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**THE INFLUENCE OF FAMILY ENVIRONMENT, LIFE STRESS
AND COPING STRATEGIES ON ACADEMIC PERFORMANCE
AMONG AFRICAN WOMEN STUDENTS
AT THE UNIVERSITY OF NATAL, PIETERMARITZBURG.**

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for the degree of Master of Arts (Counselling Psychology)
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DECLARATION

This study was undertaken in the department of Psychology, University of Natal, Pietermaritzburg, and has not been submitted to any other University. Unless otherwise stated in the text, the study represents original work by the author.

Vicky Malefo

January 1995

DEDICATION

This study is dedicated to my mother, Mmakarabo, who has shared with me her own experiences as an African woman student in predominantly White universities in South Africa and overseas.

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ABSTRACT

The present study investigates the interrelationships and relative contributions of family environment, stress and coping preferences in relation to academic performance outcomes among a sample of 93 African women student at the University of Natal in Pietermaritzburg. The students' perception of their family environment was assessed through the Family Environment Scale (Moos and Moos, 1986). Information regarding coping behaviours/ preferences and life stress was elicited through the self-report measures of Ways of Coping Checklist (Folkman and Lazarus, 1980), and the Life Experiences Survey (Holmes and Rahe, 1976). The dependent variable of Academic performance was assessed through the students' weighted average marks for the year. Socioeconomic Status and other demographic factors are included in the model. The study lends support to the multidimensional models of stress and coping in the investigation of the academic performance of Black students in predominantly White universities. Multiple regression procedures were performed to examine which variables from the Family Environment Scale (FES), the Ways of Coping Checklist (WCC), the Negative Change Score (stress index from the Life Experiences Survey), and demographic variables, influenced academic performance. Control, the extent to which the family demonstrates clearly defined and enforced rules, was the most significant family environment factor in accounting for academic performance and was found to have a positive correlation with the latter. Generally, the relative contributions of the particular family environment variables in predicting performance outcomes was small. Although family environment, life stress and coping preferences were correlated on a number of dimensions, clear interactive effects between these factors were not yielded. As was hypothesised, coping efforts were found to mediate stress. Further, students' background/ demographic variables accounted for 42% of the variability in academic performance, and a number of possible explanations for these results are discussed. Finally, in evaluating the present study, suggestions concerning improvement in design and possible directions for future research are made.

INTRODUCTION

Background to the Study

Education has been a highly charged political issue for many decades in South Africa. Critical analysis of the growth of the South African education system indicates that education has always been part of broader patterns of social inequality along class, colour and gender lines. It is also noted from the literature that debates around education have always been surrounded by controversy. This has been so because access to educational opportunities by different sectors of the S.A. population became, par excellence, a function of the position in the social and racial hierarchy of each population group.

The record of the South African educational system since 1959 and its tendency to reinforce existing racial, class, and gender inequalities has caused many researchers to challenge the apparent bias in the system. Although access to higher education has subsequently improved over the last two decades (since the repeal of The University Act), barriers to academic achievement continue to be pervasive for Blacks in predominantly White universities, and the relatively small numbers of African women students in post-graduate programmes in particular, are a cause of concern.

Generally, problems of access to higher education in South Africa can be traced back to the discriminatory Extension of University Education Act of 1959 which had a negative impact on education in general as demonstrated below:

University Education Policy in South Africa

Historically, university education in S.A. has not been separated from broader political considerations. Before 1960 African students could be admitted to open universities of Cape Town and the Witwatersrand, as well as to the University of Natal. However,

in 1959 the ruling Nationalist Party passed the Extension of University Education Act, through which ethnic universities were established. This led to the gradual exclusion of Black students from open universities. Four different systems characterised admission criteria to different white universities by Black students as follows:

The Charter of the University of Potchefstroom permitted it to admit only White students. The University of Natal devised a specific system of its own whereby separate classes in separate buildings were conducted for White and Black students. The university provided for separation in extra-curricular student activities. The open universities of Cape Town and the Witwatersrand admitted Black students to all faculties on the same basis as their white counterparts with a limited number of exceptions due to special circumstances. All students attended same classes with the exception of training of medical students. All students had equal access to cultural, academic and most social activities, except for dancing and sport from which Black students were excluded (SAHR, 1954).

For an indepth review of the growth of the South African university system readers are referred to Welsh (1972).

Participation of Black Students in Predominantly White Universities

During the 1970's the relaxation of the regulations governing the admission of Black students to historically white universities took place. This was followed by the lifting of the racial restrictions on admissions in 1983, and the consequent increase in numbers of Black students entering these universities, where they still constitute a minority.

In the same year, 1983, severe cuts in the subsidy to universities was introduced by the Government, and this has had serious financial implications for both the universities, and the majority of African students on these campuses. In 1988, however, the University of Natal successfully challenged in the Supreme Court the threat to withhold

subsidies unless universities imposed the quota system, the Government's idea of campus discipline (University of Natal, 1989).

Following the influx of Black students into predominantly White universities there had been significant attention paid by social scientists to an investigation of their academic performance. From these research studies has emerged a preponderance of theoretical evidence indicating that the well-being and academic performance of Black students in predominantly White universities is impacted upon by the peculiar psychological and social adjustments required by these environments (Nettles, 1988; Prillerman et al, 1989).

There has since emerged over the past decades studies on the academic performance of "minority groups" in Australia (Miller,1970), Great Britain (McLaren, 1989), and America (Berry and Asamen, 1989; Fleming, 1984; Nettles, 1988; Prillerman et al, 1989). In South Africa, only a limited amount of research has been undertaken to investigate the academic performance of Black students in predominantly White universities.

Psychosocial Factors and Academic Performance

Literature on academic performance of Black students in predominantly White universities in the countries mentioned above point out to multiple factors which have been investigated and found to have a bearing on these students' performance outcomes. These factors can be explained in terms of the two main research categories which typically characterise studies on Black students in White universities. Research in this field typically falls into one of the two main categories, namely studies of psychological constructs within the individual and studies of environmental factors imposing on the individual. Some researchers have largely dispelled the assumption that academic performance depends entirely on cognitive factors, and have looked toward the intertwinement of socio-emotional, intrapsychic and other non-cognitive variables in the pathway to academic success or failure for Black students (Allen, 1989; Fleming, 1984; Nettles, 1989; Prillerman et al 1989). Some of the factors implicated

in the academic performance of Black students in predominantly White universities are delineated:

A. *STUDENTS' BACKGROUND FACTORS*

Some of the students' personal and background factors which have been considered in accounting for achievement outcome are: educational background (Nettles, 1988; Sanders, 1966), age (Brandford, 1961; Berg, 1973; Nettles, 1988; Sanders, 1963), gender/sex, fit between racial composition of last school attended and university campus (Nettles, *ibid*), socio-cultural background (Gounden, 1977; Moos and Moos, 1986), social and occupational status of parents, motivational variables (Allen, 1988; Fleming, 1984; Jenkins, 1989; Lockheed, Fuller, and Nyirongo, 1989) attribution of success, perception of parent expectancies (Richardson, 1990) expectations for performance (Kleemann, 1994) and family environment (Berg, 1990; Moos and Moos, 1986).

B. *STUDENTS' ATTITUDES AND BEHAVIOURS*

Students' attitudinal and behavioral characteristics have been identified as useful predictors of their general academic performance at university. These variables are said to be significantly related to both the students' weighted average and progression rate more than their personal background variables (Nettles, 1988). Some of the attitudinal and behavioral characteristics assessed as determining academic achievement of Black students in predominantly White universities are: study habits, academic integration, interfering problems such as emotional difficulties and interpersonal relationships (Nettles, *ibid*), social integration Leon (1987), satisfaction with the university, feelings of racial discrimination (Fleming, 1984; Nettles 1988), student accommodation, self beliefs and levels of preparation (Gibson, 1990; Kleeman, 1994; McLaren, 1989)

C. *FACULTY ATTITUDES AND BEHAVIOURS*

Nettles (1988) identified five variables thought to characterise the behaviours and attitudes of university faculties, and has examined the relationship between these factors and the academic performance of Black students in a predominantly White university. These factors include faculty teaching style, faculty contact with students outside of lecturers, faculty concern for student development, feelings about whether the university is racially discriminatory, and the amount of contact that faculty members have with their students. Two of these factors namely faculty teaching style and faculty contact with students outside of lectures, are said to be significant predictors of students' grade-point averages. The other two factors are perceived to be predictors of students rate of progression. These are faculty concern for student development and feelings about whether the university is racially discriminatory. The other factor, namely the amount of contact that faculty members have with their students is said to affect both the grade-point averages and rate of progression.

Nettles (ibid) found that faculties that employ less traditional teaching styles, have contact with students including outside of lectures, and have content members of staff, demonstrated positive academic performance among students. It is also apparent that the university's preparedness and commitment to addressing effectively the increasingly diverse student population has a direct bearing on the academic performance of Black students in predominantly White universities (Kleeman, 1994).

D. *STRESS AND COPING PROCESSES*

Stress and coping behaviours have also been associated with these students' success or failure at the university. Some sources of stress for Black students in predominantly White universities identified in the previous literature include: racial discrimination, having few Black classmates (Fleming, 1984; Nettles, 1988), constricted or distant relationship with faculty (Kleeman, 1994), and

perceived lack of social support (Fleming, 1984). Also implicated here are maladaptive coping strategies, and perceived locus of control (Fleming, *ibid*).

A notable common feature among the studies discussed above is a tendency to focus on the students as they are perceived to have an important role to play in assuring their own success. It seems, however, that these studies tend to extol the need to help Black students adapt to the White university environment, thereby underestimating the equally compelling need for these universities to adapt to the growing diversity of the student populations. The latter need has been the motivating force behind the most recent research debate around the issue of academic performance of Black students in predominantly White universities in South Africa (Vilakazi and Tema, 1985), and America (Kleeman, 1994; McLaren, 1989). This line of research has produced findings supporting the notion that institutions need to change to accommodate greater diversity, rather than to expect students to adapt to institutional practices. It is argued that it would be useful to both students and universities to pay attention to institutional problems that inhibit student success as well (Nettles, 1988). An investigation of how White universities could adapt to the changing profile of their student population is beyond the scope of this study, and will therefore not be addressed here. Instead readers are referred to Richardson and Skinner (1990) for "A Model of Institutional Adaptation to Student Diversity".

Within the two broad categories of research into the academic performance of Black students in White universities the concepts which emerge as central in the literature are the relationship of stress and coping behaviours and adaptation, as well as that of family factors to academic performance (Jenkins, 1989; Berg, 1990). It is therefore the aim of this study to serve as an integratory study which will not only further elucidate the relationship between each of the afore-mentioned concepts and academic performance, but will also provide an exploration of the interrelationships among family environment, stress and coping behaviours in their relation to achievement outcomes. The multidimensional or generic theories of stress and coping will be further developed to include an exploration of possible ways of improving the lives of Black students, in particular women, in predominantly White universities, as well as

to locate this within a historical context. Therefore the multidimensional theories of stress, coping and academic performance will inform this study, and will be proposed as a theoretical framework to be used in future investigations of performance outcomes of African women students in White universities.

Terminology/ Definitions:

- A. Predominantly White Universities:** universities who, by previous apartheid law, could only offer tuition to White students (U.C.T.; Natal; Rhodes; Pochefstroom; O.F.S.; Pretoria; Stellenbosch).
- B. Open Universities:** predominantly White universities who "opened" admission to Black students in 1983.
- C. Black students:** students from population groups classified as "non-White" through the previous S.A. population classification (Indian, Coloured, African).
- D. African students:** students of African origin (Sotho-Tswana, Nguni, and Tsonga).

CHAPTER ONE

1. STRESS AND COPING

1.1 Introduction

There is a common theme in the studies which have addressed the academic performance and adjustment of Black students in predominantly White universities and colleges in the United States of America (USA). This is what Prillerman et al (1989) refer to as "a problematic person-environment fit" between Black students and the social/academic setting of the predominantly White universities. This has in turn made it necessary to draw from "multidimensional" theories of stress, coping and adaptation which provide a useful conceptual framework within which to address the issue of relative higher vulnerability of Black students in White universities (Prillerman, 1989). These models are typically characterised by the following features: (a) consideration of students' personal background factors, (b) an investigation of various types and sources of stress, and (c) consideration of different factors that serve as mediators of stress to predict functional and health outcomes. Further, the multidimensional approach to stress and coping in the investigation of the academic performance of Black students in White universities provide evidence that the impact of stressful environments are mediated by personal strengths and weaknesses, as well as by social resources and obstacles.

This chapter will provide some theoretical overview of the models of stress and coping which will inform this study. Attention will be paid to the multidimensional models thought to be relevant to the investigation of stress, coping and academic performance among African women students.

1.2 Models of Stress and Coping

1.2.1 The Transactional Models of Stress

The transactional models of stress have played a significant role in the stress research by bringing into play a wide spectrum of human cognitive activities. This approach represents a conceptual shift from the non-specific medical model of the 1930's to a more specific model which incorporates the environmental and psychological stimuli in the explanation of the development of stress among individuals.

In the transactional models like the one developed by Lazarus and colleagues, stress is usually perceived as an intervening variable which reflect the interactions or transactions between the individual and the environment. The transactional models do not, however, assume that life threatening situations are inevitably stressful (Singer and Davidson, 1991). Rather, a situation in the environment is considered to be stressful only if the individual's appraisal of it, and of his/her own resources, suggests that it is threatening or disturbing. These models of stress are said to be human-oriented (Singer and Davidson, 1991) in that they use psychological measures, both for how the individual evaluates the stress as well as in terms of the individual's reactions to the situation.

Comprehensive reviews of the interactionist/transactional approaches to stress have been provided by Gibson (1987) and Michelson (1991), and will not be discussed here. It is important however to provide a brief overview of some of the significant criticisms levelled at these models.

1.2.2 Some Critiques to the Transactional Models of Stress

Criticism towards the transactional models of stress centres around two main issues, namely appraisal and individual differences.

Appraisal is said to occur repeatedly subsequent to the introduction of a stressor. There is an assumption here that circumstances once thought of as innocuous or challenging may become stressful as appraisals and coping are modified. This explanation of the stress process has been criticised for being mechanistic in that it mimics the cause and effect relationship of the natural sciences which are usually perceived to be neutral.

The transactional models of stress have also been criticised for disregarding individual differences in reaction to stress, e.g that individuals may be exposed to various amounts of stress, which variation may occur in terms of, for example, the frequency, the pattern, or the number of stress exposures. Other individual difference variables that are underplayed by transactional models are differences in individual interpretation of stressful situations, choice of coping styles, nature of the circumstances around the stressful situation which in turn determines how the stress is moderated, and the presence or absence of social support (Singer and Davidson, 1991).

In summary, the transactional models of stress perceive the subject as an intentional individual, thereby implying that an individual is able to act intentionally on the environment without necessarily being constricted by genuine environmental restraints and the meaning inherent in events following their appraisal. It is vital however to locate any conceptualization of stress within a broader understanding of the political and social conditions underlying stressful events through acknowledging that psychosocial stimuli are capable of producing a stress response, and also that the psychological meaning ascribed to an event can mediate the stress response. It could be argued therefore that for a more comprehensive theory of stress, there is a need to incorporate an understanding of these psychological factors and the role of psychosocial stimuli. It is also felt that these underlying stressful events should be located within a historical context if effective preventive and corrective programmes are to be developed to counter the development and/or recurrence of stressful life events.

1.2.3 Critical Models of Stress

In an endeavour to counter the ideological shortcomings of the interactionist approach demonstrated by the transactional models, the critical approach was developed. These models' point of departure is a need to recognise social and psychological factors as integral components of the stress process. They emphasise that stress should be perceived not as just a function of events, but rather as including underlying social structures and personality factors. It is further argued that personality and social variables are constituted by other broader issues like, for example, personal history, gender, socio-economic status, and employment conditions. Gibson (1987) cautions against simply including the latter additional factors as stressors in themselves. The author emphasises a need to consider these factors' own determinants like people's socio-political and socio-economic positions in the society, as well as the values and structures of their society. It is hoped that this will provide a more analytic model than the interactionist / transactional one, that locates the relationship between the individual and the stressor within a broader social context.

The critical models of stress identify four groups of factors which are thought to constitute and produce the stress experience. These are:

- (a) levels of socio-economic advantage;
- (b) exposure to life events;
- (c) the nature of one's interpersonal relationships; and
- (d) one's intrapersonal strengths and weaknesses.

To understand the relations among the four factors mentioned above in the production and constitution of stress is of vital significance to this study. It is important in that it gives suggestions for the interpretation of results, to overcome the ideological difficulties posed by the interactional models.

The critical models of stress, therefore, serve to identify sources of stress by locating them within the broader social and political contexts. As Gibson (1987) pointed out,

a "need to examine and assess the validity of models of stress, not just in terms of their value as scientific processes, but also as regards their ideological consequences", is apparent. In attempting to further develop the critical approach to stress the present study proposes an incorporation of the exploration of possible solutions to remedy stressful life situations. The latter would, hopefully, provide guidelines toward improving the quality of life of the subjects of these studies.

