Chapter 5

DISCUSSION AND CONCLUSION

An individual’s unique expression plays an integral and constructive part in setting a direction for the group – in fact for all of humanity.

Zander
5. DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

The previous chapter documented and explained observations on the results of the various statistical procedures. The results portrayed were in the form of descriptive statistics, factor analysis, analysis of variance, and analysis of covariance.

Figure 5.1: Chapter 5 in context

This chapter will provide an overview of the previous chapters and will also include a discussion and interpretation of the results of the literature review as well as the empirical evidence. The findings of the study will be discussed and conclusions will be drawn.

5.2 BRIEF OVERVIEW OF THE STUDY

Chapter 1 served as the introduction to this research and placed the total investigation in context by providing a framework for the problem under study.
The motivation, purpose statement, the research question and research objectives were discussed, including the formulation of the hypotheses. An overview of the research methodology to be applied to this study was laid out. This chapter also addressed the issues of validity, reliability and ethical considerations. The expected value as well as the limitations of the study was indicated.

Chapter 2 presented the results of the literature and research review. The two key concepts researched in this chapter were organisational energy and individual well-being.

Chapter 3 provided a detailed discussion on the research design, the sample, the procedure and the analysis of the data. The research was designed in such a manner that it could adequately meet the research objectives.

Chapter 4 presented the results of the study in an integrated manner. The discussion included the processing, analysis and interpretation of the data in figures and tables. Nine hypotheses were formulated relating to the ESP, the ESP dimensions, the SMVM, the SMVM dimensions and biographical, lifestyle and health status variables. The results of the descriptive statistics, the ANOVA’s, MANOVA’s, and T-tests were exhibited.

5.3. REVIEW OF THE RESEARCH QUESTION AND OBJECTIVES

The main research question for this study is: What is the relationship between organisational energy and individual well-being of employees in a financial institution in South Africa? The primary research objective is to apply the EnergyScapes Profile (ESP) and Shirom-Melamed Vigor Measure (SMVM) in a financial institution with the purpose of determining whether a relationship exists between organisational energy and individual well-being in such an environment. The aim of this study can be visualized at two levels: objectives of the literature review and objectives of the empirical study:

- The research objectives of the literature review were to:
  - Describe the concept of organisational energy;
• Describe the concept of individual well-being;
• Describe the relationship between organisational energy, organisational climate and individual well-being;
• Describe the antecedents of individual well-being.

The research objectives of the empirical study were to:

• Determine the psychometric properties (i.e. validity and reliability) of the ESP for South African employees;
• Determine the psychometric properties (i.e. validity and reliability) of the SMVM for South African employees;
• Determine the interactive relationship between organisational energy (dependent variable) and biographical variables (gender, marital status, marital/relationship satisfaction, language, race, age, division/department, geographical region, job level, tenure, basis of employment, and hours worked in a week);
• Determine the interactive relationship between organisational energy (dependent variable) and life style and health status variables (interests or hobbies, time to relax, exercise, cardiovascular disease, hypertension or diabetes, and depression or psychosis);
• Determine the interactive relationship between individual well-being (dependent variable) and biographical variables (gender, marital status, marital/relationship satisfaction, language, race, age, division/department, geographical region, job level, tenure, basis of employment, and hours worked in a week);
• Determine the interactive relationship between individual well-being (dependent variable) and life style and health status variables (interests or hobbies, time to relax, exercise, cardiovascular disease, hypertension or diabetes, and depression or psychosis).

These study objectives are set out in Chapter 1. The key results obtained in the literature review are presented in Chapter 2 and are summarized below.
5.4 KEY RESULTS OF THE LITERATURE STUDY

Chapter 2 provided an overview of the existing literature and research on the relevant topics. The review of the literature revealed that the concept of organisational energy has been debated in organisational and management literature for some time. A heuristically developed measuring instrument, the EnergyScapes (ESP), was found and used in this study.

The review of the literature on the concept of individual well-being showed that this topic has enjoyed a lot of attention from researchers and academics over a period of time (Block, 1994; Husemoen, Hayes, Chu Zhang, 2000; Cunha & Cooper, 2002). Topics such as burnout, work engagement and vigour have been researched and debated (Burke, 2001; Lewis, Rapoport & Gambles, 2003; Schaufeli & Bakker, 2003; Maslach & Leiter, 2005). A measuring instrument, the Shirom Melamed Vigor Measure (SMVM) was discovered and used in this study.

The results of the four literature research objectives, as set out above, will be discussed below.

5.4.1 The concept of organisational energy

A review of the literature revealed that although a difficult concept to define, mankind has been aware of energy and its importance since the beginning of time. For the purposes of this study, the concept of energy was defined as human consciousness and at the collective level as the collective consciousness of the organisations’ members (Tosey, 1994).

A theoretical model of organisational energy that is based on the background of learning theories which utilizes the theoretical platform of complexity and field theories was found (Smith & Tosey, 1999). This model explores seven dimensions namely: Inspiration, Integration, Meaning, Community, Control, Activity and Existence. These energies are considered to ebb and flow in the
organisation according to the intentions of the employees. Blocked energies are indicative of areas that need management attention at a given point of time (Tosey, 1994). It is a dynamic and interactive model that is envisaged to change as the organisation changes.

5.4.2 The concept of individual well-being

Emerging from the well-being research is the school of thought on positive psychology and more specifically, positive emotions (Seligman, 2004; Csikszentmihalyi, 1990; Snyder & Lopez, 2002). From studying the popular concept of burnout, researchers (Lewis, Rapoport & Gambles, 2003, p. 825) have now turned their attention to the study of engagement. Engagement was found to include the dimension of vigour and more specifically, of vigour in the work environment. Researchers have found that vigour is associated with managerial effectiveness, (Katwyk van, Fox, Spector, & Kelloway, 2000) and describe vigour as a core affect that can be attributed to the work environment (Shirom, 2005).

