WOMEN MANAGERS IN SECONDARY SCHOOLS OF MAFIKENG AREA PROJECT OFFICE IN THE NORTH WEST PROVINCE: EFFECTIVE MANAGERS OR TOKENS?

BY

North-West University
Mafikeng Campus Library

HELEN MMANTSEPA MMANTSWALO MAHLABE

A MINI DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE DEGREE OF MASTERS OF EDUCATION IN THE DEPARTMENT OF PLANNING AND ADMINISTRATION IN THE FACULTY OF EDUCATION AT NORTH WEST UNIVERSITY.

SUPERVISORS: 1. Dr. C.M. TEU
               2. MR. E.T. MATSHIDISO
               3. Prof. M.W. LEGOTLO

EXTERNAL EXAMINER: Dr S. MOYO

DATE OF SUBMISSION: JULY 2005
DECLARATION

I, Helen Mmantsępá Mmantswalɔ Mahlaɓe, declare that the dissertation for the degree of Masters of Education at North West University hereby submitted, has not been previously submitted by me for a degree at this or any other university, that it is my own work in design and execution and that all material herein has been duly acknowledged.
ACKNOWLEDGEMENTS

A special word of appreciation and gratitude goes to the following people who have greatly contributed to the completion of this work:

*My supervisors, Dr. C.M Teu, Mr. E.T. Matshidiso, Prof. M.W. Legotlo for their expertise and motivation. My heartfelt thanks to them for always being there to offer sincere support during times when I wanted to quit.

*Educators who participated in this study, and their principals who gave them time to fill in the questionnaires.

*The department of Education in the North West Province, for granting me permission to distribute the questionnaires in schools.

*Friends, family members, colleagues and classmates, in particular, S.M. Mathibela and M. Gabanakgos who encouraged me to complete this document.

*The library staff of the University of Pretoria, University of South Africa and North West University for making their resources available.

*Paul, for assisting me with statistical analysis.

*Special thanks to my husband, Stoffel Seshia, for his understanding and support, and also for editing and evaluating my work.

*I dedicate this work to my late parents. I am grateful for their cultivating in me the value of education.

*Finally, and above all, I thank the Almighty God for giving me the wisdom and courage to complete this study.
Declaration

I declare that this dissertation for the degree of Master of Social Science in Clinical Psychology at the North West University, Mafikeng Campus hereby submitted, has not been previously submitted by me for a degree at this or any other university. This is my own work in design and execution; and all the material contained herein has been duly acknowledged.

........................................

J.C. MBOWENI
Acknowledgements

I would like to thank my supervisors, Miss Sarah Niemand and Mr Michael Temane for their assistance, patience, and support.

I sincerely appreciate the consistent support from my family and my two sisters Tshidi and Pearl throughout the period when I was conducting this study. Most significantly, I am grateful to my wife, Mapule and my children, Gadifele, Amogelang and Neo for having being tolerant of the inconveniences I caused them at the time I was busy with this study.

Above all I thank God for being with me all the way and being my comforter in time of need.
Summary

The aim of the study was to determine whether adolescent psychological well-being can be significantly influenced by attributional style, general health, satisfaction with life and self-esteem. A cross-sectional research design was implemented for this study. An availability sample of 130 learners from 2 high schools; namely Batloung and Kgobokwe in the Ramatlabama area in rural North West Province (RSA) were chosen to collect data. The learners were selected using the stratified random sampling technique. All participants described themselves as equally traditional and westernised with a high value placed on individual goals and community goals. The respondents were 12-22 years old.

Participants responded to a questionnaire consisting of six sections. The first section comprised of biographical data. Psychological well-being was measured in terms of distinctions between hedonism and eudaimonism. The Satisfaction With Life Scale (SWLS) was used to measure hedonism and the PWB scale by Ryff (1995) was used to measure eudaimonism. General health was measured by the 28 item General Health Questionnaire (GHQ-28). The cognitive Attributional Style Questionnaire (CaQ) measured attributional style. The 10 item Rosenberg’s Self Esteem Scale (SES) was used to measure self-esteem.

The quantitative data for the research, which was gathered through questionnaires, was subjected to statistical analysis. This was done through the utilisation of the Statistical Package for Social Sciences (SPSS ver. 12). Descriptive statistics and Cronbach alpha reliability indices were computed for each scale. Regression analysis was used to establish the relative contribution made by the independent variables; Attributional style (AS), Self Esteem (SE), General Health (GH) and Satisfaction With Life (SWL); on the dependent variable (psychological well-being). Analysis of Variance (ANOVA) is used to test the significance of $R^2$, which is the same as testing the significance of the regression model as a whole.

The results of the study generally show that satisfaction with life, attributional styles, self-esteem and health meaningfully predict psychological well-being ($R^2 = .41$). The practical significance of the finding based on the Steyn’s formulation was 0.69. Psychological well-being correlated positively with satisfaction with life, general health,
and the external attributions made by learners. There were no significant differences regarding the nature of attributions made by both male and female learners.

It is therefore recommended that adolescents get support from parents, engage in challenging activities, positive life events, and interact more with significant others for their well-being. Further research into the mechanisms of how life satisfaction plays its role in positive youth development is needed to promote the psychological well-being of all youth.
Remarks

The reader is apprised of the following:

☐ References and the editorial style as prescribed by the *Publication Manual (5th edition)* of the American Psychological Association (APA) were followed in this dissertation. This is consistent with academic writing in Psychology using the APA-style in all scientific documents.

☐ The thesis is submitted in the form of a research articles.

☐ The article adopts the generic referencing style of the potential journal of publication if it is not consistent with editing style of the South African Journal of Psychology.
INSTRUCTIONS TO AUTHORS: South African Journal of Psychology

The original typewritten manuscripts plus two copies must be submitted to the Editor: Professor N. Duncan, Institute for Social & Health Sciences, University of South Africa. P.O. Box 1087, Lenasia, 1820. E-mail: sajp@unisa.ac.za.

The manuscript must be accompanied by a letter stating that the paper has not been previously published, is the author(s) own original work and all list authors must sign the letter to indicate their agreement with the submission, the manuscript should be typed in a 12 point font, double spacing with generous margins, on one side of the paper only. The first page should contain the title of the paper, the author(s) name(s) and address(es), and the name and address of the author to whom correspondence should be addressed. The abstract should be on a separate page. The text of the paper should be started on a new page. Tables and figures should be numbered consecutively and submitted on separate A4 pages attached the manuscript. The appropriate positions in the text should be indicated. Once the article has been accepted for publication, a computer diskette must also be submitted ASCII is the preferred text format. The diskette should be clearly marked.

The format of articles should conform to the requirements of the South African Journal of Psychology: Guide to Authors, which is based on the Publication Manual of the American Psychological Association. The SAJP Guide can be obtained from the office of the Psychological Society of South Africa at a cost of R35.00, including VAT and postage.

Illustrations and figures: These should be prepared on A4 sheets. One set of original illustrations and figures of good quality drawing paper, or glossy photo prints and three sets of copies, should accompany the submission. The figures should be clearly labelled on the back. Authors are requested to pay particular attention to the proportions of figures so that they can be accommodated in single (82 mm) or double (170mm) columns after reduction, without wasting space. Figures should be numbered consecutively in Arabic numerals (Figure 1, Figure 2), and descriptive captions listed on a separate sheet of A4 paper. Graphs should be fully inscribed, and points should be indicated with standard symbols. All illustrations and figures should be grouped together at the end of the manuscript, and their appropriate positions in the text should be indicated.

It is strongly recommended that all manuscripts be carefully edited by a language specialist before submission. A note that the manuscript had been language edited should accompany the manuscript on submission.
Manuscript

The role of Attributional Styles, Satisfaction with life, General Health and Self Esteem on the Psychological Well Being of Adolescents.
THE ROLE OF ATTRIBUTIONAL STYLES, SATISFACTION WITH LIFE, GENERAL HEALTH AND SELF ESTEEM ON THE PSYCHOLOGICAL WELL BEING OF ADOLESCENTS

BY

JABULANI CAESAR MBOWENI

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE

DEGREE OF MASTER OF SOCIAL SCIENCE IN CLINICAL
PSYCHOLOGY

IN THE DEPARTMENT OF PSYCHOLOGY OF THE FACULTY OF HUMAN AND
SOCIAL SCIENCE OF THE NORTH WEST UNIVERSITY, MAFIKENG CAMPUS

DATE: MAY 2005

Supervisor : S.W. Niemand
Co-supervisor : Q.M. Temane
Abstract

The role of attributional styles, satisfaction with life, general health and self-esteem on the psychological well being of adolescents was examined in this study. A sample of 130 male and adolescents in grade 12 was drawn from 2 high schools in Ramatlabama. The results of the study show that satisfaction with life, self-esteem, and general health, play a major role in psychological well-being. There is also a positive relationship among Satisfaction With Life, internal and external attributions, general health, self-esteem and psychological well-being. It is therefore recommended that adolescents get support from parents, engage in challenging activities, positive life events, and interact more with significant others for their well being.
The Role of Attributional Styles, Satisfaction with life, General Health and Self-Esteem on the Psychological Well Being of Adolescents

The role of neighbourhood characteristics has been implicated in the health outcomes of communities (Robert. 1998; Yen & Syme, 1999). Low socio-economic neighbourhood, such as most if not all of South Africa’s rural areas, are more likely to suffer in terms of both the quantity and quality of municipal and public health services (Macintyre, Maciver, & Sooman, A. 1993). Hadley-Ives, Stiffman, Elze, Johnson and Dore (2000) found that actual neighbourhood characteristics influence adolescent’s mental health over the perceived neighbourhood characteristics. Indeed, Amato & Zuo, (1992) had demonstrated empirically that differences exist between psychological well being in rural areas as compared to psychological well being in urban areas with higher levels in the latter. This study is focussed on the role of attributional style (AS), satisfaction with life (SWL), general health (GH), and self-esteem (SE) on the psychological well being (PWB) of black rural adolescents.

Adolescence is an age of increasing independence and autonomy, with more time being spent in neighbourhood settings, away from the family and formal social control institution of the school (Allison et al., 1999). Neighbourhood characteristics differ because of residential segregation and these differences influence child development and health (Garcia Coll et al., 1996). Neighbourhood poverty and socio-economic deprivation have reported to have negative effects on children’s mental health (Kalff et al., 2001), internalising behaviour and school achievement (Duncan, Brooks Gunn, &Klebanov, 1994). Poverty has also been associated with school dropout rates (Sum & Fogg, 1991) as
well as elevated levels of loneliness and depression in rural adolescents (Lempers, Clark-Lempers, & Simons, 1989).