1.3 Implications for the Present Study

Stress and coping are viewed in this study as closely associated, with coping being understood as an integral part of the process of stress. Further, stress is viewed as an outcome of the transactions between the individual and the environment. The study hypothesises that African women students who participated in this research will experience negative life changes which would have a negative impact on their well being. It is further hypothesised that experiences of stressful life events as indicated by the subjects' scores in the life stress index, will have a negative effect on their academic performance. This study will also adopt a view of stress which includes an exploration of the role played by material and socio-political conditions in the production of stress. To this end, the relationship between the subjects' socioeconomic status and their scores on the life stress index will be explored in the analysis section of this study.

1.4 On Coping

"Coping" is understood as a product of intrapsychic functioning by some theorists, e.g Haan (1977), and as a personality trait by others like Lazarus (1985) and, Billings and Moos (1980). Other theorists have also conceptualised "coping" as a transaction between individuals and their environment (Folkman and Lazarus, 1980; Lazarus and Folkman, 1991). Generally literature on the study of coping seems to indicate that it plays a significant role in producing and mediating stress.

The models of coping developed by Lazarus and his colleagues (1991), and Pearlin and Schooler (1978) will inform this study. The main tenets of these models are discussed below:

1.4.1 Models of Coping

In the model of coping developed by Lazarus and his colleagues, coping is understood as being a transaction and process orientated phenomenon which involves the individual and his/her environment. The cognitive and behavioral responses that people report in response to stressful events as well as how the person appraises what he/she experienced and uses that information in coping to shape the course of events, are emphasised in this model. Further, the degree to which the person experiences psychological distress i.e feels harmed, threatened or challenged in any given situation, is said to be determined by the evaluation of what is at stake as well as the evaluation of coping resources and options (Coyne and Lazarus, 1980).

It is thus argued in this model that the ongoing relationship with the environment for one's well-being would lead to coping processes which are consistent with one's own personal agendas. Further, the effects of the coping would in turn be appraised and reacted to as part of the continuous flow of psychosocial and physiological processes and events. Thus coping behaviours and cognitive appraisals of the individual-environment transaction are said to be in constant interaction. Also, these coping efforts and appraisals are said to have a mutual influence on each other in an endeavour to adapt to or change the situation which is seen as threatening. Coping is generally understood as a mediator of emotional states in this model. Variability in coping behavioral patterns are accounted for in this model by situational determinants and personality determinants. With regard to the situational determinants of coping, it is argued, for example, that coping demands produced by different situations would encourage certain types of coping behaviour, and that these coping behaviours are in response to features of the situational demands. With regard to personality determinants of coping responses, Lazarus and his colleagues' model asserts that certain personality dispositions may influence specific coping behaviours as they yield

an approach to dealing with problems that shape or obstruct the range of coping processes in a given situation. For example, long-term personality dispositions may influence the choice of coping responses.

Another well developed model of coping, which is of particular relevance to this study, is the one that addresses how people cope with everyday life stresses like, for example, occupation or even being a student. The model, developed by Pearlin and Schooler, is discussed below:

Pearlin and Schooler (1978) contend that most literature on coping has tended to focus on highly individualised intra-psychic methods. The authors further note a bias towards unusual populations e.g people with exceptional/ pathological characteristics, or unusual events dominating research on coping. They draw attention to inadequate focus placed on how most people, who do not portray either pathology or exceptional characteristics, cope with their everyday life stresses. It is also noted that coping measures have also been deficient or inappropriate for addressing everyday life experiences / stresses. This model therefore purports to address itself to "aspects of structured social experiences that adversely penetrate people's emotional lives" (Pearlin and Schooler, *ibid*, 2) by focusing on "normative coping responses to normative life-problems" (*ibid*).

A significant feature of this model is the differentiation made between social resources (e.g family and friends), psychological resources (e.g. personality characteristics), and specific coping responses. The latter refers to the behaviours, cognitions and perceptions that people demonstrate in dealing with problems. It includes responses that change the situation from which stressful experiences emerge, responses that control the meaning of the strainful experience once it has taken place but before stress emerges, and responses that function for the management of stress after it has occurred. These responses are said to be conceptually and empirically independent, although they may be influenced by one's psychological resources.

Pearlin and Schooler (1978) go on to explain how social structural conditions may influence the development of particular coping patterns. They argue that "... social structural conditions not only discriminate in placing more strain on some groups of people than on others, but they seem as well to cause the very segments of society that are under strain to have less effective coping repertoires. The striking fact that groups most exposed to hardship are also least equipped to deal with it gives some urgency to understanding better the process by which people are led toward or away from various coping responses and resources..." (p 18). It is further argued that "coping failures, therefore do not necessarily reflect the shortcomings of individuals; in a real sense they may represent the failure of the social systems in which the individuals are enmeshed" (Pearlin and Schooler, *ibid*, p 18).

In summary, the authors emphasise a need to look beyond personality characteristics of individuals, to the specific responses to problems in various social situations for us to gain better understanding of the process of coping. Coping is seen as a multidimensional construct which functions at various levels, through various behaviours, cognitions, and perceptions. Flexibility is regarded as imperative to effective coping.

A serious limitation of the situation-specific approach to coping rests on its inability to produce results that can be generalised. This is attributed to the fact that since studies usually identify coping strategies in response to particular and unusual situations, it becomes difficult to generalise findings to other situations. In an attempt to counter the latter shortcoming, Shinn and Krantz (1981) suggest looking at how subjects "typically" cope in order to address the problem of coping inconsistency.

1.5 Implications for the Present Study

The situation-specific approach to coping will be adopted in this study in an attempt to address coping efforts demonstrated by African women students at the University of Natal, Pietermaritzburg, in response to their present circumstances. This approach provides a useful framework to study coping efforts through its comprehensive and

inclusive description of coping. Research in this field has indicated that individuals seem to combine kinds of coping behaviour in relation to the situation and specific problem that they are coping with (Pearlin and Schooler, 1978), as well as their personalities (Folkman and Lazarus, 1980). The approach also provides useful guidelines for conducting research into specific coping behaviours demonstrated in response to the demands of particular situations.

Within this frame of reference, coping will be seen as a multidimensional construct which involves both emotion-focused and problem-focused coping behaviours. These coping behaviours are further understood to be characterised by cognitive (intra-psychic) and behavioral coping strategies, as well as by both more rational problem-solving behaviour and less rational behaviours which are defensive. Coping behaviour is viewed as serving two major functions, namely: (a) problem-focused, i.e directing resources in order to change the source of the stress, and (b) emotion-focused, i.e using intrapsychic activities to decrease the tension aroused by stressful situations. This study will concern itself with the relationship between specific situational factors, coping styles and academic performance. The study hypothesises that those African women students who score high on the life stress index, will demonstrate ineffective coping behaviours. Thus the coping styles of the students will be explored through an examination of the effectiveness of certain coping responses. This will be accomplished by an analysis of the relationship between coping efforts, in particular problem-focused coping styles, and the life stress index.

1.6 Summary

The above conceptualization of stress and coping is in keeping with the multidimensional models that yield a comprehensive framework by which different stress responses and coping repertoire as well as differences between individual responses can be explained. These models provide useful conceptual tools with which the problem of Black academic performance and well-being in predominantly White universities can be investigated. The models also allow us to unravel factors that are likely to be involved in the production of stressful life circumstances. The latter is

accomplished through paying attention to how contextual factors can serve as precursors or mediators of stress-related outcome, and also through emphasising the process of adaptation over time. Most importantly, the multidimensional models offer the opportunity to study Black students who are functionally successful. Finally, multidimensional models of stress and coping may help identify various points of the process of adaptation as well as various aspects of the causes of stress as targets for meaningful corrective and preventive programmes of intervention.

Having explored the generic models of stress and coping, it is necessary to discuss in detail the conceptual model developed by Prillerman (1988) to investigate stress and coping processes among "ethnic minority" students at predominantly White universities in the U.S.A. This method will be adopted in the investigation of stress, coping and academic performance of African women students who participated in the present study.

CHAPTER TWO

2. STRESS, COPING AND ACADEMIC PERFORMANCE

2.1 Introduction

The previous chapter highlighted some of the models of stress and coping, and has also delineated the particular research approach adopted in the present study. This chapter will focus on a review of some of the studies that have addressed stress and coping, and academic performance among Black students in predominantly White universities, with special reference to Prillerman's (1989) model which will inform this study. The final section of this chapter will focus on the significance of family variables in predicting achievement outcomes, followed by a discussion of the relationship between family environment and academic performance.

Much empirical attention has been paid to generic models of stress in the prediction of individual functioning including academic performance. Thus various factors have been implicated in accounting for achievement outcomes for Black students in White universities in countries such as Australia (Miller, 1970), Great Britain (McLaren, 1989), America (Berry and Asamen, 1989); Nettles, 1988; Prillerman et al, 1989) and in Malawi (Lockheed et al, 1989).

Some of the students' background factors measured by these studies are gender, race, age, socioeconomic status (Barry and Asamen, 1989; Fleming, 1984; Nettles, 1988), level of academic preparation (Kleeman, 1994; Nettles, 1988). These studies have also identified several sources of stress hypothesised to impact outcomes, e.g transitional events, acute life changes, availability of financial aid, daily hassles and chronic role strains (Pearlin and Schooler, 1978). Other researchers also found social support, social integration and satisfaction, degree

of alienation and perceived supportiveness of the environment to have a direct bearing on performance outcomes. There has also been an etiological link between psychosocial stresses and mediators with a variety of physical, psychological and functional outcomes. For example the relative effect of using different adaptational strategies to cope with stressful situation is said to be a significant mediator of stressful events among students (Lazarus and Folkman, 1984; Sarason and Johnson, 1978). It has also been argued that "the impact of stressful environments are mediated by personal vulnerabilities and strengths, as well as by social resources and obstacles" (Prillerman et al, 1991). The authors attribute the latter argument to the fact that :

"... Many of the stresses that ethnic minorities face, and the coping options and resources that may be used, are influenced by the perceived lower status of ethnic minority groups in our society. Therefore, whether persons from low-status groups, such as Blacks, are able to cope successfully in high-status university settings would appear to depend not only on their personal attributes and resources but also on whether appropriate resources exist for them at the university and whether they have effective access to and can use the resources of the university ..."
(Prillerman et al, ibid, p 204).

It could be argued that the university environment can either foster effective coping and adaptation in African women students or it can interfere with and stifle coping, as social status position seems to impact access to coping resources. The present study will therefore reiterate Lazarus and his colleagues' position which argues against the conceptualization of the dynamics of stress and coping in individualistic terms. It is argued here that problems encountered by Black students in White universities do not necessarily reflect failed individual efforts to cope with stress.

2.2 Black Students in White Universities - Research Themes

Research which has addressed performance outcomes of Black students in predominantly White universities usually focus on the following themes: (a) perception of the university campus as hostile or supportive (Allen, 1988; Kleeman, 1994; Leon, 1987; McLaren, 1989; Nettles, 1988); (b) feelings of alienation (Fleming, 1984), also see Jocelyn (1992) and Bekker and Mqingwane (1983); (c) "status-related pressures" including the following: achieving a desired level of academic performance, a need to establish a meaningful identity as a Black person, the need for increased Black unity, developing long-range career plans, pressures from male-female relationships (Nettles, 1988) and family/parents' demand for students' labour (Lockheed et al, 1989); (d) coping / adaptational strategies (Allen, 1986; Gibbs, 1974); (e) social relationships and support (Fleming, 1984).

It has been argued that the above factors constitute some of the strongest predictors of negative academic outcomes for Black students in predominantly White universities.

Prillerman et al (1989) developed an integrative conceptual model to account for how the aforementioned factors interact to predict the outcomes observed among Black students in White institutions. This model was developed through a conceptualization of reported experiences of Afro-American students at White universities from a stress, coping, and adaptation point of view. It delineates the assumed interplay of sociocultural and psychological processes in the adjustment and achievement of Black students in these universities. Central to Prillerman and colleagues' theory is a view that academic performance of Black students hinges on the transactions between the individual and the environment as well as related sociocultural processes within the university, rather than on academic and intellectual factors that are usually appraised. The model identifies seven variables that are thought to influence adaptational outcome among Black students in predominantly White universities.

The process variables of Prillerman's model appear on Figure 1 below. This will be followed by a summary discussion of individual process variables implicated in the academic performance of Black students.

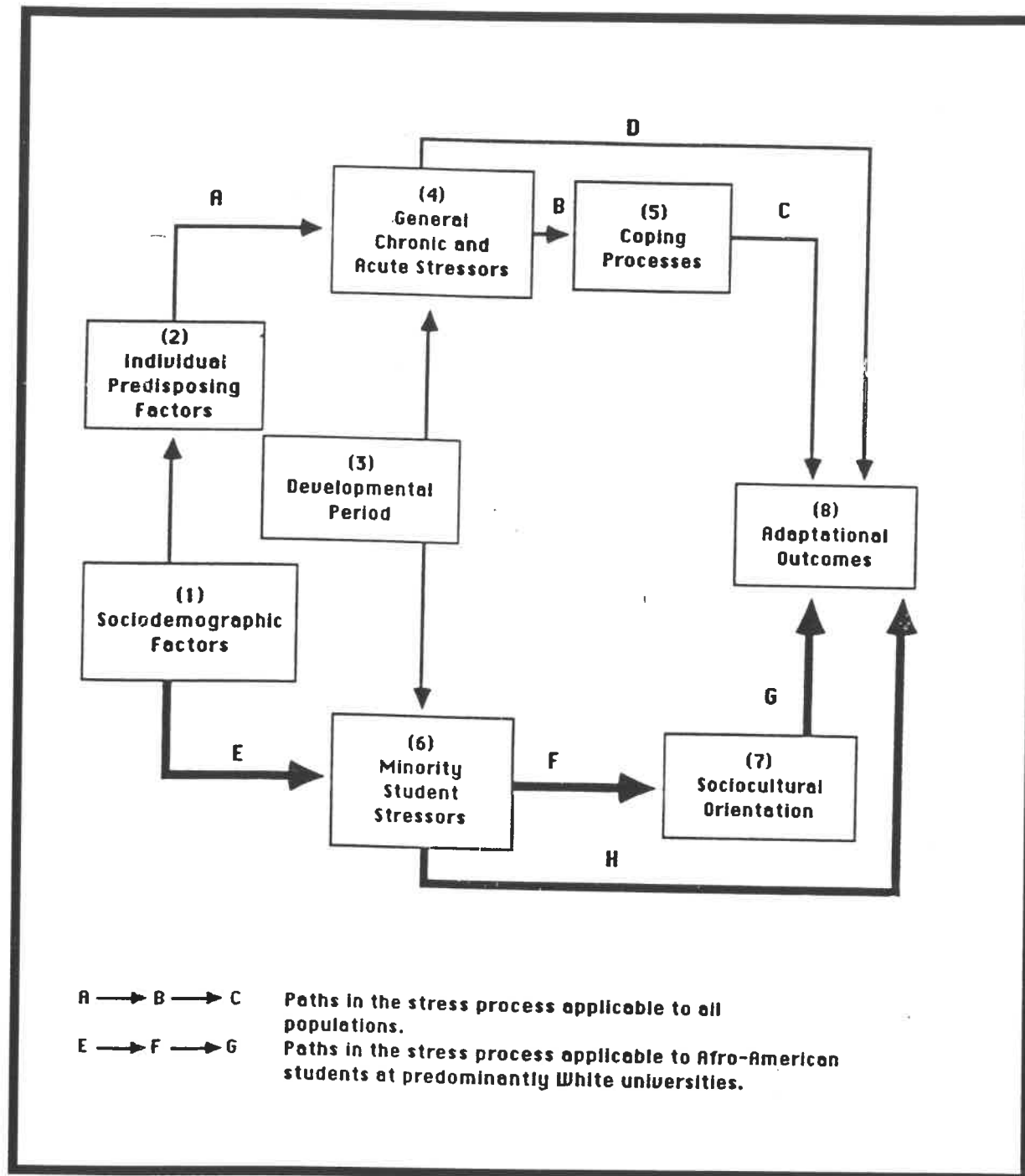


Figure 1: Model of Stress and Coping Processes of African Students at a Predominantly White University (Prillerman, 1989).

2.3 Prillerman's Model of Stress and Coping Processes of Black Students in Predominantly White Universities, (U.S.A.)

2.3.1 Sociodemographic Factors

These include variables like gender, race, socioeconomic status and degree of previous exposure to people of other racial groups.

2.3.2 Individual Predisposing Factors

These include those factors which are perceived as traditional predictors of university preparation like matriculation aggregate.

2.3.3 Developmental Period of the Students

Here is included issues like establishing interpersonal relationships, identity formation, and development of autonomy from one's family.

The three factors discussed above are said to be important background factors, precursors, and are considered to influence the stressful experiences of university students.

The model further includes what is referred to as the "generic" pathway by which stress is hypothesised to effect performance outcome. This links life stresses, coping strategies and outcomes as defined in the traditional models of stress, viz:

2.3.4 General Acute and Chronic Stressors

This includes the sources of stress experienced by many university students like financial difficulties, academic pressures and living in residence.