The affect of vigour at work however differs from vigour as a mood state in that vigour at work has an object such as the personally meaningful relationships at work (Shirom, 2005). Vigour at work breaks away from the predominant focus by researchers in this field on vigour as a mood in clinical-psychological studies. Vigour as generally defined by researchers only recognizes one form of energy, physical energy, whereas vigour has personal resources interwoven with physical strength, such as emotional energy and cognitive liveliness (Shirom, 2005). This conceptualization of vigour is regarded as an indication of well-being and is therefore important to this study.

5.4.3 Relationship between organisational energy and individual well-being

The literature review revealed a number of examples of research that had been conducted on the relationship between the organisation, its culture and
the individual; for example it was found that in order for customer relationship management to succeed, an appropriate cultural foundation is needed (Van Bentum & Stone, 2005). Clients are better serviced if the practices and policies of the organisation meet the needs of their employees. Research has also shown that the psychological climate of individual employees has a pronounced positive or negative effect on the organisation and its performance (Davidson, 2000).

The literature and research previously conducted indicate that a relationship between the organisation and the individual could be expected. However, no previous research could be found that focussed on the relationship between organisational energy and individual well-being, as defined in this study.

5.4.4 The antecedents of individual well-being

Various literature and research sources indicate that positive emotions produce optimal functioning, thus promoting psychological and physical health. Individuals’ emotional reactions emanate from the way that the individual assesses and interprets a situation to be either positive or negative for them. Stress in the work place, is an example of studies that consider the interaction between the individual and the environment (Fredrickson, 2002). Stress is regarded as an important antecedent to individual well-being. Another area that is gaining prominence in research now is the question of meaningfulness at work and its impact on well-being. Research conducted on the phenomena of workaholism, burnout and engagement has been conducted over the years as it is generally recognised that these factors play important roles in individual well-being (Maslach & Leiter, 2005).

The detailed results of the literature review are presented in Chapter 2 of this study. A summary of the research methodology applied to this study will be presented next.
5.5 RESEARCH METHODOLOGY

Chapter 3 provided an overview of the research methodology which would be applied to the study in order to test the construct validity of the instruments used and to test the hypotheses formulated.

The study of organisational energy falls into what Moran and Volkwein (1992) term, the cultural approach. This approach emphasizes the fact that the individual and the organisation are in a reciprocal relationship, continuously interacting, influencing, and changing each other. Denison (1990) stated that it is desirable to combine both rational and intuitive approaches to the understanding of organisations as social systems (Denison, 1990). Furnham (1991) suggests that a reciprocal, dynamic relationship exists between the organisation and the individual. This viewpoint is supported by this study. The research methodology that was followed in this study to test this relationship is explained below.

Survey research was conducted, which is a frequently used approach in the social sciences. This study can be regarded as an attitudinal study as it is designed to establish the perceptions of subjects on various issues including their material well-being (Burton, 2000). This study is also regarded as descriptive, as it presents a picture of the specific details of a situation, social setting, or relationship (Neuman, 1994).

For this study, no particular size, location or specific industry was required, as the study relates to all organisations. Non-probability sampling was conducted, more specifically, a convenience sample was used. The researcher notes that as a result of this subjective method of sampling, there may be concern about the ability to generalize the results of the findings to the wider population (Burton, 2000).
In this study, questionnaires were used as the method of data collection, a widely used instrument in the social sciences (Burton, 2000). Respondents were situated in various regions across the country. The questionnaires were distributed manually and data collection was pen and paper based.

The survey consisted of three questionnaires: the ESP, which aims to measure employees’ experience of the energy levels in their organisation; the SMVM which aims to measure individual vigour; and a background questionnaire. The composition of the questionnaires was explained, the rationale for inclusion of each questionnaire in the study was provided and a brief look at other available instruments was given.

Pre-testing a questionnaire, especially when working with one that has been developed in another country, is not only recommended but also regarded as essential by a number of researchers (Babbie, 2001; Burton, 2000; Rosnow & Rosenthal, 1993). In consideration of this factor, various focus groups were used to ensure the appropriateness of the wording. A pilot study was conducted to ascertain applicability. Acceptable internal consistencies were obtained for both questionnaires. The results of the pilot study were not included in the final sample.

The final field survey was conducted using the same methodology applied to the pilot study. 3850 questionnaires were distributed, of which a total of 520 completed questionnaires were returned, providing a response rate of 13.5%, which can be regarded as adequate (Kraut, 1996).

Data analysis was conducted in order to provide proof that the measuring instruments were reliable and valid for the purpose of the study by means of frequency analysis and descriptive statistics of the total sample. The relevant tables are presented in Chapter 3, Table 3.6 to Table 3.24.
5.5.1 Validity

According to Kerlinger & Lee (2000) validity is defined as the extent to which a set of measures (in the case of the current research this refers to the ESP and SMVM) accurately represent the research construct (for this research the constructs are organisational energy and individual well-being). “Validity pertains to the nature of the variable being measured by a set of operations” (Ghiselli, Campbell & Zedeck, 1981, p. 265).

The following forms of validity are relevant to this study:

- **Construct validity**
  Construct validity is the result of a series of activities during which a researcher simultaneously defines a construct and develops the instrument to measure it (Kaplan, 1987). Construct validity, according to Kerlinger and Lee (2000), is the degree to which an instrument measures the theoretical construct that the instrument was designed to measure,

  It is concluded that the ESP and the SMVM measure what they are designed to measure.

- **Factorial validity**
  Factor analysis is of critical importance for construct validation, as it is utilized to reduce a large number of measures to a smaller number (called factors) by discovering which ones measure the same thing and the relations between the clusters of measures that go together (Kerlinger & Lee, 2000). Factorial validity is established through factor analysis.

  After the first order factor analysis on the ESP it was established that nine factors contribute 99.1% of the initial eigenvalues. From the 105 items of the ESP, only one underlying factor was identified, which
excludes the need for conducting a second order factor analysis. The factor analysis matrix is presented in Table 4.4.

After the first order factor analysis on the SMVM it was established that two factors contribute 77.7% of the initial eigenvalues. The factor matrix obtained was rotated and sorted to a simple structure by means of a varimax rotation. After two rotations, one factor was found to contribute 83.8% of the initial eigenvalues and could not be rotated further. The factor analysis matrix is presented in Table 4.36.

- **Content validity**

  Content validity is defined by Kerlinger (1992) as the sampling adequacy of the content (the substance, the matter, the topic) of a measuring instrument. Content validation as a procedure is guided by the question: “Is the content of this measure representative of the universe of the content of the property being measured?”

  The sampling adequacy of the ESP was established by the KMO measure for sampling adequacy and the Bartlett’s test for sphericity. Table 4.1 indicates that the data set complies with the requirements of sampling adequacy (0.986) and sphericity, and could thus be subjected to factor analysis.

  The sampling adequacy of the SMVM was established by the KMO measure for sampling adequacy and the Bartlett’s test for sphericity. Table 4.31 indicates that the data set complies with the requirements of sampling adequacy (0.925) and sphericity, and could thus be subjected to factor analysis.

Guilford and Fruchter (1978) explain the relationship between validity and reliability by stating that it can be accepted, as a principle, that the predictive validity of a test is directly proportional to its reliability, indicating that the more reliable the test, the more valid it is. The statistics regarding the reliability of the ESP and the SMVM are provided below.
5.6 KEY EMPIRICAL FINDINGS

Chapter 4 of this study presents the empirical findings obtained as based on the methodology described in Chapter 3. The results are presented in two phases: Phase One dealt with data analysis and Phase Two with the formulation and testing of hypotheses. A summary of the results for the ESP will be presented first and will be followed by a summary of the results for the SMVM.

5.6.1 Phase one: empirical findings - ESP

The data analysis was conducted by means of frequency analysis, descriptive statistics, measuring for sampling adequacy and sphericity, factor analysis, reliability analysis, item reliability analysis, reliability analysis of the sub-scales, and tests for normality. These will be summarised below.

5.6.1.1 Frequency analysis

Frequency tables of the sample group for the ESP and SMVM were drawn on each of the background variables. These are provided in detail in Chapter 4, Table 4.1 to Table 4.19.

5.6.1.2 Descriptive statistics

The descriptive statistics for the ESP are provided in Chapter 3, Table 3.23. From this table, it is clear that a maximum of 486 valid responses were received. The statistical information is as follows:

- A mean is the arithmetic average of a group of scores, and in this table the mean ranges from 3.48 to 4.71.
- Skewness refers to the symmetry or asymmetry of a frequency distribution. The score depicted in this table are negatively skewed and range between -.497 and .205.
- Kurtosis refers to the degree of steepness of the middle part of the sample distribution. With the kurtosis scores between -.528 and .125, the distribution ranges between Platykurtic and Leptokurtic.

5.6.1.3 Sampling adequacy and sphericity

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) and Bartlett’s Test of Sphericity were respectively conducted on the item inter-correlation of the instrument. A MSA of 0.986, with a significance level of 0.000 was attained for this questionnaire. These results are reported in Chapter 4, Table 4.1.

5.6.1.4 Factor analysis

As the ESP is based on a theoretical model, a factor analysis was required to extract an empirical model from the obtained data. Based on the indication of the KMO and the Bartlett’s test that the sample is adequate, a first order factor analysis, using the Principle Axis Factoring extraction method was conducted. The 105 items of the ESP were inter-correlated and the eigenvalues of the unreduced inter-correlation matrix were calculated. After two iterations, only one factor was extracted. The results are presented in Chapter 4, Tables 4.3 and 4.4.

5.6.1.5 Reliability analysis

A reliability analysis was conducted on the results of the ESP and is reported in Chapter 4, Table 4.5. This table indicates that a total of 520 responses were received for analysis of which 34 (6.5%) were excluded from the factor analysis due to incompleteness. From Table 4.6 it can be seen that a Cronbach’s Alpha Coefficient of 0.993 was obtained from 105 items. This is considered an acceptable reliability for the ESP.
5.6.1.6 Item reliability analysis

Iterative Item Reliability Analysis was conducted on the ESP, the results of which are reported in Chapter 4, Table 4.7. From this table, it can be evidenced that a Cronbach Alpha Coefficient of 0.993 was achieved, indicating that the ESP has a high level of homogeneity between the items and is capable of consistently reflecting the same underlying constructs.

5.6.1.7 Reliability analysis of the sub-scales

Reliability analysis was conducted on each of the seven sub-scales. The results are presented in Chapter 4, Table 4.8 to Table 4.28. Acceptable Cronbach Alpha Coefficient results were obtained for all seven of the sub scales of the ESP indicating a high level of reliability of the ESP sub-scales.

5.6.1.8 Test for normality

In order to determine the normality of the scale obtained in the factor analysis, the Kolmogorov-Smirnov test was performed on the ESP, the results of which are reported in Chapter 4, Table 4.30. This table indicates that the scale conforms to normality.

5.6.1.9 Conclusion: phase one - ESP

In summary, it can be reported that:

1. The statistical process resulted in one factor.
2. The Cronbach Alpha Coefficient indicates that the scale has high acceptable reliability and can consistently measure the particular dimensions it is designed to measure. It also indicates a high degree of homogeneity between the questionnaire items.
3. The scale conforms to normality.
The results of Phase one for the SMVM will be reported next.

### 5.6.2 Phase one: empirical findings - SMVM

The data analysis was conducted by means of frequency analysis, descriptive statistics, measuring for sampling adequacy and sphericity, factor analysis, reliability analysis, item reliability analysis, reliability analysis of the subscales, and tests for normality. These will be summarised below.

#### 5.6.2.1 Frequency analysis

Frequency tables of the sample group for the ESP and SMVM were drawn on each of the background variables. These are provided in detail in Chapter 3, Table 3.6 to Table 3.22.

#### 5.6.2.2 Descriptive statistics

The descriptive statistics for the SMVM are provided in Chapter 3, Table 3.24. From this table it is clear that a maximum of 512 valid responses were received. The statistical information is as follows:

- The mean in this table ranges from 4.35 to 5.37.
- The skewness score depicted in this table ranges between -.790 and -.336.
- The kurtosis scores depicted in this table ranges between -.129 and .412.

#### 5.6.2.3 Sampling adequacy and sphericity

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) and Bartlett’s Test of Sphericity were respectively conducted on the item intercorrelation of the instrument. A MSA of 0.925, with a significance level of 0.000 was attained for this questionnaire. These results are reported in Chapter 4, Table 4.31.
5.6.2.4 Factor analysis

As the SMVM is based on a theoretical model, a factor analysis was required to extract an empirical model from the obtained data. Based on the indication of the KMO and the Bartlett’s test that the sample is adequate, a first order factor analysis, using the Principle Axis Factoring extraction method was conducted. The 12 items of the SMVM were inter-correlated and the eigenvalues of the unreduced inter-correlation matrix were calculated. After three iterations it can be seen that only one factor was extracted. The results are presented in Chapter 4, Table 4.33 to Table 4.36.

5.6.2.5 Reliability analysis

A reliability analysis was conducted on the results of the SMVM and is reported in Chapter 4, Table 4.37. This table indicates that a total of 520 responses were received for analysis of which 8 (1.5%) were excluded from the factor analysis due to incompleteness. From Table 4.38 it can be seen that a Cronbach Alpha Coefficient of 0.948 was obtained from 12 items. This is considered an acceptable reliability for the SMVM.

5.6.2.6 Item reliability analysis

Iterative Item Reliability Analysis was conducted on the SMVM, the results of which are provided in Chapter 4, Table 4.39. From this table, it can be seen that the Cronbach Alpha Coefficient ranged between 0.941 and 0.946. This indicates that the SMVM has a high level of homogeneity between the items and is capable of consistently reflecting the same underlying constructs.
5.6.2.7 Reliability analysis of the sub-scales

Reliability analysis was conducted on each of the three sub-scales. The results are presented in Chapter 4, Table 4.40 to Table 4.48. Acceptable Cronbach Alpha Coefficient results were obtained for all three of the sub-scales of the SMVM indicating a high level of reliability of the SMVM sub-scales.

5.6.2.8 Test for normality

In order to determine the normality of the scale obtained in the factor analysis, the Kolmogorov-Smirnov test was performed on the SMVM, the results of which are reported in Chapter 4, Table 4.50. This table indicates that the scale conforms to normality.

5.6.2.9 Conclusion: phase one - SMVM

In summary, it can be reported that:

1. The statistical process resulted in one factor.
2. The Cronbach Alpha Coefficient indicates that the scale has high acceptable reliability and can consistently measure the particular dimensions it is designed to measure. It also indicates a high degree of homogeneity between the questionnaire items.
3. The scale conforms to normality.

The results of Phase two for the ESP and the SMVM will be reported next.

5.6.3 Phase two: empirical findings - ESP

Each of the hypotheses was stated in a non-directional way, based on the fact that no evidence in the relevant literature could be found to support the
relationship between different biographical, life style and health variables and the ESP, or the ESP dimensions.

Four hypotheses were formulated and tested:

- The first hypothesis relates to the ESP and the biographical variables;
- the second to the ESP and the life style and health status variables;
- the third hypothesis to the ESP dimensions and the biographical variables, and
- the fourth to the ESP dimensions and the life style and health status variables.

Sub-hypotheses were postulated and further tests conducted where statistically significant relationships were found, as follows:

Hypothesis 1: There is no statistically significant difference between different biographical variables and Organisational Energy (ESP). This hypothesis was partially accepted based on the results of the sub-hypothesis as set out below.

- Sub-hypothesis 1.1: There is no statistically significant difference between geographical regions and ESP. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.52) indicate that the various groups (based on geographical region) are differentiated on the basis of this biographical variable in relation to ESP. The means vary from 406.23 to 561.67. The findings therefore reject the hypothesis.
This is an important finding, because no evidence in the relevant literature could be found to indicate this.

Hypothesis 2: There is no statistically significant difference between different life style and health status variables and Organisational Energy (ESP). This hypothesis was partially accepted. This hypothesis was partially accepted based on the results of the sub-hypotheses as set out below.

- Sub-hypothesis 2.1: There is no statistically significant differences between interests/hobbies and ESP. This hypothesis was accepted.

- Sub-hypothesis 2.2: There is no statistically significant difference between relaxation and ESP. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.56) indicate that the various groups (based on relaxation) experience this life style variable in relation to ESP, quite differently. The means vary from 384.19 to 487.22. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 2.3: There is no statistically significant difference between exercise and ESP. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.60) indicate that the various groups (based on exercise) experience this life style variable in relation to ESP, quite differently. The means vary from 385.96 to
The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 2.4: There is no statistically significant difference between cardiovascular disease and ESP. This hypothesis was accepted.

- Sub-hypothesis 2.5: There is no statistically significant difference between hypertension or diabetes and ESP. This hypothesis was rejected.

The results of the ANOVA, (Table 4.65) indicate that the various groups (based on hypertension or diabetes) experience this health status variable in relation to ESP, quite differently. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 2.6: There is no statistically significant difference between depression or psychosis and ESP. This hypothesis was rejected.

The results of the ANOVA, (Table 4.66) indicate that the various groups (based on depression or psychosis) experience this life style
variable in relation to ESP, quite differently. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

Hypothesis 3: There is no statistically significant difference between different biographical variables and the Organisational Energy (ESP) dimensions. This hypothesis was partially accepted, based on the results of the sub-hypotheses as set out below

- Sub-hypothesis 3.1: There is no statistically significant difference between age and the ESP dimensions. This hypothesis was accepted.
- Sub-hypothesis 3.2: There is no statistically significant difference between geographical region and the ESP dimensions. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.72) indicate that the various groups (based on geographical region) are differentiated on the basis of this biographical variable in relation to the ESP dimensions. The means vary from 56.62 to 80.33. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.
Sub-hypothesis 3.3: There is no statistically significant difference between tenure and the ESP dimensions. This hypothesis was accepted.

Hypothesis 4: There is no statistically significant difference between different life style and health status variables and the Organisational Energy (ESP) dimensions. This hypothesis was partially accepted, based on the results of the sub-hypotheses as set out below.

Sub-hypothesis 4.1: There is no statistically significant difference between interests or hobbies and the ESP dimensions. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.83) indicate that the various groups (based on interests or hobbies) experience this life style variable in relation to the ESP dimensions, quite differently. The means vary from 53.87 to 60.96. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

Sub-hypothesis 4.2: There is no statistically significant difference between relaxation and the ESP dimensions. This hypothesis was partially accepted.
The results of the descriptive statistics, (Table 4.89) indicate that the various groups (based on relaxation) experience this life style variable in relation to the ESP dimensions, quite differently. The means vary from 53.31 to 70.80. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

• Sub-hypothesis 4.3: There is no statistically significant difference between exercise and the ESP dimensions. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.94) indicate that the various groups (based on exercise) experience this life style variable in relation to the ESP dimensions, quite differently. The means vary from 55.48 to 67.81. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

• Sub-hypothesis 4.4: There are no statistically significant differences between hypertension or diabetes and the ESP dimensions. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.99) indicate that the various groups (based on hypertension or diabetes) experience this
health status variable in relation to the ESP dimensions, quite differently. The means vary from 53.26 to 61.53. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 4.5: There is no statistically significant difference between depression or psychosis and the ESP dimensions. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.105) indicate that the various groups (based on depression or psychosis) experience this health status variable in relation to the ESP dimensions, quite differently. The means vary from 47.75 to 61.60. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

5.6.3.1 Conclusion: phase two - ESP

Hypotheses were formulated to test the ESP and the ESP dimensions. Some of the hypotheses were supported by empirical evidence. Statistically significant differences were found between certain biographical variables and ESP, notably geographical region. Statistically significant differences were also found for ESP and life style, notably relaxation and exercise as well as
for health status, notably hypertension or diabetes and, depression or psychosis. Statistically significant differences were found between certain biographical variables and the ESP dimensions, notably geographical region. Statistically significant differences were also found for the ESP dimensions and life style, notably interests or hobbies, relaxation and exercise as well as for health status, notably hypertension or diabetes and, depression or psychosis.

5.6.4 Phase two: empirical findings - SMVM

Each of the hypotheses was stated in a non-directional way, based on the fact that no evidence in the relevant literature could be found to support the relationship between different biographical, life style and health status variables and the SMVM, or the SMVM dimensions.

Four hypotheses were formulated and tested, as follows:

Hypothesis 5: There is no statistically significant difference between different biographical variables and Individual Well-being (SMVM). This hypothesis was rejected based on the results of the sub-hypotheses as set out below.

- Sub-hypothesis 5.1: There is no statistically significant difference between gender and SMVM. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.112) indicate that the various groups (based on gender) are differentiated on the basis of this biographical variable in relation to SMVM. The means vary from 59.29 to 56.58. The findings therefore reject the hypothesis.
Hypothesis 6: There is no statistically significant difference between different life style and health status variables and Individual Well-being (SMVM). This hypothesis was partially accepted, based on the results of the sub-hypotheses as set out below.

- Sub-hypothesis 6.1: There is no statistically significant difference between interests or hobbies and SMVM. This hypothesis was rejected.

The results of the ANOVA, (Table 4.115) indicate that the various groups (based on interests or hobbies) experience this lifestyle variable in relation to SMVM, quite differently. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 6.2: There is no statistically significant difference between relaxation and SMVM. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.116) indicate that the various groups (based on relaxation) experience this lifestyle variable in relation to SMVM, quite differently. The means vary from 53.23 to 56.54. The findings therefore reject the hypothesis.
This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- **Sub-hypothesis 6.3**: There is no statistically significant difference between exercise and SMVM. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.120) indicate that the various groups (based on exercise) experience this life style variable in relation to SMVM, quite differently. The means vary from 53.17 to 64.36. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- **Sub-hypothesis 6.4**: There is no statistically significant difference between cardiovascular disease and SMVM. This hypothesis was accepted.

- **Sub-hypothesis 6.5**: There is no statistically significant difference between hypertension or diabetes and SMVM. This hypothesis was accepted.

- **Sub-hypothesis 6.6**: There is no statistically significant difference between depression or psychosis and SMVM. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.126) indicate that the
various groups (based on depression or psychosis) experience this health status variable in relation to SMVM, quite differently. The means vary from 51.50 to 57.79. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

Hypothesis 7: There is no statistically significant difference between different biographical variables and Individual Well-being (SMVM) dimensions. This hypothesis was accepted, based on the results of the sub-hypotheses as set out below.

- Sub-hypothesis 7.1: There is no statistically significant difference between gender and the SMVM dimensions. This hypothesis was accepted.

Hypothesis 8: There is no statistically significant difference between different life style and health status variables and Individual Well-being (SMVM) dimensions, based on the results of the sub-hypotheses as set out below.

- Sub-hypothesis 8.1: There is no statistically significant difference between interests or hobbies and the SMVM dimensions. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.136) indicate that the various groups (based on interests or hobbies) experience this life style variable in relation to the SMVM dimensions, quite differently. The
means vary from 12.98 to 22.53. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 8.2: There is no statistically significant difference between relaxation and the SMVM dimensions. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.142) indicate that the various groups (based on relaxation) experience this life style variable in relation to the SMVM dimensions, quite differently. The means vary from 13.21 to 26.13. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

- Sub-hypothesis 8.3: There is no statistically significant difference between exercise and the SMVM dimensions. This hypothesis was partially accepted.

The results of the descriptive statistics, (Table 4.148) indicate that the various groups (based on exercise) experience this life style variable in relation to the SMVM dimensions, quite differently. The means vary from 12.90 to 26.75. The findings therefore reject the hypothesis.
This is an important finding, because no evidence in the relevant literature could be found to indicate this.

Sub-hypothesis 8.4: There is no statistically significant difference between depression or psychosis and the SMVM dimensions. This hypothesis was rejected.

The results of the descriptive statistics, (Table 4.154) indicate that the various groups (based on depression or psychosis) experience this health status variable in relation to the SMVM dimensions, quite differently. The means vary from 12.33 to 22.53. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this.

5.6.4.1 Conclusion: phase two - SMVM

Hypotheses were formulated to test the SMVM and the SMVM dimensions. Some of the hypotheses were supported by empirical evidence. Statistically significant differences were found between certain biographical variables and SMVM, notably gender. Statistically significant differences were also found for SMVM and life style, notably relaxation and exercise, as well as for health status, depression or psychosis. Statistically significant differences were also found for the SMVM dimensions and life style variables notably interests or hobbies, relaxation, and exercise, as well as for health status variables notably cardiovascular disease, and depression or psychosis.
5.6.5 Relationship between organisational energy and individual well-being

Hypothesis 9: There is no statistically significant relationship between Organisational Energy and Individual Well-being. This hypothesis was rejected.

The results of the Pearson correlation coefficient, (Table 4.160) indicate that practically significant correlations of large effect between organisational energy and individual well-being were obtained. The findings therefore reject the hypothesis.

This is an important finding, because no evidence in the relevant literature could be found to indicate this, based on the definitions of organisational energy and individual well-being as used in this study.

5.7 SIGNIFICANCE OF THE RESEARCH

This research has theoretical, psychometric, and practical significance as it contributes to the understanding of organisational energy and individual well-being in theory and in practice by applying the measuring instruments in a financial institution.

According to the taxonomy of Colquitt and Zapata-Phelan (2007) this study can be considered as an expander. See Figure 1.3. “Expanders are articles that are relatively high in both theory building and theory testing. Expanders focus on constructs, relationship, or processes that have not been the subject of prior theorizing, but they conduct that examination while testing some
existing theory” (Colquitt & Zapata-Phelan, 2007, p. 1286). This study is the first to examine the relationship between organisational energy and individual well-being, thereby contributing to the building of theory. The study tests the theory of organisational energy based on the foundation of quantum physics, as proposed by Tosey. The study also tests the theory of vigour as a measure of individual well-being, within the South African context. This study can therefore be regarded as both contributing to the building of theory as well as testing of existing theory, meeting the requirements of an “expander”, as defined by Colquitt and Zapata-Phelan (2007).

5.7.1 Theoretical significance

Organisations continually search for new methodologies in order to obtain a competitive advantage in a highly competitive environment, especially now that competition is a global factor of business management. This research contributes further information on a very important management issue, that of organisational energy and individual well-being. This study provides a framework for assessing organisational energy and individual well-being in financial institutions in South Africa.

A comprehensive literature study was undertaken on the two concepts; organisational energy and individual well-being. The insights gained into the various aspects of these two concepts will contribute towards theory building and thereby a more accurate assessment of organisational energy and individual well-being. This will assist managers to design and implement effective change interventions designed to enhance the working experience and hence the individual well-being of their staff. The literature indicates that this in turn should result in improved productivity for the organisation.

This research also provided holistic insight into the concept of organisational energy and clearly defined the seven dimensions of the energy model. It also confirmed the concept of individual well-being and the three dimensions that
define vigour. Furthermore, this research comprehensively contributes to the body of knowledge of organisational behaviour, development and management, providing quantitative methods of assessing organisational energy and individual well-being, as defined in this study.

5.7.2 Psychometric significance

The well-constructed research design of this study contributes to the limited body of original research studies regarding organisational energy and individual well-being. Comprehensive use was made of inferential statistical procedures which included factor analysis, bi-variate analysis, multivariate analysis of variance, t-tests and estimated effect sizes (Guilford & Fruchter, 1978).

The study has made a psychometric contribution as well. The validity and reliability of the organisational energy questionnaire EnergyScapes (ESP), was determined. This questionnaire had previously only been used as a heuristic questionnaire on a consultancy basis. The validity of the well-being (vigour) scale, Shirom-Melamed Vigor Measure (SMVM) was determined. Both scales were found to be valid and reliable.

This was the first time that the ESP and SMVM were used in South Africa, having been developed in the U.K and Israel respectively. By engaging focus groups and running a pilot study, the researcher ensured that the instruments are suitable for use in the South African context.

This research supports the value of quantitative methods for assessing organisational and behavioural aspects (Kerlinger & Lee, 2000). The ESP and SMVM provide insight into organisational energy and individual well-being as well as the biographical, life style and health status variables.
5.7.3 Practical significance

No empirical research has been conducted either internationally or in South Africa, on the question of organisational energy and individual well-being, as defined in this study. The organisations that participated in the pilot study and the field survey have both requested that the surveys be run again in their organisations. They found that the results were helpful in identifying areas that require managerial attention.

The insight gained by studying the relationship between organisational energy and individual well-being contributes in a unique way and shows the importance of considering organisations as being dynamic and interactive with the very people that work for them (Pettigrew & Fenton, 2000) Previous research has identified the need to study the interaction between the organisation and the individual, but there does not appear to be many studies conducted of this nature (Moran & Volkwein, 1992). The study of the relationship between organisational energy and well-being has therefore added to the body of knowledge in this field and will prove useful for organisations and practitioners who are interested in climate studies. The study has also increased the awareness of energy and well-being as a means to improve quality of life and as such may be of interest to those in the care-giving sectors.

Furthermore, the study will serve as a guideline to those wishing to develop interventions in order to address problems of energy and well-being at both the organisational and individual levels. As the approach is based on the person as a holistic being, this study should prove useful in integrating thinking on the topic. A greater understanding of the topic can contribute to the field of leadership and improve productivity in commerce.
5.8 LIMITATIONS OF THE STUDY

Although this study provided relevant insights into organisational energy and individual well-being in a financial institution, it is accepted that this study has the usual limitations of survey research. The following are recognised as specific limitations of this study:

- The sample utilised for this study was a convenience sample. This sample was chosen because the researcher was able to gain access to the organisation. This implies that the results of this study can only be generalised to the target organisation and to other similar environments (Burton, 2000).

- Although the need for a comprehensive sample was explained to the target organisation’s management, responses to the questionnaire were voluntary, which made the size and quality of the sample dependent on the goodwill of the employees. Despite this, an adequate sample was obtained in this manner, but a more direct approach could have resulted in a higher response rate.

5.9 RECOMMENDATIONS

When considering the scope and complexity of this study area it is clear that recommendations should be made. Recommendations regarding the theoretical, psychometric and practical implications are provided below.
5.9.1 Theoretical recommendations

From a theoretical perspective the following recommendations are posited:

- It is evident from the literature review that not much research has been conducted in the area of organisational energy. This area should therefore be researched further.

- The concept of individual well-being, based on Shirom’s definition of vigour has also not been researched in any great depth. Further research is also required in this area.

5.9.2 Psychometric recommendations

The following suggestions may improve the psychometric properties of the scales used:

- The seven point Likert type response scales used in this study should be further refined to improve the reliability and validity of responses. It is suggested that the scale be shortened in order to obtain a clearer indication from respondents. As this is an opinion survey, respondents’ answers tended to gravitate to the mean.

- The use of only 12 questions to measure well-being on the SMVM seems limited. This scale could be reviewed and further questions developed.

- Qualitative approaches and methods, including interviews and focus groups should be employed to supplement questionnaire surveys (Babbie, 2001).
5.9.3 Practical recommendations

To add value on a practical note, the following recommendations are suggested:

- The results of this study should encourage other organisations to question their own organisational energy and the individual well-being of their employees.
- To enhance the success of conducting a quantitative survey of this nature in an organisation, qualitative methods should also be employed to obtain further information from respondents (Babbie, 2001).
- Insight gained from conducting a survey of this nature should lead to the development of interventions and action plans that can be implemented. After a reasonable period of time, the survey can be re-run in order to determine if any change had been achieved.

5.9.4 Suggestions for further research

Within the framework of this study, the following suggestions for potential research opportunities are forwarded:

- A comparison between different financial institutions should be made, with the purpose of generalising the findings.
- A comparison between other types of organisations should be explored, with the purpose of generalising the findings.
- Further research should be undertaken on the concept of organisational energy, as defined in this study.
- Further research should be undertaken on the concept of individual well-being, as defined in this study.
5.10 CONCLUSION

This chapter provided final conclusions and recommendations regarding this study by discussing the significance and the limitations of this study as well as suggesting potential research opportunities.

The study of organisational energy and individual well-being is a relatively new field of study and many gaps still exist in the body of knowledge. These are multi-faceted dimensions that are not easily nor categorically defined. Nonetheless, these concepts can be found at work on a day to day basis. Employees and management speak of them, without necessarily having clearly identified definitions available to them. It is a reality of organisational life. Any further research can only aid in understanding and thereby improving the life of employees and their organisations.

The findings of this study do not only provide valuable insight into the theory of organisational energy and individual well-being, but the psychometric properties of the two scales were also determined in the South African context.

All the research objectives, as stated in chapter 1 have been met.
It’s an experience like no other experience I can describe, the best thing that can happen to a scientist, realizing that something that’s happened in his or her mind exactly corresponds to something that happens in nature. It’s startling every time it occurs. One is surprised that a construct of one’s own mind can actually be realized in the honest-to-goodness world out there. A great shock, and a great, great joy.

Leo Kadanoff
ANNEXURE A

NORMS PROVIDED ON THE SMVM BY THE DEVELOPER

Based on a sample of 2743 apparently healthy employees

We have excluded 920 respondents from the analyses due to their reporting to us that they were either:
- Diagnosed to have a cardiovascular disease, stroke, cancer, or mental crisis (regardless of any medications taken on a regular basis)
- Diagnosed to have and regularly take medications for hypertension, diabetes, chronic pain, or peripheral blood disease.
- Regularly take anti-depressant or antipsychotic medications.

|                      | The whole sample | Women | | Men |
|----------------------|------------------|-------|---|---|---|
| Standardized Alpha   | .94 .91 .93 .93 | .94 .90 .93 .93 | .95 .91 .93 .93 |
| N                    | 2744 2745 2308 2742 | 1082 1083 942 1081 | 1661 1661 1366 1660 |
| Mean                 | 5.36 5.38 5.57 5.22 | 5.30 5.22 5.72 5.11 | 5.40 5.49 5.46 5.29 |
| Std. Error of Mean   | 0.02 0.02 0.02 0.02 | 0.03 0.03 0.03 0.03 | 0.02 0.02 0.03 0.02 |
| Median               | 5.36 5.40 5.75 5.20 | 5.29 5.20 6.00 5.00 | 5.43 5.60 5.50 5.20 |
| Std. Deviation       | 0.90 1.01 1.07 1.05 | 0.91 1.04 1.02 1.09 | 0.89 0.97 1.08 1.02 |
| Range                | 1-7 1-7 1-7 1-7 | 1-7 1-7 1-7 1-7 | 1-7 1-7 1-7 1-7 |
| 10 perc.             | 4.21 4.00 4.00 4.00 | 4.14 4.00 4.50 3.80 | 4.29 4.20 4.00 4.00 |
| 20 perc.             | 4.57 4.60 4.75 4.40 | 4.50 4.40 4.75 4.20 | 4.64 4.60 4.50 4.40 |
| 30 perc.             | 4.86 4.80 5.00 4.80 | 4.79 4.60 5.00 4.60 | 4.93 5.00 5.00 4.80 |
| 40 perc.             | 5.14 5.00 5.25 5.00 | 5.00 5.00 5.50 4.80 | 5.20 5.20 5.00 5.00 |
| 50 perc.             | 5.36 5.40 5.75 5.20 | 5.29 5.20 6.00 5.00 | 5.43 5.60 5.50 5.20 |
| 60 perc.             | 5.64 5.80 6.00 5.40 | 5.57 5.40 6.00 5.40 | 5.71 5.80 6.00 5.60 |
| 70 perc.             | 5.89 6.00 6.25 5.80 | 5.86 5.80 6.50 5.80 | 5.93 6.00 6.00 6.00 |
| 90 perc.             | 6.57 6.80 7.00 6.75 | 6.57 6.80 7.00 6.60 | 6.57 6.80 7.00 6.80 |
| Number of items      | 14 5 4 5 | 14 5 4 5 | 14 5 4 5 |

Note: The following abbreviations were used in the table: physical strength = phys., emotional energy = emo., cognitive liveliness = cog.
Dear Wellness Practitioner,

The Relationship Between Organisational Energy And Individual Well-Being

(A research programme conducted by the University of Johannesburg)

You will agree that the success of organisations is largely dependent on the employees. Employees find themselves in a certain organisational climate, which they experience as either enhancing their performance or hindering it. Researchers have suggested that integration of phenomena at the individual and organisational levels moves the analysis of organisations away from the static, structural qualities towards a more dynamic process. This study proposes to look at the relationship between organisational energy and individual well-being.

The objectives of the study are to describe the concepts of organisational energy and well-being as well as the relationship between these. In the empirical study, employees’ perceptions of organisational energy and levels of well-being will be determined. The interactive relationship between these two concepts and possible intervening variables such as age, educational level etc, will also be examined. As part of this study, the psychometric properties of the two scales for South African employees will be determined.

The senior management of Absa has requested this research to be conducted. Please be so kind as to encourage participation in this important research project. A high participation level is vitally important to us in our efforts to learn more about organisational energy and individual well-being. Responses will be handled anonymously and will be used for research purposes only. The results of the study will be made available to your company and you will have access to it.

The value of this research depends on employees’ willingness to take part. If you have any queries, which we have not addressed and would like to discuss these with us, please contact:

Lynne Derman by e-mail: lynne.isc@worldonline.co.za or by cellphone: 082-410-999-8.

Yours faithfully

KJ Stanz
L Derman

Dr EN Barkhuizen
Promoter

Prof KJ Stanz
Co-promoter

Ms L Derman
Researcher
ANNEXURE C

The Relationship between Organisational Energy and Well-Being
A research project undertaken by the University of Johannesburg

Ms Lynne Derman  Dr Nicolene Barkhuizen  Prof Karel Stanz
PhD Candidate  Promoter  Co-Promoter
Department of Human  Department of Human  Department of Human
University of Johannesburg  University of Johannesburg  University of Johannesburg

Dear Respondent

We value your co-operation in completing this questionnaire. Your answers will be treated in strict confidence and your responses will be used for research purposes only. Your name should therefore not appear anywhere on these questionnaires.

The questions are intended to cover views towards work and your personal well-being. There are no right or wrong answers to any of the questions; we are only interested in your personal opinions. You are participating in a scientific study; frank and truthful answers are the most important contributions you can make to its success.

It is essential that you complete the questionnaire personally. If you do not see your way open to complete it personally, rather do not complete the questionnaire. Handing it to someone else to complete will jeopardise the validity of the results and conclusions.

The results of the study will be made available to your company and you will have access to them.

Different instructions will precede different sets of questions. Please follow the instructions as carefully as possible. Please answer all the questions. Kindly mark only one item per question.

Please complete your copy of the survey by Friday 08 June 2007.

Thank you for your co-operation