Adolescents in rural areas have few resources available to empower them about current developments in the country. They also do not get enough exposure programmes aimed at developing them to future adults who can participate fully in the building of the new South Africa. When they get a chance to socialise with their urban counterparts, they might feel that they are left behind thus this might lead to stress and low self-esteem. Social, cultural, economic and political consequences of rurality are also embedded in the social context in which rural residents grow up. Rurality depressed opportunities for, and the diversity of, social interactions resulting in a lack of anonymity, fewer contacts and greater likelihood of isolation. (Bourke, 2003) According to Leventhal & Brooks-Gunn (2000) the availability, accessibility, affordability, and quality of several types of resources in the community - learning, recreational, and social activities; childcare; schools; medical facilities; and employment opportunities – could influence child and adolescent outcomes. The question thus becomes, what influences the psychological well-being of rural adolescents in the rural context. To this extent a variety of independent variables such attributional style, self esteem, satisfaction with life and so forth.

Attributional style is an individual-differences variable that refers to the habitual ways in which people explain their positive and negative life experiences. This construct emerged from the attributional reformulation of the learned helplessness model, which posited that a person's explanatory style determines the extent to which learned helplessness is stable, pervasive, and undermining of self-esteem. According to this
model, causal attributions vary on three critical dimensions: locus, stability, and globality. Locus of causality refers to whether the outcome was due to something about the person (internal) or something about the situation or circumstances (external). Stability refers to whether the cause will again be present (stable) or is temporary (unstable). The third dimension, globality, refers to whether the cause influences just this particular situation or whether it influences other areas of the respondent's life global explanation (Higgins et. al, 2003).

A pessimistic (or depressive) attributional style is the tendency to explain negative life events with internal, stable, and global causes and to explain positive events with external, unstable, and specific causes. In contrast, an optimistic attributional style is the tendency to explain negative events with external, unstable, and specific causes and to explain positive events with internal, stable, and global causes. Pessimists are more likely than optimists to display helplessness deficits when they experience a negative event. Attributional styles have been demonstrated to play a mediating role between negative events and problems in living, such as depression, loneliness, and shyness. For example, a pessimistic AS appears to increase the risk for depression through the negative impact of the attributions on self-esteem (locus attributions) and expectations about future events (stability and globality attributions) (Higgins et.al., 2003)

The hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) proposes that specific types of attributions can play an important causal role in the onset of depression. The model posits that individuals who are at risk for developing depression have a consistent style in which they make internal, stable, and global attributions for negative events. These negative attributions act as a cognitive vulnerability or diathesis
that is hypothesized to contribute to the onset of depression following stressful life events. According to this theory, persons with a negative attributional style are more likely to develop depression in the presence (but not in the absence) of life stressors (Abramson, Metalsky, & Alloy, 1989)

Substantial evidence supports the association between negative attributional styles and depression in children and adolescents (see Gladstone & Kaslow, 1995; Joiner & Wagner, 1995, for meta-analytic reviews). Dixon and Ahrens (1992) studied troubled children at summer camp, and their results showed that daily hassles resulted in higher levels of depressive symptoms among children with negative attributional styles than among those with more positive styles. Using a grade-stress methodology, Hilsman and Garber (1995) found that academic disappointment predicted increased depressive symptoms more strongly among children with negative attributional styles than among those with more positive styles.

Happiness and life satisfaction are major goals for most people. Subjective well-being refers to the individual's own views of their life and is therefore an important aspect of global well-being. Several studies have shown that a range of factors, such as daily strain, financial state, life events, personal goals, and personality has an impact on subjective well-being. Research on adolescent well-being is often related to changes of family structure and focused solely on the aspects of ill-being, for example, depression, anxiety, social problems and criminal behaviour (Rask et al., 2002). Wissing and Van Eeden (1997) identified a general psychological well-being factor, which they described as a combination of specific qualities such as a sense of coherence, satisfaction with life, affect balance, and a general attitude of optimism or positive life orientation. These
authors also indicate that qualities that characterise general well-being include having an interest in the world and the motivation to carry out activities on a behavioural level.

According to Urry et al. (2004) many conceptualisations of the nature of well-being have been formulated, as have many nomenclatures, including “psychological well-being” (PWB; Ryff, 1989; Ryff & Keyes, 1995), “subjective well being” (SWB; Diener, 2000), “quality of life” (Frisch, Cornell, Villanueva, & Retzlaff, 1992), and “happiness” (Lyubomirsky & Lepper, 1999; Myers, 2000). According to Ryan and Deci (2001) the many conceptualisations of well-being stem from two traditions of research, namely; eudaimonic well-being and hedonic well-being. Eudaimonic tradition is represented by Ryff and her colleagues (e.g. Ryff, 1989). They describe well-being as the extent to which respondents endorse high levels of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Hedonic well-being, on the other hand, is exemplified in the SWB work of Diener and his colleagues (Diener, 2000; Kahneman, Diener, & Schwarz, 1999). Defining SWB as people’s affective and cognitive evaluations of their lives, Diener (2000) has identified four separable components, including life satisfaction, satisfaction with important domains (e.g., work), frequent pleasant emotions, and infrequent unpleasant emotions. Hedonic well-being thus embraces positive affect as a defining feature of well-being, whereas eudaimonic well-being emphasizes that purpose, growth, and mastery may or may not be accompanied by feeling good (Keyes, Shmotkin, & Ryff, 2002). Rothman, Kirsten & Wissing (2003) posits that it would seem that psychological well-being can be conceptualised with reference to affective, physical, cognitive, spiritual, self and social processes. According to Ryff (1995, 101), the key dimensions of the synthetic model of
well-being are self-acceptance, positive relationships with other people, autonomy, environmental mastery, purpose in life, and personal growth. Definitions for each dimension are provided in table 1 below.

<table>
<thead>
<tr>
<th>Table 1: Definitions of theory-guided dimensions of well-being</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimension</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Self-acceptance</td>
</tr>
<tr>
<td>Positive relations with other people</td>
</tr>
<tr>
<td>Autonomy</td>
</tr>
<tr>
<td>Environmental mastery</td>
</tr>
<tr>
<td>Purpose in life</td>
</tr>
</tbody>
</table>
Aneshensel and Sucoff (1996) found that youth in low socioeconomic neighbourhoods perceive greater ambient hazards such as crime, violence, drug use, etc., than those in high socioeconomic neighborhoods. They suggest that the more threatening the neighbourhood, the more common the symptoms of depression, anxiety, oppositional defiant disorder and conduct disorder. In an attempt to explain one of the pathways through which context can influence well-being, Gallo and Matthews (2003) use the reserve capacity model to support the idea that low socioeconomic environments may kindle disproportionate levels of negative emotions and attitudes, and likewise, these variables may have negative effects on health by reducing the individual’s capacity to manage stress. This literature suggests that rural environments can also influence levels of psychological well-being in adolescents.

Self-esteem continues to be one of the most commonly researched concepts in social psychology. Generally conceptualised as a part of the self-concept, to some self-esteem is one of the most important parts of the self-concept. This focus on self-esteem has largely been due to the association of high self-esteem with a number of positive outcomes for the individual and for society as a whole. Moreover, the belief is widespread that raising an individual’s self-esteem (especially that of a child or adolescent) would be beneficial for both the individual and society as a whole (Cast, 2002)
In view of the above, the aim of this study was to determine whether adolescent psychological well-being can be significantly influenced by attributional style, general health, satisfaction with life and self esteem.

METHOD

Research Design

A cross-sectional research design was implemented for this study. Participants gave self reports at one point in time regarding the measures in this study. The survey research design helps to reveal attitudes, perceptions or self-reported behaviour of a sample of people (Welman and Kruger, 1999: 46).

Questionnaires will be used to elicit responses relevant to the objectives of the study. In a survey the researcher does not manipulate situation or condition, people simply answer questions provided.

Participants

An availability sample of 130 learners from 2 High Schools namely; Batloung and Kgobokwe in the Ramatlabama area north of Mafikeng were chosen to collect data. Both schools are found in the rural North West Province. The learners were selected from grade 12 using the stratified random sampling technique. All participants described themselves as equally traditional and westernised with a high value placed on individual goals and community goals. Their ages range from 12 to 22 years. Some of the characteristics of the participants are represented in table 2 below.
Table 2: Descriptive characteristics of participants

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>56</td>
<td>43</td>
</tr>
<tr>
<td>Female</td>
<td>74</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-14</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>15-18</td>
<td>49</td>
<td>38</td>
</tr>
<tr>
<td>19-22</td>
<td>80</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>130</td>
<td>100</td>
</tr>
</tbody>
</table>

Measuring Instruments

Participants responded to a questionnaire consisting of six sections. The first section was comprised of biographical data, which includes age, sex, religion and level of study, and their self-perception.

Psychological well being

Psychological well-being was measured in terms of the distinctions established in the literature namely hedonism and eudaimonism. In the case of the former the satisfaction with life (SWL) was used to measure hedonism and the PWB scale by Ryff (1995) was used to measure eudaimonism. The five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), which is used in this study to measure a general psychological well-being factor. Participants indicated their agreement or disagreement with each item on a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. The SWLS is a cognitive judgement on individuals' global perceptions of their lives (Diener, 1994). The SWLS has an internal consistency of .87 and a test-retest reliability of .82 (Diener et al., 1985).

The participants completed three measures: Ryff's Scales of Psychological Well-Being (Ryff, 1995), The short form of the Scales of Psychological Well-Being consists of 84
items divided equally among the six subscales: Autonomy, Environmental Mastery, Personal Growth, Positive Relations With Others, Purpose in Life, and Self-Acceptance. Responses are given on a Likert-type scale (1 = strongly disagree, 6 = strongly agree). Internal consistencies for the subscales of well-being range from .83 to .91 (Ryff, 1995).

**General health**

General health was measured by the 28 item General Health Questionnaire (GHQ-28). The GHQ-28 is a widely used self-assessment scale for measuring subjective well being and psychological distress and has 4 subscales - social function and role, health perception (somatization), anxiety, insomnia and severe depression - altogether 28 questions with 4 reply questions (Goldberg & Hillier, 1979). It can be scored in two different ways; the Likert scaling method (0,1,2,3); and the GHQ scaling method (0,0,1,1). The former is appropriate for survey research and the latter for identifying psychiatric cases. (Swallow, Lindow, Masson and Hay, 2003).

**Attributional Style**

The cognitive Attributional Style Questionnaire (CAQ) measured attributional style. (Botha & Wissing, 2003). The CAQ is a Likert type scale based on the Explanatory Style Theory of Buchanan and Seligman (1995). It measures the degree of an optimistic versus a pessimistic explanatory style. A more optimistic style is characterised by viewing the causes of bad events as external, specific, and unstable, while positive events are ascribed to internal, global and stable factors. A Cronbach alpha of 0.72 was obtained in the POWIRS project. (See Botha, Wissing, & Vorster, 2004)
Self-esteem

The 10 item Rosenberg's Self Esteem Scale (SES). The Rosenberg's Self Esteem Scale (SES) is a brief, unidimensional measure of global self-esteem (Rosenberg, 1965). It was originally constructed to measure self-esteem of high school students. Since its development, the scale has been used with a number of other groups including substance abuse. The SES consists of 10 statements related to overall feelings of self-worth or self-acceptance. The items are answered on a four point scale ranging from strongly agree to strongly disagree. The SES is applicable to clinical and general populations. The SES was designed as a self-report measure, but has also been administered as an interview. It can be completed in less than 5 minutes. The scale generally has high reliability. Internal consistency estimates range from alpha = .89 for a sample of 206 female undergraduate students to .77 for sample of 1,332 men over 60 years of age. A coefficient alpha estimate of .87 for sample of Canadian students in grade 11 and 12 has been reported. The SES has demonstrated good test-retest reliability. A correlation of r=.82 for a college sample over one-week period and a correlation of r=.85 between two administrations of SES with college student sample over a 2-week period were reported. Scoring was reversed for negatively stated items. The scale ranges from 00-30, with 30 indicating the highest score possible and the highest possible level of self-esteem. For items 1,2,4,6,7: Strongly Agree=3, Agree=2, Disagree=1,and Strongly Disagree =0. For items 3,5,8,9,10: Strongly Agree=0, Agree=1, Disagree=2 and Strongly Disagree=3.