2.3.5 Coping Processes

This includes specific coping behaviours , the availability, use and satisfaction with social support networks, and the cognitive appraisal of the stresses faced by individual students. These variables are said to mediate the impact of stress on outcomes. For example, it is argued that the way in which a student perceives a stressful event, or copes with it, can buffer or exacerbate the impact of the stress. It is also argued that stress can have direct effect on outcomes independent of coping and other mediating factors.

Prillerman's model further identifies an additional pathway which is considered to be a minority-status pathway. This pathway reflects what is perceived as the unique experiences of Black students at White universities. It includes the following:

2.3.6 Minority Student Stressors

This refers to stressful occurrences that are perceived and attributed to being an ethnic minority student at a White university. Some of the minority student stressors include experiences of racial discrimination, as well as "chronic features of the context" (Prillerman, 1989) like having few Black faculty or Black classmates. These stressors are also thought to increase the overall stress load and stress-related risk among Black students and other minority students. Also, these stressors are perceived as exerting their effects on outcomes in two ways, viz independently or by being mediated by students' sociocultural orientation.

2.3.7 Sociocultural Orientation

The sociocultural orientation construct is based on the four patterns of adaptation among Black students as identified by Gibbs (1974). The patterns are assimilation, withdrawal, separation, and self/group affirmation. These patterns of adaptation are considered to be indicative of relatively stable modes of coping, and are included in the model as an index of the adaptational styles developed by Black students to cope with the stresses of a "multiracial" environment. Examples of latter stresses are racial identity conflict, racial conflict as well as pressures for Black students to become fully assimilated into the dominant majority culture.

It is further argued that the patterns of adaptation adopted by Black students in White universities or their sociocultural orientation should be viewed as having both advantages and disadvantages in that it has a potential to either hinder or help effective functioning. It is argued for example that those adaptations that may facilitate high academic performance may do so at the expense of the student's personal identity or psychological well-being. On the other hand, it is further argued, the adaptations that enhance ethnic identity and social activism may do so at the expense of the student's academic performance. The two pathways are seen as mutually inclusive. They can occur simultaneously, for example where a student's academic failure is due to both inadequate mastery of the material and to racial discrimination. The pathways can also occur in an interactive way. For example having few Black classmates could impinge negatively on the student's interpersonal relationships.

2.3.8 Adaptational Outcomes

Here the model identifies the adaptational outcomes of interest, said to be products of the stress-coping process. Examples include functional outcomes like academic performance and achievement; psychological outcomes like depression

and anxiety or sense of well-being; and physical outcomes like somatic symptoms.

It is argued that the variables in this model might differ in the extent to which they contribute to these individual outcomes.

In summary, Prillerman and colleagues assert that theories of stress, coping and adaptation offer a useful conceptual perspective from which to address issues of Black students in predominantly White universities. They emphasize the usefulness of multidimensional models of stress, coping and adjustment as conceptual tools in the investigation of the academic performance of Black students in these campuses. Of particular significance to the present study is the authors' emphasis on the need to include consideration of personal background factors, various types and sources of stress, as well as different factors that serve as mediators of stress in predicting functional and health outcomes among Black students in predominantly White universities.

2.4 Implications for the Present Study

In keeping with Prillerman et al's multidimensional approach, the present study will conceptualise academic outcomes as not predictable simply from cognitive factors like academic preparation. It will be argued that the interaction between background and personal attributes, adjustment problems, and the development of maladaptive coping strategies all seem to give an additional risk for poor academic performance and psychological distress in a large percentage of African women students who participated in the present study. For purposes of this study, some of the background variables explored include the students' socioeconomic status, demographic variables such as age, and, most significant to this study, family environment. Therefore in the analysis section of this study, an attempt will be made to determine the relationship among levels of stress, coping behaviours, and academic performance demonstrated by subjects of this study.

2.5 Family Environment and Academic Performance

The need to recognise the students' background variables in predicting performance outcome has emerged as a dominant theme in the literature reviewed for the purpose of this study. Several studies have found a significant relationship between family variables such as family structure (Berg, 1990), family environment (Moos and Moos, 1986) and academic performance. The emotional climate and transactional patterns within the family environments, expectations of parents for achievement and parental attributions about the students have been found to influence the academic performance of the students (Hess and Holloway, 1984). A picture of parents' characteristics and their relationship to their children has also emerged in relation to high and low achievers. In underachieving families, the parents attempt to force their children into a pattern of non-aggression and dependency, and also tend to be more domineering, overrestrictive, and apt to use more severe and frequent punishment (Clark, 1983). On the other hand, parents of achievers try to give their children more approval and praise, are closer to their children, and show more interest and understanding. Lee (1984) cited by Jenkins (1989), identified eight psychosocial family variables said to contribute to the academic success of rural Black adolescents in America. These are:

1. Closely knit family structure
2. High degree of parental control
3. Moderate to high degree of family openness
4. High degree of educational encouragement
5. Strong family values
6. Good relationships with sibling role models
7. Extended family members, and
8. Sense of responsibility fostered by required chores.

It is therefore apparent that parents' interest in the student's education, their general awareness, as well as family finances do impact on the children's

academic performance. The achievement motivation of the family, e.g. high expectations and aspirations of the parents, were also found to have a positive relationship with students' academic performance. Generally, studies on family factors and academic achievement indicate that effective learning becomes difficult in a situation where a student is overly involved in family difficulties (Kaslow, 1977).

Research on the effects of family background on students' academic achievement has been criticised for suffering from conceptual and methodological flaws (Lockheed, Fuller and Nyirongo 1989). Some of the conceptual flaws identified by these authors include

the tendency to limit the concept of family background to the material aspect of class, thereby failing to consider other significant family background factors like motivational variables, that affect students' academic performance; tendency to use measures of family background that are conventional for industrialised environments instead of using indicators of class that are more culturally valid for the particular setting/country in which the study is conducted. Measures often used include parents' educational background and their occupational status.

With regard to methodological flaws, it has been argued for example that prior research on family effects on students' academic performance have been limited to cross-sectional data that are incapable of differentiating the initial level of students' achievement over time, which in turn tended to confound the effects of both school and family attributes.

To address these shortcomings, Lockheed et al (1989) recommend inclusion of "a broader range of students' background indicators" e.g students' motivation, as well as "relevant social class indicators" in the research analysis.

2.6 Summary

In this study, family environment is perceived as a significant background variable that would be expected to impact on the students' academic performance. The study will pay attention to the perception of their family environment by the students who participated in the research, in an attempt to explore possible relationships between family environment and academic performance. A further attempt will be made to identify any possible relationship between family environment, stress levels, and the subjects' ways of coping. The study will also attempt to include broader background variables in the analysis of the results of this research by exploring possible relationships between academic performance and certain situational and demographic variables of the students. These will be drawn from the variables recommended by Prillerman (1989). It should be noted however that a degree of variability will be expected from individual perception of their family environments, as would be expected with their stress levels and coping efforts.

CHAPTER THREE

3. THE RESEARCH STUDY

3.1 Aims and Hypotheses

In keeping with the rationale developed in the previous chapters, the main aim of the present study is to serve as correlational study whose objectives can be located at three significant levels. Firstly, the study purports to highlight the profile of African women students in the residences of the University of Natal in Pietermaritzburg (UNP), as well as to identify and make known factors or issues that impinge on their academic performance as African women in a predominantly White institution. Secondly, at a theoretical level, this study aims to explore family environment, life stress, and coping preferences in relation to academic performance of African women students who participated in this study. Special attention will be paid to problem-focused coping behaviours in an attempt to investigate whether these mediate the level of stress experienced by these students. Attention will also be paid to certain situational and demographic variables in an effort to determine the extent to which these variables affect academic performance. Finally, the study aims to provide guidelines to further research addressing the academic performance of African women students in predominantly White universities. The multidimensional approach is proposed as a useful theoretical frame of reference that could be used in studies such as the ones described above.

The independent variables of this study will be measured through an analysis of the subjects' scores on the ten dimensions of the Family Environment Scale for family environment; an analysis of the subjects' scores on the negative life change events of the Life Experiences Survey for life stress; and an analysis of self-report scales obtained from The Ways of Coping Checklist (WCC) for coping behaviours/preferences. The weighted average obtained for various courses during the year 1993 by students is used as an indicator of the dependent variable of academic performance.

3.2 Hypotheses

* Discussion

Several studies have investigated the relationship between stressful life experiences and coping mechanisms, and have concluded that "people with a large number of life events they regard as Bad and having had a Great Effect on their lives are more vulnerable to maladaptive stress reactions ..." (Sarason and Sarason, 1980 p.140).

While there is evidence of the wide research carried out to investigate problems of adjustment experienced by "Black" students in predominantly White universities, there is an apparent lack of similar studies which specifically address life experiences and sources of stress amongst African women students, how these students cope with their current situation, their perceptions of their family environments, and how these impact on their academic performance.

The present study is therefore an exploratory integratory one, attempting to explore the issues mentioned above. In keeping with the rationale explained above, the general hypotheses of the present study are presented as follows:

1. It is expected that a significant number of African women students (AWS) who participated in this study will experience a large number of life events that they regard as stressful and having extremely negative impact on their lives, and that there will be a significant correlation between the students' exposure to stressful life events and academic performance (the greater the number of negative life events, the lower the academic performance and vice versa).
2. It is hypothesised that a significant relationship will be found between the students' negative life change events score, the stress index, and coping behaviours. In other words, the higher the negative life change event score, the more likely that the students will demonstrate maladaptive coping behaviours, which in turn will affect negatively their academic performance. Conversely, students with a high positive life changes event score will be expected to demonstrate more problem-focused coping behaviours whose main objective would be the direct modification of problem situations. These students will

demonstrate greater academic performance. However, this study will concern itself with the negative change score only.

3. Perception of Family Environment is hypothesised to be an important determinant of possible differences in the students' life stress score, coping behaviours, and academic performance. Students who perceive their family as supportive (as indicated by high scores in Relationship and Personal Growth dimensions of the (LES) will demonstrate greater academic performance than those who perceive their families as less supportive (i.e with lower scores of the same measures).
4. Finally, it is hypothesised that certain situational and demographic variables like age, socioeconomic status, and whether or not a student had failed a course before, will have a positive correlation with their academic performance.

3.3 Subjects

Although historically African Women Students have been not well represented at universities, current investigations point out to the increase in numbers of these students at predominantly White universities. However, the literature reviewed for this study demonstrated lack of significant attention paid to the investigation of the academic performance of African women students in particular. Thus although the performance outcomes of the increased number of Black students entering predominantly White universities has received considerable attention, it seems no attempt has been made by researchers to investigate the academic performance of African women students in these institutions. In this study, therefore, an attempt is made to explore some of the factors that could possibly affect the academic performance of African women students in predominantly White universities.

The subjects of the present study consisted of 93 African women students in the main residences as well as some of the off-campus accommodation establishments of the

University of Natal, Pietermaritzburg. The residences and/or student off-campus accommodation from which the sample was drawn were selected on the basis of being the largest and therefore most representative of the various faculties and levels of study. Thus the researcher visited the selected residences during August 1993.

The sample included students from various faculties and levels of study, and the distribution of age among them were: Under 20 (33); 20-24 years (33); 25-29 years (18) and 30 years and above (5). All students who participated in the study consented to have details of their academic record accessed by the researcher.

In total, 264 questionnaires were distributed. Of the 97 questionnaires returned, only 93 were valid.

The sample of the present study is largely a non-probability sample (Bailey, 1978) whereby the probability of selection is, to some extent, unknown. Bailey (ibid) asserts that small-scale surveys often resort to non-probability samples because despite the drawbacks that arise from their non-representativeness, they are considerably less expensive, are far less complicated, and can prove adequate in instances where the researcher has no intention of generalizing the findings of the study beyond the specific sample studied. The study also contained elements of convenience sampling as the researcher relied on volunteers from the residences only.

3.4 Instruments Used

Various instruments were selected for use in the present study. In the next section, descriptions as well as the rationale for the selection of these instruments will be provided.

3.4.1 Ways of Coping Checklist (WCC)

The Ways of Coping Checklist (WCC) (Folkman and Lazarus, 1980) is a self report measure which comprises a checklist of 68 items which describe a broad range of behavioural and cognitive coping strategies that people might use to deal with stressful situations. The coping strategies were obtained from the framework suggested by Lazarus and colleagues (Lazarus et al, 1974) as well as from suggestions put forward in the coping literature. Included here are items which cover such areas as defensive coping (e.g. isolation, suppression, avoidance, problem solving, information-seeking, inhibition of action, and direct action).

The WCC was constructed with the assumption that coping strategies are responsive to the specific situations in which they take place. This assumption is in keeping with the critical approach which, although based upon the interactional model, incorporates an understanding of the role played by material and sociopolitical factors in the production and constitution of experiences of stress and coping.

Folkman and Lazarus (1980) categorised the items of the WCC into two broad groupings namely problem-focused and emotion-focused. Problem-focused coping includes items that describe cognitive problem-solving efforts and behavioural strategies for managing or altering the source of the problem. The emotion-focused category includes items that describe cognitive and behavioural efforts aimed at reducing or managing emotional distress. The definition of these broad categories of coping avoids confounding it with outcome through emphasizing efforts employed to manage stress notwithstanding their success.

Eagle (1987) has criticised the WCC for failure to identify the more specific problem-focused strategies that may be used to cope with a stressful event. Some authors have argued that each of the broad categories of the WCC contain more specific coping strategies. For example the emotion-focused category contains more specific strategies like fatalism, withholding, wishful thinking. On the other hand, specific strategies

within the problem-focused category would include information seeking, taking direct action and seeking social help.

Vingerhoets and Flohr (1984) have criticized the WCC for its inability to assess more specific coping strategies. To address this shortcoming, the authors subjected the raw scores on the WCC of a sample of 300 adults to a principal component analysis with varimax rotation where six factors with eigenvalues above 2.0 were yielded. These factors are:

1. Wishful Thinking / Escape,
2. Acceptance,
3. Problem Focused / Help Seeking,
4. Emotional Withholding,
5. Self Blame, and
6. Growth.

Vingerhoets and Flohr (ibid) found that the six factors were interpretable, and that they accounted for 44.7% of the variance in their study. The use of these scales resulted in a somewhat shortened version of the WCC, with only 60 items.

There appears to be problems in using the problem-focused/help seeking scale in coping research (Cf Eagle, 1987). The latter author argues that the scale (problem-focused/help seeking) appears to subsume two relatively distinct coping styles. The first method is said to concern coping strategies which involve direct cognitive or behavioural problem-solving efforts. The second method concerns specific help-seeking activities. In addressing the above shortcomings of the problem-focused/help seeking scales, Eagle (1987) developed a 4-item scale concerned only with Help Seeking efforts, in order to allow direct comparison on the Help Seeking variable alone. The reliabilities (Chronbach's) corrected for the number of the coping scales used in Eagle's (1987) study were:

Wishful Thinking/Escape (0.784); Acceptance (0.647); Problem Focused/Help Seeking (0.392); Emotional Withholding (0.603); Self Blame (0.590); Growth (0.680); and Help Seeking (0.698) in that order.

Eagle (ibid) further modified the WCC in responding to suggestions put forward by Billings and Moos (1981). The binary Yes/No response was replaced by a five point likert scale ranging from 1.(Never) to 5. (Always). Instead of merely eliciting a response to using a specific coping strategy, the likert scale taps the frequency with which a particular strategy is used.

The present study used the WCC version developed by Eagle in an attempt to explore the frequency with which the subjects of this study used particular coping behaviours. Following is a brief discussion of the WCC scales:

1. Wishful Thinking - Escape (16 items)

This refers to emotion-focused coping strategies which centre around cognitive efforts to escape from emotional distress through using techniques such as wishful thinking, denial, humour and fantasy. Examples: Daydreaming or imagining a better time; Joking about it.

2. Acceptance (13 items)

This refers to emotion-focused coping strategies which indicate acceptance of stress following its emergence. This scale includes both the cognitive and emotional coping strategies used to minimize the effect of stress like patience, substitute activity, and bargaining. The scale includes several items which are negatively correlated with "acceptance", and are therefore scored in a reverse direction. Examples: Accepting understanding and sympathy from someone; Taking it out on other people (negative correlation).

cognitive efforts which recognize the creative, growth possibilities that may be brought about by stressful situations. Examples: Feeling you change or grow as a person in a good way; Being inspired to do something creative.

7. Help - Seeking (4 items)

This refers to specific problem-focused strategies whereby efforts are directed towards other people in order to obtain information and help. Examples: Talking to someone who can do something concrete about the problem; Getting professional help and doing what they recommend.

The WCC has been found to be one of the most comprehensive coping measures currently available. Some of the advantages of using the WCC are: firstly, that it can be readily used for both intra-individual and comparative analyses; secondly, that it allows individuals to characterize their coping thoughts and actions in a complex manner; and thirdly, it is easy to use and administer and therefore requires little training. The scores of the WCC are absolute, and not relative to each other.

In keeping with the situation-specific model of coping (Folkman and Lazarus, 1980), the current study employed the WCC to investigate how African Women Students at UNP respond to their present situation as students in a predominantly White university. It is noted however that the AWS population is not homogenous as it is comprised of students from various socio-economic and educational backgrounds. Therefore the situation of AWS does not represent one specific event, but a series of events with various problems. Therefore no attempt was made in the present study to isolate specific stressful events. Rather, subjects were asked how they might generally cope across a broad range of situations. Further, subjects were asked to indicate, on a five-point scale, how frequently they normally or typically cope with their problems. The rationale for introducing the five-point scale was to enhance rather than constrain possible relationships between coping responses and various other measures (Eagle, 1987).

3.4.2 Family Environment Scale

The Family Environment Scale (FES) (Moos and Moos, 1981) was used in the present study to assess the students' perceptions of their family environment. The scale consists of 90 items, each requiring a true "T" or false "F" response. It is further categorised into 10 subscales which measure three areas of the family environment, namely Relationship Dimensions, Personal Growth Dimensions, and System Maintenance Dimensions. The descriptions of the FES subscales and dimensions are illustrated in Table 1 which appear in the next two pages:

Table 1 - Family Environment Scale Subscales and Dimension Descriptions

RELATIONSHIP DIMENSIONS		
1.	Cohesion	The degree of commitment, help and support family members provide for one another.
2.	Expressiveness	The extent to which family members are encouraged to act openly and to express their feelings directly.
3.	Conflict	The amount of openly expressed anger, aggression and conflict among family members.

PERSONAL GROWTH DIMENSIONS		
4.	Independence	The extent to which family members are assertive, are self sufficient and make their own decisions.
5.	Achievement Orientation	The extent to which activities (eg school and work) are cast into an achievement-oriented or competitive framework.
6.	Intellectual-Cultural Orientation	The degree of interest in political, social, intellectual and cultural activities.
7.	Active-Recreational Orientation	The extent of participation in social and recreational activities.
8.	Moral-Religious Emphasis	The degree of emphasis on ethical and religious issues and values.

SYSTEM MAINTENANCE DIMENSIONS

- | | | |
|-----|--------------|--|
| 9. | Organization | The degree of importance of clear organization and structure in planning family activities and responsibilities. |
| 10. | Control | The extent to which set rules and procedures are used to run family life. |
-

Several items of the Family Environment Scale were adjusted so that they would be suited for use with African women students. The adjustments, some of which were developed by Berg (1991) included substitution of word or sentence structure as well as additional explanations where language was found to be different from that commonly used in South Africa. Adjustments to the FES appear on Appendix 7.

In Berg's (1991) study internal consistencies for each of the ten FES subscales were found to be in an acceptable range. These varied from moderate for Independence and Achievement Orientation, to substantial for Cohesion, Organization, Intellectual-Cultural Orientation and Moral-Religious Emphasis. Chronbach's Alphas were between .61 and .78. Test-Retest reliabilities were all found in an acceptable range, ranging from .68 for Independence to .86 for Cohesion.

3.4.3 Life Experiences Survey (LES)

The LES is a 60-item self-report measure that allows respondents to mark events that they have experienced during the past year. The LES marked a significant development in research aimed at quantifying the impact of life changes. It represents a further development of the Schedule of Recent Experiences (SRE) developed by Holmes and Rahe (1976). A significant feature of the LES which distinguishes it from the SRE is that the latter was based on the assumption that regardless of the desirability of the events experienced, life changes in general are stressful. Thus the SRE considered both the negative and the positive life event changes in determining

the life stress score. The LES on the other hand is based on the premise that undesirable events may have a very different, and possibly a more detrimental effect on people than positive events. Therefore the LSE approach conceptualizes stress primarily in terms of events that wield negative impacts.

The LES scale is divided into two main sections. Section 1, designed for all respondents, includes a list of 47 specific events plus three additional blank spaces in which subjects can indicate other events that they may have experienced. The events listed in this section refer to life changes that are common to individuals in a wide variety of situations, and is appropriate for use with subjects drawn from the general population. Section 2 of the LES consists of 10 events which are designed primarily for use with students. Although section 2 deals specifically with changes experienced in the academic environment, they can be adapted for use with other populations as well. Both sections 1 and 2 are relevant to a student population, and were included in the questionnaire used for this study.

The format of the LES requires subjects to rate separately the desirability and impact of events that they have experienced. Respondents are asked to indicate those events experienced during the past year (0-6 months or 7 months- 1 year). The subjects are also called to indicate (a) whether they viewed the event as being positive or negative and (b) the perceived impact of the particular event on their life *at the time of occurrence*. Ratings on the LES are on a 7-point scale ranging from extremely negative (-3) to extremely positive (+3). A *positive change score* is derived by summing the impact ratings of those events indicated as positive by the respondents, while summing the impact ratings of those events designated as negative by the respondents provides a *negative change score*. A *total change score* can be obtained by adding the two values, which represents the total amount of rated change, both desirable and undesirable, which has been experienced by the subjects in the past year. Sarason, Johnson and Segal (1979) have pointed out that although the LES provides for the assessment of life changes occurring during two 6-months intervals, all analyses so far have involved change scores based on the entire preceding 12-month time period.

Therefore, no attempt will be made in the present study to isolate the time period of the life changes. Rather attention will be paid to events that occurred within the entire preceding 12-months.

A few items of the original LES were adjusted so that they would be suitable for South African students. In making these adjustments, care was taken not to alter the original sense of the items on the scale. Adjustments included words and/or sentence structure substitutions particularly in instances where the original language used was thought to be different from the language commonly used in S.A. Some items thought not to be relevant to the subjects of this study i.e those addressing themselves to male subjects, were excluded. Details of the adjusted items are indicated in Appendix 7.

A comprehensive review of the life stress literature as well as a consideration of methodological issues in this area of research has been presented elsewhere, and will therefore not be addressed in this study (Sarason et al, 1979; Sarason and Sarason, 1980; Zung and Cavenar, 1980). However, the salient features of the LES which distinguishes it from other instruments for assessing life stress need to be mentioned here. Firstly, the LES includes a list of events experienced with at least some degree of frequency in the population being investigated. Secondly, the LES allows for ratings by respondents themselves, of the desirability or undesirability of the events; and Thirdly, it allows for individualized ratings of the personal impact of the events experienced. The fact that the LES provides for a measure of the individual's cognitive appraisal of the impact of the experienced life changes is of particular significance to the present study.

The adjusted version of the LES will be used in this study in an attempt to investigate whether there is any correlation between life stress, conceptualized in terms of the negative life change event scores, and academic performance. A further attempt will be made to determine whether there is a relationship between negative life change event scores, and maladaptive coping reactions among the subjects of this study.

3.4.4 Academic Performance

In order to obtain a somewhat stable reflection of academic performance, it was decided to use a year long performance record, which was computed from multiplying the number of credit points accumulated by marks obtained (in percentage), and further dividing these by a total number of required credits for the year. Finally, the weighted average of all courses yielded a total score for Academic Performance. The weighted average, also known as the cumulative grade-point average has been described as "... the best available measure of student learning performance in a college curriculum" (Nettles, 1988, p 18). Without attempting to address the question of the extent to which grade-point average measures the students' learning performance and/or capacity, which issue is beyond the scope of the present study, it could be argued that the students' grade-point average which is derived from marks obtained from tests and examinations may be an indication of the students' capacity to merely regurgitate textbook and/or lecture material, rather than an indication of their actual learning potential.

3.4.5 Socioeconomic Status (SES)

Some research has indicated that there is no single socioeconomic indicator or scale used in the surveys carried out by social researchers (e.g. the HSRC). However a number of questionnaires and studies that have addressed SES were examined, and on the basis of these, the socioeconomic questions for inclusion in this study were selected (Fleming, 1984; Lockheed et al, 1989; Oppenheim, 1966). Although different variables were included in the SES section of the questionnaire used for this study, for manageability of research design only two of the commonly used measures of SES (Fleming, 1984; Morse and Steele, 1975) namely "parents' level of education" and "occupational status of parents" will be used in the analysis of data. The "total family income" variable, also commonly used for measuring SES was excluded as the majority of the respondents indicated that they did not know their annual total family income. Thus the parents level of education as well as parents' occupation would be used as SES indices for purposes of this study. In the analysis stage, stepwise regression

technique will be used to examine which of these socioeconomic variables best explain the variability in academic performance.

3.4.6 Demographic Variables

The demographic variables used in this study include the subjects' age, marital status, the number of years that they have been in residence, the education department under which they matriculated, the faculty in which they are registered and the year of study for which they are registered, the number of courses or subjects they are taking, whether or not they have failed a course before and the reason for the failure, their assessment of their academic confidence, and whether or not they were in any other training or employment before they came to study at UNP.

3.5 Procedure

3.5.1 Pilot Study

An informal pilot survey was conducted among a group of 20 volunteer African women students in the residences of the Durban campus of the University of Natal. The main objective of the pilot survey was to obtain responses to the Socioeconomic Status section of the questionnaire in particular, in an attempt to develop a SES measure suited for use with the subjects of this study, as well as to tap problems that could arise from the wording of questions and other aspects of the research design (Alreck and Settle, 1985). Generally, the pilot study revealed no major problems with the questionnaire design when it was content analysed. However, on the basis of the content analysis of the results of the pilot survey the SES indices for inclusion in the questionnaire used for this study were selected (see paragraph 3.4.5).

3.5.2 Consultation

The first session of the research involved consultation with several people from the university and residences administration namely the registrar academic, the central residences office, some assistant wardens and members of the various house committees. The aims and objectives of the study, research procedures as well as the envisaged significance of the research were discussed with the assistant wardens, house committee members and research assistants prior to the distribution of the questionnaires. It was indicated that the present research project formed part of the researcher's requirements for the masters degree in psychology. The need for a development of studies investigating experiences of African women students, by African women students themselves, was also pointed out.

3.5.3 Cover Letter

A bulk printed cover letter explaining the rationale and significance of the research to the respondents was enclosed with each questionnaire (Appendix 1). In the letter, respondents were assured of confidentiality, and their permission was sought to allow the researcher to access their academic record. The respondents were asked to fill in a consent form designed for the latter purpose (see Appendix 2).

3.5.4 Administration

For the main study, apart from the academic performance measure which was obtained from the University of Natal's Student Information Management Systems (SIMS), the questionnaires were handed out directly to participants during August 1993, and were left with them for completion. Each questionnaire consisted of The Life Experiences Survey, The Family Environment Scale - with answer sheet, and the Ways of Coping Checklist. Although respondents were requested to complete the questionnaire speedily and to return these to the researcher or research assistants, initially no time limit was placed regarding the return of the completed questionnaires.

3.5.5 Data Processing

Collection of the data was carefully monitored, with follow-up reports conducted with research assistants daily in the first two weeks of August, and once a week during the last two weeks. Reported delays in returning completed questionnaires by respondents in one residence in particular necessitated initiation of appropriate changes and allocation of extra effort to the data collection. Questionnaire deposit boxes bearing a final date by which completed questionnaires ought to be returned were placed in the dining halls of two of the larger residences. Individual completed questionnaires were handed to the research assistants or placed in the deposit boxes. Some questionnaires were collected from the respondents by the researcher and/or research assistants.

Once the completed questionnaires were received, recorded, and sorted, they were sight edited to detect data collection problems that were then addressed. Questionnaires which were returned blank were eliminated from the collection of those that were processed. Data from the completed questionnaires was then transferred to the Epi Info Version 5 data files. Data process editing was performed to detect and rectify errors of deviations from the original record format and data field range. The Socioeconomic Status (SES) section (biographical data variable) of the questionnaire as well as the Life Experiences Survey (LES), were hand-coded and reclassified into fewer and meaningful categories. The SES categories were computed and reduced from four (mother, father, brothers, and sisters) to two main indices of siblings' and parents' level of education and occupation. The LES items were computed using Epi Info 5, into five main variable categories of Number of Negative Life Change Experiences, Negative Change Score, Number of Positive Life Change Experiences, Positive Change Score, and Number of Neutral (no impact) experiences.

3.6 Statistical Analysis

This study employed correlation and multiple regression procedures in an effort to determine relationships between different variables included in the study. The present study is purely correlational in that it will attempt to determine the relationships

between variables, but will not necessarily provide evidence as to the direction of causation. In keeping with the aims of the study, the following statistical analyses were performed:

- (i) An analysis was performed providing a description of the sub-scales and total scores obtained on all the measures. The minimum, maximum, mean and standard deviation for each of the scores were obtained using SAS. The results of this analysis are shown in Table 2.
- (ii) Pearson Correlation Coefficients (SAS) were computed to determine the interrelationships among the following variables:
 - (a) The ten Family Environment Scale variables namely Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active Recreational Orientation, Moral-Religious Emphasis, Organization and Control;
 - (b) The seven coping strategies scales of the Ways of Coping Checklist, namely Wishful Thinking, Acceptance, Problem Focused/Help Seeking, Emotional Withholding, Self Blame, Growth and Help Seeking;
- (iii) Since significant correlations were found within the 10 FES dimensions, factor analyses were carried out to determine the dimensionality of this scale. Initially, principal factor analysis was carried out and a scree diagram used to determine the number of factors required. The relevant maximum likelihood factor analysis was the carried out followed by a Varimax rotation in order to make the factors easier to interpret (Krzanowski, 1988). For the FES a 3-factor model was chosen, which explained 58.8% of the variability. The rotated factor headings are given in Table 15, and will be discussed in the results section of this chapter.
- (iv) Regression models were fitted to determine the amount of variation in the academic performance (measured by the students' average mark weighted by

the credits for each course where appropriate) that could be accounted for by family environment variables, levels of stress, coping preferences, and some demographic variables; and to explore possible relationships among the FES variables and the students' coping preferences. Since there were a large number of independent variables, backward elimination was used to choose appropriate regression models.

- (v) As a secondary objective, relationships were explored between the following variables:
- (a) Negative change score (LES stress index) and WCC variables;
 - (b) Negative change score and FES subscales;
 - (c) Negative change score and demographic variables, and
 - (d) The seven WCC factors and FES subscales.

The results of these relationships are summarised and discussed in the next chapter.

Having discussed the rationale, aims and objectives of this study, and delineated the statistical procedures performed in it, the next chapter will outline the results obtained from these procedures.

CHAPTER FOUR

4.

RESULTS

4.1 Introduction

The results in this chapter will be presented in the same order as the statistical analyses/ procedures that were described in the previous chapter. Firstly, the simple descriptive statistics for all the variables included in the present study will be provided. This will be followed by a focus on the analysis of the relationship between the following variables: family environment and coping preferences; life stress and family environment; life stress and coping behaviours; academic performance and demographic variables; and life stress and demographic variables. Next will be an analysis of the correlation between all the variables for the various instruments and/or scales used in the present study; and finally the results of the factor analysis performed to determine the dimensionality of the Family Environment Scale will be provided.

4.2 Descriptive Statistics

The minimum, maximum, means and standard deviations for the variables from the instruments used in this study are presented in Table 2 on the next page.

Table 2

Table for Minimum, Maximum, Means and Standard Deviations

N Obs	Variable	N	Min	Max	Mean	Std Dev
93	Cohesion	93	9.00	68.00	51.60	14.18
	Expressiveness	93	21.00	73.00	44.09	11.11
	Conflict	93	32.00	75.00	46.77	9.20
	Independence	93	0	70.00	38.09	13.48
	Achievement Orientation	93	28.00	72.00	55.41	9.80
	Intellectual Cultural Orientation	93	29.00	70.00	48.61	9.83
	Active Recreational Orientation	93	21.00	70.00	43.10	11.82
	Moral Religious Emphasis	93	31.00	72.00	56.80	9.39
	Organization	93	26.00	70.00	54.53	11.26
	Control	93	32.00	76.00	54.27	10.50
	Wishful Thinking	92●	-3.00	5.00	0.18	1.63
	Acceptance	92●	6.00	39.00	25.02	5.92
	Problem Focused/ Help Seeking	92●	-9.00	8.00	-1.97	2.32
	Emotional Withholding	92●	-11.00	16.00	0.30	5.65
	Self Blame	92●	12.00	42.00	25.58	5.44
	Growth	92●	-3.00	4.00	0.53	1.48
	Help Seeking	92●	-2.00	5.00	1.47	1.62
	* Numneg	93	0	32.00	5.27	4.64
	* Negsco	93	0	82.00	12.12	12.24
	* Numpos	93	0	18.00	3.93	3.40
	* Possco	93	0	44.00	8.38	7.86
	Average Marks	80	30.00	70.00	54.37	9.03

Note: The value of the variables marked "●" were missing for one subject.

Key to Life Stress Index "●":

Numneg = Number of negative life change events

Negsco = Negative change score

Numpos = Number of positive life change events

Possco = Positive change score

NB. Number of responses indicated to have had no impact were excluded

4.3 Stepwise Regression Procedures

Regression models were fitted to examine which variables from the Family Environment Scale (FES), the Ways of Coping Checklist (WCC), Stress Index (LES) and demographic variables, influenced academic performance as measured by the students' average mark (weighted by the credits for each course where appropriate). Since there were a large number of independent variables, backward elimination was used to choose appropriate regression models. Since the number of regressor variables was small (one or two in almost all cases), the R-Square value, rather than the adjusted R-Square has been used. The results obtained from the stepwise regression procedures described above are summarised in Tables 3 - 16 and are discussed below:

4.3.1 Family Environment and Coping Preferences

As demonstrated in Tables 3a - 3f, the stepwise regression procedure (backward elimination) was carried out to determine which of the family environment variables (IV's) best explained the variability in the coping behaviour scores (WCC as DV), and the following results were found:

The Problem Focused/ Help Seeking coping strategy was not significantly related to any of the FES sub-scales, whereas the Help Seeking coping behaviour was significantly related ($p < 0.03$) to only one FES variable, namely Achievement Orientation, with the following fitted equation:

$$y = 3.44 - 0.03 (\text{Achievement Orientation})$$

This suggests that Help Seeking behaviour decreases with Achievement Orientation, or perhaps that subjects from families with a higher Achievement Orientation experience less stressful situations which would warrant help seeking behaviour (see Table 3 (a) on the next page).

TABLE 3 (a)

Summary of Multiple Regression Procedure for Dependent Variable Help Seeking Coping Behaviour, Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	1	11.12	11.12	4.36	< 0.05
Error	90	229.82	2.30		
Total	91	240.95			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	3.44	0.95	33.10	12.96	< 0.001
ACHIEVEMENT ORIENTATION	-0.03	0.01	11.12	4.36	< 0.05

R-SQUARE = 3.6% C(p) = -2.33

TABLE 3 (b)

Summary of Multiple Regression Procedure for Dependent Variable Wishful Thinking/ Escape, Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	4	41.65	10.41	4.53	< 0.001
Error	87	200.20	2.30		
Total	91	241.85			

Variable	Parameter	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	3.86	1.19	24.15	10.50	< 0.001
CONTROL	0.32	0.01	14.89	6.47	< 0.01
ACTIVE-RECREATIONAL ORIENTATION	-0.03	0.01	9.72	4.22	< 0.05
MORAL-RELIGIOUS EMPHASIS	-0.04	0.01	10.99	4.78	< 0.05
ORGANIZATION	-0.03	0.01	10.78	4.68	< 0.05

R-SQUARE = 17% C(p) = 2.78

As can be seen from Table 3 (b) in the previous page, the Wishful Thinking/ Escape coping pattern was found to be significantly related to four FES subscales. These FES subscales with the resultant fitted equations, are:

$$y = 3.864 + 0.03 (\text{Control}) - 0.02 (\text{Active-Recreational Orientation}) - 0.03 (\text{Moral-Religious Emphasis}) - 0.03 (\text{Organization}).$$

The latter equation suggests that Wishful Thinking/ Escape behaviour increases with Control and decreases with Active-Recreational Orientation, Moral-Religious Emphasis and Organization. It thus seems that subjects from families perceived as demonstrating a higher Control dimension, tend to prefer the Wishful Thinking/ Escape coping behaviour than those subjects who scored high on the FES subscales of Active-Recreational Orientation, Moral Religious Emphasis and Organization.

From Table 3 (c), it can be seen that only two FES subscales were found to be significantly related to Acceptance coping behaviour. These are Expressiveness and Intellectual-Cultural Orientation. The fitted equation was:

$$y = 24.65 + 0.13 (\text{Expressiveness}) - 0.11 (\text{Intellectual-Cultural Orientation})$$

This suggests that Acceptance increases with Expressiveness and decreases with Intellectual-Cultural Orientation.

TABLE 3 (c)
Summary of Multiple Regression Procedure for Dependent Variable Acceptance,
Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Squares	F	Sign. Level
Regression	2	227.10	113.55	3.41	< 0.05
Error	89	2962.84	33.29		
Total	91	3189.95			

Variable	Parameter	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	24.65	3.37	1774.72	53.31	< 0.001
EXPRESSIVENESS	0.13	0.05	190.34	5.72	< 0.01
INTELLECTUAL-CULTURAL ORIENTATION	-0.11	0.06	108.04	3.25	< 0.10

R-SQUARE = 7% C(p) = 1.90

The FES variable of Active-Recreational Orientation was the only one found to be significantly related to the coping behaviour of Emotional Withholding (Table 3 (d), and yielded the following fitted equation:

$$y = 7.30 - 0.16 (\text{Active-Recreational Orientation})$$

This suggests that Emotional Withholding decreases with the family environment variable of Active-Recreational Orientation, or in this case that subjects from families that demonstrate a higher Active-Recreational Orientation, will be more willing to seek and/or accept emotional support from others in an effort to control their anxiety.

TABLE 3 (d)
Summary of Multiple Regression Procedure for Dependent Variable Emotional Withholding,
Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	1	339.74	339.74	11.90	< 0.001
Error	90	2569.73	28.55		
Total	91	2909.47			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	7.30	2.10	344.01	12.05	< 0.001
ACTIVE-RECREATIONAL ORIENTATION	-0.16	0.04	339.74	11.90	< 0.001

R-SQUARE = 11% C(p) = 2.24

For Self Blame coping style (Table 3 (e)), the FES variables found to be significant were Intellectual-Cultural Orientation and Control. The fitted equation was:

$$y = 24.72 - 0.12 (\text{Intellectual-Cultural Orientation}) + 0.12 (\text{Control})$$

This suggests that Self Blame increases with the family environment variable of Control, and decreases with that of Intellectual-Cultural Orientation. This implies that subjects whose family environment is high in Control would tend to respond to stressful situations by blaming and/or criticising themselves for being unable to cope with these situations than those from families with a higher Intellectual-Cultural Orientation.

TABLE 3 (e)
Summary of Multiple Regression Procedure for Dependent Variable Self Blame,
Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	2	311.54	155.77	5.81	< 0.001
Error	89	2384.75	26.79		
Total	91	2696.30			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	24.72	3.99	1026.23	38.30	< 0.001
INTELLECTUAL-CULTURAL ORIENTATION	-0.12	0.05	135.81	5.07	< 0.05
CONTROL	0.12	0.05	162.27	6.06	< 0.01

R-SQUARE = 11% C(p) = 2.14

For Growth, two FES variables were found to be significant (Table 3 (f)). These are Expressiveness and Intellectual-Cultural Orientation. The fitted equation was:

$$y = 0.11 - 0.03 (\text{Expressiveness}) + 0.03 (\text{Intellectual-Cultural Orientation})$$

These results suggest that Growth increases with the family environment variable of Intellectual-Cultural Orientation and decreases with that of Expressiveness. An inference can be drawn therefore that subjects whose family environment is perceived as showing an interest in political, social, intellectual and cultural activities, would tend to use coping behaviours which include cognitive efforts which recognize the creative, growth possibilities that may be brought about by experiences of stress. The negative correlation between Growth and Expressiveness perhaps indicates that subjects who participated in the present study perceive their family environment as not encouraging open and direct expression of feelings, thereby thwarting their growth potential that could arise from experiences of stress.

TABLE 3 (f)
Summary of Multiple Regression Procedure for Dependent Variable Growth,
Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign.Level
Regression	2	16.77	8.38	4.06	< 0.05
Error	89	184.12	2.06		
Total	91	200.90			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	0.11	0.84	0.03	0.02	n.s
EXPRESSIVENESS	-0.03	0.01	10.87	5.26	< 0.05
INTELLECTUAL-CULTURAL ORIENTATION	0.03	0.01	11.60	5.61	< 0.05

R-SQUARE = 8% C(p) = 3.07

4.3.2 Family Environment and Life Stress

The stepwise regression procedure for the Dependent Variable negative change score, the stress index, with the FES subscales as Independent Variables indicated that only one FES subscale, namely Control, was significantly related to life stress. The fitted equation obtained was:

$$y = -4.03 + 0.29 (\text{Control}),$$

which suggests that negative change score or life stress, increases with Control (the extent to which set rules and procedures are used to run family life). These procedures are presented in Table 4.

TABLE 4
Summary of Multiple Regression Procedure for Dependent Variable Negative Change Score, the stress index, Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	1	900.90	900.90	6.36	< 0.01
Error	91	12887.54	141.62		
Total	92	13788.45			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	-4.03	6.52	54.20	0.38	n.s
CONTROL	0.29	0.11	900.90	6.36	< 0.01

R-SQUARE = 6% C(p) = -1.77

4.3.3 Family Environment, Stress, Coping, and Academic Performance

From the stepwise regression procedure carried out to determine the variability in academic performance, the students' average mark, and the FES, WCC variables, and the life stress index, the following results were found: A significant relationship was found between the subjects' average mark and only one FES subscale namely Control (Table 5). The fitted equation was:

$$y = 46.45 + 0.15 (\text{Control}),$$

which suggests that average marks increase slightly with Control. This implies that subjects whose families are perceived as having set rules and procedures used to run family life performed slightly better academically than those who scored lower on this FES variable.

TABLE 5
Summary of Multiple Regression Procedure for Dependent Variable Average Marks, Family Environment Scale Subscales as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	1	334.84	334.84	4.27	< 0.05
Error	78	6115.90	78.40		
Total	79	6450.75			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	46.55	3.91	11086.05	141.39	< 0.001
CONTROL	0.15	0.07	334.84	4.27	< 0.05

R-SQUARE = 5% C(p) = -3.15

With regard to coping behaviours, it was found that the subjects' average mark was related to only one WCC variable i.e Acceptance, with the following fitted equation:
 $y = 63.08 - 0.35 (\text{Acceptance})$,
 thus indicating that average marks decrease with Acceptance (Table 6). This suggests also that subjects who tend to use emotion-focused coping behaviours characterised by acceptance of their stress would demonstrate lower academic performance.

TABLE 6
 Summary of Multiple Regression Procedure for Dependent Variable Average Marks,
 Ways of Coping Factors as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	1	336.41	336.41	4.33	< 0.05
Error	77	5977.48	77.62		
Total	78	6313.89			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	63.08	4.36	16198.02	208.66	< 0.001
ACCEPTANCE	-0.35	0.16	336.41	4.33	< 0.05

R-SQUARE = 5% C(p) = -1.36

Although no statistically significant relationship was found between the students' academic performance measure and the stress index, the relationship between Acceptance coping behaviour and academic performance described above seem to suggest that there is a relationship between these variables since Acceptance is an emotion-focused coping strategy.

4.3.4 Life Stress and Coping Behaviours

In the investigation of the relationship between coping and life stress, stepwise regression procedure results indicated that there is a significant positive relationship between the coping pattern of Acceptance, and a negative relationship between Help Seeking and the life stress index measured in terms of the negative change score i.e the total impact of negative life experiences. The fitted equation was:

$$y = 1.52 + 0.47 (\text{Acceptance}) - 1.31 (\text{Help Seeking}),$$

which suggests that life stress increases with Acceptance and decreases with Help Seeking coping behaviours respectively (see Table 7).

TABLE 7
Summary of Multiple Regression Procedure for Dependent Variable Negative Change Score, the stress index, Ways of Coping Checklist Factors as Independent Variables.

	DF	Sum of Squares	Mean Square	F	Sign. Level
Regression	2	1025.79	512.89	5.83	< 0.001
Error	89	7827.63	87.95		
Total	91	8853.43			

Variable	Parameter Estimate	Standard Error	Sum of Squares	F	Sign. Level
INTERCEPT	1.52	4.29	11.10	0.13	n.s
ACCEPTANCE	0.47	0.16	702.14	7.98	< 0.001
HELP SEEKING	-1.31	0.60	414.64	4.71	< 0.05

R-SQUARE = 11% C(p) = 0.49

4.3.5 Academic Performance and Demographic Variables

No significant relationship was found between the subjects' scores on the academic performance measure and the SES indices (parents' level of education and occupation). However, a significant relationship was found between the dependent variable of average mark and some demographic variables namely age, whether or not the subject had failed a course before, whether or not subjects have dependents, and their marital status, the independent variables accounting for 42% of the variation in average marks.

Summary tables of the multiple regression procedures for DV Average (mark) and demographic variables appear on Tables 8 (Model 1) and 9 (Model 2) which includes marital status. Table 8 gives the analysis of variance for the Multiple Regression of Academic Performance on Demographic Variables. The table shows that academic performance depends significantly on age and whether or not the respondents have dependents. These three variables jointly account for 34% of the variation in academic performance. Table 9 gives the analysis of variance for an alternative Multiple Regression Model of Academic Performance on Demographic Variables (Model 2). The table shows that academic performance depends significantly on age, whether or not the respondents had failed a course before, marital status (married, or single with a relationship or without a relationship) and whether or not the respondents have dependents. These factors jointly account for 42% of the variation in academic performance.

TABLE 8
Summary of Multiple Regression Procedure for Dependent Variable Academic Performance,
Demographic Factors as Independent Variables (Model 1 - Analysis of Variance)

Source	DF	Sum of Squares	Mean Square	F	Sign. Level
AGE	1	704.39	704.39	13.14	<0.001
HAD FAILED A COURSE	1	757.38	757.38	14.13	<0.001
DEPENDENTS	1	269.15	269.15	5.02	<0.05
ERROR	65	3484.63	53.60		
CORRECTED TOTAL	68	5317.07			
R-SQUARE = 34%					

TABLE 9

Summary of Multiple Regression Procedure for Dependent Variable Academic Performance,
Demographic Factors as Independent Variables (Model 2 - Analysis of Variance).

Source	DF	Sum of Squares	Mean Square	F	Sign. Level
AGE	1	1097.13	1097.13	21.76	< 0.001
HAD FAILED A COURSE	1	1027.99	1027.99	20.39	< 0.001
MARITAL STATUS	2	299.59	149.79	2.97	< 0.05
DEPENDENTS	1	248.92	248.92	4.94	< 0.05
ERROR	72	3630.01	50.41		
CORRECTED TOTAL	77	6303.65			
R-SQUARE = 42%					

TABLE 10

Summary of Multiple Regression Procedure for Dependent Variable Academic Performance
Demographic Factors as Independent Variables - Parameter Estimates.

Parameter	Estimate	Standard Error	T-Value	Sign. Level
INTERCEPT	31.33	5.03	6.23	< 0.001
AGE	4.79	1.05	4.56	< 0.001
HAD FAILED A COURSE	7.34	1.74	4.21	< 0.001
MARRIED	-7.59	4.80	-1.58	0.11
SINGLE WITH RELATIONSHIP	-4.41	2.00	-2.20	0.03
SINGLE, NO RELATIONSHIP	0.00	-	-	-
DEPENDENTS	4.17	1.88	2.22	0.03
ERROR	72	3630.01	50.41	
CORRECTED TOTAL	77	6303.65		
R-SQUARE = 42%				

From the parameter estimates summarised in Table 10 it can be inferred that the subjects' average mark increased with increasing age, was higher by 7.34% for students who had failed a course (perhaps because they were performing better on a

repeated course), was higher by 4.17% for those with dependents, but lower by 7.59% for those who are married compared to those who are single without a relationship and single with a relationship. The single with relationship subjects obtained lower marks by 4.41% on average than those single without a relationship.

Generally, there was no statistical evidence of a relationship between academic performance scores of the subjects of this study on the one hand, and the FES subscales, the WCC factors, and the life stress index on the other.

4.3.6 Life Stress and Demographic Variables

Summary of the stepwise regression procedure for negative change score, the stress index as the dependent variable, and demographic variables appear on Table 11, and the parameter estimates of this procedure are indicated in Table 12 which appear on the next page.

TABLE 11
Summary of Multiple Regression Procedure for Dependent Variable Negative Change Score, the stress index, Demographic Factors as Independent Variables.

Source	DF	Sum of Squares	Mean Square	F	Sign. Level
AGE	1	23.39	23.39	0.16	0.69
YEAR OF STUDY	3	576.73	192.24	1.30	0.28
MARITAL STATUS	2	536.86	268.43	1.82	0.17
Error	85	12526.24	147.36		
Corrected Total	91	13663.25			

R-SQUARE = 8%

TABLE 12
*Summary of Multiple Regression Procedure for Dependent Variable Negative Change Score (Parameter Estimates),
 Demographic Factors as Independent Variables.*

Parameter	Estimate	T for H ₀ Parameter = 0	Pr > T	Std Error of Estimates
INTERCEPT	5.27	0.86	0.39	6.13
AGE	0.98	0.54	0.58	1.82
FIRST YEAR	4.58	0.99	0.32	4.60
SECOND YEAR	3.63	0.78	0.43	4.67
THIRD / FOURTH YEAR	-1.28	-0.27	0.78	4.71
MARRIED	15.56	1.91	0.06	8.16
SINGLE WITH RELATIONSHIP	2.45	0.76	0.44	3.21
SINGLE, NO RELATIONSHIP	0.00			

From Table 12, it seems that the subjects' stress decreased with decreasing age, was higher by 4.58% among first year students compared to second year students (3.63%) and was lower by 1.28% among third/fourth year students. Life stress was also higher by 15.56% among married subjects compared to those who are single with a relationship (2.45%).

4.4 Variable Correlations

Several significant correlations between FES subscales were found e.g Cohesion had positive correlations with Independence, Intellectual-Cultural Orientation, Active-Recreational Orientation, and Organization, and a negative correlation with Control. These results indicate that there is a considerable amount of interrelationship among the FES variables, and therefore that family environment could be represented by dimensionality less than 10. The correlations described above are represented in Table 13.

TABLE 13
Correlation Analysis of Family Environment Scale Subscales.

	COH	EXP	CON	IND	AO	ICO	ARO	MRE	ORG	CTRL
COH	1.00	0.28**	-0.38**	0.42**	0.22*	0.44**	0.34**	0.14	0.41**	-0.13
EXP	0.28**	1.00	0.01	0.34**	0.08	0.35**	0.39**	0.17	0.26*	-0.29*
CON	-0.37**	0.01	1.00	-0.18	0.22*	-0.08	-0.05	-0.09	-0.24**	0.32**
IND	0.42**	0.34**	-0.18	1.00	0.04	0.21*	0.17	0.02	0.19	-0.32**
AO	0.22*	0.08	0.22*	0.04	1.00	0.15	-0.01	0.20	0.32**	0.23*
ICO	0.44**	0.35**	-0.08	0.21*	0.15	1.00	0.56**	0.26*	0.26*	-0.03
ARO	0.34**	0.39**	-0.05	0.17	-0.01	0.56**	1.00	0.05	0.11	-0.13
MRE	0.14	0.17	-0.09	0.02	0.20	0.26*	0.05	1.00	0.32**	0.18
ORG	0.40**	0.26*	-0.24*	0.19	0.32**	0.26*	0.11	0.32**	1.00	0.12
CTRL	-0.13	-0.29**	0.32**	-0.32**	0.23*	-0.03	-0.13	0.18	0.12	1.00

FES Subscales Key:

COH = Cohesion; EXP = Expressiveness; CON = Conflict; IND = Independence; AO = Achievement Orientation; ICO = Intellectual-Cultural Orientation; ARO = Active-Recreational Orientation; MRE = Moral-Religious Emphasis; ORG = Organization; CTRL = Control.

Significant Level Key

- N = 93
- * = significant at 5%
- ** = significant at 1%

There were fewer significant correlations between the WCC factors than between the FES variables. Some of the significant correlations found include Wishful Thinking/Escape and Emotional Withholding, which were negatively correlated. These correlations are represented in Table 14.

TABLE 14
Correlation Analysis of Ways of Coping Checklist Factors

	WT	AC	PF	EW	SB	GR	HS
WT	1.00	-0.14	0.07	-0.31**	-0.04	-0.09	0.19
AC	-0.14	1.00	-0.33**	0.07	0.35**	-0.16	0.09
PF	0.07	-0.34**	1.00	0.07	-0.19	0.17	0.14
EW	-0.30**	0.07	0.07	1.00	0.18	-0.29**	-0.37**
SB	-0.04	0.35**	-0.19	0.18	1.00	-0.11	-0.04
GR	-0.10	-0.16	0.17	-0.29**	-0.11	1.00	0.15
HS	0.19	0.09	0.14	-0.37**	-0.04	0.15	1.00

WCC Factors Key:

WT = Wishful Thinking/ Escape; AC = Acceptance; PF = Problem Focused/ Help Seeking; EW = Emotional Withholding; SB = Self Blame; GR = Growth; HS = Help Seeking.

Significant Level Key

- N = 93
- * = significant at 5%
- ** = significant at 1%

4.5 Factor Analyses

A 3-factor model was chosen to determine the dimensionality of the FES, and this explained 58.8% of the variability. The rotated factor loadings are given in Table 15.

TABLE 15
Rotated Factor Pattern for FES Subscales

	FACTOR 1	FACTOR 2	FACTOR 3
Cohesion		-0.51	
Expressiveness			
Conflict		0.58	
Independence		-0.50	
Achievement Orientation			
Intellectual- Cultural Orientation	0.70		
Active- Recreational Orientation	0.77		
Moral-Religious Emphasis			
Organisation			0.62
Control		0.57	0.50

As can be seen from Table 15, Factor 1 is an emphasis on Intellectual-Cultural Orientation and Active-Recreational Orientation (the Personal Growth dimension). Factor 2 is an contrast between Control and Conflict on the one hand, and Cohesion and Independence on the other. Factor 3 is an emphasis on Organization and Control. This suggests that in the present context, a lower dimensional FES may have been appropriate.

4.6 Concluding Remarks and Summary

A great deal of caution should be exercised in the interpretation of the results yielded by the present study. Cognizance should be taken of the fact that the subjects of this study are not homogenous, and also that the nonprobability sampling that was used here greatly limits this researcher's ability to generalize the findings beyond the subjects who participated in this study. With this in mind, a summary of the results obtained from this study is presented as follows:

No statistically significant relationship was found between the students' academic performance measure and the scores obtained in the FES subscales, the WCC factors and the life stress index. However, significant relationships emerged between the subjects' scores on the academic performance measure and demographic variables. Average marks increased with increasing age, was higher for subjects who had failed a course before, and also for those with dependents. Further, academic performance scores were lower for married subjects, and those single without relationship. Generally, the students' demographic variables accounted for 42% of the variability in their scores in the academic performance measure (Refer to Table 10).

CHAPTER FIVE

5. DISCUSSION

5.1 Introduction

The main objective of the present study was to investigate the relationship between family environment, experiences of life stress as well as coping behaviours, and to further explore the influence of these factors on academic performance among African women students in the residences of the University of Natal, Pietermaritzburg. The results of the study indicated lack of statistical significance between the subjects' scores on the academic performance measure and those obtained on the family environment scale, the stress index and the ways of coping variables. However, interesting results emerged from an exploration of the relationship between the students' academic performance and demographic variables. The latter findings seem to confirm the position that inclusion of students' "background variables" (Lockheed, Fuller and Nyirongo, 1989; Prillerman, 1989) should serve as a necessary point of departure for every study that purports to investigate the performance outcomes of Black students in predominantly White universities.

The discussion of the results obtained in this study will be guided by Prillerman's (1989) model. This model, which was discussed in detail in Chapter two, set out what is referred to as pathways to academic achievement among Black students in predominantly White universities. In keeping with this model, the first theme of the discussion will centre around an exploration of results obtained from an investigation of the relationship between academic performance and the students' *Sociodemographic Factors*. This will include the following variables which were included in the present study: age, gender, socioeconomic status (SES), and family environment. Next will be a brief discussion of the relationship found between having "failed" a course before and the students' current level of academic

performance. This variable was included in this study to serve as an indicator of *Individual Predisposing Factors*. It was used in place of measures such as matric results which are often used to explore students' level of academic preparedness as well as to predict performance outcome. The third theme of the discussion will address itself to an exploration of relationships between stress, coping and academic performance. The latter represent stages four and five of Prillerman's model namely *General Acute and Chronic Stressors* and *Coping Processes*. Here attention will be paid to the relationship between academic performance and the students' scores on the life stress index. Attention will also be paid to coping efforts that emerge in response to experiences of stressful life events. Finally some of the theoretical and methodological shortcomings of the present study will be presented, and their implications for further research will be provided.

5.2 Sociodemographic Factors and Academic Performance

Results of the stepwise regression procedures summarised in paragraph 4.6 in the previous chapter, indicated a positive relationship between the students' academic performance measure and some background variables. The relationship between these variables and their implications for predicting performance outcomes is discussed below:

5.2.1 Age

The results obtained in this study supports findings reported by Harris (1940) suggesting that older students are better achievers at university than younger students. Since a positive relationship has been reported between age and coping efforts (Michelson, 1991), it is possible that older students in this study were better equipped to deal with environmental stressors. The variability in average mark among the students could also be attributed to motivational factors, whereby

family responsibility and/or obligations serve as a driving force behind older students' determination to succeed in and complete their studies (Nettles, 1988). Low social integration whereby older students are less likely to participate in campus social activities could also be a contributing factor to these students' slightly higher academic performance. It is worth noting however that although high social integration is reported to have a negative effect on students' general averages, it is also said to have a positive effect on the students' rate of progression (Nettles, 1988). This points out to a need to maintain a balance between social and academic activities since there is theoretical evidence supporting negative correlations between social alienation and academic performance among Black students in predominantly White universities (e.g Leon, 1987). Contrasting results obtained from other studies with regard to the relationship between age and academic performance are worth noting. For example some researchers have found younger students to be better achievers at university e.g Brandford (1961) and Sanders (1963) cited by Punch (1966).

It seems that the issue of the relationship between age and academic performance is a complex and yet interesting one which would need to be further researched. It would therefore be difficult for any conclusion to be drawn from the results of the present study regarding the age issue.

5.2.2 Gender and Sociocultural Factors

Although this study did not set out to explore variability in academic performance which could be accounted for by gender differences, it produced interesting results which pointed to certain gender and sociocultural factors which may impact on the academic performance of African women students in predominantly White universities. These factors seem to manifest themselves in, among others, the students' coping behaviours in reaction to stressful life events (Fleming, 1984).

5.2.3 Family Environment

A significant positive relationship was found between the students' average mark, the academic performance measure, and the Family Environment Scale factor of Control. These results resemble those reported by Coopersmith (in Berg, 1993), suggesting that clearly defined and enforced limits and rules in the family have an enhancing effect on the children's performance outcome. The positive relationship between academic performance and Control has also been reported in some studies conducted in America. For example Clark (1983) found that academic performance was higher among students from families where parents served as authority figures, had distinct achievement centred rules and norms characterised by clear, specific role boundaries and status structures, and also applied firm, consistent monitoring and role enforcements. The author also found that high achievers indicated long term acceptance of norms as legitimate. Similar findings were reported by Lee (1984) from a study conducted to investigate some psycho-social family variables which contribute to the academic success of Black adolescents in America. The relationship between Control and academic performance described above has been attributed to the fact that a family environment with enforced standards of conduct would enable students to know when they have failed, as well as by how much, and would also allow them to determine what they should do to achieve success.

5.2.4 Socioeconomic Status (SES)

The results of the present study found no statistically significant relationship between SES and academic performance. This is contrary to some research findings whereby a negative relationship between low SES and academic performance was yielded (Nettles, 1988; Pearlin and Schooler, 1978) and a positive relationship found with high SES as indicated by the social and occupational status of parents (Allen, 1988; Fleming, 1984; Punch, 1966). There also exists conflicting evidence with regard to the significance of the family income which is often used as an indicator of SES (Fleming, 1984; Lockheed et al, 1989; Punch, 1966). Hence

some researchers for example Fleming (1984), have cautioned against applying Western criteria in the assessment of socioeconomic status of Black students. In furthering this argument, Lockheed, Fuller and Nyirongo (1989) recommend the inclusion of other measures of social class that are both broader and valid for use in research involving Black students. The fact that most participants indicated that they did not have any knowledge of their family income, perhaps bears testimony to a need to further develop a more accommodative SES measure.

5.3 Individual Predisposing Factors

This refers to the students' educational background as indicated by, for example matriculation aggregate. The effectiveness of using matriculation in predicting performance outcome at university remains a debatable issue addressed by many researchers e.g. de Vetta (1993), and it falls outside of the scope of this study. However it has implications on the prediction of academic performance of the subjects of this study who has been generally described as "educationally disadvantaged". It is therefore interesting to note that no statistically significant relationship was found between the academic performance of the subjects of this study and their educational background indicator of students' matriculation department. It therefore appears that students' educational background, as is the case with their matriculation results, is not a good predictor of academic performance at university.

Another interesting observation made in this study was that students who had failed a course before, indicated average mark higher by 7.34% (refer to Table 10 in chapter 4). Although there is no theoretical explanation for the latter finding, the increased level of performance could be attributable to certain factors such as improved study habits and increased level of social and academic integration. The latter factors have been found to have a positive relationship with academic performance among Black students in predominantly White universities (Fleming, 1984; Nettles, 1988). Although the latter results seem to suggest that failing a course puts students in a better position to subsequently do well in their studies,

the possible negative impact of failing a course on the students' academic self concept cannot be overruled. Also, the fact that the study focused on the academic performance of the students during the 1993 academic year only, and included only the weighted average mark as a measure of academic performance, further compounds attempts to explain the relationship between having failed a course before and the reported improved academic performance. Since high average mark in any year of study does not necessarily imply faster progression rate, it would be useful for future research to differentiate between the two variables of academic performance. Doing so would hopefully help determine the extent to which failing or not failing a course affect the academic performance of the student over the duration of the degree being studied for.

5.4 Family Environment, Stress and Coping

In the previous paragraph it was pointed out that a significant positive relationship was found between the students' academic performance and the FES variable of Control. The results of this study also indicated a negative correlation between Control and the students' scores on the life stress index. With regard to coping and family environment, the study yielded a negative correlation between Help Seeking coping style and the FES dimension of Achievement Orientation. The latter findings are similar to those obtained by Berg (1993) in a study conducted to investigate the academic performance of some Jewish primary school pupils in Johannesburg. There is empirical evidence however, supporting a positive relationship between academic achievement and the family's "achievement motivation" such as parents' high expectations and aspirations of their children (Matthews-Juarez, 1982 cited by Jenkins, 1989).

The results obtained from the stepwise regression procedure also indicated that Wishful Thinking/Escape coping behaviour increased with the FES dimension of Control, while it decreased with those of Active-Recreational Orientation, Moral-Religious Emphasis and Organization. Further, a negative relationship was found between academic performance and Acceptance. The results of this study do not,

however, clearly demonstrate the additive effects of family environment and coping efforts, as well as their interaction in accounting for variation in the students' academic performance (the results do indicate that personal coping efforts mediate stress). From these results it seems that further research is required to investigate sources of stress among African women students. These studies should emphasise qualitative analysis of responses to questionnaire items over a quantitative one which tends to limit the identification of actual areas of life that are stressful to the subjects. In doing so, a necessary differentiation between academic and family or social stressors will hopefully be accomplished.

5.5 Life Stress and Coping Efforts

Having explored the relationships between family environment, stress, coping and academic performance, further consideration is given below to the relationships found between certain coping behaviours and the students' experiences of life stress. It should be noted that the study only explored relationships between variables, and did not address the strength of such relationships.

Results from the stepwise regression procedures performed in this study offer support for the hypotheses that (a) subjects who experience fewer stressful life change events will demonstrate problem-focused coping behaviours; and (b) subjects with a higher negative life change score will demonstrate maladaptive, emotion-focused coping efforts. The fitted equation obtained from the stepwise regression procedure (refer to Table 7) was:

$$y = 1.52 + 0.47 (\text{Acceptance} - 1.31 (\text{Help Seeking})).$$

The previous fitted equation suggests that students whose scores on the stress index were lower, tended to use problem-focused efforts which include seeking other people's help in dealing with stressful life events. These results are in concordance with those obtained from previous research (e.g. Folkman and Lazarus, 1980), suggesting that coping efforts that emphasise problem-focused behaviour mediate the impact of stressful life events.

As was discussed in the literature review section of this thesis, coping is conceptualized here as a product of the transaction between the individual and his/her environment. Further, since coping is seen as involving the extent to which environmental demands influence personal and social adaptation of the individual, it becomes necessary to try and understand the "contextual factors" (Prillerman) which are believed to play a significant role in shaping the students' coping behaviours in their attempt to deal with stressful life events in their university environment.

The students' social status position has been cited as one of the factors which affect access to coping resources among Black students in predominantly White universities. This has been attributed to the development of what has been referred to as "minority status stressors" (Prillerman, 1989) among these students. The latter includes factors such as social and academic alienation, which have been found to impact negatively on the performance outcomes of Black students in White universities (Fleming, 1984; Jocelyn, 1991; Leon, 1987). It would appear that a "supportive community" which comprise not only of the students' peers, but also of other members of the university staff such as professional counsellors offering "responsive counselling services" (Fleming, 1984), and lecturers can serve as useful support system that would mediate the stress experienced by these students. Further research could help to explore "faculty attitudes and behaviours" (Nettles, 1988) in an effort to ascertain the extent to which these factors impinge on the academic performance of African women students in White universities. An exploration of these faculty factors would also give some indication of what support services if any, are offered to students by their various faculties, and will also help indicate the extent to which these services are accessible to these students.

5.6 Stress and Academic Performance

Contrary to findings obtained from previous research (e.g Prillerman, 1989; Sarason, Johnson and Siegel, 1979), the relationship between life stress and academic performance was not yielded.

In the present study, stress, like coping, is understood as a product of a transaction occurring in a broader social context between the student and her environment. Therefore in the light of the theoretical evidence suggesting the correlation between life stress and academic performance, the lack of any statistically significant relationship between the latter variables among the subjects of this study could be indicative of the methodological problems inherent in this study. These seem to suggest that the LES is not an adequate measure of stress to be used with the population that it was not standardised for such as the African women students. Therefore it would also be useful for future research to try and develop a measure of stress that incorporates an exploration of those sources of stress that are said to be peculiar to Black students in the White university environments in South Africa. Reference could be made in this regard to such instruments as the one used by Prillerman (1988) to investigate sources of stress among Black students in White universities in America, namely the Minority Student Stress Scale. The latter scale was developed to measure stresses that are experienced by minority students, which are attributed to their status as a minority group at the university.

5.7 Limitations of the Study

A number of methodological and conceptual problems are inherent in the present study as demonstrated in the following discussion:

A major methodological flaw of the present study centres around the fact that the instruments used here have not been standardised for use in South Africa. Although some of the measures have been used in various cross-cultural settings e.g. Michelson (1991) for WCC and Moos and Moos (1986) for Family Environment Scale, they have not been validated for use with a population of African women students. This problem has serious implications for the reliability and validity of these instruments and the results obtained from using them. To counter these shortcomings, no attempt was made in this study to use the available norms for the Ways of Coping Checklist that were not established on a population of African women students. Future research is needed to standardise and validate the instruments used in this study.

A further shortcoming of the present study emanates from the controversy which exists in the literature regarding factors relevant to the process of predicting performance outcome among Black students in predominantly White universities. While some researchers have been criticised for either focusing on cognitive and emotive factors separately, some have attempted to explore the extent to which both factors affect academic performance. Attention has also been paid to the students' sociodemographic variable in an attempt to explore the effect of environmental factors in predicting performance outcomes. In the light of limited information found in the literature reviewed for the purposes of this thesis, it appears that there is a great need for further investigation of the academic performance of African women students in predominantly White universities.

The controversy which exists in the literature regarding accurate or meaningful measurement of the functioning of families in general (Moos and Moos, 1986) and Black families in particular (Jenkins, 1989) represent another shortcoming of the study. For example, with regard to the use of the Family Environment Scale (FES), it has been argued that its nature makes it difficult to draw direct conclusions about family functioning in general. This is attributed to the fact that through FES the family environment is measured from the individual's subjective view rather than from that of the whole family. Further, FES has been criticised

for the tendency to give a quantitative measure of the family environment rather than a qualitative one. It is argued that a quantitative measure or the degree to which a particular FES dimension is perceived, rather than a qualitative measure could conceal certain effects. With regard to the investigation of Black families and academic performance, it has been found that studies that have addressed this issue tend "to ignore the embeddedness of the Black family within the larger social system" (Jenkins, 1989), p 13), which factor confounds results obtained from these studies. It is with the latter view in mind that the present study adopts a multidimensional approach to the investigation of factors which affect the academic performance of Black students in White universities. The latter includes a further exploration of the students' background variables such as family environment, experiences of life stress and the resultant coping behaviours, and locates these within a broader social context.

Problems usually associated with the use of closed-response questionnaires such as the Family Environment Scale also pose a methodological problem present in this study. These problems may involve respondent biases, deliberate inaccuracies in supplying information, as well as the constriction of the richness of response. Another problem inherent in this study concerning the response sets usually found in the use of self-report inventories which use Likert scales for scoring responses is that the Likert type scales can compel subjects to respond extremely.

A significant aspect of the research design which need to be taken cognizance of involves the fact that the study was based upon a single group correlational design, and therefore did not include the use of a control group. Therefore there is no baseline information against which the subjects' responses can be assessed. It is believed that the use of control groups would be useful in studies similar to the present one. These would yield useful baseline information to compare the stresses experienced by certain groups of African women students with other groups of African women students who have not been exposed to similar "minority student stressors".

Generally, the methodological problems inherent in the present study centres around lack of standardised measures, problems associated with the use of self report inventories and difficulties inherent in the use of single group designs. It is therefore important that the results of this study be interpreted within the limitations of the specific measuring instruments used.

Certain conceptual problems emerged from the methodological problems mentioned above. For example, it has been argued that items included in the WCC may not be able to address or pick up "culturally specific coping styles that are far more relevant or appropriate" (Michelson, 1991 p 129) to a population such as the African women students. Michelson (ibid) also argues that an exploration of traditional beliefs and practices may be far more relevant than the categories included in the Ways of Coping Checklist. A similar critique applies to the use of Family Environment Scale whose items would mainly apply to "Western" standards of family functioning.

Finally, the external validity of the findings represent an obvious limitation of the study. Thus future research would be necessary through which broader samples of the African women students can be studied in order to determine the generalizability of the present findings.

In summary the results obtained in the present study yielded various implications for future research. These include studies that would address methodological problems such as the standardization of measures used in this study, as well as the development of measures dealing specifically with the status of African women students in predominantly White universities within the South African context. Socio-cultural factors which affect the students coping styles, and also impact on the process of stress would need to be investigated further. Generally a need for a more inclusive multimodal approach to the investigation of the academic performance of African women students in White universities would serve as a necessary conceptual tool for future research if developed further.

The multidimensional approach to stress and coping in the investigation of the academic performance and psychological well-being of Black students in predominantly White universities has been proposed as a useful conceptual and methodological tool to be used in such studies. The present study attempted to develop this model further in the investigation of factors that affect the performance outcome of African women students at the University of Natal in Pietermaritzburg. The aim of the present study was not simply to add yet another stress and coping dimensions to the array of literature which have addressed these issues. Rather, the main objective of this study was to place both stress and coping in a broader perspective, and to simultaneously explore their relative contribution as well as their relationship in accounting for achievement outcomes among the subjects of this study. Although very minimal correlations were found between the students' academic performance measure and the scores on the life stress index, the Ways of Coping variables, and the Family Environment Scale dimensions, the overall findings of the study has given rise to interesting implications for future research. The most significant finding or observation made in this study relates to the relatively higher level of statistical significance between the students' average marks and the demographic variables. This suggests that in the light of the methodological and conceptual limitations associated with the use of the instruments like the ones used in this study, it is necessary to include a broader spectrum of the students' background or demographic variables in future studies. Emerging from this study thus is a motivation for the conceptualization of stress, coping and general well-being among African women students in White campuses as a transaction between themselves as individuals, and their university environments.

Finally, it is important to emphasize that the present study has largely been an exploratory one which should not necessarily be perceived as a definitive study. Further, in view of the relatively small sample size used, caution should be exercised in the interpretation of the results obtained from this study.

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APPENDIX 1

Cover Letter Enclosed With Each Questionnaire

August 1993

Fellow Student

My name is Vicky Malefo. I am presently doing my thesis to complete a masters degree in Psychology. I enclose herewith a questionnaire that I need you to fill in for data for my thesis. Although the items of the questionnaire appear long, it should take you just under an hour to fill it in. I appeal to you to fill in this questionnaire.

My thesis is titled *The Influence of Family Environment, Life Stress and Coping Strategies on Academic Performance Among African Women Students at the University of Natal, Pietermaritzburg*. The rationale of this research project is to try and highlight some of the pertinent issues in the lives of African women students, that have some effect of academic performance, and to share these issues and/or experiences with other members of the university community.

All information gathered from these questionnaires will be treated as strictly confidential, and only myself and the supervisors will see the completed questionnaires. To ensure this, you received your questionnaire in an unsealed envelope to be sealed by yourself once you have finished filling in the questionnaire. You are also not required to write you names on the questionnaire so that your responses should remain anonymous. I will also need to have your academic record for the year 1993. Please complete and sign the enclosed consent form to facilitate access to your results.

The results of this study will be considered valid if I get at least 90% of the questionnaires returned, and I therefore appeal to you to complete the questionnaire and hand it to the research assistant as soon as you finish completing it.

I depend on your co-operation for the success of this study!

Thank you.

Vicky M.

APPENDIX 2

Consent Form Facilitating Access to Students' Academic Record

I hereby consent to the Registrar, University of Natal, Pietermaritzburg releasing, in confidence, the following information to Ms Vicky Malefo for use in her thesis titled *The Influence of Family Environment, Life Stress and Coping Strategies on Academic Performance Among African Women Students at the University of Natal, Pietermaritzburg*:

1. Statement of Results for the 1993 Examinations.

NAME OF STUDENT :

STUDENT NUMBER :

RESEARCH ID. NO. :

SIGNED :

DATE :

APPENDIX 3

Demographic Details

Research Identity Number: _____

NOTE: Please put a cross, X, on the number corresponding to your response.

1. In which age group do you fall?

1 X	2	3	4
Under 20	20-24 yrs	25-29 yrs	30 yrs +

2. How long have you been in Residence for?

1 X	2	3
0-1 year	2-3 yrs	4 yrs +

3. Please indicate your Matric Education Department.

1	Department of Education and Training (DET)
2	Department of Education and Culture (DEC) X
3	Natal Education Department (NED)
4	Transvaal Education Department (TED)
5	House of Delegates (HOD)
6	Joint Matriculation Board (JMB)
7	TBVC / Self Governing State Department

4. Which faculty are you registered in?

1	Agriculture
2	Arts/Humanities <input checked="" type="checkbox"/>
3	Commerce
4	Education
5	Engineering
6	Law
7	Science
8	Social Science

4.1 What year of study are you in?

1	<input checked="" type="checkbox"/> 2	3	4
1st Year	2nd Year	3rd/4th Year	Postgraduate

4.2 How many courses are you taking this year?

1	2	<input checked="" type="checkbox"/> 3	4
2 courses	3 courses	4 courses	5 courses +

5. Have you ever failed a course?

1 <input checked="" type="checkbox"/>	2
Yes	No

5.1 If yes, please indicate the main reason for the failure:

1	General study difficulties <input checked="" type="checkbox"/>
2	Personal problems related to university life
3	Personal problems related to family issues
4	Other, specify:

5.2 Compared to other students in the same academic year as you, would you say you are now:

1	Above Average
2	Average <input checked="" type="checkbox"/>
3	Below Average

5.3 How confident are you about your academic performance so far?

1	Very confident
2	Somewhat Confident <input checked="" type="checkbox"/>
3	Lacking in Confidence

6. What is your current marital status?

1	2	3	4	5	6
Married	Widowed	Divorced	Re-married	Single With Relationship <input checked="" type="checkbox"/>	Single Without Relationship

7. Were you in any other training or employment before you registered as a student at this university?

1	Training and Employment
2	Training Only
3	Employment Only
4	Neither Training nor Employment <input checked="" type="checkbox"/>

8. FINANCIAL DETAILS

**8.1 What is the main source of finance for your university education?
(Please cross only one option).**

1	2	3	4	5	6
Loan <input checked="" type="checkbox"/>	HSRC CSIR etc Grant	Bursary	Parents Pay Fees	Pay Own Fees	Remission of Fees

**8.2 Which of the following statements describes your situation?
(Please cross only one option).**

Do you come from a family which is:	
1	struggling to earn a living? <input checked="" type="checkbox"/>
2	making ends meet, but has no luxuries?
3	living comfortably?
4	wealthy / rich?

8.3 Please indicate which of the following best represents your total family income in 1992, before taxes. This should include wages and salaries, net income from business or farm, pensions, rent and any other money income received by all those people in your household. (Cross appropriate number).

1	No income - R999
2	R1000 - R2999
3	R3000 - R4999
4	R5000 - R6999
5	R7000 - R9999
6	R10000 - R29999
7	R30000 - R49999
8	R50000 - R69999
9	R70000 - R99999
10	R10000 +
11	Don't know <input checked="" type="checkbox"/>
12	If uncertain, what would be your guess?

8.4 Which of the following statements best describes your family house/dwelling?

1	A one family house detached from any other house
2	A one family house on the same yard/land as other houses: MAIN HOUSE
3	A one family house on the same yard/land as other houses: TENANT
4	A one family apartment in a block of flats <input checked="" type="checkbox"/>

8.5 Does your family own this dwelling /land, or rent it?

1 <input checked="" type="checkbox"/>	2
Own	Rent

8.6 Please indicate monthly expenses, i.e rent or bond payment, for the house, or your nearest guess:

1	0 - R99
2	R100 - R155
3	R160 - R250
4	R300 - R500
5	R550 - R775
6	R800 - R995
7	R1000 - R1050
8	R1055+

9. Do you or any member of your family own or have any of the following things?

	Yes	No	Don't Know
1 Medical Aid	<input checked="" type="checkbox"/>		
2 Life Insurance	<input checked="" type="checkbox"/>		
3 A retirement or pension plan		<input checked="" type="checkbox"/>	
4 A savings account with more	<input checked="" type="checkbox"/>		
5 Any credit or charge cards			<input checked="" type="checkbox"/>
6 A bank or building society			<input checked="" type="checkbox"/>
7 Shares, bonds or unit trusts			<input checked="" type="checkbox"/>
8 A business or part of a business	<input checked="" type="checkbox"/>		
9 A car, truck or kombie	<input checked="" type="checkbox"/>		
10 A small holding			<input checked="" type="checkbox"/>

10. What is the highest educational level of your family members? (Put a cross in the appropriate box):

	Father	Mother	Brothers	Sisters
1. University				
2. College or Technikon				
3. Matric	X			
4. Secondary or High School		X	X	X
5. Primary School				
6. Vocational Training				
7. Literacy Course				
8. No Formal Education				

11. What is the present occupation of members of your family?

		Mother	Father	Brothers	Sisters
1	PROFESSIONAL, SEMI-PROFESSIONAL (e.g teaching, sport admin, technician, medical doctor)				
2	MANAGERIAL, EXECUTIVE AND ADMINISTRATIVE (e.g government official, manager)				
3	CLERICAL AND SALES (e.g clerk, sales person)				
4	TRANSPORT & DELIVERY (e.g taxi driver)				
5	SERVICE (e.g protective service, catering, domestic work)				
6	FARMING AND RELATED OCCUPATIONS				
7	ECONOMICALLY INACTIVE (e.g unemployed, student, pensioner, house wife, disabled)				

12. Do you have any members of your family in your care?

1 ✓	2
Yes	No

13. If yes, please specify their relationship to you:

1	Parents ✓
2	Grandparents
3	Own Children
4	Children of Relatives
5	Other, specify:

14. What is your responsibility to people mentioned in 12.1?
(You may cross more than one)

1	Financial Support
2	Emotional Support and General Advice ✓
3	Personal / Physical Care
4	Other, specify:

15. Do you get any help from your family?

1 ✗	2
Yes	No

15.1 If yes, please specify.
(you may cross more than one)

1	Financial Support ✓
2	Emotional Support and General Advice ✓
3	Personal / Physical Care
4	Other, specify:

16. Which of the following statements **best** represents your family's general feelings about your studying at university?

My family ...	
1	Feels I should study to be able to help them financially.
2	Would like me to improve my social/ personal life through education.
3	Feels I should be able to contribute more to family and society. ✗
4	Feels education will give me broader employment opportunities.
5	Would prefer me to earn money instead of studying.
6	Is impatient for me to finish my studies soonest.
7	Feels education is not suitable for a woman.

17. For each area of life named below, write the number that shows how much satisfaction you get from that area. Please use the scale provided:

1	2	3	4	5
A Great Deal	A Fair Amount	A Little	None	Don't Know

Area of Life	Rating
1. Your friendships	1
2. Your family life	1
3. Your non-academic activities, hobbies, etc.	5
4. Your health and physical conditions.	1
5. Your financial position	2
6. Your academic activities (tests, assignments, lectures, reading)	2
7. Other, specify:	

APPENDIX 4

Family Environment Scale Instructions

There are 90 statements in this questionnaire. They are statements about families. You are to decide which of these statements are true of your family and which are false. If you think the statement is *True* or mostly *True* of your family, make an **X** in the box labelled T (true). If you think the statement is *False* or mostly *False* of your family, make an **X** in the box labelled F (false).

You may feel that some of the statements are true for some family members and false for others. Mark T if the statement is *true* for most members. Mark F if the statement is *false* for most members. If the members are evenly divided, decide what is the stronger overall impression and answer accordingly.

Remember, I would like to know what your family seems like to you. So *do not* try to figure out how other members see your family, but *do* give me your general impression of you family for each statement.

1. Family members really help and support one another.
2. Family members often keep their feelings to themselves.
3. We fight a lot in our family.
4. We don't do things on our own very often in our family.
5. We feel it is important to be the best at whatever you do.
6. We often talk about political and social problems.
7. We spend most weekends and evenings at home.
8. Family members attend church or Sunday School fairly often.
9. Activities in our family are pretty carefully planned.
10. Family members are rarely ordered around.
11. We often seem to be killing time at home.
(Killing time means using up time without really having anything to do).
12. We say anything we want to around home.
13. Family members rarely become openly angry.
14. In our family, we are strongly encouraged to be independent.
15. Getting ahead in life is very important in our family.
16. We rarely go to lectures, plays or concerts.
17. Friends often come over for dinner or to visit.
18. We don't say prayers in our family.
19. We are generally very neat and tidy.
20. There are very few rules to follow in our family.
21. We put a lot of energy into what we do at home.
22. It's hard to "blow off steam" at home without upsetting somebody.
(To "blow off steam" means to give vent to, or let out your emotions).
23. Family members sometimes get so angry they throw things.
24. We think things out for ourselves in our family.
25. How much money a person makes is not very important to us.
26. Learning about new and different things is very important to us.
27. Nobody in our family is active in sports, soccer league, tennis club, etc.
28. We often talk about the religious meaning of Christmas, Passover, or other holidays.
29. It's often hard to find things when you need them in our household.
30. There is one family member who makes most of the decisions.
31. There is a feeling of togetherness in our family.
32. We tell each other about our personal problems.
33. Family members hardly ever lose their tempers.
34. We come and go as we want to in our family.
35. We believe in competition and "may the best man win".
36. We are not that interested in cultural activities (for example plays, music concerts, art exhibitions).
37. We often go to movies, sports events, camping etc.
38. We don't believe in heaven or hell.
39. Being on time is very important in our family.
40. There are set ways of doing things at home.
41. We rarely volunteer when something has to be done at home.
42. If we feel like doing something on the spur of the moment we often just get up and go.
43. Family members often criticize each other.

44. There is very little privacy in our home.
45. We always strive to do things just a little better the next time. (Strive means to try hard).
46. We rarely have intellectual discussions.
47. Everyone in our family has a hobby or two.
48. Family members have strict ideas about what is right and wrong.
49. People change their minds often in our family.
50. There is a strong emphasis on following rules in our family.
51. Family member really back each other up.
52. Someone usually gets upset if you complain in our family.
53. Family members sometimes hit each other.
54. Family members always rely on themselves when a problem comes up.
55. Family members rarely worry about job promotions, school grades, etc.
56. Someone in our family plays a musical instrument.
57. Family members are not very involved in recreational (fun, amusing or relaxing) activities outside work or school.
58. We believe there are some things you just have to take on faith.
(To "take on faith" means to accept or believe in some things even if you don't fully understand).
59. Family members make sure their rooms are neat.
60. Everyone has an equal say in family decisions.
61. There is very little group spirit in our family.
62. Money and paying bills is openly talked about in our family.
63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.
64. Family members strongly encourage each other to stand up for their rights.
65. In our family we don't try that hard to succeed.
66. Family members often go to the library.
67. Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).
68. In our family each person has different ideas about what is right and wrong.
69. Each person's duties are clearly defined in our family.
70. We can do whatever we want to in our family.
71. We really get along well with each other.
72. We are usually careful about what we say to each other.
73. Family members often try to be a step ahead of or out-do each other.
74. if a family member just wants to be by themselves, this will tend to hurt someone's feelings in our household.
75. "Work before play" is the rule in our family.
76. Watching T.V is more important than reading in our family.
77. Family members go out a lot.
78. The Bible is a very important book in our home.
79. Money is not handled very carefully in our family.
80. In our household, rules are pretty inflexible (cannot be easily changed, strict).
81. There is plenty of time and attention for everyone in our family.

- 82. There are a lot of spontaneous (unplanned and relaxed) discussions in our family.**
- 83. In our family, we believe you don't ever get anywhere by raising your voice.**
- 84. We are not really encouraged to speak up for ourselves in our family.**
- 85. Family members are often compared with others as to how well they are doing at work or school.**
- 86. Family members really like music, art and literature. (Books and Poetry).**
- 87. Our main form of entertainment is watching T.V or listening to the radio.**
- 88. Family members believe that if you sin you will be punished.**
- 89. Things are tidied up as soon as an activity is completed, e.g. putting things where they belong when we are finished using them.**
- 90. You can't get away with much in our family.**

APPENDIX 5

Family Environment Scale Adjustments

ITEM NO.:	ADJUSTMENT:
8. Family members attend church, synagogue, or Sunday School fairly often.	Family members attend church or Sunday School fairly often.
11. We often seem to be killing time at home.	We often seem to be killing time at home. (Killing time means using up time without really having anything to do).
22. It's hard to "blow off steam" at home without upsetting somebody.	It's hore to "blow off steam" at home without upsetting somebody. (To "blow off steam" means to give vent to, or let out your emotions).
27. Nobody in our family is active in sports, Little League, bowling, etc.	Nobody in our family is active in sports, soccer league, tennis club, etc.
36. We are not interested in cultural activities.	We are not interested in cultural activities (for example plays, music concerts, art exhibitions).
42. If we feel like doing something on the spur of the moment we often just pick up and go.	If we feel like doing something on the spur of the moment, we often just get up and go.
45. We always strive to do things just a little better the next time.	We always strive to do things just a little better the next time. (Strive means to try hard).
57. Family members are not very involved in recreational activities outside of work or school.	Family members are not very involved in recreational (fun, amusing or relaxing) activities outside work or school.
58. We believe there are some things you just have to take on faith.	We believe there are some things you just have to take on faith. (To "take on faith" means to accept or believe in some things even if you don't fully understand).

ITEM NO.:	ADJUSTMENT:
73. Family members often try to one-up or out-do each other.	Family members often try to be a step ahead of or out-do each other.
74. It's hard to be by yourself without hurting someone's feelings in our household.	If a family member just wants to be by themselves, this will tend to hurt someone's feelings in our household.
80. Rules are pretty inflexible in our household.	In our household, rules are pretty inflexible (cannot be easily changed, strict).
82. There are a lot of spontaneous discussions in our family.	There are a lot of spontaneous (unplanned and relaxed) discussions in our family.
86. Family members really like music, art and literature.	Family members really like music, art and literature (books and poetry).
89. Dishes are usually done immediately after eating.	Things are tidied up as soon as an activity is completed, e.g. putting things where they belong when we are finished using them.

Family Environment Scale - Answer Sheet

START
HERE

T	1	2	3	4	5	6	7	8	9	10	T
F											F
T	11	12	13	14	15	16	17	18	19	20	T
F											F
T	21	22	23	24	25	26	27	28	29	30	T
F											F
T	31	32	33	34	35	36	37	38	39	40	T
F											F
T	41	42	43	44	45	46	47	48	49	50	T
F											F
T	51	52	53	54	55	56	57	58	59	60	T
F											F
T	61	62	63	64	65	66	67	68	69	70	T
F											F
T	71	72	73	74	75	76	77	78	79	80	T
F											F
T	81	82	83	84	85	86	87	88	89	90	T
F											F

do not mark below this line

	C	Ex	Con	Ind	AO	ICO	ARO	MRE	Org	Ctl
R/S										
S/S										

APPENDIX 6

The Life Experiences Survey Instructions

Listed in the next pages are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. *Please cross those events which you have experienced in the last twelve months and indicate the time during which you have experienced each event.* Make sure that all crosses are directly across from the items they correspond to.

Also, for each item crossed below, *please indicate the extent to which you viewed the event as having either a positive or negative impact on your life* at the time the event occurred. That is, *indicate the type and extent of impact that the event had.*

A rating of -3 would indicate an extremely negative impact. A rating of 0 suggests that no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

If you have not experienced a particular event in the past year, leave it blank.

extremely
negative
moderately
negative
somewhat
negative
no impact
slightly
positive
moderately
positive
extremely
positive

Section 1

1.	Marriage	-3	-2	-1	0	+1	+2	+3
2.	Detention in jail or comparable institution	-3	-2	-1	0	+1	+2	+3
3.	Death of spouse	-3	-2	-1	0	+1	+2	+3
4.	Major change in sleeping habits (much more or much less sleep)	-3	-2	-1	0	+1	+2	+3
5.	Death of a close family member:							
	a) mother	-3	-2	-1	0	+1	+2	+3
	b) father	-3	-2	-1	0	+1	+2	+3
	c) sister	-3	-2	-1	0	+1	+2	+3
	d) brother	-3	-2	-1	0	+1	+2	+3
	e) grandmother	-3	-2	-1	0	+1	+2	+3
	f) grandfather	-3	-2	-1	0	+1	+2	+3
	g) other (specify)	-3	-2	-1	0	+1	+2	+3
6.	Major change in eating habits (much more or much less food intake)	-3	-2	-1	0	+1	+2	+3
7.	Repossession of bond or loan facilities by the bank	-3	-2	-1	0	+1	+2	+3
8.	Death of close friend	-3	-2	-1	0	+1	+2	+3
9.	Outstanding personal achievement	-3	-2	-1	0	+1	+2	+3
10.	Minor law violations (traffic tickets,	-3	-2	-1	0	+1	+2	+3
11.	Pregnancy	-3	-2	-1	0	+1	+2	+3

Section 1

extremely
negative
moderately
negative
somewhat
negative
no impact
slightly
positive
moderately
positive
extremely
positive

12.	Changed study conditions (different study responsibility, major change in study environment, lecture hours, etc)	-3	-2	-1	0	+1	+2	+3
13.	Serious illness or injury of close family member:							
	a) father							
	b) mother	-3	-2	-1	0	+1	+2	+3
	c) sister	-3	-2	-1	0	+1	+2	+3
	d) brother	-3	-2	-1	0	+1	+2	+3
	e) grandfather	-3	-2	-1	0	+1	+2	+3
	f) grandmother	-3	-2	-1	0	+1	+2	+3
	g) spouse	-3	-2	-1	0	+1	+2	+3
	h) other	-3	-2	-1	0	+1	+2	+3
	(specify)	-3	-2	-1	0	+1	+2	+3
14.	Sexual difficulties	-3	-2	-1	0	+1	+2	+3
15.	Trouble with university authorities (in danger of being expelled/suspended etc.)	-3	-2	-1	0	+1	+2	+3
16.	Trouble with in-laws	-3	-2	-1	0	+1	+2	+3
17.	Major change in financial status (a lot better off or a lot worse off)	-3	-2	-1	0	+1	+2	+3
18.	Major change in closeness of family members (increased or decreased closeness)	-3	-2	-1	0	+1	+2	+3

Section 1

extremely
negative
moderately
negative
somewhat
negative
no impact
slightly
positive
moderately
positive
extremely
positive

19.	Gaining a new family member (through birth, family member moving in etc.)	-3	-2	-1	0	+1	+2	+3
20.	Change of residence (eg. moving in/out of university residence or digs).	-3	-2	-1	0	+1	+2	+3
21.	Marital separation from partner due to conflict.	-3	-2	-1	0	+1	+2	+3
22.	Major change in church activities (increased or de- creased attendance)	-3	-2	-1	0	+1	+2	+3
23.	Marital reconciliation with spouse	-3	-2	-1	0	+1	+2	+3
24.	Major change in number of arguments with spouse or partner (a lot more or a lot less arguments)	-3	-2	-1	0	+1	+2	+3
25.	Change in husband's work (loss of job; beginning new job, retirement, etc.)	-3	-2	-1	0	+1	+2	+3
26.	Major change in usual type and/or amount of recreation	-3	-2	-1	0	+1	+2	+3
27.	Borrowing more than R30,000 (buying home, building material etc.)	-3	-2	-1	0	+1	+2	+3
28.	Borrowing less than R20,000 (study loan etc.)	-3	-2	-1	0	+1	+2	+3

Section 1

extremely
negative
moderately
negative
somewhat
negative
no impact
slightly
positive
moderately
positive
extremely
positive

29.	Loosing a job	-3	-2	-1	0	+1	+2	+3
30.	Having abortion	-3	-2	-1	0	+1	+2	+3
31.	Major personal illness or injury	-3	-2	-1	0	+1	+2	+3
32.	Major change in social activities, e.g parties, movies, visiting (increased or decreased participation)	-3	-2	-1	0	+1	+2	+3
33.	Major change in living conditions of family (building new home, renovation/ improvement, deterioration of home, suburb, village etc).	-3	-2	-1	0	+1	+2	+3
34.	Divorce	-3	-2	-1	0	+1	+2	+3
35.	Serious injury or illness of close friend	-3	-2	-1	0	+1	+2	+3
36.	Separation from spouse (due to coming to varsity)	-3	-2	-1	0	+1	+2	+3
37.	Engagement	-3	-2	-1	0	+1	+2	+3
38.	Breaking up with boyfriend/partner	-3	-2	-1	0	+1	+2	+3
39.	Leaving home for the first time	-3	-2	-1	0	+1	+2	+3
40.	Reconciliation with boyfriend/partner	-3	-2	-1	0	+1	+2	+3

Section 2

extremely negative
moderately negative
somewhat negative
no impact
slightly positive
moderately positive
extremely positive

	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
41. Beginning a new learning experience at a higher academic level (first year university, post-graduate studies, etc.)	-3	-2	-1	0	+1	+2	+3
42. Changing to a new university /faculty at same academic level (undergraduate, post-graduate etc)	-3	-2	-1	0	+1	+2	+3
43. Failing an important exam	-3	-2	-1	0	+1	+2	+3
44. Changing a major	-3	-2	-1	0	+1	+2	+3
45. Failing a course	-3	-2	-1	0	+1	+2	+3
46. Dropping a course	-3	-2	-1	0	+1	+2	+3
47. Joining a student organisation	-3	-2	-1	0	+1	+2	+3
48. Financial problems concerning university (in danger of not having sufficient money to continue with your studies)	-3	-2	-1	0	+1	+2	+3
<i>Other recent experiences which have had an impact on your life. List and rate.</i>							
49. _____ _____	-3	-2	-1	0	+1	+2	+3
50. _____ _____	-3	-2	-1	0	+1	+2	+3
51. _____ _____	-3	-2	-1	0	+1	+2	+3

APPENDIX 7

Life Experiences Survey Adjustments

ITEM	ADJUSTMENT
7. Foreclosure on mortgage or loan.	Termination of bond or loan facilities by bank.
13. Changed work situation (different work responsibility, major change in working conditions, working hours, etc.).	Changed study conditions (different study responsibility, major change in study environment, lecture hours etc).
17. Trouble with employer (in danger of losing job, being suspended, demoted, etc.).	Trouble with university authorities (in danger of being expelled, suspended, etc.).
22. Change of residence.	Change of residence (e.g. moving in/out of university residence or digs).
23. Marital separation from mate (due to conflict)	Marital separation from spouse (due to conflict).
25. Marital reconciliation with mate.	Marital reconciliation with spouse.
26. Major change in number of arguments with spouse (a lot more or a lot less arguments).	Major change in number of arguments with spouse or partner (a lot more or a lot less arguments).
30. Borrowing more than \$10 000 (buying home, business, etc).	Borrowing more than R30 000 (buying home, business, etc).
31. Borrowing less than \$10 000 (buying car, TV, getting school loan, etc)	Borrowing less than R30 000 (study loan, buying car, TV, etc).
32. Being fired from job.	Loosing a job.
37. Major change in living conditions of family (building new home, remodelling, deterioration of home, neighborhood, etc).	Major change in living conditions of family (building new home, renovation/ improvement, deterioration of home, suburb, village, etc.)
45. Breaking up with boyfriend/ girlfriend.	Breaking up with boyfriend/ partner.
47. Reconciliation with boyfriend/ girlfriend.	Reconciliation with boyfriend/ partner.

ITEM	ADJUSTMENT
51. Beginning a new school experience at a higher academic level (college, graduate school, professional school, etc).	Beginning a new learning experience at a higher academic level (first year university, post-graduate studies, etc.)
52. Changing to a new school at same academic level (undergraduate, graduate, etc.)	Changing to a new university/ faculty at same academic level (undergraduate, post-graduate, etc.)
59. Joining a fraternity/ sorority.	Joining a student organization.
60. Financial problems concerning school (in danger of not having sufficient money to continue).	Financial problems concerning university (in danger of not having sufficient money to continue).

APPENDIX 8

Ways of Coping Subscales

(* = Reverse Scoring)

1. Wishful Thinking/ Escape

1. Waiting to see what will happen.
10. Getting away from it for a while, trying to rest or take a vacation.
12. Telling yourself things that make you feel better.
13. Wishing you were a stronger person.
16. Making light of the situation, refusing to get too serious about it.
21. Wishing you could change the way you feel.
23. Hoping a miracle will happen.
28. Feeling that time will make a difference, the only thing to do is wait.
32. Feeling bad that you cannot avoid the problem.
33. Trying to make yourself feel better by eating, drinking, smoking, taking medication etc.
43. Daydreaming or imagining a better time.
49. Sleeping more than usual.
55. Refusing to believe what has happened. Keeping your feelings to yourself.
56. Joking about it.
57. Having fantasies or wishes about how things might turn out.
58. Trying to forget the whole thing.

2. Acceptance

1. Waiting to see what will happen.
2. Just taking things one step at a time.
- *8. Avoiding being with people in general.
14. Concentrating on something good that can come out of the situation.
17. Accepting understanding and sympathy from somebody.
26. Bargaining or compromising to get something positive from the situation.
31. Trying to make up for some of the bad things that have happened.
37. Looking for the silver lining, trying to look at the bright side of things.
- *42. Taking a big chance or doing something risky.
45. Turning to work or substitute activity to try and take your mind off things.
46. Accepting the next best thing to what you wanted.
- *51. Taking it out on other people.

3. Problem-Focused/ Help-Seeking

- 3. Standing your ground and fighting for what you want.
- 4. Talking to someone who can do something concrete about the problem.
- 9. Asking someone you respect for advice and following it.
- 11. Getting the person responsible to change his/her mind.
- 18. Coming up with a couple of different solutions to the problem.
- 22. Talking to someone to find out more about the situation.
- 27. Changing something so things will turn out alright.
- *28. Feeling that time will make a difference, the only thing to do is wait.
- 38. Just concentrating on what you have to do next - the next step.
- 44. Getting angry at the people or things that caused the problem.
- 50. Knowing what has to be done; doubling your efforts and trying harder to make things work.
- 52. Getting professional help and doing what they recommend.
- 53. Drawing on your past experience.
- 54. Making a plan of action and following it.

4. Emotional Withholding

- *4. Talking to someone who can do something concrete about the problem.
- 8. Avoiding being with people in general.
- *9. Asking someone your respect for advice and following it.
- 15. Maintaining your pride and keeping a stiff upper lip.
- *22. Talking to someone to find out more about the situation.
- *35. Letting your feelings out somehow.
- 40. Keeping others from knowing how bad things are.
- 59. Trying to forget the whole thing.
- 60. Keeping your feelings to yourself.

5. Self-Blame

- 5. Blaming yourself.
- 7. Criticising or lecturing yourself.
- 13. Wishing you were a stronger person, more optimistic and forceful.
- *16. Making light out of the situation, refusing to get too serious about it.
- 25. