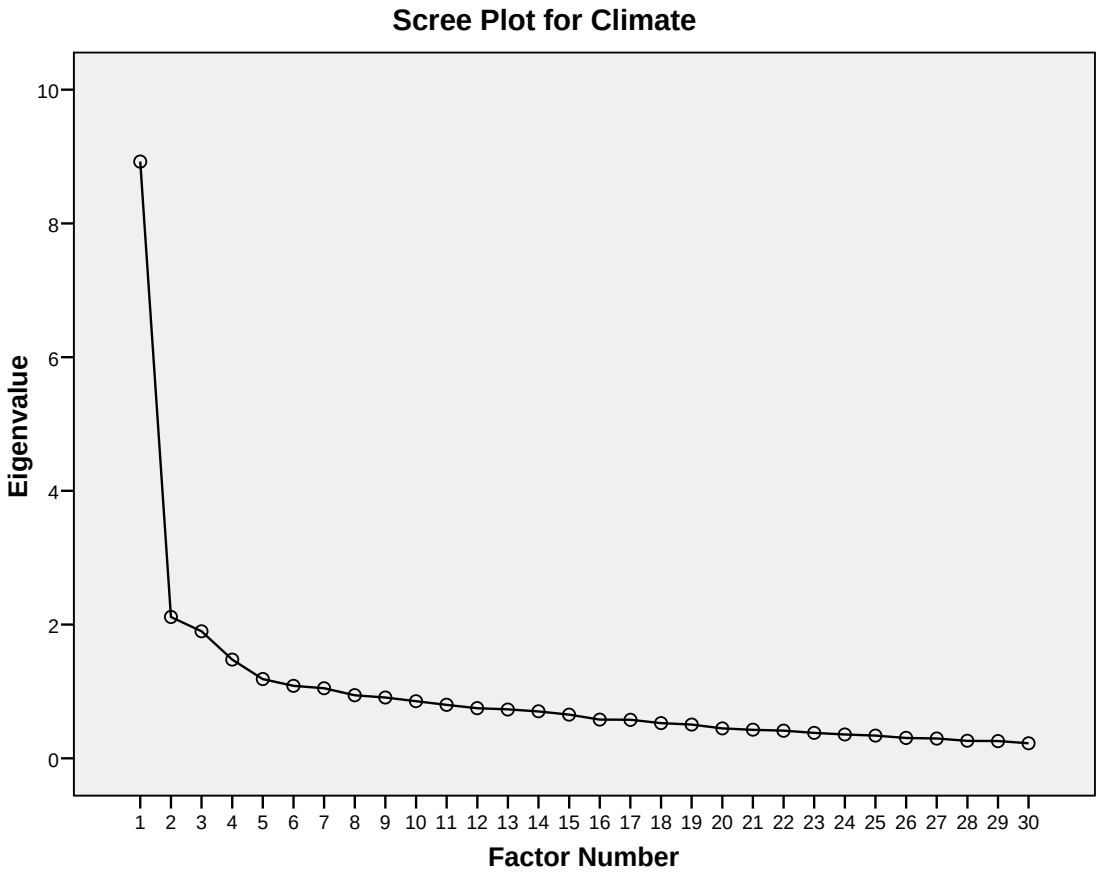
The item analysis indicates that most of the individual items included in the Climate scale meet the 0.15 to 0.5 item-scale correlation requirement as suggested by Clark and Watson (1995: 316). The lowest correlation was found for item 76 (r = 0.45). The highest item-scale correlation was found for question 47 (r = 0.82). The average item-scale correlation obtained for the Climate questionnaire during this research was 0.70. This is a relatively high average correlation, which indicates that the scales are probably measuring fairly narrowly defined constructs.

Based on the reliability analysis conducted on the questionnaire, the Organisational Climate Questionnaire was found to be sufficiently reliable to be included in this research study.

9.2.4.2. Factor structure of Organisational Climate Questionnaire

The scree plot obtained for the Organisational Climate Questionnaire can be seen in Figure 9.3 below:

Figure 9.3.: Scree plot for Organisational Climate Questionnaire



The scree plot obtained from the factor analysis of the Climate Questionnaire found evidence of the existence of a latent factor that explains 29.75 percent of the variance in the data. These findings are in line with research conducted by Neal et al (2000) which confirms the existence of climate as a single higher order factor referred to as “general psychological climate”.

In order to investigate the factorial structure of the six Climate dimensions to be included in this study, a maximum likelihood factor analysis with Promax rotation ($k = 4$) was conducted. The extraction of six factors explained 55.63 percent of the variance in the data. The results of the factor analysis conducted on the six selected Climate factors are presented in Table 9.8:

Table 9.8.: Factor pattern matrix analysis for Climate Questionnaire

Scale	Item	Factor					
		1	2	3	4	5	6
Leadership	Q15	**0.728**	0.106	-0.019	-0.048	0.094	-0.009
	Q31	**0.446**	-0.179	0.120	0.303	-0.104	0.132
	Q47	**0.790**	0.072	0.014	-0.053	0.024	-0.024
	Q63	**0.422**	0.076	-0.293	0.711	-0.111	-0.041
	Q79	**0.610**	0.018	0.071	0.131	-0.069	0.104
Propensity to stay	Q13	**0.286**	**0.214**	0.016	0.135	-0.056	-0.036
	Q29	0.107	**0.597**	0.014	-0.152	0.094	0.228
	Q45	0.164	**0.581**	-0.066	-0.052	0.087	0.294
	Q61	-0.058	**-0.831**	0.009	0.185	-0.046	0.009
	Q77	0.020	**0.727**	-0.064	0.224	-0.146	0.078
Role Clarity	Q3	-0.107	-0.025	**-0.195**	**-0.254**	0.069	0.096
	Q19	0.256	-0.099	**0.510**	0.036	0.028	-0.072
	Q35	-0.049	0.078	**0.744**	-0.054	-0.103	0.148
	Q51	0.147	0.011	**0.857**	-0.089	-0.134	-0.073
	Q67	-0.108	0.052	0.193	**0.300**	0.092	0.114
Communication	Q7	-0.112	-0.032	0.279	**0.389**	0.064	**0.405**
	Q23	0.103	0.011	0.199	**0.310**	0.243	0.015
	Q39	0.358	-0.184	0.189	**0.339**	0.029	0.054
	Q55	0.054	0.037	0.099	**0.470**	0.071	-0.007
	Q71	**-0.491**	-0.016	-0.115	-0.033	-0.118	0.134
Tension	Q12	-0.189	0.003	0.042	-0.015	**-0.534**	0.013
	Q28	0.033	0.145	0.075	0.022	**-0.750**	0.211
	Q44	-0.022	-0.161	0.004	-0.148	**-0.317**	0.049
	Q60	-0.078	**-0.197**	-0.077	-0.136	**-0.124**	-0.093
	Q76	-0.066	-0.110	0.086	-0.120	0.074	**-0.301**
Satisfaction	Q11	-0.084	0.172	**0.518**	-0.013	0.146	-0.214
	Q27	-0.100	**0.486**	0.110	0.111	0.007	-0.251
	Q43	0.005	0.160	-0.079	0.168	0.246	**-0.560**
	Q59	0.171	**-0.395**	-0.144	-0.240	-0.078	0.096
	Q75	0.001	**0.837**	0.106	0.130	-0.248	-0.123

As was depicted in Table 9.8, the majority of items included in the Climate Questionnaire loaded onto their expected factors as specified by Kossuth (1998). An interesting finding would be the scattered loading of the items included in the Satisfaction dimension (Factor 6). Most of the questions included in Satisfaction seem to have meaningful primary loadings on the Propensity to Stay factor (Factor 2).

9.2.4.3. Inter-correlations among selected Organisational Climate subscales

Table 9.9 presents the inter-correlations found among the six selected Climate variables.

Table 9.9.: Inter-correlations among six selected Climate variables

	Role clarity	Communication	Satisfaction	Tension	Propensity to stay	Leadership
Role Clarity	1					
Communication	0.60	1				
Satisfaction	0.48	0.48	1			
Tension	-0.38	-0.52	-0.39	1		
Propensity to Stay	0.42	0.52	0.57	-0.48	1	
Leadership	0.43	0.68	0.35	-0.47	0.59	1

Note. $p < 0.05$ for all correlations

As presented in Table 9.9, the factors included in the Climate Questionnaire are significantly correlated. These correlations indicate that, although the six Climate factors may be measuring an underlying latent Climate factor, they are still sufficiently independent to be included as separate variables in this study. The correlations are in the theoretically expected directions.

9.2.4.4. Summary

During the literature study conducted, six Climate dimensions were identified as having a significant influence on the expatriate from a work environment perspective during the various phases of the international career cycle. It was therefore decided to include them as separate dimensions.

Despite Satisfaction not emerging as an independent factor and having lower reliability, it was decided to keep it as a variable in the study. However, results obtained for the Satisfaction variable will need to be interpreted with caution.

9.3. Clarification of variables

For the purposes of simplification, the following codes will be used where necessary when referring to the questionnaires and dimensions included in the research:

Table 9.10.: Abbreviations for variables

Code	Description
SOC	Sense of Coherence
SOC (B)	Sense of Coherence before departure
SOC (D)	Sense of Coherence during assignment
SOC (A)	Sense of Coherence after assignment
HARD	Hardiness
HARD (B)	Hardiness before departure
HARD (D)	Hardiness during assignment
HARD (A)	Hardiness after assignment
Climate	Organisation Climate
Role (B)	Role Clarity before departure
Role (D)	Role Clarity during assignment
Comm (B)	Communication before departure
Comm (D)	Communication during assignment
Sat (B)	Satisfaction before assignment
Sat (D)	Satisfaction during assignment
Tense (B)	Tension before assignment
Tense (D)	Tension during assignment
Stay (B)	Propensity to stay before assignment
Stay (D)	Propensity to stay during assignment
Lead (B)	Leadership before assignment
Lead (D)	Leadership during assignment

Code	Description
16PF	16PF Questionnaire
A	Outgoing
C	Stable
E	Assertive
F	Enthusiastic
G	Conscientious
H	Adventurous
I	Sensitive
L	Suspicious
M	Imaginative
N	Shrewd
O	Apprehensive
Q1	Liberal
Q2	Self-sufficient
Q3	Control
Q4	Tense
EXTRA	Extraversion
ANXIETY	Anxiety proneness
OPEN	Openness
INDEPEND	Independence
CONTR	Self-Control

9.4 Descriptive statistics for the different measurement scales

In this section, the descriptive statistics obtained on the scale dimensions included in this research will be presented and discussed. The statistics provided in this section will be based on the analyses conducted on the experimental group (n = 84) and the control group (n = 42). The additional participants included for the purposes of calculating the reliability and construct validity of the instruments were excluded from all further analyses conducted during this research because of incomplete data (refer Paragraph 8.4.2, Chapter 8).

Table 9.11 provides the descriptive statistics of the emotional health and Climate scales for the experimental group and Table 9.12 the distribution statistics for the control group.

Table 9.11.: Descriptive statistics of the emotional health and climate scales for the experimental group

Factors	N	Mean	SD	Skewness		Kurtosis		Min	Max
				Statistic	SE	Statistic	SE		
SOC (B)	84	5.89	0.56	-0.632	0.263	0.596	0.520	4.20	6.88
HARD (B)	84	3.46	0.20	-0.032	0.263	0.791	0.520	2.84	3.92
Role (B)	84	3.60	0.50	0.179	0.263	1.628	0.520	2.20	5.00
Comm (B)	84	3.36	0.53	0.013	0.263	-0.094	0.520	2.00	4.00
Sat (B)	84	3.74	0.48	-0.814	0.263	1.391	0.520	2.00	4.80
Tense (B)	84	2.55	0.65	-0.042	0.263	0.118	0.520	1.20	4.20
Stay (B)	84	3.51	0.52	-0.615	0.263	0.043	0.520	2.00	5.00
Lead (B)	84	3.42	0.94	-0.552	0.263	-0.552	0.520	1.20	4.80
SOC (D)	84	5.30	0.69	-0.475	0.263	0.128	0.520	3.53	6.53
HARD (D)	84	3.24	0.27	-0.598	0.263	0.717	0.520	2.50	3.76
Role (D)	84	3.39	0.51	-0.199	0.263	-0.351	0.520	2.20	4.40
Comm (D)	84	3.17	0.64	-0.239	0.263	0.043	0.520	1.40	4.60
Sat (D)	84	3.60	0.47	-0.324	0.263	0.247	0.520	2.60	5.00
Tense (D)	84	2.91	0.65	0.084	0.263	-0.042	0.520	1.00	4.00
Stay (D)	84	3.30	0.48	-0.579	0.263	0.095	0.520	2.00	4.20
Lead (D)	84	3.28	0.77	-0.410	0.263	-0.749	0.520	1.60	4.60
SOC (A)	84	4.91	0.68	-0.150	0.263	-0.419	0.520	3.26	6.14
HARD (A)	84	3.12	0.32	-0.216	0.263	0.187	0.520	2.20	3.88

Table 9.12.: Descriptive statistics of emotional health and climate scales for control group

Factors	N	Mean	SD	Skewness		Kurtosis		Min	Max
				Statistic	SE	Statistic	SE		
SOC (B)	42	5.62	0.53	-0.150	0.365	-1.256	0.717	4.62	6.41
HARD (B)	42	3.15	0.31	-0.285	0.365	-0.093	0.717	2.46	3.84
Role (B)	42	3.52	0.60	-0.017	0.365	0.175	0.717	2.00	4.80
Comm (B)	42	3.12	0.70	-0.424	0.365	0.592	0.717	1.00	4.00
Sat (B)	42	3.43	0.48	-0.513	0.365	0.397	0.717	2.00	4.20
Tense (B)	42	2.90	0.64	-0.445	0.365	-0.054	0.717	1.20	4.20
Stay (B)	42	3.10	0.65	-0.223	0.365	-0.789	0.717	2.00	4.00
Lead (B)	42	3.04	1.04	0.164	0.365	-0.666	0.717	1.00	5.00
SOC (D)	42	5.60	0.52	-0.070	0.365	-1.232	0.717	4.62	6.44
HARD (D)	42	3.17	0.31	-0.411	0.365	-0.170	0.717	2.46	3.84
Role (D)	42	3.59	0.64	-0.145	0.365	-0.337	0.717	2.00	4.80
Comm (D)	42	3.08	0.67	-0.486	0.365	0.790	0.717	1.20	4.40
Sat (D)	42	3.46	0.50	-0.560	0.365	0.126	0.717	2.00	4.20
Tense (D)	42	2.89	0.64	-0.344	0.365	-0.142	0.717	1.00	4.00
Stay (D)	42	3.15	0.69	-0.264	0.365	-0.993	0.717	1.80	4.20
Lead (D)	42	3.02	1.03	0.221	0.365	-0.556	0.717	1.00	5.00
SOC (A)	42	5.58	0.69	-0.768	0.365	-0.032	0.717	3.79	6.55
HARD (A)	42	3.19	0.31	-0.579	0.365	0.560	0.717	2.44	3.86

It is evident from the statistics presented in Tables 9.11 and 9.12 that the responses of both the experimental and control groups to the individual items included in all three questionnaires tended to be negatively skewed. According to Porkess (2004: 231), skewness measures the deviation of the distribution of responses from symmetry. If the skewness is significantly different from 0, then that distribution is asymmetrical, while normal distributions are perfectly symmetrical. If the skewness is towards the negative pole, it indicates that the respondents may have tended to endorse the higher categories on a scale.

In turn, this skewness in the results can have an impact on the kurtosis. According to Porkess (2004:136), kurtosis refers to the sharpness of the peak of a distribution. The kurtosis of the normal distribution is 0. If the kurtosis is significantly different than 0, then the distribution is either flatter or more peaked than normal.

In Paragraph 8.4.2 in Chapter 8 a discussion was conducted on the demographics of the participants included in the experimental and control groups. The two groups appeared to be very similar in their demographic distribution. Taking into account these similarities, it is worth noting that the overall mean scores of the experimental group on the variables included in this study are considerably higher than those of the control group (refer Tables 9.11 and 9.12).

A noticeable difference observed in the demographics of the experimental and control groups was in their racial distribution. As was discussed in Paragraph 8.4.2.3 in Chapter 8, the vast majority of participants included in the experimental group were white males (75 percent) as compared to the 59.5 percent white males included in the control group. Reference was also made to the situation within which white males in South Africa find themselves, where they are not always able to find alternative employment due to factors such as Affirmative Action limiting the career opportunities available to them. These individuals often view themselves as having no alternative than to consider other opportunities outside South Africa, despite the turmoil and adjustment issues associated with leaving one's family and support structures at home. In their eagerness to be appointed in expatriate positions available with reputable South African companies, these individuals may "over-present" themselves when they complete the self-assessments during the initial preparation and selection process prior to their departure on assignment to the foreign countries.

It is important to consider the above mentioned observations when conducting an analysis of the results obtained during this study, especially taking into account the cautionary comments made by Kossuth (1998: 197) towards the use of self-assessment instruments during the conduct of research. Kossuth refers to the leniency error which occurs when an individual is asked to compare him or herself with others. Fox, Caspy and Reisler (Kossuth, 1998: 179) also found that the self-appraisal process may be prone to a leniency bias when it is associated with self-assessment for potential promotion. A reason for this occurrence is that the person may tend to provide a positive impression of himself in his attempt to secure a promotion or attractive position.

In order to deal with this leniency problem, Kossuth (1998: 197) recommends that the nature of the situation (in this case potential appointment on an international assignment in a foreign country) and the use of properly validated rating scales need to be considered when utilising a self-appraisal process.

Table 9.13 presents the distribution statistics of the 16PF for the experimental group, and Table 9.14 the distribution statistics for the control group.

Table 9.13.: Descriptive statistics of the 16PF for the experimental group

Experimental Group	N	Mean	SD	Skewness		Kurtosis		Min	Max
				Statistic	SE	Statistic	SE		
A	84	5.86	2.16	-0.207	0.263	-0.864	0.520	1	10
C	84	7.11	1.52	-0.522	0.263	-0.200	0.520	3	10
E	84	6.71	1.81	-0.169	0.263	-0.509	0.520	2	10
F	84	6.74	1.73	0.102	0.263	-0.465	0.520	3	10
G	84	5.33	1.71	-0.478	0.263	0.324	0.520	1	9
H	84	7.57	2.06	-0.450	0.263	-0.813	0.520	2	10
I	84	4.60	2.15	-0.171	0.263	-0.755	0.520	1	9
L	84	4.31	2.01	0.332	0.263	-0.404	0.520	1	10
M	84	4.88	1.81	0.069	0.263	-0.381	0.520	1	9
N	84	5.96	2.08	-0.462	0.263	-0.354	0.520	1	9
O	84	3.24	1.56	0.455	0.263	-0.351	0.520	1	7
Q1	84	7.07	1.68	-0.476	0.263	0.190	0.520	2	10
Q2	84	3.73	2.13	0.529	0.263	-0.150	0.520	1	10
Q3	84	7.23	1.49	-0.265	0.263	-0.652	0.520	4	10
Q4	84	4.23	1.74	0.729	0.263	0.542	0.520	1	10
Extraversion	84	6.54	1.18	-0.178	0.263	-0.479	0.520	3.44	8.64
Anxiety	84	6.91	1.25	-0.498	0.263	-0.021	0.520	3.33	9.58
Openness	84	5.29	1.08	0.011	0.263	-0.650	0.520	3.13	7.46
Independent	84	6.77	1.07	-0.159	0.263	0.318	0.520	3.90	9.60
Self-control	84	5.81	0.89	-0.453	0.263	-0.335	0.520	3.58	7.58

Table 9.14.: Descriptive statistics of the 16PF for the control group

Control Group	N	Mean	SD	Skewness		Kurtosis		Min	Max
				Statistic	SE	Statistic	SE		
A	42	5.52	1.81	0.296	0.365	0.404	0.717	2	10
C	42	5.55	1.70	-0.023	0.365	-0.850	0.717	3	9
E	42	7.55	1.57	-0.754	0.365	0.759	0.717	3	10
F	42	5.90	2.01	0.421	0.365	-0.527	0.717	3	10
G	42	6.07	1.44	-0.079	0.365	-0.057	0.717	3	9
H	42	6.74	1.82	-0.607	0.365	0.653	0.717	2	10
I	42	3.76	1.85	0.050	0.365	-0.725	0.717	1	8
L	42	5.10	2.34	0.266	0.365	-0.186	0.717	1	10
M	42	5.17	1.99	-0.124	0.365	-1.026	0.717	2	9
N	42	6.57	2.20	-0.408	0.365	-0.562	0.717	2	10
O	42	4.36	1.79	-0.196	0.365	-0.991	0.717	1	7
Q1	42	6.81	1.90	-0.182	0.365	-0.295	0.717	2	10
Q2	42	4.33	2.38	0.396	0.365	-0.840	0.717	1	10
Q3	42	7.33	1.37	-0.642	0.365	-0.023	0.717	4	9
Q4	42	4.43	1.71	0.326	0.365	-0.857	0.717	2	8
Extraversion	42	5.89	1.20	-0.239	0.365	1.213	0.717	2.44	8.84
Anxiety	42	5.99	1.17	0.027	0.365	-1.029	0.717	3.83	8.08
Openness	42	5.31	1.15	0.684	0.365	1.503	0.717	3.13	8.63
Independent	42	6.90	1.19	-0.381	0.365	0.172	0.717	3.60	9.10
Self-control	42	6.16	0.96	0.371	0.365	-0.789	0.717	4.58	8.08

As was mentioned earlier, only the 16PF sten scores for the subjects included in the experimental and control group were available during this study. Taking into account the fact that the raw scores for the subjects were not available, the results obtained from the derived sten scores need to be viewed with a certain amount of caution.

9.5. The influence of the expatriation process on the emotional health of the experimental and control groups before, during, and after assignment

9.5.1. Introduction

A General Linear Model procedure (GLM) was used to establish the differences in mean scores between the assessments before, during and after the expatriation process (within subjects factor) as well as between experimental and control groups (between subjects factor) (refer Objective 1, Paragraph 8.1). This procedure was used to establish the differences over time in terms of the Emotional Health and Organisational Climate variables between the experimental and control groups. In order to establish the difference between the experimental and control groups with regard to personality traits, where there was only one measure, an independent sample t-test was used to compare their mean scores.

The experimental group (expatriates) was exposed to the external environment in the foreign countries while on international assignment, while the control group remained in their normal work and living environment in South Africa.

9.5.2. Comparisons between experimental and control groups

The reporting of the statistical results obtained will be conducted as follows:

- Firstly, the results will be displayed and interpreted.
- A comprehensive discussion of the results obtained in attaining Hypothesis 1 can be found in Paragraph 10.1 in Chapter 10.

Results of the GLM procedure are reported in Tables 9.15 to 9.47.

9.5.2.1. Results with regard to Sense of Coherence

The results of the Repeated Measures ANOVA with regard to Sense of Coherence are reported in Table 9.15 below.

Table 9.15.: Test of Sphericity for the Factorial ANOVA conducted on Sense of Coherence

Mauchly's Test of Sphericity[b]							
Measure:MEASURE_1							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
SOC	0.939	7.677	2	0.022	0.943	0.965	0.500
b. Design: Intercept + GROUP Within Subjects Design: SOC							

Mauchly's Test of Sphericity is used where more than one level of any of the independent variables are used. As can be seen from the significance value above (p = 0.022), the data is not consistent with the sphericity assumption. As a result, multivariate tests need to be used and not the standard, pooled ANOVA results. The results of the multivariate tests conducted on Sense of Coherence can be seen in Table 9.16.

Table 9.16: Multivariate tests conducted on Sense of Coherence

Multivariate Tests[b]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
SOC	Pillai's Trace	0.282	24.208[a]	2.000	123.000	0.000	0.282
	Wilks' Lambda	0.718	24.208[a]	2.000	123.000	0.000	0.282
	Hotelling's Trace	0.394	24.208[a]	2.000	123.000	0.000	0.282
	Roy's Largest Root	0.394	24.208[a]	2.000	123.000	0.000	0.282
SOC * GROUP	Pillai's Trace	0.253	20.813[a]	2.000	123.000	0.000	0.253
	Wilks' Lambda	0.747	20.813[a]	2.000	123.000	0.000	0.253
	Hotelling's Trace	0.338	20.813[a]	2.000	123.000	0.000	0.253
	Roy's Largest Root	0.338	20.813[a]	2.000	123.000	0.000	0.253
a. Exact statistic							
b. Design: Intercept + GROUP Within Subjects Design: SOC							

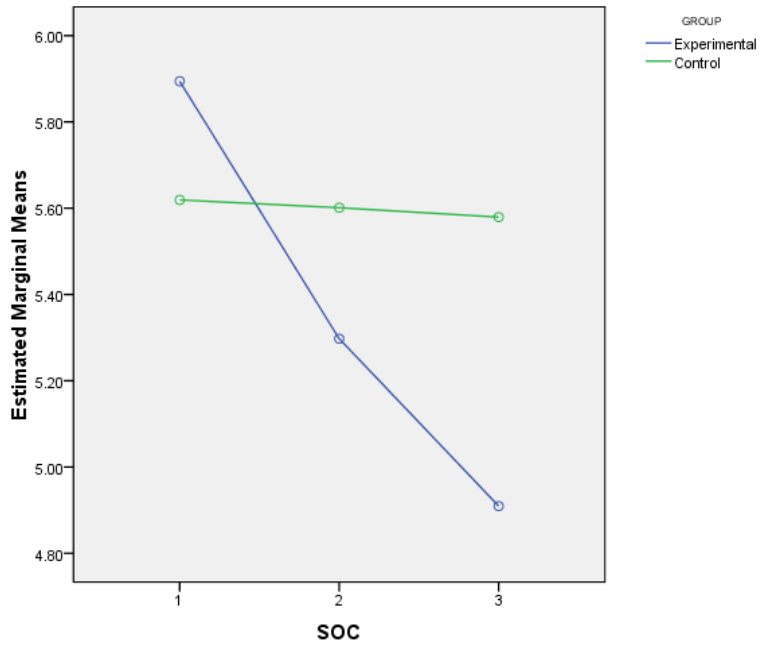
Table 9.16 above shows that there are significant differences between the three SOC measures, and that the interaction between SOC and group membership is also significant. As is evident from the descriptive statistics (Table 9.17) and Figure 9.4 below, the scores of the control group remained fairly stable over time while those of the experimental group showed a definite downward trend.

Table 9.17: Descriptive Statistics for Sense of Coherence

4. GROUP * SOC					
GROUP	**SOC**	**Mean**	**Std. Error**	**95% Confidence Interval**	
				Lower Bound	**Upper Bound**
Experimental	1*	5.894	0.060	5.775	6.013
	2	5.297	0.070	5.159	5.436
	3	4.909	0.075	4.762	5.057
Control	1	5.619	0.085	5.451	5.787
	2	5.601	0.099	5.405	5.797
	3	5.579	0.106	5.370	5.789

*Note: 1, 2 and 3 refer to measurements before, during and after assignment period respectively

Figure 9.4: Change in Sense of Coherence mean scores during expatriation phases



Post hoc pairwise comparisons between the three SOC scores of the experimental group (see Table 9.18) and the control group (see Table 9.19) indicated that there were significant differences between all three measurements for the experimental group. No differences for the control group were significant.

Table 9.18: Post hoc pairwise comparisons between SOC scores of experimental group

Pairwise Comparisons[b]						
(I) SOC	(J) SOC	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.597*	0.081	0.000	0.435	0.759
	3	0.985*	0.088	0.000	0.809	1.160
2	1	-0.597*	0.081	0.000	-0.759	-0.435
	3	0.388*	0.105	0.000	0.178	0.598
3	1	-0.985*	0.088	0.000	-1.160	-0.809
	2	-0.388*	0.105	0.000	-0.598	-0.178
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.19: Post hoc pairwise comparisons between SOC scores of control group

Pairwise Comparisons[b]						
(I) SOC	(J) SOC	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.018	0.098	0.856	-0.181	0.217
	3	0.040	0.134	0.769	-0.231	0.310
2	1	-0.018	0.098	0.856	-0.217	0.181
	3	0.022	0.107	0.840	-0.194	0.237
3	1	-0.040	0.134	0.769	-0.310	0.231
	2	-0.022	0.107	0.840	-0.237	0.194
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

9.5.2.2. Results with regard to Hardiness

Table 9.20 displays the results of the Repeated Measures ANOVA with regard to Hardiness.

Table 9.20: Test of sphericity for the Factorial ANOVA conducted on Hardiness

Mauchly's Test of Sphericity[b]							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Hardiness	0.925	9.633	2	0.008	0.930	0.951	0.500
b. Design: Intercept + GROUP Within Subjects Design: Hardiness							

As was the case with Sense of Coherence, Mauchly's Test of Sphericity (p = 0.008) suggests that the pooled ANOVA cannot be used and that adjusted values or Multivariate tests need to be used. The latter are reported below in Table 9.21.

Table 9.21: Multivariate tests conducted on Hardiness

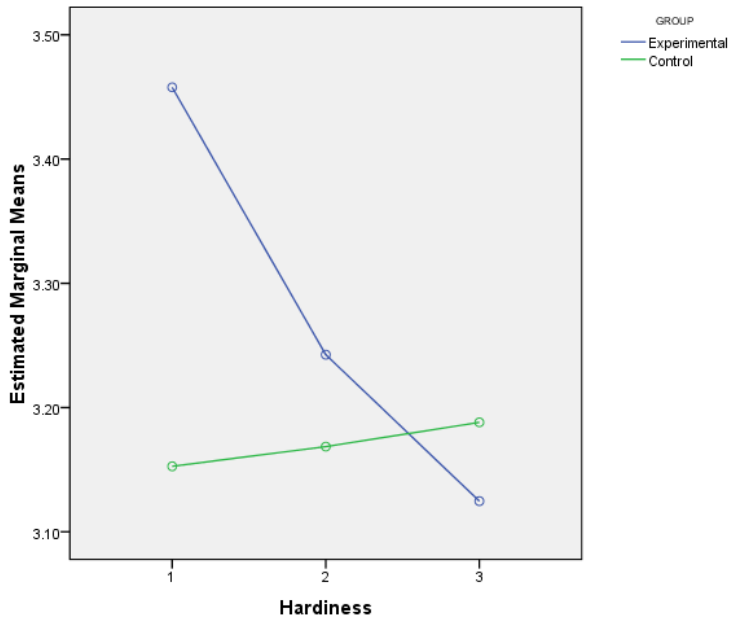
Multivariate Tests[b]							
Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Hardiness	Pillai's Trace	0.154	11.197[a]	2.000	123.000	0.000	0.154
	Wilks' Lambda	0.846	11.197[a]	2.000	123.000	0.000	0.154
	Hotelling's Trace	0.182	11.197[a]	2.000	123.000	0.000	0.154
	Roy's Largest Root	0.182	11.197[a]	2.000	123.000	0.000	0.154
Hardiness * GROUP	Pillai's Trace	0.213	16.621[a]	2.000	123.000	0.000	0.213
	Wilks' Lambda	0.787	16.621[a]	2.000	123.000	0.000	0.213
	Hotelling's Trace	0.270	16.621[a]	2.000	123.000	0.000	0.213
	Roy's Largest Root	0.270	16.621[a]	2.000	123.000	0.000	0.213
a. Exact statistic							
b. Design: Intercept + GROUP Within Subjects Design: Hardiness							

Looking at the multivariate results above it would appear that there are significant differences among the three measures of Hardiness over time (before, during and after). The interaction between Hardiness measures and group membership (experimental versus control group) is also significant. Figure 9.5 and the descriptive statistics provided in Table 9.22 indicate a large difference in Hardiness between the groups to start off with. However, a clear decrease in the scores of the experimental group seemed to occur over time, while the control group showed a marginal increase over the same period.

Table 9.22: Descriptive Statistics for Hardiness

4. GROUP * Hardiness					
GROUP	**Hardiness**	**Mean**	**Std. Error**	**95% Confidence Interval**	
				Lower Bound	**Upper Bound**
Experimental	1	3.458	0.026	3.406	3.509
	2	3.243	0.031	3.181	3.304
	3	3.125	0.035	3.056	3.193
Control	1	3.153	0.037	3.080	3.226
	2	3.169	0.044	3.082	3.255
	3	3.188	0.049	3.091	3.285

Figure 9.5: Change in Hardiness mean scores during expatriation phases



Pairwise comparisons (see Tables 9.23 and 9.24 below) with regard to Hardiness for the experimental and control group separately indicated that there are no significant differences between the three measures of the control group on Hardiness, but in the experimental group there are significant differences between the three measures respectively.

Table 9.23: Post hoc pairwise comparisons between Hardiness scores of experimental group

Pairwise Comparisons[b]						
(I) Hardiness	(J) Hardiness	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.215*	0.034	0.000	0.148	0.282
	3	0.333*	0.038	0.000	0.258	0.408
2	1	-0.215*	0.034	0.000	-0.282	-0.148
	3	0.118*	0.048	0.015	0.023	0.213
3	1	-0.333*	0.038	0.000	-0.408	-0.258
	2	-0.118*	0.048	0.015	-0.213	-0.023
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.24: Post hoc pairwise comparisons between Hardiness scores of control group

Pairwise Comparisons[b]						
(I) Hardiness	(J) Hardiness	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-0.016	0.067	0.814	-0.151	0.119
	3	-0.035	0.061	0.564	-0.158	0.087
2	1	0.016	0.067	0.814	-0.119	0.151
	3	-0.020	0.067	0.771	-0.154	0.115
3	1	0.035	0.061	0.564	-0.087	0.158
	2	0.020	0.067	0.771	-0.115	0.154
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

9.5.2.3. Results with regard to Organisational Climate variables

A Repeated Measures GLM procedure with an added between subjects variable was once again used in the comparison of the Organisational Climate scores between the experimental and control groups over time. However, the within subjects (repeated measures) variable in this case had only two levels, namely assessments before and during the expatriation process.

i. Results for Role Clarity

Results relating to Role Clarity are reported in Table 9.25 below. Tests of sphericity are not relevant here and with regard to all the Climate variables, as only two levels of both independent variables are reported.

Table 9.25: Factorial Anova for Role Clarity

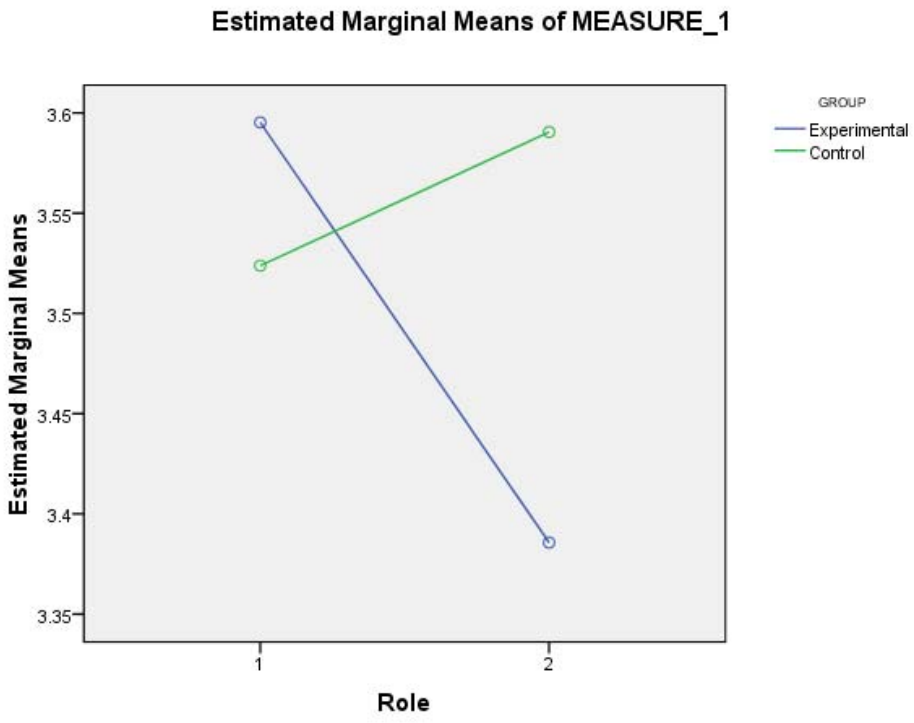
Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Role	Sphericity Assumed	0.286	1.000	0.286	1.081	0.300	0.009
	Greenhouse-Geisser	0.286	1.000	0.286	1.081	0.300	0.009
	Huynh-Feldt	0.286	1.000	0.286	1.081	0.300	0.009
	Lower-bound	0.286	1.000	0.286	1.081	0.300	0.009
Role * GROUP	Sphericity Assumed	1.068	1.000	1.068	4.042	0.047	0.032
	Greenhouse-Geisser	1.068	1.000	1.068	4.042	0.047	0.032
	Huynh-Feldt	1.068	1.000	1.068	4.042	0.047	0.032
	Lower-bound	1.068	1.000	1.068	4.042	0.047	0.032
Error (Role)	Sphericity Assumed	32.763	124	0.264			
	Greenhouse-Geisser	32.763	124.000	0.264			
	Huynh-Feldt	32.763	124.000	0.264			
	Lower-bound	32.763	124.000	0.264			

The overall main effect of Role Clarity is not significant. However, there is a marginally significant interaction between group membership and role score, implying that there may be significant differences in one group but not in the other. Figure 9.6 and the descriptive statistics provided in Table 9.26 below demonstrate a decrease in Role clarity for the experimental group and a marginal increase for the control group, which confirms this interaction.

Table 9.26: Descriptive Statistics for Role Clarity

GROUP * Role Clarity					
GROUP	**Role Clarity**	**Mean**	**Std. Error**	**95% Confidence Interval**	
				Lower Bound	**Upper Bound**
Experimental	1	3.595	0.058	3.481	3.710
	2	3.386	0.060	3.266	3.505
Control	1	3.524	0.082	3.362	3.686
	2	3.590	0.085	3.422	3.759

Figure 9.6: Change in Role Clarity mean scores during expatriation phases



The outcomes of pairwise comparisons of the experimental and control groups respectively can be seen in Tables 9.27 and 9.28 below. The results show that there was a significant difference in Role Clarity for the experimental group in the before – and during measurements, but not for the control group.

Table 9.27: Pairwise comparisons between Role Clarity scores of experimental group

Pairwise Comparisons[b]						
(I) Role Clarity	(J) Role Clarity	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.210*	0.078	0.009	0.054	0.365
2	1	-0.210*	0.078	0.009	-0.365	-0.054
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.28: Pairwise comparisons between Role Clarity scores of control group

Pairwise Comparisons[b]						
(I) Role Clarity	(J) Role Clarity	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-0.067	0.116	0.567	-0.300	0.167
2	1	0.067	0.116	0.567	-0.167	0.300
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

ii. Results for Communication

Results relating to Communication are reported in Table 9.29 below.

Table 9.29: Factorial Anova for Communication

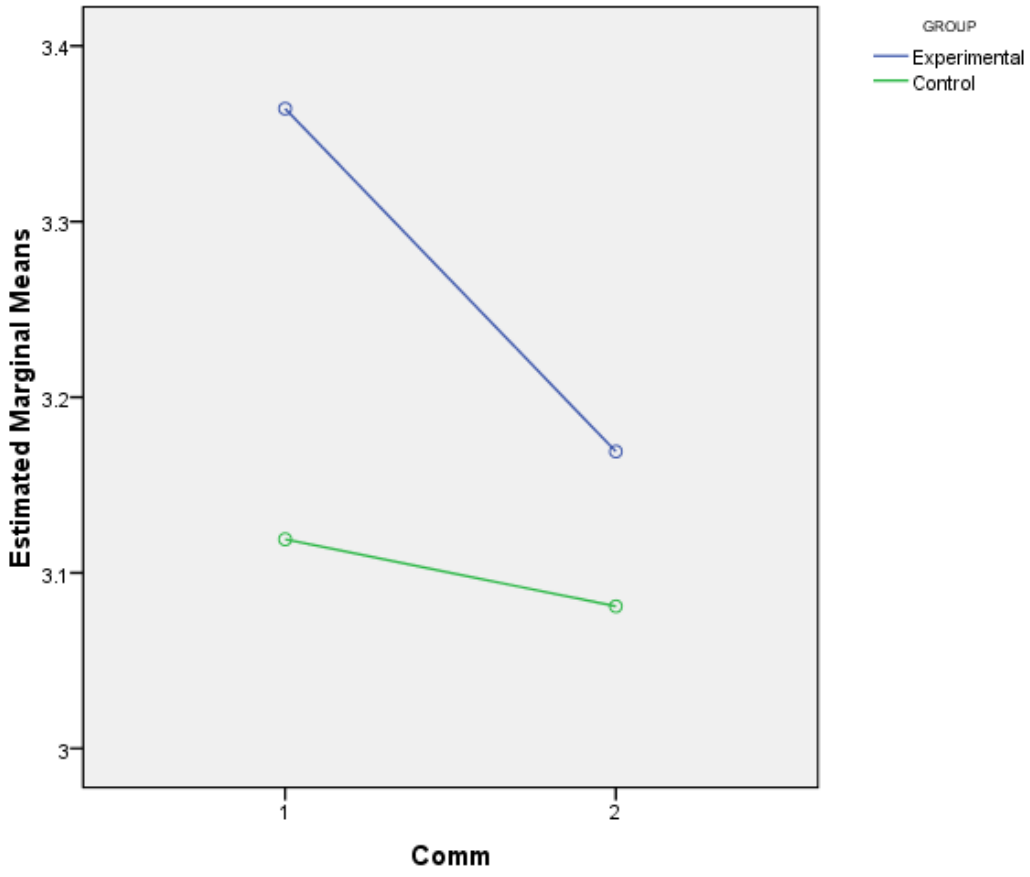
Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Comm	Sphericity Assumed	0.762	1.000	0.762	2.131	0.147	0.017
	Greenhouse-Geisser	0.762	1.000	0.762	2.131	0.147	0.017
	Huynh-Feldt	0.762	1.000	0.762	2.131	0.147	0.017
	Lower-bound	0.762	1.000	0.762	2.131	0.147	0.017
Comm * GROUP	Sphericity Assumed	0.346	1.000	0.346	0.966	0.327	0.008
	Greenhouse-Geisser	0.346	1.000	0.346	0.966	0.327	0.008
	Huynh-Feldt	0.346	1.000	0.346	0.966	0.327	0.008
	Lower-bound	0.346	1.000	0.346	0.966	0.327	0.008
Error (Communication)	Sphericity Assumed	44.359	124	0.358			
	Greenhouse-Geisser	44.359	124.000	0.358			
	Huynh-Feldt	44.359	124.000	0.358			
	Lower-bound	44.359	124.000	0.358			

The results displayed in Table 9.29 show that there seems to be no significant difference in perception of communication in the company before and during the expatriation process. Consequently, there is no main effect for communication. Figure 9.7 and the descriptive statistics provided in Table 9.30 below suggest that there was a marginal decrease in the score of the control group, and a somewhat larger decrease in the score of the experimental group.

Table 9.30: Descriptive Statistics for Communication

4. GROUP * Communication					
GROUP	**Communication**	**Mean**	**Std. Error**	**95% Confidence Interval**	
				Lower Bound	**Upper Bound**
Experimental	1	3.364	0.065	3.236	3.492
	2	3.169	0.070	3.030	3.308
Control	1	3.119	0.091	2.938	3.300
	2	3.081	0.100	2.884	3.278

Figure 9.7: Change in Communication mean scores during expatriation phases



Pairwise comparisons reveal that the difference with regard to the experimental group was statistically significant even though practically small. The difference for the control group was not statistically significant.

Table 9.31: Pairwise comparisons between Communication scores of experimental group

Pairwise Comparisons[b]						
(I) Comm	**(J) Comm**	**Mean Difference (I-J)**	**Std. Error**	**Sig.[a]**	**95% Confidence Interval for Difference[a]**	
					Lower Bound	**Upper Bound**
1	2	0.195*	0.086	0.025	0.025	0.366
2	1	-0.195*	0.086	0.025	-0.366	-0.025
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.32: Pairwise comparisons between Communication scores of control group

Pairwise Comparisons[b]						
(I) Comm	**(J) Comm**	**Mean Difference (I-J)**	**Std. Error**	**Sig.[a]**	**95% Confidence Interval for Difference[a]**	
					Lower Bound	**Upper Bound**
1	2	0.038	0.148	0.798	-0.260	0.337
2	1	-0.038	0.148	0.798	-0.337	0.260
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

iii. Results for Job Satisfaction

Table 9.33 displays the results relating to Job Satisfaction.

Table 9.33: Factorial Anova for Job Satisfaction

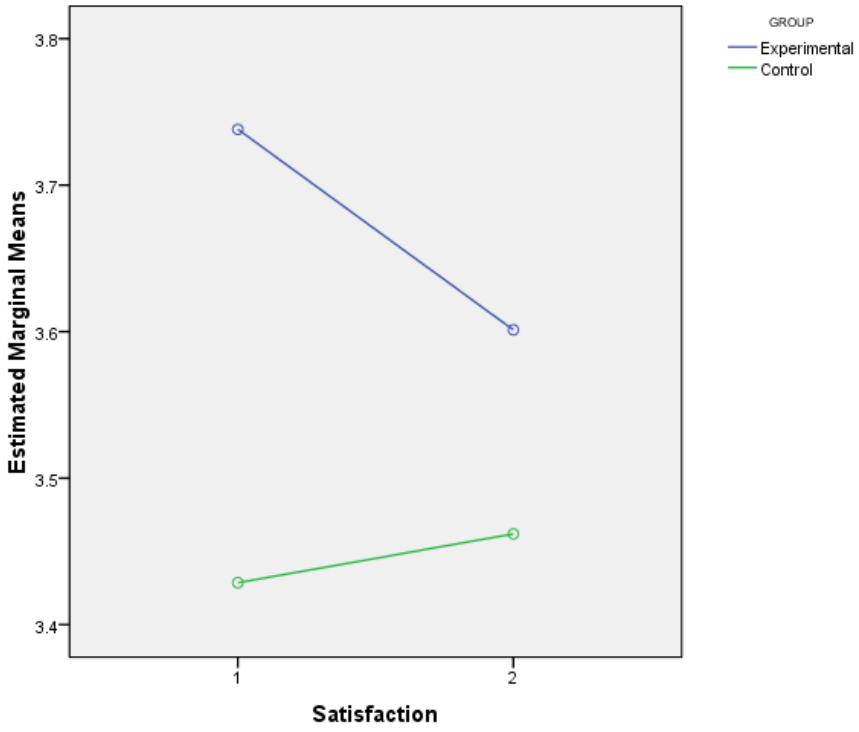
Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Satisfaction	Sphericity Assumed	0.150	1.000	0.150	0.820	0.367	0.007
	Greenhouse-Geisser	0.150	1.000	0.150	0.820	0.367	0.007
	Huynh-Feldt	0.150	1.000	0.150	0.820	0.367	0.007
	Lower-bound	0.150	1.000	0.150	0.820	0.367	0.007
Satisfaction * GROUP	Sphericity Assumed	0.406	1.000	0.406	2.216	0.139	0.018
	Greenhouse-Geisser	0.406	1.000	0.406	2.216	0.139	0.018
	Huynh-Feldt	0.406	1.000	0.406	2.216	0.139	0.018
	Lower-bound	0.406	1.000	0.406	2.216	0.139	0.018
Error (Satisfaction)	Sphericity Assumed	22.704	124	0.183			
	Greenhouse-Geisser	22.704	124.000	0.183			
	Huynh-Feldt	22.704	124.000	0.183			
	Lower-bound	22.704	124.000	0.183			

Results for the within subjects variables suggest that there was no significant difference in the perception of job satisfaction before and during expatriation. There was also no significant interaction between group membership and this perception. Figure 9.8 and the descriptive statistics indicated in Table 9.34 suggest that there was a marginal decrease in job satisfaction for the experimental group over time, while the control group showed a negligible increase.

Table 9.34: Descriptive statistics for Job Satisfaction

4. GROUP * Satisfaction					
GROUP	Job Satisfaction	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental	1	3.738	0.052	3.635	3.842
	2	3.601	0.052	3.498	3.705
Control	1	3.429	0.074	3.282	3.575
	2	3.462	0.074	3.315	3.608

Figure 9.8: Change in Job Satisfaction mean scores during expatriation phases



Pairwise comparisons as displayed in Tables 9.35 and 9.36 confirm that these differences were not statistically significant.

Table 9.35: Pairwise comparisons between Job Satisfaction scores of experimental group

Pairwise Comparisons[b]						
(I) Satisfaction	(J) Satisfaction	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.137*	0.066	0.041	0.006	0.268
2	1	-0.137*	0.066	0.041	-0.268	-0.006
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						

Table 9.36: Pairwise comparisons between Job Satisfaction scores of control group

Pairwise Comparisons[b]						
(I) Satisfaction	(J) Satisfaction	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-0.033	0.094	0.725	-0.223	0.156
2	1	0.033	0.094	0.725	-0.156	0.223
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

iv. Results for Tension

Table 9.37 displays the results relating to Tension.

Table 9.37: Factorial Anova for Tension

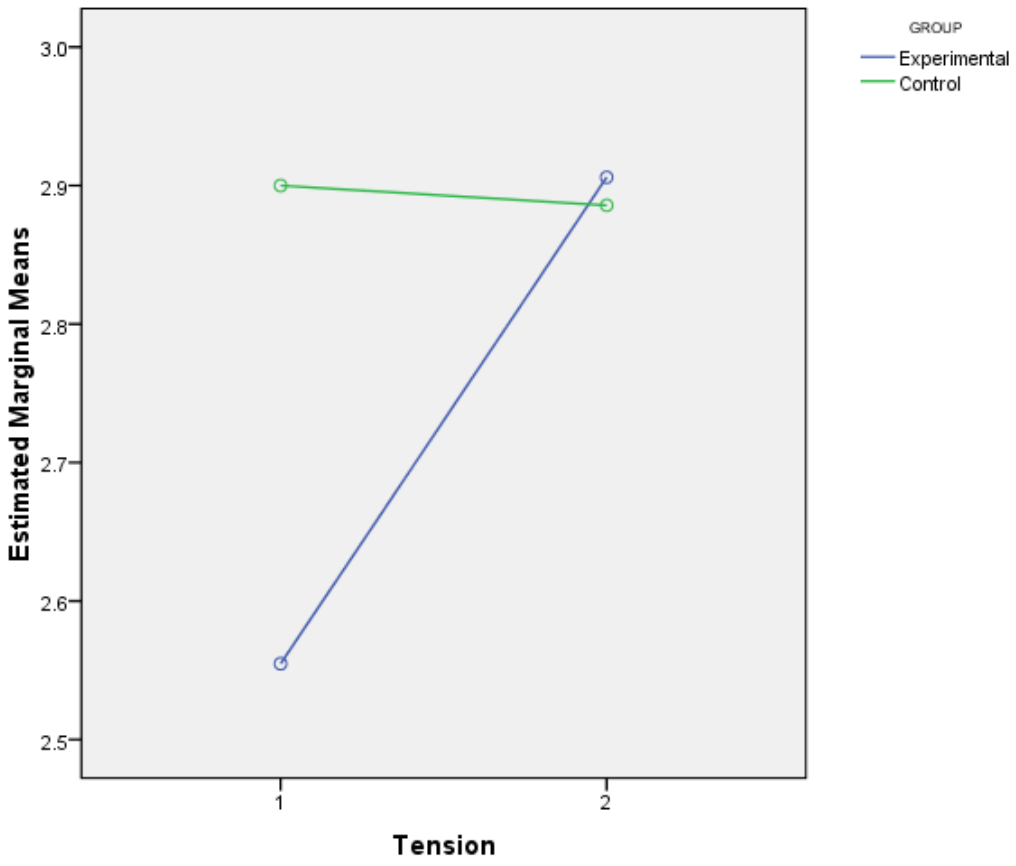
Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Tension	Sphericity Assumed	1.589	1.00	1.589	5.664	0.019	0.044
	Greenhouse-Geisser	1.589	1.000	1.589	5.664	0.019	0.044
	Huynh-Feldt	1.589	1.000	1.589	5.664	0.019	0.044
	Lower-bound	1.589	1.000	1.589	5.664	0.019	0.044
Tension * GROUP	Sphericity Assumed	1.870	1.000	1.870	6.665	0.011	0.051
	Greenhouse-Geisser	1.870	1.000	1.870	6.665	0.011	0.051
	Huynh-Feldt	1.870	1.000	1.870	6.665	0.011	0.051
	Lower-bound	1.870	1.000	1.870	6.665	0.011	0.051
Error (Tension)	Sphericity Assumed	34.791	124.000	0.281			
	Greenhouse-Geisser	34.791	124.000	0.281			
	Huynh-Feldt	34.791	124.000	0.281			
	Lower-bound	34.791	124.000	0.281			

Results of the comparison of means show that there were statistically significant differences between the two measures of tension, and that the interaction between group membership and the perception of tension was also significant. Figure 9.9 and the descriptive statistics provided in Table 9.38 confirm that the experimental group showed a clear increase in tension scores from the first to the second measurement, while the score of the control group did not show a meaningful change.

Table 9.38: Descriptive statistics for Tension

4. GROUP * Tension					
GROUP	Tension	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental	1	2.555	0.070	2.415	2.694
	2	2.906	0.071	2.766	3.046
Control	1	2.900	0.100	2.703	3.097
	2	2.886	0.100	2.687	3.084

Figure 9.9: Change in Tension mean scores during expatriation phases



Pairwise comparisons reported below in Tables 9.39 and 9.40 for the experimental and control groups respectively confirm that the movement was significant for the experimental group but not for the control group.

Table 9.39: Pairwise comparisons between Tension scores of experimental group

Pairwise Comparisons[b]						
(I) Tension	(J) Tension	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-0.351*	0.083	0.000	-0.516	-0.186
2	1	0.351*	0.083	0.000	0.186	0.516
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.40: Pairwise comparisons between Tension scores of control group

Pairwise Comparisons[b]						
(I) Tension	(J) Tension	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.014	0.112	0.899	-0.211	0.240
2	1	-0.014	0.112	0.899	-0.240	0.211
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

v. Results for Propensity to Stay

The results relating to Propensity to Stay are provided in Table 9.41 below.

Table 9.41: Factorial Anova for Propensity to Stay

Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Propensity	Sphericity Assumed	0.372	1.000	0.372	1.241	0.267	0.010
	Greenhouse-Geisser	0.372	1.000	0.372	1.241	0.267	0.010
	Huynh-Feldt	0.372	1.000	0.372	1.241	0.267	0.010
	Lower-bound	0.372	1.000	0.372	1.241	0.267	0.010
Propensity * GROUP	Sphericity Assumed	1.004	1.000	1.004	3.347	0.070	0.026
	Greenhouse-Geisser	1.004	1.000	1.004	3.347	0.070	0.026
	Huynh-Feldt	1.004	1.000	1.004	3.347	0.070	0.026
	Lower-bound	1.004	1.000	1.004	3.347	0.070	0.026
Error (Propensity)	Sphericity Assumed	37.217	124.000	0.300			
	Greenhouse-Geisser	37.217	124.000	0.300			
	Huynh-Feldt	37.217	124.000	0.300			
	Lower-bound	37.217	124.000	0.300			

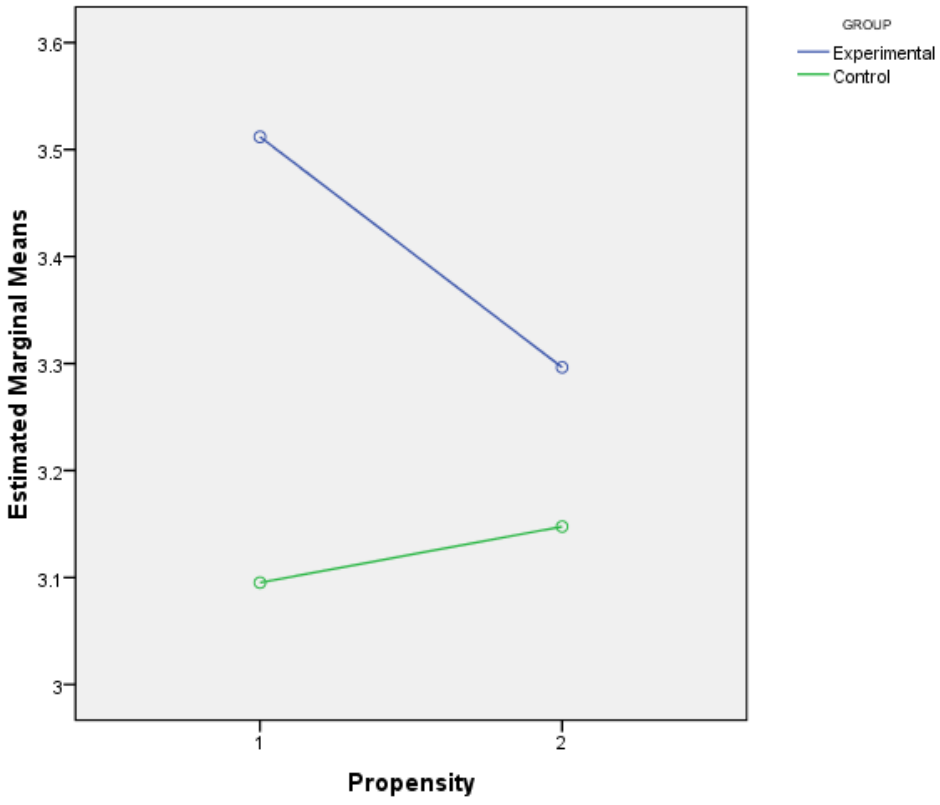
Results show that there was no main effect for Propensity to Stay and also no significant interaction between group membership and Propensity to Stay.

It becomes evident from Figure 9.10 and the descriptive statistics provided in Table 9.42 below that the scores of the experimental group decreased over time, while those of the control group showed a marginal increase.

Table 9.42: Descriptive statistics for Propensity to Stay

4. GROUP * Propensity					
				95% Confidence Interval	
GROUP	Propensity to Stay	Mean	Std. Error	Lower Bound	Upper Bound
Experimental	1	3.512	0.062	3.390	3.634
	2	3.296	0.061	3.176	3.417
Control	1	3.095	0.087	2.923	3.268
	2	3.148	0.086	2.977	3.318

Figure 9.10: Change in Propensity to Stay mean scores during expatriation phases



Results obtained from the Pairwise comparisons as indicated in Tables 9.43 and 9.44 reveal that the difference was indeed significant in the case of the experimental group but not the control group.

Table 9.43: Pairwise comparisons between Propensity to Stay scores of experimental group

Pairwise Comparisons[b]						
(I) Propensity to Stay	(J) Propensity to Stay	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.215*	0.078	0.007	0.060	0.371
2	1	-0.215*	0.078	0.007	-0.371	-0.060
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.44: Pairwise comparisons between Propensity to Stay scores of control group

Pairwise Comparisons[b]						
(I) Propensity to Stay	(J) Propensity to Stay	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-0.052	0.136	0.702	-0.327	0.222
2	1	0.052	0.136	0.702	-0.222	0.327
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

vi. Results for Leadership

The results obtained for Leadership are displayed in Table 9.45.

Table 9.45: Factorial Anova for Leadership

Tests of Within-Subjects Effects							
Source		**Type III Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Leadership	Sphericity Assumed	0.383	1.000	0.383	0.487	0.487	0.004
	Greenhouse-Geisser	0.383	1.000	0.383	0.487	0.487	0.004
	Huynh-Feldt	0.383	1.000	0.383	0.487	0.487	0.004
	Lower-bound	0.383	1.000	0.383	0.487	0.487	0.004
Leadership * GROUP	Sphericity Assumed	0.194	1.000	0.194	0.247	0.620	0.002
	Greenhouse-Geisser	0.194	1.000	0.194	0.247	0.620	0.002
	Huynh-Feldt	0.194	1.000	0.194	0.247	0.620	0.002
	Lower-bound	0.194	1.000	0.194	0.247	0.620	0.002
Error (Leadership)	Sphericity Assumed	97.660	124.000	0.788			
	Greenhouse-Geisser	97.660	124.000	0.788			
	Huynh-Feldt	97.660	124.000	0.788			
	Lower-bound	97.660	124.000	0.788			

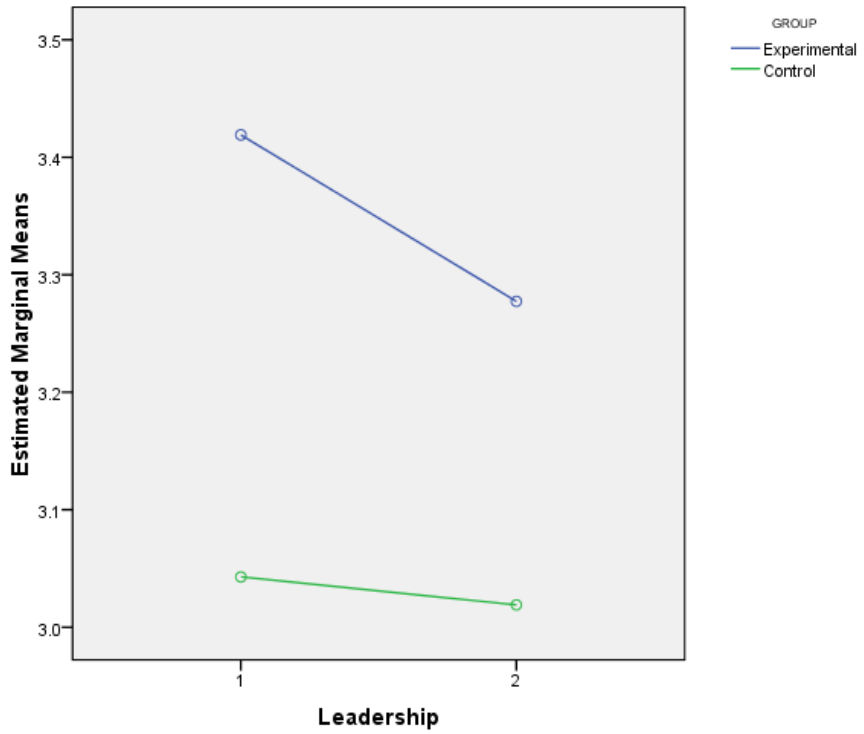
Results show that there were no significant differences in Leadership from the first to the second measure, and also no significant interaction between the variables.

Figure 9.11 and the descriptive statistics provided in Table 9.46 suggest that the mean scores for the experimental group decreased somewhat over time, while that of the control group remained fairly stable.

Table 9.46: Descriptive statistics for Leadership

4. GROUP * Leadership					
GROUP	Leadership	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Experimental	1	3.419	0.106	3.209	3.629
	2	3.277	0.094	3.091	3.464
Control	1	3.043	0.150	2.745	3.340
	2	3.019	0.133	2.755	3.283

Figure 9.11: Change in Leadership mean scores during expatriation phases



Pairwise comparisons as indicated in Tables 9.47 and 9.48 however reveal that none of these differences were statistically significant or particularly large in effect.

Table 9.47: Pairwise comparisons between Leadership scores of experimental group

Pairwise Comparisons[b]						
(I) Leadership	(J) Leadership	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.142	0.137	0.303	-0.130	0.413
2	1	-0.142	0.137	0.303	-0.413	0.130
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Experimental						

Table 9.48: Pairwise comparisons between Leadership scores of control group

Pairwise Comparisons[b]						
(I) Leadership	(J) Leadership	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	0.024	0.195	0.903	-0.369	0.417
2	1	-0.024	0.195	0.903	-0.417	0.369
Based on estimated marginal means						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						
b. GROUP = Control						

9.5.2.4. Results for personality variables

The results of the 16PF independent samples T-test for the experimental and control groups before their departure on international assignment are presented in Table 9.49. The only factor for which the variances differed between the experimental and control groups was Factor A (Outgoing) (F = 4.809, p = 0.030). The adjusted t-values are also presented in Table 9.49.

Table 9.49: Independent samples T-test applied to the 16PF mean scores of the experimental group compared to the control group before expatriation

Factor	Experimental Group (N = 84)		Control Group (N = 42)		Levene's Test					Eta Squared
	Mean	SD	Mean	SD	*F*	*P*	*df*	*T*	*p*	
A	5.86	2.16	5.52	1.81	4.809	**0.030***	96.170	0.911	0.364	0.009
C	7.11	1.52	5.55	1.70	1.641	0.203	124	5.215	**0.000***	0.180
E	6.71	1.81	7.55	1.56	1.761	0.187	124	-2.541	**0.012***	0.049
F	6.74	1.73	5.90	2.01	0.830	0.364	124	2.414	**0.017***	0.045
G	5.33	1.71	6.07	1.44	2.147	0.145	124	-2.403	**0.018***	0.044
H	7.57	2.06	6.74	1.82	3.136	0.079	124	2.226	**0.028***	0.038
I	4.60	2.15	3.76	1.85	0.804	0.372	124	2.145	**0.034***	0.036
L	4.31	2.01	5.10	2.34	0.413	0.522	124	-1.961	0.052	0.030
M	4.88	1.81	5.17	1.99	1.002	0.319	124	-.809	0.420	0.005
N	5.96	2.08	6.57	2.22	0.573	0.451	124	-1.510	0.134	0.018
O	3.24	1.56	4.36	1.79	1.789	0.183	124	-3.614	**0.000***	0.095
Q1	7.07	1.68	6.81	1.90	1.107	0.295	124	0.790	0.431	0.005
Q2	3.73	2.13	4.33	2.38	1.645	0.202	124	-1.451	0.149	0.017
Q3	7.23	1.49	7.33	1.37	0.646	0.423	124	-0.390	0.697	0.001
Q4	4.23	1.74	4.43	1.71	0.396	0.530	124	-0.619	0.537	0.003
Extraver	6.54	1.18	5.89	1.20	0.096	0.757	124	2.867	**0.005***	0.062
Anxiety	3.09	1.25	4.01	1.17	0.000	0.988	124	3.967	**0.000***	0.113
Open	5.29	1.08	5.31	1.15	0.143	0.706	124	-0.095	0.925	0.000
Independ	6.77	1.07	6.90	1.19	0.839	0.362	124	-0.623	0.534	0.003
Control	5.81	.89	6.16	.96	0.762	0.384	124	-2.016	**0.046***	0.032

* Significant at 0.05 level

With regard to the primary personality variables, significant differences were observed in the mean scores of the experimental and control groups on all 16PF factors except for Factors A, L, M, N, Q1, Q2, Q3 and Q4. However, the magnitude of the differences in the means was small, apart from factor O, which had a moderate effect size (eta squared = 0.095), and factor C, which had a large effect size (eta squared = 0.180).

In terms of the global personality factors, there was no significant difference between the experimental and the control groups on Openness and Independence. However, the experimental group scored significantly higher on Extraversion, and lower on Anxiety and Self-control. The magnitude of the differences in the means for Self Control was small (eta squared = 0.032), and effect size was moderate for Extraversion (eta squared = 0.062), and Anxiety (eta squared = 0.113). For a more detailed discussion on the above mentioned findings, refer to Paragraphs 10.5 and 10.6 in Chapter 10.

It is important to note that the experimental and control groups differ on almost all the assessed variables before departure on assignment, as it would be naïve to assume the equivalence of the experimental and control group without conducting pre-test comparisons.

Results of the independent samples T-test for the experimental group compared to the control group after six months on assignment in the foreign environment are presented in Table 9.17.

9.6. Relationships among different variables (correlations)

9.6.1. Introduction

Possible relationships existing among the variables included in the study will be investigated and discussed in this section by making use of Pearson's Product Moment Correlation Coefficient (*r*). These investigations will be conducted in order to achieve the following research objectives:

- Objective 2 set for this study was to establish the interaction that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process.
- Objective 3 was to establish the impact of organisational climate factors on the emotional adjustment of the individual prior to departure on the international assignment, and while on contract.
- Objective 4 aimed at establishing the nature of the interaction that exists between expatriate personality and the individual's perception of the organisational climate.

The results will be presented in the following sequence:

- The presentation and interpretation of the calculated correlations (Paragraphs 9.6.2 to 9.6.6);
- The relevance of the correlations to Research objectives 2, 3 and 4 can be found in Paragraphs 10.3 to 10.5 in Chapter 10.

9.6.2. Correlations between five global personality factors and other variables

The correlations among the emotional health, organisational climate, and global five personality factors are presented in Table 9.50.

Table 9.50: Correlations between emotional health and Climate variables versus global five personality factors

	Extraversion	Anxiety Proneness	Openness	Independence	Self- Control
SOC (B)	0.157	-0.142	0.113	-0.008	0.176
HARD (B)	0.152	**-0.276***	0.178	0.025	0.023
Role (B)	0.063	-0.052	-0.105	-0.062	-0.108
Comm (B)	0.154	-0.011	-0.018	-0.114	-0.132
Sat (B)	0.105	0.055	0.024	0.029	0.058
Tense (B)	-0.105	0.003	-0.081	0.133	0.076
Prop (B)	0.048	0.057	-0.019	0.020	-0.166
Lead (B)	0.104	-0.091	0.032	-0.061	-0.197
SOC (D)	-0.028	-0.140	0.206	0.033	0.177
HARD (D)	0.060	**-0.218***	**-0.220***	0.008	0.134
Role (D)	0.032	0.083	0.102	-0.123	**0.271***
Comm (D)	0.180	0.056	-0.026	-0.184	0.083
Sat (D)	-0.018	-0.05	0.095	0.152	0.088
Tense (D)	0.018	0.088	-0.123	-0.060	-0.002
Prop (D)	0.054	0.121	-0.034	0.033	0.128
Lead (D)	0.093	0.013	0.054	-0.042	0.021
SOC (A)	0.112	-0.140	0.036	0.176	0.067
HARD (A)	0.063	-0.035	-0.121	0.087	0.050

Note. *$p < 0.05$, **$p < 0.01$.

As was discussed in Paragraph 8.7.5.1, correlations that are significant at the $p < 0.05$ are considered statistically significant. However, According to Cohen (1988) the following cut-off points in terms of the correlation coefficient are recognised as practically significant (independent of the direction of the relationship) as the sample size has a definite influence on the significance of the correlations:

- $r = 0.10$: small effect
- $r = 0.30$: medium effect
- $r = 0.50$: large effect

Within the framework of both practical and statistical significance, very few significant correlations were observed between the five global personality factors and the other variables included in the study.

Anxiety showed significant negative correlations with Hardiness, both before departure on assignment (r = -0.276), and after six months into the assignment (r = -0.218). Openness showed a significant negative correlation of -0.220 with Hardiness during assignment. A significant positive correlation was also found between Self-control and Role clarity during assignment (r = 0.271). However these correlations may be said to be small in effect.

9.6.3. Correlations between primary 16PF personality factors and other variables

A number of significant correlations could be identified between the primary 16PF factors and the emotional health and climate variables included in the research. Table 9.51 presents the correlations obtained during this study. The significant correlations obtained are highlighted in the table.

As was presented in Table 9.51, significant positive correlations were observed between Outgoing (Factor A) and Role clarity (r = 0.290), Communication (r = 0.378), and Leadership (r = 0.227) during assignment. Stability (Factor C) showed significant positive correlations with Sense of Coherence before departure (r = 0.221) and Hardiness before departure (r = 0.235). Assertiveness (Factor E) showed a positive correlation of 0.270 with Satisfaction during assignment, Enthusiasm (Factor F) showed a positive correlation of 0.225 with Sense of Coherence during assignment. However most of these are small in effect according to Cohen's (1988) guideline, with the exception of the correlation between the Outgoing factor and Communication which may be said to be medium in effect.

Of interest would be the significant negative correlations that Adventurous (Factor H) showed with Sense of Coherence during assignment (r = -0.265), Role clarity during assignment (r = -0.279), and Satisfaction during assignment (r = -0.233). Even though they are relatively small in effect, it does suggest a trend. The reasons for the negative correlation between Adventurous and these variables are unclear, as the expectation would be that the higher the levels of adventurism displayed by the individual, the lower the amount of role clarification required by the individual during the conduct of his work as an expatriate. The adventurous person would also typically enjoy functioning in the unstructured and unpredictable expatriate environment and as a result, should tend to display higher levels of Sense of Coherence during assignment.

Table 9.51: Correlations between emotional health and Climate variables versus primary 16PF factors

	A	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
SOC (B)	0.133	**0.221***	0.152	-0.032	0.141	0.055	-0.056	-0.066	0.034	0.134	0.094	0.077	-0.124	0.061	**-0.219***
HARD (B)	0.080	**0.235***	0.060	0.111	-0.055	0.074	-0.019	-0.198	0.023	-0.066	-0.033	0.065	-0.108	0.209	**-0.242***
Role (B)	0.076	0.135	-0.181	0.032	0.064	0.015	0.183	-0.115	0.185	-0.056	-0.089	0.139	-0.202	**-0.246***	-0.046
Comm (B)	0.138	0.138	-0.135	0.092	-0.053	0.072	0.092	0.022	0.011	-0.086	0.010	0.054	**-0.238***	-0.126	-0.056
Sat (B)	0.126	-0.021	0.150	0.110	0.067	-0.028	-0.063	0.104	-0.067	0.119	-0.053	0.009	0.041	-0.108	-0.006
Tense (B)	-0.122	-0.157	-0.017	-0.132	0.016	0.032	0.046	-0.065	0.152	0.035	-0.035	0.174	0.063	0.111	0.074
Prop (B)	0.060	0.095	0.043	0.161	-0.130	-0.030	0.068	0.095	-0.086	-0.117	0.070	-0.120	0.073	-0.074	0.030
Lead (B)	0.111	0.166	-0.098	0.132	-0.018	0.090	0.125	-0.084	-0.078	-0.158	-0.077	0.062	-0.052	**-0.218***	-0.167
SOC (D)	0.050	0.000	0.111	**0.225***	0.031	**-0.265***	**-0.239***	-0.089	-0.114	0.195	-0.038	-0.057	0.147	0.105	**-0.223***
Hard (D)	0.043	0.092	0.055	0.104	0.099	-0.085	**-0.257***	-0.155	0.026	0.024	-0.123	0.118	-0.065	0.165	-0.186
Role (D)	**0.290****	-0.097	0.087	0.018	0.032	**-0.279***	-0.094	0.172	**-0.314****	**0.426****	0.020	-0.117	0.030	0.000	-0.035
Comm (D)	**0.378****	-0.048	-0.119	0.129	0.048	-0.096	0.052	0.13	0.001	0.150	0.083	-0.127	-0.180	-0.073	-0.149
Sat (D)	0.075	-0.079	**0.270***	0.055	0.024	**-0.233***	-0.089	0.049	-0.020	0.065	-0.089	-0.029	0.175	0.086	-0.135
Tense (D)	-0.013	-0.092	-0.067	-0.072	0.062	0.142	0.141	0.022	0.023	-0.040	0.018	-0.012	-0.039	-0.021	0.141
Prop (D)	0.144	-0.164	0.163	0.006	0.083	-0.165	-0.058	0.159	-0.005	0.138	0.024	0.024	-0.012	0.01	0.047
Lead (D)	**0.227***	-0.074	0.081	-0.093	0.076	-0.074	-0.095	0.087	-0.023	-0.056	0.001	0.012	-0.094	0.041	-0.088
SOC (A)	-0.004	0.128	0.107	-0.016	0.031	0.175	0.070	-0.086	0.127	0.174	-0.128	**0.352****	-0.052	-0.122	**-0.228***
Hard (A)	0.091	0.155	-0.062	-0.167	0.080	0.145	0.139	-0.081	**0.280****	0.119	0.031	**0.257***	-0.124	-0.142	-0.031

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Sensitivity (Factor I) showed significant negative relationships with both Sense of Coherence (*r* = -0,239) and Hardiness (*r* = -0.257) during assignment. Imaginative (Factor M) correlated significantly and negatively with Role clarity during assignment (*r* = -0.314) and positively with Hardiness after completion of assignment (*r* = 0.280), while Shrewd (Factor N) showed a significant positive correlation of 0.426 with Role clarity during assignment.

Liberal (Factor Q1) correlated significantly and positively with both Sense of Coherence (*r* = 0.352) and Hardiness (*r* = 0.257) after completion of assignment while, Self-sufficient (Factor Q2) showed a significant negative correlation with Communication before assignment (*r* = -0.238). Control (Factor Q3) indicated a significant negative correlation with both Role clarity (*r* = -0.246) and Leadership (*r* = -0.218) before assignment.

Tension (Factor Q4) indicated significant negative correlations with Sense of Coherence before (*r* = -0.219), during (*r* = -0.223), and after completion of assignment (*r* = -0.228). Tension also correlated significantly and negatively with Hardiness before assignment (*r* = -0.242). Most of the correlations were small to medium in effect size (Cohen, 1988).

9.6.4. Correlations between emotional health and Climate variables

Table 9.52 provides a layout of the correlations between the emotional health and climate variables for the experimental group during the various phases of the expatriation process.

Table 9.52: Correlations between emotional health and Climate variables

Factors	SOC (B)	HARD (B)	SOC (D)	HARD (D)	SOC (A)	HARD (A)
SOC (B)	1	**0.387****	**0.307****	0.143	0.170	0.118
HARD (B)	**0.387****	1	0.096	0.136	**0.258***	0.180
Role (B)	0.172	0.160	-0.053	0.040	0.075	0.041
Comm (B)	**0.247***	-0.019	0.138	**0.304****	-0.040	-0.032
Sat (B)	0.181	-0.187	0.192	**0.290****	0.017	-0.024
Tense (B)	**-0.321****	-0.150	**-0.299****	-0.214	-0.019	0.199
Stay (B)	0.055	0.013	**0.271***	0.155	-0.006	-0.180
Lead (B)	0.129	0.008	0.214	0.208	0.036	-0.063
SOC (D)	**0.307****	0.096	1	**0.533****	0.014	**-0.218***
HARD (D)	0.143	0.136	**0.533****	1	0.099	-0.101
Role (D)	-0.018	-0.076	**0.270***	0.067	-0.165	**-0.243***
Comm (D)	0.206	0.164	**0.254***	0.208	-0.035	0.016
Sat (D)	0.095	0.034	**0.387****	**0.317****	0.081	0.016
Tense (D)	-0.184	-0.151	**-0.489****	**-0.561****	-0.192	-0.007
Stay (D)	0.193	0.072	**0.434****	**0.248***	0.152	0.057
Lead (D)	0.206	0.112	**0.397****	**0.278***	-0.018	0.060
SOC (A)	0.170	0.258*	0.014	0.099	1	**0.535****
HARD (A)	0.118	0.180	**-0.218***	-0.101	**0.535****	1

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

Sense of Coherence before assignment showed a significant positive correlation with Hardiness before assignment (r = 0.387), as well as with Communication (r = 0.247) and Tension before assignment (r = -0.321). Sense of Coherence before assignment also correlated significantly and positively with Sense of Coherence during assignment (r = 0.307). Sense of Coherence before assignment did not show any significant correlations with any of the other variables during and after completion of assignment.

Sense of Coherence during assignment showed significant correlations with all the Climate variables during assignment. It also correlated significantly with Tension (r = -0.299) and Propensity to Stay (r = 0.271) before assignment. A significant negative correlation of -0.218 was found between Sense of Coherence during assignment and Hardiness after completion of assignment.

Significant positive correlations were found between Hardiness during assignment and most of the Climate variables during assignment. The only exceptions were Role Clarity (r = 0.067) and Communication (r = 0.208) during assignment, where limited correlations could be detected. Hardiness during assignment also showed significant correlations with Communication (r = 0.304) and Satisfaction (r = 0.290) before assignment.

Sense of Coherence after completion of assignment correlated significantly and positively with Hardiness before departure (r = 0.258). A significant positive correlation of 0.535 was also found between Sense of Coherence and Hardiness after completion of assignment. Of interest would be the significant negative correlations obtained between Hardiness after completion of assignment and Sense of Coherence (r = -0.218) and Role clarity (r = -0.243) during assignment. Most of these correlations were small in effect with the exception of the 0.535 observable between Sense of Coherence and Hardiness after completion of assignment which may be said to have a large effect size (Cohen, 1988).

9.6.5. Correlations between Climate variables before and during assignment

The correlations obtained for the Climate variables before and during assignment are depicted in Table 9.53.

Most of the Climate variables before going on assignment correlated significantly with Tension during assignment. The two exceptions were Role clarity (r = -0.106) and Propensity to Stay (r = 0.157). No other significant correlations were found among the Climate variables before and during assignment.

Table 9.53: Correlations between Climate variables before versus during assignment

Factors	Role (D)	Comm (D)	Sat (D)	Tense (D)	Stay (D)	Lead (D)
Role (B)	-0.020	0.102	-0.084	-0.106	0.068	0.057
Comm (B)	-0.047	0.106	0.051	**-0.345****	-0.055	0.007
Sat (B)	0.038	0.174	0.192	**-0.264***	0.136	0.143
Tense (B)	-0.070	-0.164	-0.171	**0.314****	-0.112	-0.169
Stay (B)	0.121	0.040	086	0.157	0.026	-0.059
Lead (B)	-0.088	-0.049	0.065	**-0.305****	-0.214	-0.067

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

9.6.6. Correlations among Climate variables during assignment

The inter-correlations observed among the Climate variables during assignment for the experimental group are shown in Table 9.54.

Table 9.54: Correlations among Climate variables during assignment

Factors	Role (D)	Comm (D)	Sat (D)	Tense (D)	Stay (D)	Lead (D)
Role (D)	1					
Comm (D)	**0.403****	1				
Sat (D)	**0.236***	0.087	1			
Tense (D)	-0.096	-0.104	**-0.437****	1		
Stay (D)	**0.339****	**0.386****	**0.242***	**-0.383****	1	
Lead (D)	**0.257***	**0.389****	0.196	**-0.328****	**0.628****	1

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

As was discussed in Paragraph 9.2.4.3, strong and significant positive correlations were identified among all of the selected Climate variables before departure on assignment. The average correlation obtained for all the Climate variables before departure was 0.49. This confirms the conclusion made that the six selected Climate factors may be assessing the same underlying organisational climate construct.

Although significant correlations were observed amongst most of the Climate variables while on assignment, these correlations seemed to be considerably lower compared to the correlations between the Climate variables before departure on assignment. The average correlation obtained among the Climate variables while on assignment was 0.30.

The following correlations were observed among the individual Climate during assignment variables: Role clarity during assignment showed significant correlations with almost all the other Climate during assignment variables. The only exception was Tension during assignment, where a correlation of only -0.096 was observed. Communication during assignment correlated significantly with Propensity to stay during assignment (r = 0.386) and Leadership during assignment (r = 389). Satisfaction during assignment also showed significant correlations with Tension during assignment (r = -0.437) and Propensity to stay during assignment (r = 0.242). Lastly, significant correlations were also observed between Tension during assignment and Propensity to stay during assignment (r = -0.383) and Leadership during assignment (r = -0.328). The correlations were mostly medium in effect size.

9.7. Regression analysis

In order to determine the nature of the predictive relationship between the expatriate's levels of emotional health, personality, and his perception of the organisational climate while on international assignment in a foreign country, a regression analysis was conducted and will be discussed in the following section.

9.7.1. Introduction

The results of the regression analysis conducted on the variables included in this study will be investigated and discussed in this section. The purpose of performing a regression analysis will be to achieve Objective 5: To investigate the main personality and organizational climate predictors of the expatriate's levels of emotional health while on an international assignment in a foreign country.

According to the expatriate adjustment model postulated in Chapter 1, both personality and Climate play a role in determining the expatriate's Sense of Coherence and Hardiness while on assignment. Herewith, an investigation of the results obtained during the regression analysis.

9.7.2. Climate during assignment as predictor of emotional health during assignment

The correlations discussed in Paragraph 9.6.4 indicated that Sense of Coherence was significantly related to all the Climate variables during assignment. A multiple regression analysis was conducted where all the Climate variables during assignment were entered as predictors of Sense of Coherence during assignment. The results indicated that the overall model was significant and verified [$F(6, 83) = 7.431$, $p = 0.000$, $R = 0.606$], and accounted for 36.7 percent of the variance in Sense of Coherence. However, Tension was the only significant predictor of Sense of Coherence. After removing the remaining variables, Tension explained 23.9 percent of the variance in Sense of Coherence during assignment [$F(1, 83) = 25.709$, $p = 0.000$, $R = 0.489$]. This corresponds with the correlation value reported in Table 9.52.

As discussed in Paragraph 9.6.4, Hardiness was significantly correlated with most of the Climate variables during assignment, excluding Role clarity and Communication. A multiple regression analysis was conducted with the Climate variables that were correlated with Hardiness during assignment as predictors. The results indicated that the overall model was significant [$F(4, 83) = 9.764$, $p = 0.000$, $R = 0.575$], and accounted for 33.1 percent of the variance in Hardiness scores. Again, Tension was the only significant predictor. After removing the remaining variables, Tension explained 31.4 percent of the variance in Hardiness during assignment [$F(1, 83) = 37.612$, $p = 0.000$, $R = 0.561$]. This corresponds with the correlation value reported in Table 9.52.

Looking at the correlations between Tension and the other Climate variables (see Table 9.9), strong and significant correlations were observed between Propensity to Stay, Satisfaction, and Tension. Therefore, the possibility exists that these variables in turn contribute to Tension while on assignment.

9.7.3. Personality as predictor of emotional health during assignment

As can be seen in Paragraph 9.6.3 of this chapter, Sense of Coherence during assignment was significantly correlated with Factors F (Enthusiastic), H (Adventurous), I (Sensitive), and Q4 (Tension) of the 16PF. A multiple regression analysis was conducted where these four personality factors were entered as predictors of Sense of Coherence during assignment. The results indicated that the overall model was significant [$F(4, 83) = 5.451$, $p = 0.001$, $R = 0.465$], and accounted for 17.7 percent of the variance in Sense of Coherence. However, Factors H and Q4 were the only significant predictors of Sense of Coherence. After removing Factors F and I, it was found that Factors H and Q4 together explained 17.2 percent of the variance in Sense of Coherence during assignment [$F(2, 83) = 8.394$, $p = 0.000$, $R = 0.414$].

The correlations reported in Paragraph 9.6.3 indicated that Hardiness was correlated only with Factor I of the 16PF. A linear regression analysis was conducted where Factor I was entered as a predictor of Hardiness during assignment. The results indicated that the overall model was significant [$F(1, 83) = 5.791$, $p = 0.018$, $R = 0.257$], and accounted for 6.6 percent of the variance in Hardiness. Even though the overall model is significant, the percentage variance explained is almost negligible and it is clear that there are other predictors of Hardiness more significant than personality traits.

9.8. Summary

The results of the research methods described in Chapter 8 were presented in Chapter 9. Detailed discussions are conducted in Chapter 10 on the extent to which the results obtained from the statistical analyses confirm the research objectives that were set for the study.

Chapter 10

Discussion

10.1. Introduction

In Chapter 10 a discussion is conducted on the extent to which the above mentioned research objectives were met. This discussion is based on the results obtained from the statistical analyses conducted as laid out in Chapter 9.

The aim of the study is to determine whether relationships exist between the expatriate's levels of emotional health, personality, and his perception of the organisational climate while on international assignment, and to present the outcome of the study as a model. In achieving this aim, the following research objectives were set:

- Objective 1:
  To establish the impact of the expatriation process on the individual's emotional health;

- Objective 2:
  To establish the interaction that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process.

- Objective 3:
  To establish the impact of organisational climate factors on the emotional adjustment of the individual prior to departure on the international assignment, and while on contract.

- Objective 4:
  To establish the nature of the interaction that exists between expatriate personality and the individual's perception of the organisational climate.

- Objective 5:
  To investigate the main personality and organisational climate predictors of the expatriate's levels of emotional health while on an international assignment in a foreign country.

10.2. Discussion of Objective 1: Impact of expatriation process on emotional health

The first objective set in this study was to establish the impact of the expatriation process on the individual's emotional health. It was proposed that the emotional health of the individual expatriate is directly and significantly influenced during the three phases of the international career cycle. In discussing Objective 1, the following hypotheses were investigated and will be discussed:

10.2.1. Discussion of Hypothesis 1a: The expatriate's sense of coherence decreases from before assignment to six months into the assignment

The first hypothesis was that the expatriate's sense of meaning decreases from prior to assignment to six months into the assignment. This hypothesis was tested by comparing the Sense of Coherence mean score of the experimental group before departure with their Sense of Coherence mean scores after six months on assignment.

The pre-departure Sense of Coherence mean score of the experimental group was found to be significantly higher than their Sense of Coherence mean score six months after arrival in the foreign country. This difference in mean scores indicates that the subjects included in the experimental group experienced a decrease in their emotional health as measured on the Sense of Coherence Scale before their departure on assignment.

The experimental group's Sense of Coherence mean score before departure was compared with that of the control group. The experimental group scored significantly higher than the control group on Sense of Coherence before departure. In isolation, this difference may be interpreted as indicating that the levels of emotional health experienced by the experimental group as assessed on the Sense of Coherence Scale before departure on assignment were significantly higher compared to those of the control group. However, it is important to note that the responses of both the experimental and control groups to the individual items included in the Sense of Coherence Scale were negatively skewed. This skewness indicates that the respondents tended to endorse the higher categories on the Scale.

Significant differences were also observed when the Sense of Coherence mean scores of the experimental and control groups were compared after six months on assignment. However, on this occasion the experimental group reported a significantly lower mean score than the control group. This outcome stands in contrast to the result obtained before departure on assignment, where the experimental group's Sense of Coherence mean score was found to be significantly higher than that of the control group.

No significant differences could be detected in the Sense of Coherence mean scores of the control group before departure and after six months on assignment. These results indicate that the control group did not experience any significant change in their levels of emotional health as assessed on the Sense of Coherence Scale during the various phases of the international career cycle to which the experimental group was exposed to.

The above mentioned discussion confirms the hypothesis that the expatriate's sense of meaning decreases from prior to assignment to six months into the assignment. The findings are in line with Antonovsky's (1993) assertion that a radical change in one's structural external situation can lead to a significant modification in one's emotional health. Antonovsky specifically highlights emigration to a foreign country (which refers to expatriation) as an example of a radical change in the individual's cultural or structural living conditions that can lead to a significant change in the sense of coherence.

10.2.2. Discussion of Hypothesis 1b: The expatriate's sense of coherence decreases from six months into assignment to after completion of assignment

Hypothesis 1b specified that the individual's sense of meaning decreases from six months into the assignment to after completion of assignment. This hypothesis was tested by comparing the experimental group's Sense of Coherence mean score during assignment with their Sense of Coherence mean score after completion of their assignments.

The Sense of Coherence mean score of the experimental group decreased significantly from six months on assignment to after returning from assignment. These results indicate that the levels of emotional health experienced by the experimental group, as evaluated on the Sense of Coherence Scale, decrease even more compared to their already lowered levels of emotional health when assessed after six months on assignment.

When the Sense of Coherence mean scores of the experimental and control groups were compared with each other after completion of the international assignments, a significant difference was observed. The experimental group scored significantly lower than the control group.

No significant differences in the Sense of Coherence mean scores of the control group during the equivalent phases could be detected, which indicates that the levels of emotional health of the control group as assessed on the Sense of Coherence Scale remained consistent during this period.

The above mentioned discussions confirm the hypothesis that the individual's sense of meaning decreases from six months into the assignment to after completion of assignment. These results confirm the findings of the literature study conducted in Paragraph 6.3, which indicate that the expatriate may tend to experience the repatriation process back into the home country as the most challenging aspect of the entire international assignment. This adjustment is even more severe than their initial adjustment to the foreign country on their arrival as expatriates (Stanoch, 2006; Beaverstock, 2000; Chan, 1999).

10.2.3. Discussion of Hypothesis 1c: The expatriate's hardiness decreases from prior to assignment to six months into the assignment

Hypothesis 1c stated that the expatriate's hardiness decreases from prior to assignment to six months into the assignment.

The first step in testing this hypothesis was to compare the Hardiness mean score of experimental group before departure with their Hardiness mean scores after six months on assignment. The pre-departure Hardiness mean score of the experimental group was found to be significantly higher than their mean scores obtained six months after arrival in the foreign country.

The experimental group's Hardiness mean score before departure was also compared with that of the control group. The experimental group scored significantly higher than the control group. Further analysis indicated that the responses of both the experimental and control groups to the individual items included in the Hardiness Scale were negatively skewed, and that the respondents tended to endorse the higher categories on the Scale. The inference can therefore be made that the Hardiness scores of the respondents included in the experimental group may have been positively influenced by their eagerness to be appointed in the available expatriate positions.

When the Hardiness mean scores of the experimental and control groups after six months were compared with each other, no significant differences could be detected. The experimental group scored slightly higher than the control group.

No significant differences were observed in the control group's Hardiness mean scores before departure on assignment when compared with their mean scores six months after arrival on assignment, which indicates that the levels of emotional health of the control group as assessed on the Hardiness Scale remained constant during this period.

The above mentioned discussions verify the hypothesis which states that the expatriate's hardiness decreases from prior to assignment to six months into the assignment.

In line with the above mentioned findings, Kaplan and Sadock (1991: 546) indicate that, where an individual is exposed to rapid cultural changes it could lead to an increase in the person's vulnerability to life strain. On the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) (Kaplan and Sadock, 1991: 224), expatriation and reallocating to a foreign country or culture is allocated a rating of four on a six point scale, which represents severe stress. This provides further proof that the individual expatriate is exposed to severe levels of psychosocial stress during his relocation into the foreign country, which could potentially lead to the person experiencing symptoms of emotional fatigue. Kaplan and Sadock (1991) also refer to this problem as culture shock, which occurs when an individual is suddenly forced into an alien culture.

A study conducted by the United Kingdom Centre for International Briefing (Marx: 1999) found that expatriates included in the study experienced symptoms of culture shock for approximately seven weeks: 70 percent of the expatriates indicated that these symptoms continued for up to five weeks, and 30 percent of them experienced symptoms for up to ten weeks. Similarly, research conducted by Tung (as cited in Beaverstock, 2000) showed that approximately 30 percent of the expatriates sent on international assignments required between six and twelve months to adjust to the environment in the foreign country.

10.2.4. Discussion of Hypothesis 1d: The expatriate's hardiness decreases from six months into the assignment to after completion of the assignment

Hypothesis 1d stated that the expatriate's hardiness decreases from six months into the assignment to after completion of their assignments. This hypothesis was tested by comparing the Hardiness mean score of the experimental group after six months on assignment with their Hardiness mean score after completion of their assignments.

As became evident in Paragraph 9.5.2.2, the Hardiness mean score of the experimental group decreased significantly from six months on assignment to after returning from assignment. This indicates that the subjects included in the experimental group experienced a significant decrease in their levels of emotional health as assessed on the Hardiness Scale during the period from six months on assignment to after returning to their home country on completion of their international assignments.

The Hardiness mean scores of the experimental and control groups were compared with each other after completion of their assignments. No significant difference could be detected in the Hardiness mean scores of the two groups after the return of the experimental group from their international assignments. No significant changes could also be detected in the Hardiness mean scores of the control group when their responses six months after arrival on assignment were compared with their results after completion of experimental group's assignments.

The above mentioned discussions substantiate Hypothesis 1d which states that the expatriate's hardiness decreases from six months into the assignment to after completion of assignment. Of interest in this regard would be a commentary made by Trompenaars and Hampton-Turner (2004: 331), who indicate that the more successful the expatriate is in adjusting and integrating him or herself into the foreign country, the bigger the possibility that he may experience significant adjustment challenges during the repatriation process back to the home country.

10.2.5. Summary

The findings obtained during the analysis of Objective 1 confirm the postulate that the emotional health of the individual expatriate is directly and significantly influenced during the three phases of the international career cycle. These findings are also in line with the discussions conducted in Chapters 5, 6, and 7 of this study, which clearly specified three distinct phases in the international career cycle (Brotchi & Engvig, 2006), namely recruitment and selection, the actual period abroad, and repatriation or transfer.

The results also confirm the occurrence of two major transitions required by expatriates in remaining productive and emotionally healthy during their completion of the international assignment, namely cross-cultural entry and home country re-entry (Chan, 1999). Each of these transitions was proven to have a significant impact on the emotional health of the expatriate as assessed on the Sense of Coherence and Hardiness Scales.

10.3. Discussion of Objective 2: The relationship between expatriate personality traits and emotional adjustment

The second objective set during this study is to establish the interaction that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process. In achieving this objective, it was proposed that a direct correlation exists between the individual's personality traits and the individual's emotional adjustment during the assignment. The following hypotheses will now be discussed within the framework of the statistical analyses conducted.

10.3.1. Discussion of Hypothesis 2a: Specific personality traits correlate with sense of coherence during assignment

Hypothesis 2a specified that individual personality traits correlate with Sense of Coherence during assignment. An investigation was conducted in order to identify the significant correlations between the 16PF factors (both global and primary 16PF factors) and the Sense of Coherence mean score of the experimental group before departure and after six months on assignment.

10.3.1.1. Correlations between global personality factors and Sense of Coherence

No significant correlations could be identified between any of the five global personality factors and Sense of Coherence before departure, after six months on assignment, or on return after completion of assignment. These results are in contrast to the findings of Van der Bank and Rothmann (2002) and Caligiuri (2000), who indicate that the big five personality factors can be utilised to predict expatriate performance (for more information see Paragraph 7.7).

Similarly, Guthrie and Ash (2003) also indicate that expatriates who are more extroverted, receptive (low tough mindedness), accommodating (low independence) are more likely to successfully integrate themselves into the foreign environment, and less likely to report a desire to terminate their assignment prematurely. According to Guthrie and Ash (2003), those individuals who are assessed as being more emotionally stable (low on anxiety proneness) and who display relatively high levels of self-control are more likely to perform effectively from a work perspective.

However, Karson et al (1997) indicate that a major disadvantage of using the global scores of the 16PF in analysing individual personality is that they can conceal important elements in a personality. In agreement with Karson, the Institute for Personality and Ability Testing (2007) also cautions that the more specific primary factors of the 16PF should be incorporated when personality assessment is conducted for the purposes of detailed feedback or the prediction of future individual behaviour. According to the Institute (2007), research has shown that more specific factors such as the 16PF primary scales tend to predict actual behaviour better than the global five personality factors.

10.3.1.2. Correlations between primary 16PF factors and Sense of Coherence

Consequently, correlations were also investigated between the primary 16PF personality factors and the Sense of Coherence mean score of the experimental group before departure and after six months on assignment.

Stable (Factor C) showed a significant positive correlation with Sense of Coherence before departure (*r* = 0.221). Cattell et al (1988) defines Stable as the extent to which an individual is emotionally mature and able to remain consistent in managing mood swings in his emotional life, especially when placed in "difficult situations".

Antonovsky (1991) asserts that a person's ability to cope with stress is determined to a significant extent by Sense of Coherence, which he refers to as a specific individual psychological factor that determines his general attitude toward the world and his own life.

As can be seen from the above mentioned definitions, the Stable personality factor and Sense of Coherence seem to be measuring similar psychological constructs of emotional health.

Enthusiasm (Factor F) showed a significant positive correlation of 0.225 with Sense of Coherence during assignment. Factor F measures a person's natural enthusiasm or energy levels (Cattell, 2006). As was discussed in Chapter 6, the expatriate is to a large extent required to create order and organisation in a highly flexible and constantly changing work environment where there are limited processes and guidelines in place to guide his actions and decisions. It can therefore be expected that individuals who score higher on Enthusiasm should probably be more able and willing to adjust to the flexible environment as compared to their more serious counterparts who score lower on Enthusiastic. As a result, the possibility exists that the person scoring higher on enthusiasm would potentially enjoy functioning in the confusing environment, which in turn, will have a positive impact on the levels of emotional health experienced by the person as assessed on the Sense of Coherence Scale while on assignment.

Also of relevance is the significant negative correlations that Adventurous (Factor H) showed with Sense of Coherence during assignment (r = -0.265). The reasons for the negative correlation between these two variables are unclear as the expectation would be that the more adventurous person would also enjoy functioning in the typically unstructured and unpredictable expatriate environment and as a result, should tend to display higher levels of Sense of Coherence during assignment.

Taking into account the relatively small sample of 84 subjects included in the experimental group, some caution may need to be exercised on the correlation obtained between Adventurous and Sense of Coherence.

Sensitivity (Factor I) showed a significant negative correlation with Sense of Coherence during assignment (r = -0, 239). Cattell et al (1988; 2007) define Sensitivity as the extent to which the individual is emotionally sensitive, empathetic, aware of feelings, and prone to make decisions based on personal values or the needs of others.

As an expatriate, the individual is required to take quick and decisive actions in dealing with constant operational demands and problems that require immediate attention (please see Paragraph 5.5.2 in Chapter 5 for a more detailed discussion). In the process, the individual is often not afforded the opportunity to focus on the softer human aspects involved. As a result of the time constraints and high demands being placed on the individual, the person who is able to make a quick analysis of the problems at hand and take appropriately decisive action will also probably see quicker progress in the achievement of his results and targets. This in turn could potentially lead to an increase in the person's perceived levels of personal achievement and emotional health as assessed on the Sense of Coherence Scale.

Liberal (Factor Q1) correlated positively with Sense of Coherence (r = 0.352) after completion of assignment. Cattell et al (1988) assert that Factor Q1 concerns the individual's orientation to change, novelty, and innovation. According to Cattell et al, an individual scoring high on Factor Q1 likes functioning in a constantly changing environment.

Antonovsky (1991) argues that the individual who has a high sense of coherence should be able to cope better with the pressures associated with significant life changing events, compared to the individual with a weak sense of coherence who may tend to become overwhelmed and paralysed by the pressure being placed on him or her.

Most of the expatriates included in the experimental group were employed on a contractual basis while on international assignment. Their contracts did not stipulate any guarantee of employment on their return to South Africa. As a result, they were unemployed on their return to South Africa after completing their international assignments. They therefore needed to search for new employment in South Africa or as expatriates in other countries. Taking into account the above mentioned observations, the inference can be made that Factor Q1 (Liberal) and Sense of Coherence can have a positive impact on each other.

Tension (Factor Q4) indicated negative correlations with Sense of Coherence before departure on assignment (r = -0.219), after six months on assignment (r = -0.223), as well as on return after completion of assignment (r = -0.228). Cattell et al (1988) view Tension as the level of physical tension experienced by the individual as expressed by irritability and impatience with others. An individual scoring high on Tension may tend to manifest signs of becoming irrationally worried, tense, irritable, anxious, and in turmoil. According to Cattell et al (1988: 108), a person indicating abnormally high levels of Tension may also show a higher probability of experiencing manic depression.

Antonovsky (1991) states that sense of coherence acts as a facilitator in the individual's ability to cope with highly stressful situations. This assertion is confirmed by research conducted by Anderzen and Arnetz (1999), who found that individuals who perceive themselves as having low sense of coherence are more likely to experience psycho-physiological stress and symptoms of depression. The individual is required to deal with substantial levels of stress and emotional turmoil during each of the adjustment phases in the expatriate career cycle (please find a more detailed discussion in this regard in Chapters 4, 5, and 6). It is expected that the more relaxed and emotionally calm the expatriate is (low on Tension), the better able he should be to cope with the demands being placed on him or her. This lower level of tension will in turn have a positive impact on the person's experienced levels of emotional health as assessed on the Sense of Coherence Scale.

10.3.2. Discussion of Hypothesis 2b: Specific personality traits correlate with hardiness during assignment

The hypothesis was set that individual personality traits are correlated with Hardiness during the assignment. This hypothesis was tested by investigating correlations between the five global personality factors and the Hardiness mean score of the experimental group before departure, after six months of assignment, and on completion of assignment.

10.3.2.1. Correlations between global personality factors and Hardiness

Herewith, a discussion on the correlations calculated between the global personality factors and the Hardiness mean score of the experimental group before departure, after six months of assignment, and on return after completion of assignment.

Anxiety proneness showed significant negative correlations with Hardiness, both before departure on assignment (r = -0.276), and after six months into the assignment (r = -0.218). Anxiety proneness refers to a person's tendency towards experiencing neuroticism, anxiety, hostility, vulnerability, and to experience negative emotions in response to their environment (Institute for Personality and Ability Testing, 2007). The opposite of Anxiety proneness is Stability, which refers to a person's emotional stability, and the general tendency to experience negative emotions in response to their environment (Institute for Personality and Ability Testing, 2007).

Kobasa (1982) conceptualises hardiness as a general health promoting factor that enables individuals to remain healthy at both a psychological and a physical level, despite being confronted with stressful situations or experiences. Kobasa is of the opinion that it is the personality trait of hardiness that leads people to respond differently to objectively identical stressors and stressful situations. According to Kobasa, the characteristics of the hardy personality reflect one's ability to successfully cope in stressful situations by means of a thorough appraisal of the situation or problem in the context of one's social environment and one's existing social support system.

Taking into account the similarities observed between the constructs, a negative relationship between Anxiety proneness and Hardiness (both before and during assignment) can therefore be expected.

Openness showed a statistically significant (though small) negative correlation of -0.220 with Hardiness during assignment. The opposite of Openness is referred to as Tough mindedness. The Tough mindedness construct focuses on the person's preference for concrete realities and facts versus abstract ideas and possibilities (Institute for Personality and Ability Testing, 2007). A typical attribute associated with high Tough mindedness would be *"a readiness to handle problems at a cognitive and objective level"* (Cattell et al, 1988: 119).

According to Kobasa (1982), the hardiness concept underlies the individual's ability and willingness to effectively deal with change. Maddi and Koshaba (2006) indicate that employees indicating high levels of hardiness tend to take the lead in situations of change because they possess key attitudes that motivate practical, constructive, and performance enhancing problem solving.

In their descriptions of the two constructs, both Cattell et al (1988) and Kobasa (1982) emphasise the importance of the individual making use of a practical problem solving approach in dealing with the problems facing him or her. Taking into account the descriptions provided for the two constructs, it becomes evident that Tough mindedness and Hardiness could potentially be two similar constructs evaluating the person's perception and approach towards dealing with problems and demands facing him in the external environment.

10.3.2.2. Correlations between primary 16PF factors and Hardiness

Herewith, a discussion on the correlations emerging between the primary 16PF personality factors and the Hardiness mean score of the experimental group before departure, after six months of assignment, and on return after completion of assignment.

Stability (Factor C) showed significant positive correlations with Hardiness before departure on assignment (r = 0.235). As discussed earlier, Stability (Factor C) refers to the expatriate's levels of maturity in coping with emotionally stressful situations. Taking into account the significant positive correlations observed between Sense of Coherence and Hardiness before assignment (r = 0.381), as well between Sense of Coherence and Hardiness during assignment (r = 0.533), the inference can be made that the two constructs are assessing similar constructs of emotional health. Therefore, the comments made relating to the correlations between Stability and Sense of Coherence in the previous section will be equally applicable to the strong correlations obtained between Stability and Hardiness before assignment.

Sensitivity (Factor I) showed a significant negative relationship with Hardiness (r = -0.257) during assignment. Individuals scoring high on Sensitivity tend to be more emotionally sensitive, and are prone to make decisions based on a more personal or subjective basis. On the other hand, individuals scoring low on Sensitivity tend to be more objective, unsentimental, tough minded, and self-reliant in their decision making (Cattell et al, 1988).

According to Kobasa et al (1988), the characteristics of the hardy personality reflect one's ability to successfully cope in stressful situations by means of a thorough and logical appraisal of the situation or problem in the context of one's social environment and one's existing social support system.

As was discussed in Paragraphs 5.4.1 and 5.5.2 in Chapter 5, the expatriate is required to function in an operationally demanding work environment where he is required to take quick, decisive action in dealing with problems. Therefore, expatriates who are more objective, unsentimental, tough minded, and self-reliant in their decision making (low on Sensitivity) are more likely to adjust to the demanding environment compared to their more sensitive counterparts. As a result, they should also indicate higher levels of emotional health, as reflected in the significant negative correlation between Sensitivity and Hardiness.

Imaginative (Factor M) correlated negatively with Hardiness after completion of assignment (r = -0.280). Factor M refers to the individual's inclination towards practicality versus creativity. According to Cattell et al (1988), individuals who score themselves highly on Imaginative are typically viewed as being creative, imaginative, and insightful. In the process, they may tend to overlook specific details and may also lack practicality. Low scorers on Imaginative prefer making decisions on a factual basis, and tend to focus on the directly observable operational results.

Taking into account the operationally challenging work environment within which the expatriate is required to function, the practical problem solving expatriate who focuses on the here-and-now results and outcomes (scoring low on Imaginative) should be better able to adjust to the work-related demands being placed on him or her. As a result, it can be expected that this person will also be indicating higher levels of emotional health as reflected in the significantly negative relationship observed between Hardiness and Imaginative.

Liberal (Factor Q1) correlated significantly and positively with Hardiness (r = 0.257) after completion of assignment. In Paragraph 9.6.7.1 a detailed discussion was conducted on the significant positive correlation (r = 0.352) that emerged between Factor Q1 and Sense of Coherence after completion of assignment. It was concluded that the person who prefers functioning in a constantly changing environment should be able to adjust more effectively to the unpredictable circumstances associated with being unemployed and having to search for a new job after completing an international assignment. Taking into account the significant positive correlation (r = 0.535) that emerged between Hardiness and Sense of Coherence after completion of assignment, the same conclusion can be obtained in explaining the positive relationship between Factor Q1 and Hardiness after completion of assignment.

Tension (Factor Q4) correlated negatively with Hardiness before assignment (r = -0.242). Factor Q4 refers to the individual's level of patience when required to deal with delays, stresses, and demands from the external environment. Individuals indicating very high levels of tension may tend to display signs of impatience, stress, and irritability. According to Cattell et al (1988: 109), a high score on Factor Q4 has the largest association with clinical depression among all the 16PF factors.

A study conducted by Harrisson et al (2002) found that a high level of hardiness is related to lower psychological distress and a more positive appraisal of the work environment. In their study, they found that those individuals who indicated higher levels of hardiness viewed themselves as able to influence life events by perceiving them as challenging rather than threatening. Those individuals also reported fewer symptoms of depression, anxiety, and anger.

Taking into account the above mentioned observations, it is viewed appropriate for Factor Q4 to show a negative correlation with Hardiness before departure on assignment, especially taking into account that the two variables were assessed at the same time.

10.3.2.3. Summary

The above mentioned findings and discussions indicate that a correlation exists between a considerable number of the individual's personality traits and the individual's emotional adjustment during the assignment as assessed on the Sense of Coherence and Hardiness Scales. The findings also confirm the postulate made that a direct positive correlation exists between the expatriate's personality traits and his emotional health during the assignment.

However, the small number of correlations observed among the global five personality factors and the Sense of Coherence and Hardiness variables also highlight the danger of only utilising the global five factors of personality, without taking into consideration the more specific personality traits as assessed more directly on the primary 16PF factors. These findings support the assertion made by Karson et al (1997: 77) that an individual's score on a global factor does not provide as much information compared to the scores on its component factors. In this regard, Karson et al (1997: 77) recommend that a more detailed diagnostic investigation needs to be conducted on the available individual personality components when assessing expatriates, as opposed to only utilising a mechanistic approach by focusing only on the person's results on the five global factors.

10.4. Discussion of Objective 3: The relationship between Climate factors on expatriate emotional adjustment prior to departure and after six months on assignment

The third objective set in this study was to establish the impact of organisational climate factors on the emotional adjustment of the expatriate prior to departure on the international assignment, and after six months on assignment.

In line with the above mentioned objective, the third postulate set in this research is that there is a significant correlation between organisational climate prior to and during the international assignment and the levels of emotional health experienced by the expatriate.

10.4.1. Discussion of Hypothesis 3a: Organisational climate before assignment is correlated with Sense of Coherence before assignment

The hypothesis was set that organisational climate before assignment is correlated with Sense of Coherence before assignment. This hypothesis was tested by identifying the correlations between the Climate variables and the Sense of Coherence mean score of the experimental group before departure on assignment.

Sense of Coherence before assignment showed a significant positive correlation (r = 0.247) with Communication before assignment. Kossuth (1998) defines Communication as the extent to which the person is able to obtain the information necessary to do his job properly, as well as the extent to which both upward and downward communication exists in the workplace.

The positive relationship found between Sense of Coherence and Communication before assignment confirms the assertion made by Hodgetts and Luthans (2003) as discussed in Paragraph 5.5.3, that the support and information provided by the company in the areas of accommodation, education and travel could potentially reduce the uncertainty associated with these significant issues and thereby facilitate the expatriate's adjustment to the foreign environment.

Sense of Coherence before assignment showed a significant negative correlation (r = -0.321) with Tension before assignment. According to Kossuth (1998), Tension refers to the extent to which the expatriate worries about aspects of his work environment that impose on his time, family, situation or personal grievances. The extent to which these issues are not satisfactory resolved will reflect in the Tension experienced by the person.

In Paragraphs 7.5.2 and 7.5.3 in Chapter 7 a detailed explanation is provided on the role sense of coherence plays in the expatriate's responses towards perceived tension and stress in his external environment. As was discussed in Paragraph 7.5.2, Antonovsky (1991) views sense of coherence as being central to the individual's ability to cope effectively with stressful situations. The sense of coherence mobilises existing generalised resistance resources. The successful utilisation of these resources leads to a reduction of tension. It therefore directly influences the physiological and psychological systems involved in the processing of stress. Consequently, the higher the sense of coherence, the lower the intensity of tension experienced by the expatriate.

No further significant correlations could be identified between Sense of Coherence and any of the other Climate variables before the experimental group's departure on assignment.

10.4.2. Discussion of Hypothesis 3b: Organisational climate prior to assignment is correlated with Hardiness prior to assignment

It was hypothesised that organisational climate prior to assignment is correlated with Hardiness prior to assignment. When the correlations between these two variables were tested, no significant correlations could be identified between any of the Climate before departure variables, and Hardiness before departure on assignment.

10.4.3. Discussion of Hypothesis 3c: Organisational climate during assignment is correlated with Sense of Coherence during assignment

The hypothesis was set that organisational climate during assignment is correlated with Sense of Coherence during assignment. To test this hypothesis, correlations between the Climate variables and the Sense of Coherence mean score of the experimental group during assignment were identified.

Sense of Coherence during assignment showed significant correlations with all the Climate variables during assignment.

Sense of Coherence during assignment correlated significantly and positively (r = 0.270) with Role clarity during assignment. Kossuth (1998: 42) defines role clarity as the extent to which employees understand what is expected of them in their work. As was discussed in Paragraph 5.5.2.1 in Chapter 5, Role clarity has been identified by numerous researchers (Harvey & Novicevic, 2001; Black et al, 1999; Morley et al, 1997; Suutari & Brewster, 1997) as the job factor that has the strongest impact on the work adjustment of the expatriate. The clearer the role expectations, the better the expatriate is able to predict how best to behave, which in turn reduces the uncertainty associated with the work situation. Consequently, the expatriate's sense of coherence will also be influenced positively.

Sense of Coherence during assignment showed a significant positive correlation of 0.254 with Communication. Communication is defined by Kossuth (1998) as the extent to which the individual is able to obtain the information necessary to do his job properly, as well as the extent to which both upward and downward communication exists in the workplace. Paragraph 5.5.3 in Chapter 5 provides a detailed discussion on the impact of communication on the adjustment of the expatriate in the foreign environment while on assignment. A few communication-related areas highlighted in Paragraph 5.5.3 would be the lack of communication that can exist as a result of the distance between the parent company and the subsidiary operation where the expatriate is situated (Kubes & Loh, 2006), the expatriate's ability and willingness to communicate in the local language of the host society (Suutari & Brewster, 1997), and the extent to which the expatriate is allowed into the "inner communication channels" by the local nationals at the foreign subsidiary (Cascio & Aguinis, 2005).

Communication is also specifically highlighted by Kubes & Loh (2006) as a major organisational factor that influences the adjustment of the expatriate in the foreign environment. Taking into consideration the above mentioned observations, the inference can be made that Communication can potentially have a direct impact on the sense of coherence experienced by the expatriate while on assignment.

A significant positive correlation of 0.387 was found between Satisfaction and Sense of Coherence during assignment. Kossuth (1998) describes Satisfaction as the extent to which the individual enjoys his work in that he is able to exercise his skills in the performance of his function.

A detailed discussion on expatriate satisfaction as both an outcome and as an influence on expatriate performance is provided in Chapter 5 of this research. A point that needs to be emphasised would be the assertion by Forehand and Gilmer (as cited in Kossuth, 1998) that satisfaction is an outcome variable that is significantly influenced by personal variables such as attitudes and motives that the person brings with him into the work situation.

Similarly, in his description of the sense of coherence concept, Antonovsky (1991) asserts that the individual's state of health and ability to cope with stress is determined to a significant extent by his general attitude toward the world and his own life.

The emphasis placed on the individual's general attitude towards his job and life in general by both Kossuth (1998) and Antonovsky (1991) provides a confirmation of the positive relationship existing between Satisfaction and sense of coherence while on assignment.

A significant negative correlation (r = -0.489) was found between Sense of Coherence during assignment and Tension during assignment. From an expatriate point of view, Tension is viewed from a broader perspective and incorporates the extent to which the individual experiences his personal, work, and social environment as being stressful. A detailed discussion on the pressures being placed on the expatriate during the various phases of the international career cycle that lead to him experiencing significant levels of tension can be seen in Paragraph 5.3 in Chapter 5, and Paragraph 7.2 in Chapter 7.

As was discussed in Paragraph 7.5.3 in Chapter 7, Anderzen and Arnetz (1999) found that expatriates with a high level of sense of meaning have a stronger ability to minimise the impact of the external environment on specific stress-related chemical reactions taking place in the human body during periods of extensive travel and pressure. These research findings provide an explanation for the negative correlation that emerged between Sense of Coherence and Tension during assignment.

Sense of Coherence during assignment showed a fairly strong significant positive correlation ($r = 0.434$) with Propensity to Stay during assignment. Propensity to stay is defined by Kossuth (1998) as the extent to which the individual is likely to want to stay with the organisation, as opposed to searching for alternative employment. Within the broader expatriate perspective, Van der Bank and Rothman (2002) refer to propensity to leave (the opposite of propensity to stay) as the individual's "desire to terminate his assignment" (as was discussed in Paragraph 8.6.4.1 in Chapter 8). They describe the individual's desire to terminate the assignment as the most basic behavioural criterion for assessing the outcome of an expatriate assignment. They also consider sense of coherence as a buffer against the expatriate's desire to prematurely terminate the assignment.

A significant positive correlation of 0.397 was found between Sense of Coherence during assignment and Leadership during assignment. According to Kossuth (1998: 47), Leadership refers to the extent to which individuals view the management team in the company as being competent, credible, and trustworthy. Kossuth identifies leadership as a critical factor that has an influence on the psychological atmosphere or climate of the organisation, as well as the sense of purpose experienced by the individual during the conduct of his work.

Taking into account the above mentioned observations, it makes sense that Sense of Coherence will show a significant positive correlation with Leadership during assignment. A detailed discussion on the impact of leadership on expatriates and their performance while on international assignment can be found in Paragraph 5.5.3 of Chapter 5.

10.4.4. Discussion of Hypothesis 3d: Organisational climate during assignment is correlated with Hardiness during assignment

A further hypothesis set during this study is that Organisational climate during assignment is correlated with Hardiness during assignment. In order to test this hypothesis, correlations between the Climate variables and the Hardiness mean score of the experimental group during assignment were identified.

Hardiness during assignment correlated significantly with most of the Climate variables during assignment. The only exceptions were Role Clarity (r = 0.067) and Communication (r = 0.208) during assignment, where limited correlations could be detected. Hardiness during assignment also showed significant positive correlations with Communication (r = 0.304) and Satisfaction (r = 0.290) before assignment.

Yavas and Bodur (1999) state that expatriate satisfaction refers to three specific aspects: satisfaction with the work environment, satisfaction with the expatriation process, as well as satisfaction with the personal aspects of expatriation. In their research, Yavas and Bodur (1999) found a direct relationship between the satisfaction experienced by expatriate managers, and their commitment towards their assignments and companies of employment. These results are confirmed by similar research conducted by Stahl et al (2002), who found that the levels of satisfaction experienced by the expatriate while on international assignment also provide some indication of the expatriate's levels of commitment towards the company on their repatriation after completing their assignments.

10.4.5. Summary

The postulate is set that there is a significant correlation between organisational climate prior to and during the international assignment and the levels of emotional health experienced by the expatriate. The results obtained from the statistical analyses in testing this hypothesis indicate that a considerable number of the Climate factors show significant correlations with Sense of Coherence and Hardiness as indicators of expatriate emotional health.

Also of relevance is the relatively small number of correlations found between the Climate variables before assignment, compared to the very strong and significant correlations obtained between the Climate variables and Sense of Coherence and Hardiness during assignment. A possible reason for the small number of significant correlations found between the Climate variables and Sense of Coherence and Hardiness is possibly provided in Paragraph 9.4, where it was found that the subjects tended to rate themselves too positively on all the variables included in the study. As was discussed in Paragraph 9.4 of this chapter, Kossuth (1998) asserts that this "leniency error" could have an impact on the outcomes of statistical analyses where such data is utilised.

The strong correlations found amongst Sense of Coherence and Hardiness during assignment and almost all the Climate variables during assignment confirm the assertions made by both Antonovsky and Kobasa that a direct interaction takes place between the person and his external environment. Antonovsky (1993) indicates that a radical change in one's structural external situation (for example expatriation) can lead to a significant modification in one's sense of coherence (please find a more detailed discussion in this regard in Paragraph 7.5.3 in Chapter 7). Kobasa (as cited in Pott, 1998: 52) also views hardiness as a dynamic personal characteristic that can change as the individual interacts with his external environment (see Paragraph 7.6 in Chapter 7 for a more detailed discussion in this regard).

10.5. Discussion of Objective 4: Interaction between expatriate personality and perception of the organisational climate while on international assignment

Objective 4 established in this study was to establish the nature of the relationship that exists between expatriate personality and the individual's perception of the organisational climate while on international assignment. The corresponding postulate states that a direct correlation exists between the individual's personality traits and the individual perception of the organisational climate prior to and during assignment. In testing this postulate, the following hypotheses were tested:

10.5.1. Discussion of Hypothesis 4a: Correlations between individual personality traits and Organisational Climate variables before assignment

The hypothesis is set that individual personality traits are correlated with Organisational Climate variables before assignment. This hypothesis was firstly tested by investigating the correlations between the five global personality factors and the Climate variables of the experimental group before their departure on assignment. Subsequently, the correlations between the primary 16PF personality factors and the Climate variables of the experimental group before their departure on assignment were also investigated.

No significant correlations could be identified between the five global personality factors and any of the Climate variables before departure on assignment.

Self-sufficiency (Factor Q2) showed a significant negative correlation with Communication before assignment (r = -0.238). Lord (2000: 62) describes Self-sufficiency as the individual's preference to be around people and to be involved in group activities. Of relevance in this regard would be the assertion made by Cattell et al (1988: 105) that the person who scores high on self-sufficiency tends to be significantly more dissatisfied with group integration and interaction, and shows a stronger preference to make decisions and solve problems on his own without requiring the involvement of others. Kossuth (1998) defines Communication as the extent to which the individual is able to obtain the information necessary to do his job properly, as well as the extent to which both upward and downward communication exists in the workplace.

Taking into account the strong preference of a strongly self-sufficient expatriate for self-reliance and independence during the conduct of his work, it can be expected that this person would tend to make use of his own resources in order to obtain the information necessary to do his job. As a result, the expatriate would not really be inclined to utilise the available communication in the company. This explains the significant negative correlation between Self-sufficiency and Communication.

Control (Factor Q3) indicated a significant negative correlation with both Role clarity (r = -0.246) and Leadership (r = -0.218) before assignment. According to the Institute for Personality and Ability Testing (2007: 7), individuals scoring higher on Control tend to be more organised and systematic, with a strong preference towards structure. However, they also caution that an extremely high level of Control may lead to the individual becoming rigid and inflexible. Furthermore, high scorers on Control tend to lose efficiency as the amount of structure in their external environment decreases. The mean score of the experimental group on Factor Q3 (Control) was 7.23, which indicates that the average individual included in the experimental group would show a relatively strong need for structure and predictability in his external environment.

Role clarity is defined by Kossuth (1998) as the extent to which employees understand what is expected of them in their work. In order to obtain a logical reason for the negative correlation existing between Control and Role clarity, it is important to note the comments made in Paragraph 8.4.2.3 on the demographics of the subjects included in the experimental group. The vast majority of participants included in the experimental group were white males (75 percent) who may have been unemployed and who possibly could have found themselves in a position where they were not always able to find alternative employment due to factors such as Affirmative Action limiting the career opportunities available to them. Due to the fact that a significant number of these individuals were in a period of transition from an employment perspective, these people would not have any clear perspective of their roles in any particular organisation.

The inference can therefore be made that the highly controlled expatriate (scoring high on Factor Q3) may experience lower levels of Role clarity during periods of transition from a position in South Africa to a new position as an expatriate in a foreign country. This may explain the significant negative correlation existing between Factor Q3 (Control) and Role clarity.

10.5.2. Discussion of Hypothesis 4b: Correlations between individual personality traits and Organisational Climate variables during assignment

The hypothesis is set that individual personality traits are correlated with Organisational Climate factors during assignment. This hypothesis was tested by firstly determining the correlations between the five global personality factors and the Climate variables of the experimental group after six months on assignment. Following this investigation, the correlations emerging between the primary 16PF personality factors and the Climate variables of the experimental group after spending six months on assignment were also evaluated.

10.5.2.1. Global personality factors

A significant positive correlation was found between Global Five Self-control and Role clarity during assignment ($r = 0.271$).

Self-control is defined by Cattell et al (2007; 1988) as the extent to which the person values competence, order, and self-discipline, as well as the extent to which he effectively and efficiently plans, organises, and carries out tasks. Typical dimensions included in the Self-control dimension would be being dependable, reliable, careful, thorough, etcetera.

According to Kossuth (1998), Role clarity can be defined as the extent to which the employee understands what is expected of him in the specific function. A detailed discussion was conducted in Paragraph 5.5.2 on the importance of the individual being able to create structure and organisation for him or herself in a highly ambiguous and unpredictable work and social environment.

Taking into account the above mentioned definitions, the inference can be made that the more able and willing the person is to effectively and efficiently plan, organise, and carry out his responsibilities as an expatriate (high Self-control), the more he will be able and willing to clarify and understand his role during the international assignment (high Role clarity). Conversely, it is also expected that the higher the levels of role clarity experienced by the expatriate, the more the individual will be able to effectively and efficiently plan, organise, and carry out tasks (high levels of Self-control).

Taking into account the above mentioned observations, it makes sense that the global personal factor Self-control would be positively correlated with the amount of role clarity experienced by the expatriate during the conduct of his work.

The above mentioned findings are in line with the research conducted by Barrick and Mount (as cited in Harvey & Novicevic, 2001), who found that the Self-control global personality factor was the best single predictor of individual expatriate performance. Van der Bank and Rothman (2002) also come to the conclusion that an elevated level of self-control is positively related to expatriate work performance, as well as the successful completion of the expatriate assignment.

10.5.2.2. Primary personality factors

Outgoing (Factor A) showed significant positive correlations with Communication (r = 0.378), Role clarity (r = 0.290), as well as Leadership (r = 0.227) during assignment.

According to Cattell et al (1988: 81), individuals scoring high on Factor A (Outgoing) tend to be easygoing, have a strong need for interpersonal contact with others, and prefer operating in a team context.

Kossuth (1998) describes Communication as the extent to which the individual is able to obtain the information necessary to do his job, as well as the extent to which both upward and downward communication exists in the workplace. It makes sense that Factor A (Outgoing) and Communication during assignment would be positively related to each other. The stronger the expatriate's preference to interact with others in his external environment, the more informed he can expect to be on developments having an impact on his work performance, and the more willing the person will be to actively communicate with his superiors on areas of concern. On the other hand, it also makes sense that the more the expatriate feels that the communication channels in the Company are open and cooperative, the more willing and able he will be to interact spontaneously with others in the work and social environment.

Role clarity is defined by Kossuth (1998) as the extent to which employees understand what is expected of them in their work. A detailed discussion was conducted in Paragraph 5.5.1 in Chapter 5 on the impact the individual's ability to meet new people and interact with them, has on his ability to integrate effectively into the expatriate work and living environment. Within the framework of these discussions, the inference can therefore be made that the more willing and able the expatriate is to interact with his colleagues and the local nationals in the foreign country, the stronger the possibility that the person will have a clear understanding of what is expected of him in his work. Conversely, it is also possible that the more the person feels comfortable that his role in the company has been clearly defined, the more comfortable he will feel to openly interact with others in his external environment.

Leadership is defined by Kossuth (1998) as the extent to which individuals view the management team in the organisation as being competent, credible, and trustworthy. In line with the previous discussions, it makes sense to expect a positive correlation between Factor A (Outgoing) and Leadership during assignment. The more able and willing the expatriate is to maintain positive relations with senior management in the company, the more the probability that he will have a positive perception towards their competence and credibility. In addition, he will also have a better understanding of the difficulties and demands the management team is required to deal with in establishing a new business venture in a foreign country.

The above mentioned results are consistent with research conducted by a number of researchers (Guthrie et al, 2003; Van der Bank & Rothmann, 2002; Caligiuri, 2000; Black et al, 1999), who found that an expatriate's ability and willingness to develop significant relationships with others has a positive impact on his adjustment to the external environment, as well as his ability to gain access to valuable information relating to the work and the social environment (see Paragraph 7.7.3.1 in Chapter 7 for a more detailed discussion on the research conducted by the above mentioned researchers).

Assertiveness (Factor E) showed a significant positive correlation of 0.270 with Satisfaction during assignment. Cattell et al (1988: 86) describes Assertiveness as a measure of the expatriate's dominance versus submissiveness in an interpersonal context. A person scoring high on Assertiveness enjoys being in control of situations involving other people. An interesting comment made by Cattell et al (1988: 87) in this regard is that teams that indicate a high overall rating on Factor E (Assertiveness) tend to show more effective role interaction and decision making, and also feel more open towards participating in activities.

Kossuth (1998) defines Satisfaction as the extent to which the individual enjoys his life and work, in the sense that he is able to exercise his skills in the performance of his function.

Taking into account the above average Assertiveness mean score obtained by the experimental group (6.71), it is plausible that the higher the expatriate's ability to exert influence on others towards his point of view, the higher the possibility that the person will experience feelings of satisfaction and control over his external environment. Alternatively, the possibility also exists that the more satisfied the expatriate is with his life and work, the more comfortable the person will feel to assert his authority over others during his interactions with them.

Adventurous (Factor H) showed a significant negative correlation with Role clarity during assignment (r = -0.279), and Satisfaction during assignment (r = -0.233). The reasons for the negative correlation between Adventurous and these variables are unclear, as the expectation would be that the higher the levels of adventurism displayed by the individual, the lower the amount of role clarification required by the individual during the conduct of his work as an expatriate, and the higher the levels of satisfaction experienced by the expatriate. Cattell et al (1988: 92) specifically indicate that a high score on Factor H (Adventurous) is a very important criterion in identifying suitability for occupations that demand "the ability to face wear-and-tear in dealing with people and gruelling emotional situations" (such as being sent on an international assignment).

Imaginative (Factor M) correlated negatively with Role clarity during assignment (r = -0.314). According to Cattell et al (1988: 99), Factor M refers to a literal detail orientation versus an imaginative big picture orientation. A person scoring low on Imaginative tends to be strongly in touch with practical realities, and prefers to focus on clarity of the here-and-now. In turn, the high scoring individual prefers to focus on the inner self for abstract and creative ideas, and shows a disregard and dislike towards practical rules and procedures. Taking into account these observations, the inference can be made that the stronger the expatriate's disregard towards practical rules and procedures (a high score on Factor M), the higher the possibility that he will not have a clear understanding of what is expected of them in their work (low levels of Role clarity). The person will also probably not have a very strong need for role clarity in his position.

Shrewd (Factor N) showed a significant positive correlation of 0.426 with Role clarity during assignment. One of the characteristics associated by Cattell et al (1988: 99) with Factor N (Shrewd) is the ability and preference to deal with situations in an exact and calculated way. Other characteristics associated with high levels of Shrewdness would be those of being emotionally detached and disciplined. As was discussed in Paragraph 5.5.1, the expatriate's ability to accurately and objectively consider and evaluate the host environment and the people living in the country (high levels of Shrewdness) directly influences his ability to make the appropriate adjustments in order to integrate into the local culture and work environment in the host-country (high Role clarity). Taking into account these observations, positive correlation between Factor N (Shrewdness) and Role clarity can be expected.

10.5.3. Summary

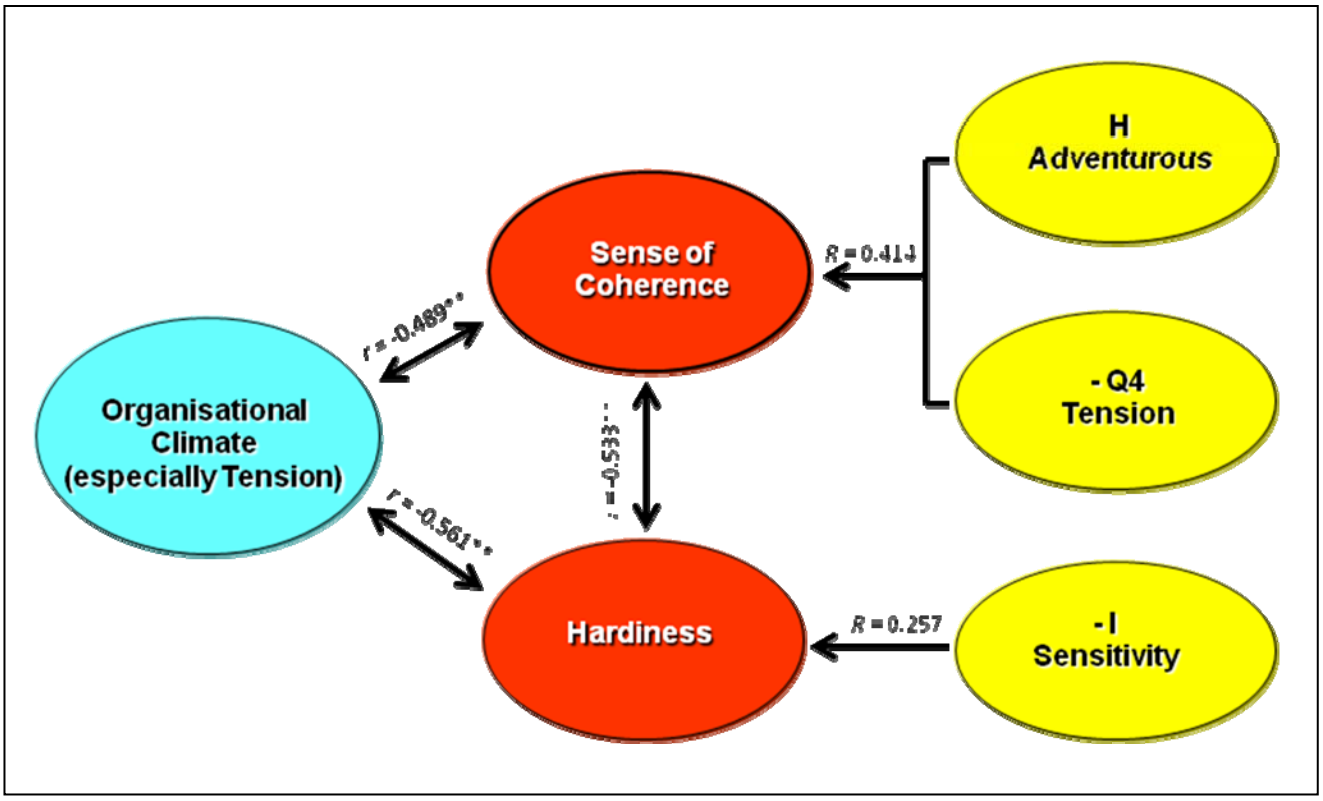
Objective 4 is to establish the nature of the interaction that exists between expatriate personality and the individual's perception of the organisational climate while on assignment. The corresponding postulate states that a direct correlation exists between the expatriate's personality traits and his perception of the organisational climate prior to and during assignment.

In testing the above mentioned postulate, significant correlations could be identified between a considerable number of the personality traits and Organisational Climate variables prior to departure and after spending six months on assignment. Based on these findings, the inference can be made that a dynamic interaction takes place between the individual's personality and his perception of the organisational climate during the phases of the expatriation process. Taking into account the significant correlations that were also obtained between these factors and the expatriate's emotional well-being while on assignment as assessed on the Sense of Coherence and Hardiness Scales, the possibility exists that certain causal relationships may potentially exist among the various variables included.

10.6. Discussion of Objective 5: To investigate the main personality and organisational climate predictors of the expatriate's levels of emotional health while on an international assignment in a foreign country.

In order to investigate these relationships, a regression analysis was conducted where all climate and personality variables were used respectively as predictors of emotional health. Based on the outcomes of the regression analysis, a graphical representation of a potential expatriate adjustment model is presented in Figure 9.12. It needs to be noted that a proper structural equation model could not be established due to sample size considerations.

Figure 10.1.: Potential expatriate emotional adjustment model extrapolated from multiple regression analysis



Although Sense of Coherence during assignment was correlated with all the Climate variables during assignment (as was shown in the discussion of Hypothesis 3c in Paragraph 9.6.7.2), the multiple regression indicated that Tension during assignment was the only significant predictor of Sense of Coherence during assignment.

Hardiness was correlated with most of the Climate variables during assignment, with the exceptions being Role clarity and Communication. The multiple regression conducted indicated again that Tension during assignment was the only significant predictor of Hardiness during assignment. Tension was therefore found a significant predictor of both Sense of Coherence and Hardiness.

A significant and strong correlation of 0.533 was found between Sense of Coherence and Hardiness during assignment. This strong correlation indicates that the two variables may be evaluating similar underlying constructs. As was discussed in Paragraph 7.6.1 in Chapter 7, Antonovsky (as cited in Pott, 1998) argues that the two constructs are assessing the same underlying factor. The correlation of 0.533 found in the present study does not warrant the conclusion that these two variables are measuring the same construct, rather that they are probably both indicators of a larger construct, namely emotional health.

The correlations discussed in Paragraph 9.6.2 indicated that Sense of Coherence was significantly correlated with Factors F (Enthusiastic), H (Adventurous), I (Sensitive), and Q4 (Tense) of the 16PF. The multiple regression analysis conducted where these four personality factors were entered as predictors of Sense of Coherence during assignment found that only Factor H (Adventurous), and Factor Q4 (Tension) were significant predictors of Sense of Coherence.

The correlations identified in Paragraph 9.6.2 in Chapter 9 indicated that Hardiness was significantly correlated only with Factor I (Sensitive) of the 16PF. The results from the linear regression analysis indicated that low Sensitivity was a predictor of Hardiness during assignment. However, the amount of variance explained was small.

It would appear that there are indications that the postulated model could be valuable. However further investigations using structural equation modelling on larger samples will have to be conducted in order to verify the model.

10.7. Summary

All the postulates and hypotheses set initially during this research were confirmed. A conclusive discussion on the results obtained from this study is provided in Chapter 11.

Chapter 11
Conclusion and Recommendations

11.1. Introduction

The results of the research were presented and discussed comprehensively in Chapter 9. In Chapter 10 the main conclusions will be presented as they relate to the objectives set in Chapter 1. These conclusions will be based on the results obtained in Chapter 9. Recommendations will also be made for further research and application of the results.

11.2 Conclusions

Conclusions are herewith presented for each objective:

11.2.1. Conclusions regarding Research objective 1: To establish the impact that the expatriation process has on the expatriate's emotional health

The main conclusion is that the emotional health of the expatriate, as assessed on the Sense of Coherence (Antonovsky, 1993) and Hardiness (Kobasa, 1982) Scales, is directly and significantly influenced during the three phases of the international assignment.

11.2.1.1. Hypothesis 1a

Hypothesis 1a stated that the individual's sense of meaning decreases from prior to assignment to six months into the assignment. Hypothesis 1a was confirmed during this study. The conclusions regarding Hypothesis 1a are the following:

- The pre-departure Sense of Coherence mean score of the experimental group was found to be significantly higher than their Sense of Coherence mean score obtained six months after arrival in the foreign country.
- The experimental group scored significantly higher than the control group on Sense of Coherence before departure on assignment.
- After spending six months on international assignment in a foreign country, the experimental group reported a significantly lower Sense of Coherence mean score compared to the control group.
- No significant differences could be detected in the Sense of Coherence mean scores of the subjects included in the control group before departure and after six months on assignment.

11.2.1.2. Hypothesis 1b

Hypothesis 1b stated that the individual's sense of meaning decreases from six months into the assignment to after completion of assignment. This hypothesis was confirmed. The conclusions reached regarding Hypothesis 1b are the following:

- The Sense of Coherence mean score of the experimental group decreased significantly from six months on assignment to after completion of assignment.
- The Sense of Coherence mean score of the experimental group was significantly lower that the mean score of the control group when measured after completion of the international assignments.
- No significant differences in the Sense of Coherence mean scores of the control group were observed when measured after six months on assignment and after the experimental group's return from the international assignment.

11.2.1.3. Hypothesis 1c

The following conclusions are reached relating to Hypothesis 1c, which states that the individual's hardiness decreases from prior to assignment to six months into the assignment:

- The pre-departure Hardiness mean score of the experimental group was found to be significantly higher than their mean score obtained six months after arrival in the foreign country.

- The Hardiness mean score of the experimental group before departure on assignment was significantly higher than the mean score of the control group.
- No significant differences could be detected when the Hardiness mean scores of the experimental and control groups were compared with each other after six months on assignment. The experimental group scored slightly higher than the control group. However, this difference was not sufficiently significant.
- No significant differences were observed in the control group's Hardiness mean score before departure on assignment when compared with their mean score equivalent to after six months on assignment.

11.2.1.4. Hypothesis 1d

Hypothesis 1d states that the individual's hardiness decreases from six months into the assignment to after completion of assignment. The conclusions reached in achieving this hypothesis were the following:

- No significant difference was observable in the mean scores of the experimental and control groups on Hardiness after the experimental group's return from assignment. The experimental group scored slightly lower than the control group. However, this difference was not sufficiently significant.
- The Hardiness mean scores of the experimental group decreased significantly from six months on assignment to after returning from assignment.
- No significant difference could be detected in the Hardiness mean scores of the experimental and control groups after their return from their international assignments.
- No significant differences could be detected in the Hardiness mean scores of the control group when their responses equivalent to six months after arrival on assignment, were compared with their results after completion of their assignments.

A detailed discussion on the results obtained in achieving Research objective 1 can be found in Paragraph 9.5.4 in Chapter 9.

11.2.2. Conclusions relating to Research objective 2: To establish the interaction that exists between the expatriate personality and the individual's emotional adjustment during the various phases of the expatriation process

The key conclusion reached in investigating Objective 2 was that a direct correlation exists between the individual's personality traits and his or her emotional adjustment while on an international assignment as assessed on the Sense of Coherence and Hardiness Scales. However, the relatively small number of correlations observable among the global five personality factors and the Sense of Coherence and Hardiness variables also highlight the danger of only utilising the global five factors of personality, without taking into consideration the more specific personality traits as assessed more directly on the primary 16PF factors.

For a detailed discussion on the statistical results obtained in proving Research objective 2, refer to Paragraphs 9.6.3 and 9.6.7.1 in Chapter 9.

11.2.2.1. Hypothesis 2a

The conclusions relating to Hypothesis 2a, which states that individual personality traits are correlated with sense of coherence during the assignment, were the following:

- No significant correlations could be identified between any of the five global personality factors and Sense of Coherence before departure, after six months on assignment, or on return after completion of assignment.
- Sense of Coherence before departure showed a significant positive correlation with primary 16PF Factor C (Stable), and a significant negative correlation with Factor Q4 (Tension).
- Sense of Coherence during assignment showed a significant positive correlation with primary 16PF Factor F (Enthusiasm). Sense of Coherence during assignment also showed a significant negative correlation with primary 16PF Factor H (Adventurous), Factor I (Sensitivity), and Factor Q4 (Tension).

- A significant positive correlation was found between Sense of Coherence after completion of assignment and primary 16PF Factor Q1 (Liberal). Sense of Coherence also correlated significantly and negatively with Factor Q4 (Tension).

11.2.2.2. Hypothesis 2b

Hypothesis 2b stated that significant correlations exist between individual personality traits (both global and primary personality variables) and hardiness during the various phases of the international assignment. The following conclusions were reached relating to Hypothesis 2b:

- Hardiness before departure showed significant negative correlation with global personality factor Anxiety proneness.
- Hardiness during assignment showed significant negative correlations with global personality factors Anxiety proneness and Openness .
- Hardiness before assignment showed a significant positive correlation with primary 16PF personality Factor C (Stable), and a significant negative correlation with Factor Q4 (Tension).
- Hardiness during assignment showed a significant negative correlation of -0.257 with primary 16PF Factor I (Sensitivity).
- A significant positive correlation was found between Hardiness after completion of assignment and primary 16PF Factor Q1 (Liberal). A significant negative correlation was also observed between Hardiness after completion of assignment and Factor M (Imaginative).

11.2.3. Conclusions reached relating to Research objective 3: To establish the impact of organisational climate factors on the emotional adjustment of the individual prior to departure on the international assignment, and after six months on assignment

The following conclusions were reached relating to Research objective 3:

- Significant correlations were found between most of the Climate variables during assignment and Sense of Coherence and Hardiness during assignment.
- Limited significant correlations could be identified when the Climate variables before assignment were correlated with Sense of Coherence and Hardiness before assignment. As was discussed in Paragraph 9.4 in Chapter 9, these low correlations may have been the result of the negative skewness observed in self-assessment results of the subjects who may have tended to "over-present" themselves in their attempts to secure the available expatriate positions available in the companies.

11.2.3.1. Hypothesis 3a

The conclusions reached in testing Hypothesis 3a, which stated that organisational climate prior to assignment is correlated with sense of coherence before departure on assignment, were the following:

- Sense of Coherence before assignment showed a significant positive correlation with Communication before assignment, and a significant negative correlation with Tension before assignment.

11.2.3.2. Hypothesis 3b

Hypothesis 3b indicated that Organisational climate before assignment is correlated with hardiness before departure on assignment. The following conclusions were reached in testing this hypothesis:

- No significant correlations could be observed between the Climate variables before departure and Hardiness before departure on assignment. Hypothesis 3b could therefore not be confirmed.

11.2.3.3. Hypothesis 3c

Hypothesis 3c specified that Organisational climate during assignment is correlated with sense of coherence during assignment. In testing this hypothesis, the following conclusions were reached:

- Sense of Coherence during assignment showed significant correlations with all the Climate variables during assignment.

11.2.3.4. Hypothesis 3d

In testing Hypothesis 3d, which stated that organisational climate during assignment is correlated with Hardiness during assignment, the following conclusions were achieved:

- Hardiness during assignment correlated significantly with most of the Climate variables during assignment. Hardiness during assignment showed a significant positive correlation with Satisfaction, Propensity to Stay, and Leadership during assignment, and a significant negative correlation with Tension during assignment.

A detailed discussion on the statistical analyses and results obtained in proving Objective 3 can be found in Paragraphs 9.6.3 and 9.6.7.2 in Chapter 9.

11.2.4. Conclusions reached relating to Objective 4: To establish the nature of the interaction between the expatriate personality and the person's perception of the organisational climate while on international assignment

The main conclusion reached in investigating this objective was that a considerable number of relationships exist between primary 16PF personality factors and Climate variables during assignment.

11.2.4.1. Hypothesis 4a

The conclusions reached in testing Hypothesis 4a, which stated that individual personality traits are correlated with organisational climate factors before assignment, were the following:

- No significant correlations could be identified between the five global personality factors and any of the Climate variables before departure on assignment.
- Two primary 16PF factors (Self-sufficiency and Control) showed significant correlations with Climate variables before assignment.

11.2.4.2. Hypothesis 4b

Hypothesis 4b stated that individual personality traits are correlated with organisational climate factors during assignment. The following conclusions were reached in testing this hypothesis:

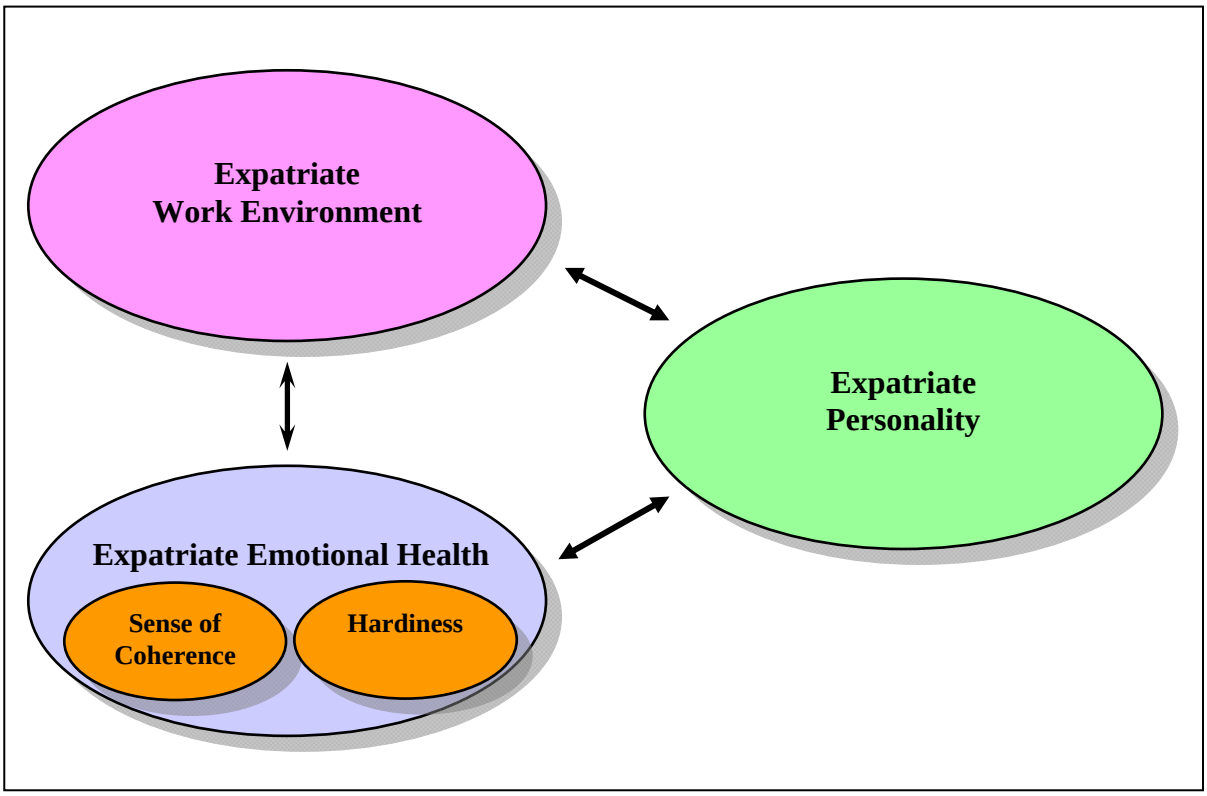
- A significant positive correlation was found between global personality factor Self-control and Role clarity during assignment.
- The following significant correlations were observed between the primary 16PF factors and the Climate variables after six months on assignment:
  - Factor A (Outgoing) showed significant positive correlations with Communication, Role clarity, and Leadership during assignment.
  - Factor E (Assertiveness) showed a significant positive correlation with Satisfaction during assignment.
  - Factor H (Adventurous) showed a significant negative correlation with Role clarity and Satisfaction during assignment.
  - Factor M (Imaginative) correlated significantly and negatively with Role clarity during assignment.
  - Factor N (Shrewd) showed a significant positive correlation with Role clarity during assignment.

The results for Research objective 4 are comprehensively discussed in Paragraphs 9.6.3 and 9.6.7.2.

11.2.5. Conclusions relating to Objective 5: To investigate the main personality and organizational climate predictors of the expatriate's levels of emotional health while on an international assignment in a foreign country.

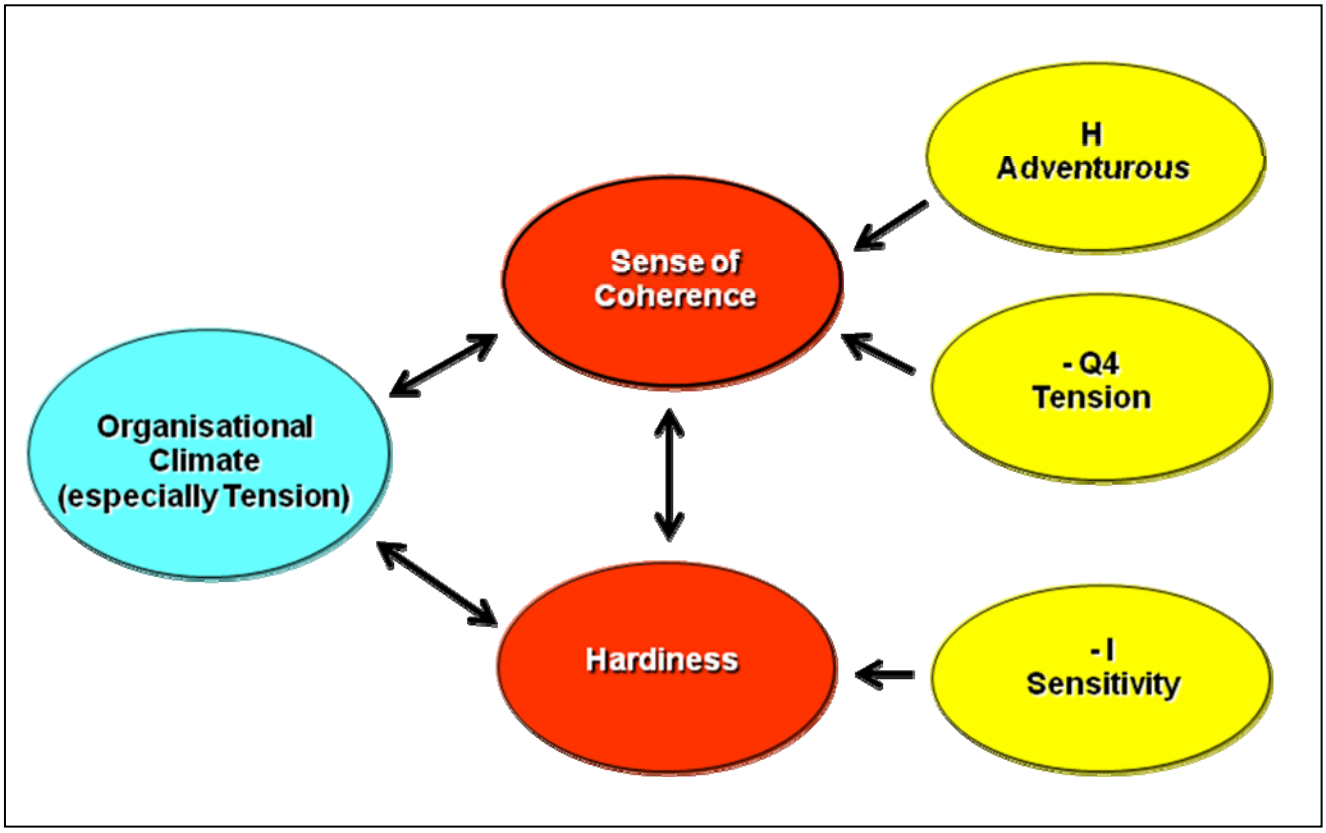
A graphical layout of the expatriate emotional health model postulated in Chapter 1 is presented in Figure 10.1:

Figure 11.1: Suggested expatriate emotional health model



The statistical analyses conducted during this research provide preliminary support for the above mentioned model. Figure 10.2 presents a potential expatriate emotional adjustment model that can be extrapolated from the analyses conducted. It needs to be noted that a proper structural equation model could not be established due to sample size considerations.

Figure 11.2.: Potential expatriate emotional adjustment model extrapolated from multiple regression analysis



Herewith, the main conclusions reached on the extrapolated expatriate adjustment model:

11.2.5.1. Climate as a predictor of Sense of Coherence and Hardiness

- Tension during assignment was identified as a significant Climate predictor of Sense of Coherence and Hardiness during assignment.
- A significant and strong correlation was observed between Sense of Coherence and Hardiness during assignment. This strong correlation indicates that the two variables may both be indicators of a larger construct, namely emotional health.

11.2.5.2. Personality as a predictor of Sense of Coherence and Hardiness

- Low primary 16PF Factor H (Adventurous) and high Factor Q4 (Tension) were found significant predictors of Sense of Coherence during assignment.
- Low primary 16PF Factor I (Sensitivity) was indicated as a predictor of Hardiness during assignment.

The multiple regression analysis and detailed results for Research objective 5 are comprehensively discussed in Paragraph 9.7 in Chapter 9.

11.3. Recommendations for further research and application

Recommendations on how the research on expatriate emotional health can be improved and extended are provided below:

- It is recommended that the research be repeated making use of larger samples of at least 100 subjects included in both the experimental and the control groups. This will allow for confirmatory factor analyses to be conducted in order to test the validity and robustness of the empirical expatriate emotional adjustment model established during this study.

- A measurement of actual expatriate work performance while on international assignment should be included as an independent variable against which the emotional health of the individuals can be compared.

- It is furthermore recommended that a more updated version of the Sixteen Personality Factor Questionnaire such as the 16PF-5 be utilised in future research as a measurement of expatriate personality.

- In order to obtain a more accurate indication of the reliability and construct validity of the 16PF, the raw scores obtained from the subjects included in the sample should be utilised, as opposed to only using the standardised sten scores as was the case in this study.

- To cover the full spectrum of the expatriate adjustment process as was discussed in Chapter 5 in this study, appropriate instruments should be included that measure the impact of the cultural and personal environments within which the expatriate is required to function in adjusting to the conditions in the foreign country.

- It is recommended that further research be conducted on the appropriateness of the potential expatriate model as described in Paragraph 10.2.5 in order to investigate its validity and reliability.

The following recommendations are made regarding the practical application of the results and conclusions obtained from this research:

- The results obtained from this study can be used as meaningful input that can be utilised by human resource practitioners and line managers responsible for expatriates to effectively select, prepare, and manage their international workforce within the framework of scientifically based processes and principles. It is recommended that the suggested model be researched in more detail in order to establish its value as a predictor of expatriate adjustment and performance.

- The results and conclusions presented in this research can be utilised to prepare and counsel future expatriates from an emotional health perspective on the demands and pressures they can expect to be faced with as they progress through the various phases of their international assignments.

- The results and conclusions can also be utilised within a corporate environment to proactively identify and deal with potential areas of concern that could impact on prospective expatriates' expected ability to cope with the pressures he or she will be faced with prior to their departure on international assignment.

- Expatriates already on international assignment who may be experiencing difficulty coping with the demands placed on them can be identified and provided with the appropriate support by making use of the expatriate emotional adjustment model.

- From an organisational climate perspective, the key work environmental variables influencing expatriate emotional health can be measured and managed according to empirically proven principles and processes.

- Customised repatriation interventions may be presented to meet the emotional health requirements of expatriates returning to the parent company and home country on their completion of their international assignments.

11.4. Summary

In Chapter 11, a conclusive discussion was conducted on the outcomes of the research according to the objectives originally established in Chapter 1. The culmination of the conclusions made in this chapter led to the establishment of an empirically sound expatriate emotional adjustment model. Recommendations were also made with respect to future research that may be conducted, as well as the practical application of the expatriate emotional adjustment model extrapolated in this research.