The scale ranges from 00-30, with 30 indicating the highest score possible.
Procedure

The researcher obtained written informed consent from school managers and parent governing bodies of both schools and the Mafikeng district manager of the department of education. Consent forms and information sheets providing details about the study were distributed to participants for them and their parents to read and sign. The forms were collected before the scheduled test time to ensure that all participants and their parents have consented.

All the 65 participants for each school were tested in the life skills classroom. The study took place at times convenient to both educators and learners. The students were assured that their responses would remain confidential. Each student then received the questionnaire, which was assigned code numbers.

The survey was administered in the same order to all participants so as to control for a possible carry over effect. Participants were allowed as much time as they needed to complete the survey. The researcher was in attendance during the entire test for consultation. Once all the participants had finished, the investigator debriefed them. The investigator reminded the participants that if for any reason they felt a need to talk about feelings, which may have surfaced during their participation in this study, they could talk to their life skills educator and a workshop will be organised for them.

Data analysis

The quantitative data for the research, which was gathered through questionnaires, was subjected to statistical analysis. This was done through the utilisation of the Statistical Package for Social Sciences (SPSS version 12). Descriptive statistics and Cronbach alpha reliability indices were computed for each scale. Confirmatory factor analyses were
performed to determine the construct validity of scales, implementing the principal component method of factor analysis.

Regression analysis was used to establish the relative contribution made by the independent variables (AS, SE, GH, SWL) on the dependent variable (psychological well-being). The coefficient of determination ($R^2$) is reported to express this relationship. The Analysis of Variance (ANOVA) is used to test the significance of $R^2$, which is the same as testing the significance of the regression model as a whole. If prob ($F$) < .05, then the model is considered significantly better than would be expected by chance and we reject the null hypothesis of no linear relationship of $y$ to the independents. $F$ is a function of $R^2$, the number of independents, and the number of cases (see Everitt, 1996)

The use of statistical significance testing as a routine procedure has been criticised (cf. Cohen, 1990; Hunter, 1997). An appeal to authors has also been made to place more emphasis on effect sizes (cf. Thompson, 1994) as a way of attesting for the practical significance of the findings. Effect size (ES) is a name given to a family of indices that measure the magnitude of a treatment effect. Effect sizes are independent of sample size. Thus to attest to the practical significance of the regression models, effect sizes were computed based on the following formula by Steyn (1999): $f^2 = R^2/1 - R^2$. A cut-off point of 0.10 (medium effect) was set for practical significance of $f^2$. There is as a wide array of formulas used to measure effect size possibly as there are tests of significance

**Ethical considerations**

Ethical aspects of the study were checked by the Departmental Board of Psychology at NWU (Mfk campus). A study of this nature will be confronted with a number of ethical considerations. To ensure that the research will be conducted correctly, consent letters
will be signed by the school managers of each school including the parents of the participants. This letter will specify the objectives of the study and highlight the confidentiality of the participants and the information gathered. Participants will be informed that they have the freedom to withdraw from the process at any time without any penalties for doing so. No identifying data will be used at any point in the research.

Results

The results of the study generally show that satisfaction with life, attributional styles, self-esteem and health meaningfully predict psychological well-being (R² = 0.41) as the table 3 below shows. An analysis of variance used to test the significance of this result yielded a significant finding (F=6.89, df = 4/39; p=0.0001). The practical significance of the finding based on Steyn’s formulation was 0.69. SWLS, CAQ I, CAQ E, GHQ, SES were compared to see their relationship to PWB. The table 3 below shows that there is a positive relationship among SWLS, CAQI, CAQE, GHQ, SES AND PWB. (F = 2.55, df 5/37, p = 0.04). All these predictors explain variance in psychological well-being by 26%. When internal attributions were excluded in the prediction of PWB, the coefficient of determination improved by 15% (R² = 0.41). Thus it would appear that the following factors: CAQ E, SWLSTOT and GHQ predicted PWB best. An effect size of 0.69 was obtained for this finding suggesting that this result is practically significant.
Table 3: Relationship among predictors and psychological well-being

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.649</td>
<td>.414</td>
<td>.354</td>
</tr>
</tbody>
</table>

- Predictors: (Constant), SWLSTOT, CAQ_E, SES_T, GHQ_T

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>10727.79</td>
<td>4.00</td>
<td>2681.95</td>
<td>6.89</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>15187.01</td>
<td>39.00</td>
<td>389.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25914.8</td>
<td>43.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Predictors: (Constant), SWLSTOT, CAQ_E, SES_T, GHQ_T
- Dependent Variable: PWB_T

The finding above is confirmed by the correlation of all scales in the study. The table below shows that psychological well-being correlated positively with satisfaction with life, general health, and the external attributions made by learners as these are measures of wellness. The table also shows that as the GHQ which measures the pathogenic orientation is negatively related to the positive measures of well-being.
Table 4: Correlation matrix of scales in the study

<table>
<thead>
<tr>
<th>SCALES</th>
<th>SWLS</th>
<th>GHQ</th>
<th>SES</th>
<th>PWB</th>
<th>CAQ-E</th>
<th>CAQ-I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWLS</td>
<td>-</td>
<td>-0.107</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHQ</td>
<td>0.302**</td>
<td>-0.103</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>0.302**</td>
<td>0.350**</td>
<td>-0.133</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWB</td>
<td>0.249*</td>
<td>0.303*</td>
<td>0.062</td>
<td>0.303**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CAQ-E</td>
<td>0.143</td>
<td>0.062</td>
<td>0.022</td>
<td>0.154</td>
<td>-0.136</td>
<td>1</td>
</tr>
<tr>
<td>CAQ-I</td>
<td>0.044</td>
<td>-0.223</td>
<td>0.022</td>
<td>0.154</td>
<td>-0.136</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

SWLS = Satisfaction with life scale, GHQ = General Health questionnaire
SES = Self Esteem Scale, PWB = Psychological Well Being, CAQ-E = Cognitive Appraisal Questionnaire – External, CAQ-I = Cognitive Appraisal Questionnaire-Internal

The table below summarizes the descriptive statistics of the scales used in the study.

Table 5: Descriptive Statistics of scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWLS</td>
<td>23</td>
<td>5.72</td>
<td>0.15</td>
</tr>
<tr>
<td>GHQ_T</td>
<td>55</td>
<td>13.65</td>
<td>-0.33</td>
</tr>
<tr>
<td>SES</td>
<td>22</td>
<td>3.16</td>
<td>0.44</td>
</tr>
<tr>
<td>CAQ</td>
<td>26</td>
<td>4.12</td>
<td>0.42</td>
</tr>
<tr>
<td>PWB</td>
<td>165.84</td>
<td>22.18</td>
<td>4.2</td>
</tr>
</tbody>
</table>

The table below shows that there were no significant differences regarding the nature of attributions made by both male and female learners. ($F_1 = 0.01$, $df = 1/115$, $p = 0.94$; $F_2 = 2.80$, $df = 1/120$, $p = 0.10$)
Table 6: Comparison of means for external and internal attributions between males and females.

<table>
<thead>
<tr>
<th>GENDER</th>
<th>External Attributions</th>
<th>Internal Attributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>F</td>
<td>70</td>
<td>68</td>
</tr>
</tbody>
</table>

The study established that psychological well-being is influenced by a number of factors.

DISCUSSION

The current study indicates that satisfaction with life, self-esteem, and general health, play a major role in psychological well-being and that there is a positive relationship among Satisfaction With Life, internal and external attributions, general health, self-esteem and psychological well-being. Interestingly, when internal attributions were excluded, satisfaction with life, external attribution and general health seem to predict psychological well-being best. This means that learners who were thinking positively about their lives, health and people around them experienced greater psychological well-being. According to Park, N. (2004), comprehensive perspectives on well-being that include positive aspects of human life such as subjective well-being have recently been proposed. Life satisfaction is the cognitive component of subjective well-being and plays an important role in positive development as an indicator, a predictor, a mediator/moderator, and an outcome. Whereas low life satisfaction is associated with psychological, social, and behavior problems, high life satisfaction is related to good adaptation and optimal mental health among youth. Life satisfaction and positive affect mitigate the negative effects of stressful life events and work against the development of psychological and behavioral problems among youth.
The findings also suggest that there were no significant differences regarding the nature of attributions made by both male and female learners. This means that both male and female learners did not differ in ways which they explain their positive and negative life experiences. In a study conducted by Roothman, Kirsten, & Wissing (2003), men and women perceived themselves as able to gauge and balance both their positive and negative emotions, which in turn could increase their judgements of subjective well-being.

According to the findings self esteem does not seems to have significant role on the psychological well being of learners. However, this does not necessarily mean that self-esteem is not an important aspect of psychological well-being. Self-esteem co varies with SWB, although this relation is stronger in individualistic societies where the "self" stands out as more important (Diener & Diener, 1995). In collectivist cultures self-esteem and life satisfaction are typically related, but not so strongly as in individualistic

Satisfaction with life is also found to be important in experiencing of psychological well-being. Happy people are likely to experience more events that are considered desirable in the culture, but also have a propensity to interpret and recall ambiguous events as good (Lyubomirsky & Ross, 1996; Seidlitz & Diener, 1993). People with high subjective wellbeing (SWB) are also more likely to perceive "neutral" events as positive. Thus, people with high SWB may not only experience objectively more positive events, but they also seem to perceive events more positively than do people who are low in SWB. A person is said to have high SWB if she or he experiences life satisfaction and frequent joy, and only infrequently experience unpleasant emotions such as sadness and anger.
However, the following limitations are acknowledged: the sample was drawn from a single geographic location and thus represents a relatively restricted range of community and school conditions. Language is also another limitation as English is not the first language of all the participants. Caution was taken to deal with them in the following way. Each question was fully explained to participants before they could answer the questionnaires. Those who did not understand were asked to consult the researcher for further explanation. Future research should include a larger more diverse sample. Additional research including learners from other race groups would help eliminate the generalising of the findings.

It is therefore recommended that adolescents get support from parents, engage in challenging activities, positive life events, and interact more with significant others for their well being. Further research into the mechanisms of how life satisfaction plays its role in positive youth development is needed to promote the psychological well-being of all youth.

**REFERENCES**


and Social Psychology, 69, 370-380.


Questionnaire

SECTION A

BIOGRAPHICAL DATA

Put an X in the space provided.

1. Sex
   - Male
   - Female

2. Age group
   - 12-14
   - 15-18
   - 19-22

3. Religion
   -

4. Grade
   -

5. Name of your school
   -

6. Residence
   - Rural
   - Urban

7. Marital Status
   - Single
   - Married
   - Separated
   - Divorced
   - Widowed

8. Do you have a Child
   - Yes
   - No

9. How do you perceive yourself according to the following statements.
SD= Strongly Disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly Agree.

a. I see myself as traditional
b. I see myself as westernised
c. I think the individual comes before the family
d. I think that community is important than the individual
SECTION B

SATISFACTION WITH LIFE SCALE
Below are five statements with which you may disagree. Using the 1-7 scale below, indicate your agreement with each item by crossing the appropriate number in line with that item.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Slightly agree</th>
<th>agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. In most ways my life is close to my ideal
2. The conditions of my life are excellent
3. I am satisfied with my life
4. So far I have gotten the important things I want in life
5. If I could live my life over, I would change almost nothing

SECTION C

PSYCHOLOGICAL WELL-BEING SCALES
The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers.

Circle the number that best describes your present agreement or disagreement with each statement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree Somewhat</th>
<th>Disagree Slightly</th>
<th>Agree Slightly</th>
<th>Agree Somewhat</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most people see me as loving and Affectionate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2. In general, I feel I am in charge of the situation in which I live</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>3. I feel good when I think of what I’ve done in the past and what I hope to do in the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4. Maintaining close relationships has been</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>difficult and frustrating for me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5. The demands of everyday life often get me down.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>6. I live life one day at a time and don’t really think about the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7. I often feel lonely because I have a few close friends with whom to share my concerns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>8. I do not fit very well with the people and the community around me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>9. I tend to focus on the present, because the future nearly always bring me problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10. I enjoy personal and mutual conversations with family members or friends.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>11. I am quite good at managing the many responsibilities of my daily life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>12. I have a sense of direction and purpose in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>13. It is important to me to be a good listener when close friends talk to me about their problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14. I often feel overwhelmed by my responsibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. My daily activities often seem trivial and unimportant to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. I don’t have many people who want to listen</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>17. If I were unhappy with my living situation, I would take effective steps to change it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. I don’t have a good sense of what it is I’m trying to accomplish in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. I feel like I get a lot out of my friendships.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. I generally do a good job of taking care of my personal finances and affairs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21. I used to set goals for myself, but that now seems like a waste of time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>22. It seems to me that most other people have more friends than I do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23. I find stressful that I can’t keep up with all of the things I have to do each day.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>24. I enjoy making plans for the future and working to make them a reality.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>25. People would describe me as a giving person, willing to share my time with others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>26. I am good at juggling my time so that I can fit everything in that needs to be done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>27. I am an active person in carrying out the plans I set for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>28. I have not experienced many warm and trusting relationships with others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>29. My daily life is busy, but I derive a sense of satisfaction from keeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>30. Some people wander aimlessly through life, but I am not one of them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>31. I often feel as if I’m on the outside looking in when it comes to friendships.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>32. I get frustrated when trying to plan my daily activities because I never accomplish the things I set out to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>33. I sometimes feel as if I’ve done all there is to do in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>34. I know that I can trust my friends, and they know they can trust me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>35. My efforts to find the kinds of activities and relationships that I need have been quite successful.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>36. My aims in life have been more a source of frustration to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>37. I find it difficult to really open up when I talk to others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>38. I have difficulty arranging my life in a way that is satisfying to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>39. I find it satisfying to think about what I have accomplished in life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>40. My friends and I sympathize with each other’s problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>41. I have been able to build a home and a lifestyle for myself that is much to my liking.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>42. In the final analysis, I’m not so sure that my life adds up to much.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
SECTION D
GENERAL HEALTH QUESTIONNAIRE
Instructions:
I would like to know if you had any medical complaints, and how your health has been in
general over the past few weeks. Please answer ALL the questions simply by underlining
or marking the answer, which you think most nearly, applies to you. Remember that we
want to know about present and recent complaints not those you had in the past. It is
important that you try to answer ALL the questions. Thank you very much for your
cooperation.

HAVE YOU RECENTLY

<table>
<thead>
<tr>
<th>A1</th>
<th>Been feeling perfectly well and in Good health?</th>
<th>Better than usual</th>
<th>Same as usual</th>
<th>Worse than Usual</th>
<th>Much worse than usual</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>Been feeling in need of a good tonic?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>A3</td>
<td>Been feeling run down and out of sorts?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>A4</td>
<td>Felt that you are ill?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>A5</td>
<td>Been getting pains in your head?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>A6</td>
<td>Been getting a feeling of tightness or pressure in your head?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>A7</td>
<td>Been having hot or cold spells?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B1</td>
<td>Lost much sleep over worry?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B2</td>
<td>Had difficulty in staying asleep?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B3</td>
<td>Felt constantly under strain?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B4</td>
<td>Been getting edgy and bad-tempered?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B5</td>
<td>Been getting scared or panicky for no good reason?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B6</td>
<td>Found everything getting on top of you?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>B7</td>
<td>Been feeling nervous and stung-up all the time?</td>
<td>Not at all</td>
<td>No more than usual</td>
<td>Rather more than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>C1</td>
<td>Been managing to keep yourself busy and occupied?</td>
<td>More so than usual</td>
<td>Same as usual</td>
<td>Rather less than usual</td>
<td>Much less than usual</td>
</tr>
<tr>
<td>C2</td>
<td>Been taking longer over the things you do?</td>
<td>Quicker than usual?</td>
<td>Same as usual</td>
<td>Longer than usual</td>
<td>Much more than usual</td>
</tr>
<tr>
<td>C3</td>
<td>Felt on the whole you were doing things well?</td>
<td>Better than usual?</td>
<td>About the same</td>
<td>Less well than usual</td>
<td>Much less well</td>
</tr>
<tr>
<td>C4</td>
<td>Been satisfied with the way you've carried out your task?</td>
<td>More satisfied</td>
<td>About same as usual</td>
<td>Less satisfied than usual</td>
<td>Much less satisfied</td>
</tr>
<tr>
<td>C5</td>
<td>Felt that you are playing a useful part in things?</td>
<td>More so than usual</td>
<td>Same as usual</td>
<td>Less useful than usual</td>
<td>More less useful</td>
</tr>
<tr>
<td>C6</td>
<td>Felt capable of making decisions about things?</td>
<td>More so than usual</td>
<td>Same as usual</td>
<td>Less so than usual</td>
<td>Much less capable</td>
</tr>
<tr>
<td>C7</td>
<td>Been able to enjoy your normal day-to-day activities?</td>
<td>More so than usual</td>
<td>Same as usual</td>
<td>Less so than usual</td>
<td>Much less than usual</td>
</tr>
</tbody>
</table>

| D1 | Been thinking of yourself as worthless person? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| D2 | Felt that life is entirely hopeless? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| D3 | Felt that life isn’t worth living? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| D4 | Thought of the possibility that you might make away with yourself?? | Definitely not | I don’t think so | Has crossed my mind | Definitely has |
| D5 | Found at times you couldn’t do anything because your nerves were too bad? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| D6 | Found yourself wishing you were dead and away from it all? | Not at all | No more than usual | Rather more than usual | Much more than usual |
| D7 | Found that the idea of taking your own life kept coming into your head? | Definitely not | I don’t think so | Has crossed my mind | Definitely has |

SECTION E  
COGNITIVE APPRAISAL QUESTIONNAIRE

Instructions: Please answer these questions as honestly as possible. There is no right or wrong answer. Below are 8 statements with which you may agree or disagree. Please circle the choice that best describes to which extent you agree with each statement.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. When something bad/negative happens, I typically think that it is my fault.  

2. Typically, in most situations of my life, when something bad/negative does happen it is fault
### SECTION F
ROSENBERG SELF-ESTEEM SCALE

INSTRUCTIONS: BELOW IS A LIST OF STATEMENTS DEALING WITH YOUR GENERAL FEELINGS ABOUT YOURSELF. IF YOU STRONGLY AGREE, CIRCLE SA. IF YOU AGREE WITH THE STATEMENT, CIRCLE A. IF YOU DISAGREE, CIRCLE D. IF YOU STRONGLY DISAGREE, CIRCLE SD.

<table>
<thead>
<tr>
<th></th>
<th>On the whole, I am satisfied with myself.</th>
<th>strongly agree</th>
<th>agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>At times I think I am no good at all.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>3</td>
<td>I feel that I have a number of good qualities.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>4</td>
<td>I am able to do things as well as most other people.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>5</td>
<td>I feel I do not have much to be proud of.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>6</td>
<td>I certainly feel useless at times.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>7</td>
<td>I feel that I'm a person of worth, at least on an equal plane with others.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>8</td>
<td>I wish I could have more respect for myself.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>9</td>
<td>All in all, I am inclined to feel that I am a failure.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>10</td>
<td>I take a positive attitude toward myself.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
</tbody>
</table>
will be an important role of government in its efforts to upgrade the sophistication of customer demand. Refer to table 3.2 below.

<table>
<thead>
<tr>
<th>PHASE</th>
<th>STRATEGY</th>
</tr>
</thead>
</table>
| Pre-purchase phase | • Learn what customers expect  
|                 | • Tell customers what to expect  
|                 | • Consistently provide the service customers expect |
| Service Encounter | • Communicate with customers during the service  
|                 | • If possible, modify service to meet customer expectations  
|                 | • If not possible to modify service, explain why |
| Post-Purchase phase | • Communicate to see whether expectations were met  
|                 | • Develop a follow-up programme  
|                 | • Develop a procedure for dealing with dissatisfied customers |

SOURCE: HOFFMAN AND BATESON (2002:313)

The above table summarises what service providers need to know about service quality based on perception. Government promised to deliver against the needs of customers and users, and to deliver against such needs means the understanding of user needs. The information in table 3.2 enables service providers to understand factors which they have to consider before, during and after service provision. Customers prioritise and rank companies according to services they receive.
3.16 Service quality based on perception

One principle underlying the understanding of service quality is based on perception. Often a difference exists between the level of quality customers received and what they perceived (Hoffman and Bateson, 2002:295). Customers, who are evaluating the quality of a service, are influenced by their perceptions and not what the service provider assumes. If the customer perceives (s) he received poor service, then the decision about future patronage will be based on that perception. Service firms must first understand the concept of service quality from the viewpoint of a customer, and not from the viewpoint of the service provider.

3.17 The services environment

A manager's practical abilities will be related to his understanding of the environment within which his business functions, both physical and social. The environment changes very rapidly and this necessitates a thorough environmental awareness on the part of management, as well as adaptability with regard to its approach to management (Bennet and Nieman, 2002:72).

Service organisations should take four steps to maximise the impact of their environment. First, the firm should identify its operational strategy. Second, it must identify the appropriate service position that corresponds with its operational position. Third, the firm should identify the desired behaviors they wish to elicit from the service. Fourth, the firms needs to identify the service factors that will enhance the desired behaviors (Jordaan and Prinsloo, 2004:39) Refer to table 3.3 below;
TABLE 3.3
MAXIMISING THE SERVICE ENVIRONMENT

MAXIMISE THE SERVICE ENVIRONMENT
1. Identify the firm's operational position
2. Identify the appropriate service scape position
3. Identify desired behaviors to be elicited by the service scape
4. Identify service scape factors that will enhance desirable behaviors.


Industries must understand the environments they operate in before maximising the service. The transport strategy developed under the apartheid regime set out to connect dormitory townships with urban employment modes, leaving non-commuters largely stranded. Companies therefore needed a new transport strategy to provide all passengers with access to safe and reliable transport options, and to enable them to choose between different options depending on their specific needs.

3.18 Management techniques
Most industries are managed by certain strategies. Bell and Iida (997:20) stated that it is important to use three approaches in the transport industry. He first is management by exception, management by objectives and leadership.

Management by exception requires managers to look for relevant information and to have it available in a systematic formal manner. An effective manager will be the one who can manage his own time.

Second, management by objectives depends on the effective budgeting and requires the reporting of significant information, but it is more concerned with management behavior and the way objectives are set at this level. Business consists of subordinates and
supervisors and how members see it. The manager as a member will never be satisfied with objectives that are set by his superiors; he is the best judge of his own performance. What is needed is a way of setting standards that enables the manager to be fair to him.

Third, leadership is very important. Admittedly, there is a commonality in which businesses are run in terms of leadership. The activity of leadership cannot be carried out without followers. What the leader must do is to influence the behavior, beliefs and feelings of other group members in an intended direction (Wright, 1996:47). There is of course a place for an authoritative style of leadership, as well as for a consultative style. The former belongs to what may be called a fail-dangerous situation, which applies in many branches of transport (Hilling, 1996:23).

Wright (1996:51) explained that authoritative leadership occurs mainly in the case of aircraft transport where the captain must have absolute authority in case of an emergency, and the second officer must be ready to assume this authority if the captain is incapacitated.

But the captain also functions as a leader of a team, in which each member has his own contribution to make, be it engineering or navigation. Apart from emergencies, the appropriate leadership style will be consultative. Although the manager in a bus company is not in the isolated position as the captain of an aircraft, there will be occasions when (s)he has to take authoritative action in an emergency.

3.19 Conclusion
Transport is an unusual form of public service in that it is not consumed for its own sake but, rather, as a means to another end. The value of the service depends primarily on how well it provides access to destinations. People located towards the peripheral of the urban areas have poorer transportation, especially transit services.
Resources need to be allocated equally and fairly. People believe that the type of service rendered should display the comparable quantity and quality of other providers regardless of service.

The issue of systematic discrimination raises legal and moral equity question, namely the distribution of public transport service benefits to disadvantaged urban groups. From a moral perspective, the primary issue revolves around low-income and transportation disadvantaged individuals. Therefore, government and private transport providers must have knowledge of the needs and expectations of customers when planning.

This chapter evaluated the views of different writers and what is enshrined in various policies of government on the topic under consideration. Different authors have different view and this is what underpins the study.

The next chapter will focus on the problem statement and the objectives.
CHAPTER 4

PROBLEM STATEMENT AND OBJECTIVES

4.1. Introduction

This chapter introduces the problem statement and objectives of this research. The problem perceived by customers to transport particularly for developing communities, is caused by insufficient public transport in their areas. Government on the other hand, intends to redress the imbalance, particularly in the rural disadvantaged areas. Government has its own strategies to attend to issues such as:

- Financial sustainability;
- Safety and the environment;
- Institutional and regulatory structures, and
- Human capacity building.

According to the Provincial Land Transport Framework (2002:149), public transport will be promoted over private transport. All land transport activities across all three spheres of government must be assessed in terms of whether they will be able to achieve the aim of giving public transport priority over private transport. Improved levels of service, comfort, affordability and sustainability will be striven for in public transport services, so as to enhance their attractiveness as an alternative for private vehicle users.

4.2. Defining the problem

It is generally believed by commuters that the current public transport system does not meet the consumer needs in terms of travel time, cost and level of choice. Mobility and accessibility are purchased at high cost. This has been worsened by the lack of adequate resources to
make quantum leap improvements on the transportation system where scarcity of resources is a problem.

The transport mode in most cases is disorganised. The Shop steward (2001:17) stated that transport needs to be properly organized for better services. Operators also contribute to this disorganisation. They form themselves into transport syndicates which operate in a similar way to the transport agencies. Other factors are the bad conditions of the vehicles. Most taxis which operate illegally ignore the annual inspection of vehicles which causes fear in the social welfare of commuters. Provinces experience accidents caused by those vehicles which are not roadworthy, for example, scholars in Gauteng province were involved in a bus accident due to a mechanical failure (Sunday Times, 23 May 2005:1).

Some of the questions which arise resulting from the above phenomenon questions such as what determines the choice of transport preferred does status in society and one's means of living play a role in determining the desired choice of the preferred transport on the commuting public. The study will further seek to investigate the factors that influence commuters in the North West province with specific reference to the Mafikeng area.

It is also apparent that transport policy goals and planning principles for both urban and rural transport are not well balanced. Goals and planning principles have tended to focus on the higher cost motorized transport modes and dismisses the non-motorised transport (NMT), regarding them as inefficient and, at best, relegating them to the ancient era of creation (Moving South Africa, 1996:32).

Since mobility and accessibility are the primary problem for passengers, there are also sub-problems which contribute to the negativity of the current situation at hand. Both urban and rural passengers experience travel problems in terms of:
- Availability of resources;
- Proper infrastructure;
- High traffic congestion on urban roads;
- Low income and higher cost fares;
- Parking bays in towns and cities;
- Time and availability; and
- Regulations governing public transport.

### 4.2.1 Urban Passengers

When viewed as a whole, the key gaps in urban transport were distilled into challenges, which are, lack of affordable basic access, ineffective public transport driven by past land-use patterns and poor subsidy. Another gap is due to the increasing dependence on cars and lastly, spatial planning. According to Moving South Africa (1996:68), urban commuters are categorized into six segments.

There are commuters that can be hikers, who enjoy good low-cost access to their preferred destinations.

The second group is the stranded. The transport system is failing this group more than for any other groups. They lack affordable basic access to motorised transport and therefore, have little ability to integrate with the rest of the society.

The third group is the survival passengers. Their principal needs are low cost, higher speed public transport. This group can afford to use public transport, but is captive to the least expensive option. They have few choices, even within public transport.

The fourth group, the sensitive, still captive to public transport, but has enough income that members can select the best transport option. A few of this group can afford a car but are willing to use public transport
if it meets their primary requirements of higher speed, and greater choice and convenience.

The last group comprises the stubborn customers. Members of this segment opt out of the public transport system altogether by using their cars, and cost is a minor issue for them, compared to the much more salient concerns of convenience and speed.

The stranded and survival segments are not well served in terms of cost, travel times and choice. One segment that is well served is the stubborn, which benefits from a high income level and a good road network for their cars. Even though the stubborn customers are somewhat dissatisfied with the convenience of the system, by international and local standards, they are exceptionally well served.

The above groups’ problems are being increased by current land patterns which leave commuters and other residents distant from key services that they need, and the system’s overall inefficiency is creating high demands for subsidies. Unless something is done, land use patterns will increase public transport journey time and cost, and increase car dependence. According to Hilling (1999:25), the number of stranded customers will grow. The number of car users will double and road congestion will consequently worsen and have a significant effective on economic productivity and the viability of the public transport system.

There is still a problem of inefficiency of public transport. This matter can worsen the problems faced with road space and road congestion. The current public does not meet customer needs in terms of travel time, level of choice and cost. The system is of limited use for scholars, given its orientation around the needs of commuters and the limited level of off-peak service. According to the Green Paper dated October 24, 1996, South African public transport cost is relatively high
compared to international benchmarks. Services cost users 32% more than world averages, primarily because of the distance they travel. The result is higher system costs, deteriorating infrastructure, higher user costs and poorer service for those users who are captive to the system. More generally, ineffective public transport severely restricts labour mobility, impinges on worker productivity and impedes social integration.

On the other hand, there are several factors which contribute to this problem of inefficiency of public transport. One is the lack of financial sustainability of the urban public transport system. Commuters, rail, bus and taxi operators are spending well below the needed level to maintain and upgrade their assets (http://www.transport.gov.za-14 January, 2006). The results are poorer service, more vehicles out of service, more frequent maintenance, and more safety incidents.

A second factor contributing to the inefficient public transport system is poor public transport planning, operation and regulation. Part of this problem derives from unclear and fragmented institutional arrangements and lack of capacity at many metros for transport planning and regulations. However, regardless of the origin, inadequacy of planning creates high systems costs that could, if eliminated be, applied to savings to the fiscus, and savings to the end users (http://www.transport.gov.za-14 January, 2006).

4.2.2 RURAL PASSENGERS
In most developing countries, the provision of rural roads is directly linked to the need for rural residents to subsist and earn income through agriculture. The purpose of rural roads in these countries is primarily to enable residents to transport agricultural goods to the market. In most of the developing world, a sustainable rural community is based on agriculture. Due to the apartheid legacy, however, land tenure in rural S.A. is substantially different from other countries, with most productive land and agriculture concentrated in the hands of white
commercial farmers. This results in a relatively low level of the population directly dependent on agriculture. As a consequence of this land tenure pattern, over 37% of rural households depend on income sources generated outside their community. Four types of communities result from this economic base, and they have been characterized by the Department of Constitutional Development in its Rural Infrastructure Investment Framework (RIIF) (Moving S.A, 1996). These communities include village dwellers, dense and rural settlement, farming population and scattered settlement (Hilling, 1999:25).

According to the White Paper (1996:27) almost 80% of the rural population resides in villages and dense rural settlements. Researchers in Kwazulu-Natal stated that major problems of the rural dwellers in terms of transport are increased by poor roads and infrastructure. Most communities want more roads and there is insufficient funding to pay for the required need. Again, roads must be provided in a sustainable fashion to those communities that need them most (Rural Passenger Transport, 1999:78).

Rural areas have largely been neglected in South Africa in terms of planning. The rural people, mainly women, need transport to access either basic needs or to engage in base economic activities. Scholars in rural areas experience similar problems as those in urban areas. Other problems encountered in rural areas relate to movement between homesteads and social services such as clinics, shops, pension pay-points, community centers and in some cases water collection points. Therefore, it is important to consider the usage of NMT such as bicycles. There was little recognition of the importance of NMT transport by planners in developing countries, despite its potential to alleviate the transport problems of the poor (Hilling, 1999:25).

Furthermore, although walking was by far the most prevalent of movement, it was not always treated as a full mode to transport (Wigan, 1995:15). The idea of viewing the pedestrian as second class
citizen has lingered on both in general attitudes and road user behavior.

4.3 Objectives of the study
The objectives of the study which shall direct the research entitled “The impact of commuters on public transport in the Mafikeng area” are as follows:

4.3.1 To establish needs and expectations of commuters with regards to transport.

4.3.2 To determine the product offering from transport providers.

4.3.3 To compare perceptions and expectation of commuters with those of the transport providers.

Once the objectives of this study are addressed, government could execute strategies developed in enhancing mobility and accessibility. The North West Province intends to address the transportation needs of those commuters whose needs are not adequately serviced via the conventional transport system or NMT. Urban transport strategies also intends to focus on densification of transport corridors, optimised modal economics and the services mix, and lastly, improving firm level performance (Provincial Transport Framework, 2002:231).

4.4 Conclusion
The chapter looked at the problem statement as well as the objectives of the study. Under the topic, issues such as strategies adopted for both rural and urban areas have been explored as well as strategies on rural and urban passengers. The aim of the chapter was to highlight the intricate aspect of the inherent problem which the study seeks to address as well as to display the objectives thereof.

The next chapter will focus on the research design and analysis. This is where the methodology to be used will be presented and the tools of data analysis will be discussed.
CHAPTER 5

RESEARCH DESIGN AND METHODOLOGY

5.1 Introduction

This chapter commences by discussing the research design, which incorporates the methodology, the techniques, sampling procedures, data collecting instruments and data analysis.

The research design that will be used by the researcher for the purpose of the current research will be a combination of both the qualitative and quantitative methods. This choice has particularly been selected because the type of research being undertaken was regarded as social and behavioral tendencies because people behave differently and respond differently when exposed to different circumstances. This is why both the qualitative and quantitative methods will be used so that most of the different aspects affected by the study could be covered. The other reason for utilising both methods is that they subscribe more to a phenomenological, inductive, holistic, non-subjective, process-oriented, and social anthropological world view in accordance with the views of Cook and Reichardt (1999: 145).

It is important to establish the client's needs, in any type of business. Customer relationship management provides several benefits to the service provider. Initially, the cost of retaining current customers is much less than obtaining new customers. Thereafter, a customer who has developed a strong relationship with a service provider will tend to have repeated business, resulting in higher sales per customer. A timely supply of appropriate information provides feedback on the organisation to keep in touch with its customers (Cook and Reichardt (1999: 145).
Large companies need to measure the attitudes of their employees and customers in order to make good business decisions and managers must be in a position to act upon the prevailing circumstances. Market research gives managers the opportunity to be creative and flexible in the way they carry out their business. It is essential that management should be able to evaluate the type of service their companies provide and try make an appropriate decision about the likely value to be added based on the evaluation in question.

5.2 Case study as a methodological framework

The main aim of using a case study is to try and relay the message using events, which had occurred, or those that are still taking place. Bell (1993: 8) states that case studies are particularly appropriate for individual researchers because they give an opportunity for one aspect of the problem to be structured in some depth within a limited time scale. The case studies as a methodological framework is being mentioned in passing for the purpose of enlightening the reader that it is also available for use although it will not be used in our study.

5.3 Sampling design and procedures

Sampling design will be one of the most crucial stages of this research process and there are a number of sampling techniques, which may be used especially in the social science research similar to the one being undertaken. For the purpose of this study, the design to be used is the probability sampling procedure. For the purpose of the current study, as already mentioned, three types which make up the commuter modes have been identified as units of analysis. A sample will be derived from these types where one hundred randomly selected respondents will be chosen in the entire Mafikeng area but drawn from the three types which will mainly comprise the working and non-working group and youth. This sample has been selected in this particular order because it adequately represents all aspects under investigation and will influence a balanced result. The respondents will
be provided with questionnaires, which will be completed and returned to the researcher for analysis.

The other element will be that of consulting documents in the North West Department of Transport, the department relevant to the study at hand to ascertain what the trends have been in the past, so that through the documents available, it would be possible to determine what the future might hold.

5.4 Sampling
Probability sampling techniques vary in terms of sampling efficiency. Sampling efficiency is a concept, which reflects a trade-off between sampling cost and precision. Precision refers to the level of uncertainty about the characteristics being measured (Matima, 2001:14).
The survey research approach with questionnaires will be used in this study. It involves a representative sample and structural data collection procedure.

A large sample enables one to be more representative and more accurate conclusions can be made than in smaller samples. The size of the sample will be influenced by the relative homogeneity or heterogeneity of the population, and the desired degree of reliability for the purpose of the investigation (Strydom, Fouché and Delport, 2002:128).

The target population will be drawn from both rural and urban public transport commuters. The study will cover young people and adults employed as well as unemployed residents. The main aim of this study is to provide both government and other service providers within Mafikeng with a comprehensive analysis of commuters' needs and expectations concerning public transport. The total sample size will be 100 for both rural and urban commuters.
The distribution of the sample will be as follows:

**TABLE: 5.1**

The design dichotomises the difference between urban and rural sampling. The urban sampling, indicates less or non-working group since most of the people are employed than those in rural setting. With regard youth sampling in rural setting, it is less as compared to urban setting. Hence, non-working group in rural setting comprise a high percentage.

**5.4.1 Population**

A population is the aggregate of all the elements that shares a common set of characteristics and that comprise the universe for the purpose of the research problem. In this study people who are using public transport form the population in the Mafikeng area, which will be sampled.

A group of people will be selected at random from a complete list or map of a given population. The simple random sampling technique will be used for this study and the following are the characteristics of simple random sampling:
• In this type of sampling, each element in the population will be a known and will have an equal probability of selection.
• Furthermore, each possible sample of a given size will have a known and equal probability of being the sample actually selected,
• The sample will be drawn by a random procedure from a sampling frame,
• To draw a simple random sample, the researcher will first compile a sampling frame in which each element will be assigned a unique identification number (Matima, 2001:44).

5.4.2 Drawing a simple random sample
A group of people is selected at random from a complete list or map of a given population. The simple random technique will be used for this study. In order to effectively achieve the desired results where the above mentioned type of sampling will be used, it is important to lay out the process and characteristics of the simple random sample which are as follows:
• In a simple random sampling each element in the population has a known and equal chance of being selected.
• Items are chosen at random using a fixed interval e.g. sampling every fifth person
• Further, each possible sample of a given size has a known and equal probability of being the sample actually selected.
• The sample is drawn by random procedure from a sampling frame
• To draw a simple random sample, the researcher first compiles a sampling frame in which each element is assigned in unique identification numbers (Matima: 2001).
• Assign a number to every person in the population. The researcher has the tedious task of assigning numbers to all the numbers of the population.
• Decide on the size of the sample, that is, what percentage of the population he or she wants to study.
5.5 Data collection procedures

Various data collection procedures will be followed. These are interviews and questionnaires. Various respondents will be asked to respond to questionnaires while in certain cases where the respondents are unable to respond using the questionnaire due to illiteracy or for other reasons, the use of personal interviews will be employed. Further, data will also be gleaned from documents in the Department of Transport for statistics and reports. In order to execute this research, a team of four enumerators and two volunteers knowledgeable in this area of survey research and government regulations on transport will be used. Two research assistants will be used to collect data under the supervision of the principal researcher.

5.6 Data collection instruments

In view of the fact that the choice of design will be that of sampling, it was deemed important by the researcher to indicate the type of data collection instruments to be used and these will be the questionnaire and interviews. Due to the fact that the questionnaire and semi-structured interviews will be employed as techniques for data collection, it is worth noting that relevant documents will also be analysed in order to strengthen the evidence derived from the questionnaires. This also will afford triangulation necessary for validating the findings of the study. Robson (1999: 379) argues that triangulation is an indispensable tool that provides a means of testing one source of information against other sources. Both the questionnaire and semi-structured interviews will be aimed at all respondents in the categories under review.

It was mentioned earlier that questionnaires will be used as the main measuring instrument in this research. The main advantages and disadvantages of the questionnaire will now be discussed.

All copies of the questionnaire will be accompanied by a covering letter (Appendix A). The letter will explain the purpose of the survey and its
intentions. It will be written in a friendly tone and in a formal manner and this will help encourage the response rate. Bell (1993:85) states that a good covering letter is ideal and fundamental in stimulating interest and response to the survey, the letters were distributed to randomly selected employees. The covering letter will inform respondents that their information will be solely used for educational purposes and confidentiality will be guaranteed.

5.6.1 Questions used

Please refer to Annex 1 which contains the questionnaire used in this research. All questions will be presented in a readable and presentable manner. The questionnaire will be classified into four categories. The first part will establish the status of the respondent in society, and the second part is about the society and its view on commuting modes. The third section of the questionnaire will try to establish where the choice and modal preferences of respondents and how this fits into the overall transport structure and its significance.

The questionnaire will also consist of two types of questions, open ended and closed questions. The open-ended questions will allow the respondents to expand further on the subject especially on those points that are likely to be left out when using close-ended questions.

5.6.2 Advantages of questionnaires

Using a questionnaire has been found to have several advantages and the following are the advantages as stated by Bailey (1994: 148). Advantages and disadvantages of the mailed interview are being highlighted for the benefit of the reader in order that the reader knows of the existence, pros and cons of the methods mentioned below Bailey (1994: 148).

(i) Considerable savings of time and money: A mailed study costs far less than an interview study with the same sample size. Time saving: Mailed questionnaires can be sent to all respondents

54
simultaneously and most of the replies will be received within a short period, while interviews are generally performed sequentially and may take months to complete.

(ii) The questionnaire may be completed at the respondent’s convenience.

(iii) Greater assurance of anonymity: Since there is no interviewer present who can identify the respondent later, the respondents may be more willing to provide socially undesirable answers or answers that violate norms.

(iv) Standardised wording: Comparison of respondent’s answers is facilitated by the fact that each respondent is exposed to exactly the same wording. However, differential understanding of questions may lessen this advantage.

(v) No interviewer bias: there is any opportunity for the respondent to be biased by an interviewer.

(vi) Securing information: Mailed questionnaires allow the respondent to consult records, confer with colleagues or conduct research before answering.

(vii) Accessibility: Respondents who are widely separated geographically can all be reached for the price of a postage stamp as compared to the expensive travel costs of the interviewers.

5.6.3 Disadvantages of questionnaires

Although this method of data collection seems to be a cheaper and convenient approach to research, it has certain disadvantages. According to Bailey (1994) the following were found to be the disadvantages;

(i) Low response rate: In an interview study, the great majority of interviews are successfully completed and the reason for non-responses is generally known. However, mailed studies sometimes receive response rates as low as 10% and 50% is considered adequate. To avoid the low response rate, the
questionnaires are addressed to known people and followed up to get a higher response rate.

(ii) Many questions may remain unanswered: With no supervision while filling in the questionnaire, the respondents may leave some questions unanswered. Thus while 60% of all questionnaires may be returned the researcher might find that only 10% of respondents answered a particular question. In this case semi-structured interviews would be used to get the answers for the questions not answered.

(iii) No control over date of response: Lack of control over the time the questionnaire is completed can affect a study greatly. To avoid this, respondents will be phoned time and again to be reminded to fill in and return completed questionnaires.

(iv) Lack of flexibility: With no interviewer present, there can be no variation in questions asked and no probing for more specific answers if the respondent’s first answer is too vague or too general to be useful. Also, if the respondent misunderstands the question he or she cannot be corrected.

The other types of measuring instruments which have not been used in this study are telephonic, focus groups and others.

5.7 Administration of questionnaires

5.7.1 Self administered questionnaires

The 100 questionnaires will be randomly distributed by hand and follow-ups will be carried out for collection in the case of respondents who may not be able to return the questionnaire immediately. Then, once fully completed, the questionnaires will then be collected for the analysis of data. The two research assistants mentioned previously will collect data from the respondents while supervised by the principal researcher. Networking will be very essential in carrying out this exercise and will be effectively used. Before the questionnaire is
distributed, it will be pre-tested by using three people representing all the categories which will comprise the sample. The purpose of the pre-testing is to ensure that:

- The vocabulary and instructions are simple and clear.
- None of the words are ambiguous
- None of the statements are inappropriate, and
- The attention of the respondents is aimed at the duration of the procedure.

5.7.2 Semi-structured interviews

This method of interview has been opted for because it offers insights into participants' perspective and flexibility. It is aimed at respondents who are illiterate or those who may not be able to read (Blind). According to Robson (1999:228), the interview appears to be straightforward and non-problematic in the way of getting information. However, using interviews to collect information also place demands on the researcher such as active listening in order to gain more from such interviews.

5.8 Data analysis techniques

According to Robson (1999:228), the data analysis technique to be used in this study is the non-parametrical statistical technique. This technique is preferred because:

(i) The observations are independent
(ii) The tests do not require measurements as strong as that required for parametric tests.
(iii) The variable under study has underlying continuity.
(iv) The data in the study are nominal and ordinal to which this test will be applied.
(v) The data is of a superior nature in power when it comes to considering population distribution.
Robinson further says that as most of the data collected is both qualitative and quantitative in nature, survey analysis techniques, including categorical data analysis, will be used. Results will be presented in tables, charts and graphs depending on the results of the study.

5.9 Summary
This chapter presented an overview of the research design and methodology that will be employed in the study. The questionnaire will be employed as the main instrument in the collection of data because of its advantages over the others. Chapter 6 focuses on the results of the survey.
CHAPTER 6

RESULTS

6.1. Introduction
The purpose of this chapter is to present the results of the study. The chapter reflects background information and an outline of the response received from the respondents who participated in the study through answering questions put to them in the questionnaire.

The previous chapter contained the specific details of how the research was conducted, from the problem statement to the collection of data and the methodologies applied at all stages and in between.

This chapter further covers the results from the actual reactions attained from the study, starting with information related to age, mode of transport mostly used, affordability, reliability, income source as well as critical problems which respondents would want the government to address urgently. The detailed survey results are in Appendix 1, while other data is reflected in appropriate chapters.

6.2. Reliability of questionnaire
The opinion poll was confirmed as reliable because it was tested before being implemented. A set of 10 questionnaires was distributed to prospective respondents across the sample distribution and the results were not diverse from the results obtained during the main survey.

6.3. Sample
The sample comprised a total of 100 respondents whose demographic distribution was as follows;

6.3.1 Age distribution
The ages of the sample were distributed as follows;
• 55 were under the age of 20.

59
• 13 were between the ages of 21 and 30.
• 7 were between the ages of 31 and 40.
• 9 were between the ages 41 and 50.
• 16 were aged above 50.

6.3.2 Gender distribution
The sample was distributed in the following manner regarding gender
• Male - 44%
• Female - 56%

6.3.3 Location
The sample was drawn from diverse locations, which depicted different lifestyles due to the financial status alluded to people residing in the particular areas. The distribution was as follows;
• Category A - distribution amounted to 50% for rural dwellers:
  * working
  * non-working
  * youth
• Category B – distribution amounted to 50% for urban dwellers:
  * working
  * youth

6.4. Demographic data
Demographics relevant to the study at hand were gathered and every variable was evenly spread graphically to accommodate all the respondents that were targeted by the study. The impact of each demographic variable, in this case, gender will be discussed while a complete analysis of age and its impact on the study will be explored in detail.
6.4.1. Age

The results of the analysis of age show that the majority of commuters are students aged below 20 years. This is due to the fact that in each household, there are more than three school going children falling within the age group as compared to only one parent per household going to work using commuter transport (or both parents in rare cases). Therefore, this could possibly explain why respondents under the age of 20-years accounted for about 55% of the total sample. Further, the survey was not gender sensitive because gender was not deemed to have a measurable impact on the current study. It has further been implicitiated from the results that respondents between the ages of 21 and 30 accounted for 13% of the sample, 31-40 years age group accounted for 7% of the sample, 41-50 years age group accounted for 9% and respondents in the age group above 50-years accounted for 16% in the sample.

Figure 6.1 Distribution of mode preference by age group

The above graph shows the preference of age groups to the different modes available. It shows that there is a close contest between the preferred modes across all ages.
TABLE 6.1 Distribution of mode preference by age group

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>OWN CAR</th>
<th>TAXI</th>
<th>BUS</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>13</td>
<td>13</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>10</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

The table above shows information similar to the information displayed in graph 6.1, except that it has been presented in form of a table.

Figure 6.2 Distribution of mode preference by age of respondents

According to the results, the majority of respondents below the age of 20 years commute using other means of transport such as walking, bicycles, donkey carts and other forms of NMT. A quarter of the respondents from the same age group use own transport, which implies that they are driven to school in their parents’ or guardians’ vehicles. The other quarter of
respondents in the same age group make use of public transport, i.e. taxis and busses. Therefore this entails that others in this category use delivery kind of public transport system where the pick up point, destination, fare and frequency of the pick up is pre-determined. The other category comprises the respondents who use public transport as it comes as they have no arrangement of pick up.

Figure 6.3 Age distribution of respondents

![Pie chart showing age distribution by mode in percentages.]

Figure 6.4 Age Distribution of respondents

![Bar chart showing age distribution by mode in percentages.]

63
The above results further indicate that there was a vast difference in terms of choice of the commuting mode in the sense that the age group between 21–30 years had a majority that preferred commuting either by taxi or by bus while the 31-40 years age group mainly comprised commuters who used their own vehicles. Those on age 50 and above mostly comprised of respondents who commute in own vehicles with a few that commute by public transport.

6.4.2. AFFORDABILITY OF PUBLIC TRANSPORT
The question which needed to be answered under this topic was “Public transport is expensive, insufficient and unreliable”. The result was that the fixed variable in this study is age and from the results, few respondents in the under-20 age category making up 42% agree that public transport is affordable as it is not expensive. The majority, though, who make up 77% \(^1\) of the respondents disagree and say that public transport is not affordable hence very expensive. Refer to table 6.2. below;

**TABLE 6.2 Distribution of affordability of transport**

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>DISAGREE</th>
<th>AGREE</th>
<th>NEUTRAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>13</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>0</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>6</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

The response on the question of affordability differed mainly across ages as those under-20 age barriers who are mainly dependants did not seem to find it expensive as they did not earn an income and merely depend on their parents.
6.4.3 QUALITY OF SERVICE PROVIDED

TABLE 6.3 Rate of satisfaction with quality of service

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>DISAGREE</th>
<th>AGREE</th>
<th>NATURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>27</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>11</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>6</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

The question for this part of the study was how the respondents rated the quality of service for the mode they used and according to the results, 53% of the respondents disagree with the public service satisfaction statement and say that they are not satisfied with the quality of service provided. 47% of respondents from all age groups agreed and said that they were satisfied with the quality of service provided in the public transport sector.

Figure 6.5 Rate of satisfaction with quality of service
The graph above shows the rate at which the respondents responded to the question of satisfaction with the quality of service for the particular mode each category preferred and the results are reflected in both the graph and table above.

6.4.4 INTERRUPTION OF SERVICE DURING RAINY SEASONS

Regarding the interruption of services in the rainy season, the statement to the respondents stated as follows;

TABLE 6.4 Interruption of service

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>DISAGREE</th>
<th>AGREE</th>
<th>NUTRAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>10</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>0</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>3</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

During rainy seasons, most people experience interrupted services and observing the way respondents responded to the above statement, 27% of all respondents disagreed and said that no interruption of service was experienced during the period in question while 66% of the respondents agreed and said that there was interruption of services during the rainy season while 7% remained neutral. In the 21-30 category 53 % of the respondents agreed and 6 remaining neutral on the issue of interruption of service during rainy seasons. 71% of respondents in the 31-40 years category disagreed while 14% agreed and another 14% of respondents remained neutral regarding the interruption of service. In the category of over 50 years, 18% of the respondents disagreed while 82% of the respondents
agreed and said that the public transport service had so many interruptions during the period in question as per table 6.4 below.

6.4.4 SOURCE OF INCOME

TABLE 6.5 Income source by age group

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>WORK</th>
<th>SELF EMP</th>
<th>PENSION</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>55</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

According to table 6.5 which depicted the source of income for respondents, 100% of the respondents in the category of under 20 years had a source. Other than work, pension or self employment while in the 21 – 30 category, 8 respondents indicated that work is their source of income and 2 are self employed. 3 respondents in the 31–40 categories indicated their source of income as work while the same number got their income from self employment. In the 41–50 category, all the 9 respondents work for their income. The response from the over 50 years category was varied as 5 said their source was work while 6 were self employed and the other 5 were pensioners whose income was pension as displayed in table 6.5.

6.4.6 PROBLEMS TO BE ADDRESSED FIRST

TABLE 6.6 Priority in addressing problem

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL</th>
<th>POLICY</th>
<th>ROAD INF</th>
<th>ROUTE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
<td>30</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
<td>0</td>
<td>10</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
<td>2</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
According to the information in the above table, 55% of the respondents below the age of 20-years preferred policy issues to be firstly addressed by government in order to improve public transport commuting while 45% of the respondents from the same category opted for road infrastructure to be addressed first. In the category of 21 – 40 years, 77% of the respondents preferred road infrastructure to be addressed first while 23% chose the route system of public transport. 100% of the respondents in the 31–40 and 41–50 categories of respondents opted for policy while 13% of respondents in the above 50 category also chose policy with 87% choosing road infrastructure as reflected in table 6.4 below.

Figure 6.6 Age distribution of respondents

The distribution of age for the respondents is presented in table 6.7 and pie chart 6.3 below;

**TABLE 6.7 AGE DISTRIBUTION OF RESPONDENTS**

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>TOTAL RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>55</td>
</tr>
<tr>
<td>21 - 30 Years</td>
<td>13</td>
</tr>
<tr>
<td>31 - 40 Years</td>
<td>7</td>
</tr>
<tr>
<td>41 - 50 Years</td>
<td>9</td>
</tr>
<tr>
<td>Over 50</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
</tr>
</tbody>
</table>
The distribution of age with regards to the respondents was as follows:
55% of the respondents were aged below 20 years
13% of the respondents were aged between 21 and 30 years
7% of the respondents were aged between 31 and 40 years
9% of the respondents were aged between 41 and 50 years
16% of the respondents were aged between 21 and 30 years

6.4.8 Gender distribution
The distribution of the sample in the population in terms of gender was as per
pie chart 6.4 below;
The distribution of gender in the study was as in such a way that forty four percent (44%) of the respondents were male while the remaining fifty six percent (56%) of the respondents were female. This was not by design because the initial aim of the researcher was to strike a balance between both genders. Despite this being the case, the current setup does not alter the validity of the results. It is also worth noting that the gender distribution includes all categories of the sample which is:

Below 20 years
21 and 30 years
31 and 40 years
41 and 50 years
21 and 30 years

6.4.9 Carts and bicycles as a transport mode

The question of whether donkey carts or bicycles were acceptable as transport modes had a very diverse response which has been presented in the pie chart 6.5 below;

Figure 6.9 Acceptance of carts and bicycles as a transport mode

![Pie chart showing acceptance of carts and bicycles as a transport mode]
The results from the question of bicycles or donkey carts being acceptable as a mode of transport has a diversity of responses which are presented in the pie chart 6.5 above where the following statistics were obtained. 40% strongly agreed to the statement, 30% merely agreed while 10% strongly disagreed with 5% of the respondents disagreeing. 15% of the respondents opted to remain neutral.

6.5 Summary
This chapter reflected a discussion of the background information and the way respondents responded to a set of questions and statements provided to them in form of a questionnaire. The purpose was to find how to fuse management of asset information into the basis of the study. Following the analysis of the data, the next chapter will discuss the results and look at the recommendations of what must be incorporated by both the government and the private sector in order to improve the areas that have been found to be inadequate.
CHAPTER 7

CONCLUSION IMPLICATIONS AND RECOMMENDATIONS

7.1 Introduction
This chapter will present the conclusions and will also feature implications which will be a depiction of the impact of the results on the aims and objectives of the study. It will also be under implications that an attempt will be made to relate and explain the findings to the research questions reflected in chapter 1. Finally, the chapter will discuss the recommendations based on the findings from the conducted survey and its interpretation.

7.2 Summary of the main findings
Resulting from the study conducted under the topic "An investigation into factors that influence commuters in the North West Province with specific reference to the Mafikeng area", and following an extensive review of literature conducted, the research design, methodology and the interpretation of the results used in this study particularly, the following are the main findings;

7.2.1 Finding 1
- Commuter demographics (Research question 01)
According to the results reflected in paragraph 6.3.8 in chapter 6, the finding relates to objective number 1 in chapter 1, which is based on the demographics of the commuting public. The sample comprised different age groups as per table 5.1 in chapter 5. It further shows that the majority of commuters in the sample belonged to the under-20 age category, while the lowest category was that of 30-40 age category, which accounted for only 7% of the respondents.
• Conclusion
The conclusion drawn from the above finding is that the majority of commuters who utilise both public and private commuting modes are of the school going age which is below 20 years. This has a huge impact on the commuter industry in the sense that this age group accounts for at least 55% of the statistics of commuters.

• Implication
The above result implies that the less than 20 years category of commuters has a great influence on the commuting sector. The statistics further imply that the high commuter figures in this category indicate that for every average household of about six members inclusive of parents, four children are of a school going age and utilise a particular mode to commute between home and school. It therefore means that for every four children in the under 20 years age group, there is one parent utilising at least any one of the modes as a result of which the under 20 category seems to have higher figures.

• Recommendations
It is recommended that special commuter transport for students or school-going children be introduced in order that rebates and other forms of subsidy in this sector may be effectively implemented and monitored to provide financial relief to parents who can hardly afford the ever escalating commuter fees.

7.2.2. Finding 2
Characteristics influencing commuters
The study found that the characteristic influencing commuters on the most preferred mode of commuting is the age as well as the income as per table 6.1 and 6.5 in chapter 6.
• Conclusion
From this finding, it can be deduced that age and income played a superior role in influencing the choice of mode to be used.
It is evident from the results that most of the under 20 either utilised own cars (family cars) or they commuted by mini-bus taxi. These are relatively expensive means of commuting while most of those above the age of 21 who are believed to be earning an income in one way or another either used own cars or preferred to use a bus, NMT or other means. The relationship with the introduction of school buses is that if such a system is in place, then parents will not be under pressure to sponsor the school children on their costly choice of transport.

• Implications
The above finding and conclusion implies that commuters who earn an income opted to commute using the cheapest means while those who are heavily dependant on parents and guardians opted for the most expensive means, which include mini-bus taxis and own car.

• Recommendation
Schools and other learning institutions need to develop systems where scholars will commute to and from their learning places in school buses in order to level the playing field and facilitate the effective way of providing subsidies on scholar transport.

7.2.3. Finding 3
• The cost of commuting
According to paragraph 6.3.2, the study found that 100% of the under 20 years category, responded in the negative to the question of whether public transport was expensive while most of the respondents in the categories of above 20 replied in the affirmative.
• Conclusion
In view of the above observation, it is justifiable to conclude that respondents who replied in the negative are those who hold the opinion that public transport is not expensive and comprised mainly of students. Those who replied in the affirmative were found to be workers or respondents who at least earn an income in one way or another.

• Implications
The findings imply that the category of respondents in the under 20 category were dependants who relied heavily on funding from parents are those in whose opinion, public transport was not expensive. This may be owed to the fact that this category does not work for a living and therefore, does not know the agony of working for an income in order that a meaningful value may be attached to any expenditure.

• Recommendation
There is an extravagant way of expenditure by the non-income earning category, which is made up of the under-20 years. As this may be the case, it has a very huge impact on the sector as it influences the modalities of choice of transportation to a great extent.

7.2.4. Finding 4
• Disruption of services
The study recorded a diversity of opinions regarding the issue of disrupted services during rainy seasons. Almost 60% of the respondents in the under 20 category replied in the negative and stated that services are not disrupted while 40% from the same category stated that services were disrupted during this period. In general, 70% of the all the respondents acknowledged disrupted services during the rainy season while 25% disagreed and 45% remained neutral.
• Conclusion
Based on the study conducted with respondents as parameters, there was evidence that services were disrupted in the rainy season and therefore concluded that weather has an impact of the services provided in the commuter industry and therefore cause disruptions.

• Implications
This implies that 50% of the under 20 respondents implored that services were normal due to the fact that they belonged to the category of commuters who utilise a family car as a means of commuting. But all other respondents who commute by public transport dejected that there was disruption including some of those who drive own cars, use other means and those who generally hike (walk).

• Recommendations
It is recommended that during rainy seasons, more public transport modes should be introduced and a lot of bus stops on the way in order to reduce or shorten distances walked by commuters from their homes, work places or schools to commuter transport routes. Further the designated commuter pick-up and drop-off points should have proper shelters which are able to shelter commuters from harsh weather conditions as well as minimizing the disruptions.

7.2.5. Finding 5
• Problem to be addressed first
According to the findings in paragraph 6.3.7, the findings of the study regarding the choice of respondents for the problem to be addressed first were that 3% of the respondents preferred public transport routes to be addressed first while 48% opted for policy and 49% preferred the road infrastructure. This means that all categories of the respondents are not fully satisfied with the way the public transport sector in organised and are all of the opinion that government needs to do more to improve the situation.
Conclusion
The study concludes that the government requires playing a pivotal role in ensuring that a satisfactory level of service is provided to the commuting public by public and private service providers. This includes regulating the public transport sector and a complete overhaul of the entire road infrastructure.

Implication
The above implies that every commuter is affected by the public transport facilities and that in one way or another; all make use of the systems in place. In essence, both those who commute by public transport, with own cars and those who make use of other means inclusive of NMT and hiking had shared sentiments regarding the way their lives are influenced by the factors of public transport.

Recommendation
It is recommended that the government takes a balanced approach to all the issues highlighted by the respondents because once road infrastructure, policy and route have been addressed, then the commuters are most likely to have a valued and dignified way of commuting regardless of whether one commutes by public means, own car, NMT or hiking.

7.3 Limitations of the study
This study is only limited to a convenience sample of commuters who comprised the sample. As such, it is not representative of the all the commuter scenarios in South Africa and its results may only be used and interpreted in the research context, and not for any other comparative issues.

The decision to focus on the make-up of age categories as well as the choice to use own car, bus, taxi and other as units of analysis was due to time constraints and followed an initial positive response from this category during the pre-testing stage of the survey.
The researcher was further concerned that the convenience sample may not be representative of the total commuter base and its impact in terms of demographic data. However, the demographic data indicate that the sample obtained is in line with expectations as discussed in the preceding chapters.

The study is also limited to the analysis of the impact of commuters on public transport in the Mafikeng area in its entirety, therefore, information researchers were omitted from the study.

In the demographic detail, a correct analysis of the income variable among the respondents also required that an establishment be made as to whether a single income or a dual income exists in a household in order to determine its impacts on the sector. In this particular study, only a single income source was explored and the results derived therefrom were satisfactory for the level of the study.

7.4 Future research
The analysis of the impact of commuters on public transport is a very wide and in exhaustive subject which is also dynamic. Different researchers try to conduct studies on the subject matter but because of general limitations and human nature, it is practically impossible to cover and exhaust all aspects that relate to the topic. Therefore in view of the above, it is recommended that further research be conducted in the geographical areas.

7.5 Summary
This chapter discussed the findings, conclusions and the implications of the results. This was derived from a survey conducted in the manner that was prescribed in chapter five which discussed the research design and methodology. It is also worth noting that the current results are based on the quantitative model used. The results could have probably been different if the methodology was different as well as if the model used was that of qualitative. It is therefore justifiable to conclude that, commuters have a great impact on the Public transport system in the Mafikeng area.
BIBLIOGRAPHY


City Press, 10/05/2005.


Sunday Times; 25/7/2005.

The Department of Transport, Moving South Africa, 1999.

The Department of Transport, National White Paper, 1996.


ANNEXURE A

QUESTIONNAIRE

1. In what age group do you belong?

<table>
<thead>
<tr>
<th>Under 20 yrs</th>
<th>31-40 yrs</th>
<th>Over 50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30 yrs</td>
<td>41-50 yrs</td>
<td></td>
</tr>
</tbody>
</table>

2. State your Gender.

| Male | Female |

3. Do you own a car?

| Yes | No |

4. What mode of transport do you use when going to work/school?

| Own Car | Bus | Taxi | Other |

5. Bicycle or donkey cart can be used as mode of transport.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

6. How do you rate the quality in terms of service for the mode you use?

| Very Satisfied | Satisfied | Not Satisfied | Other |

7. Public transport is expensive, insufficient and unreliable.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |

8. During rainy season most people experience interrupted services.

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
9. **What is the source of your household income?**

<table>
<thead>
<tr>
<th>Pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-employment</td>
</tr>
<tr>
<td>Formal employment</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

10. **Which of the following problems must be addressed first?**

<table>
<thead>
<tr>
<th>Road infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport policies</td>
</tr>
<tr>
<td>Increase the routes and quantities of public buses</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>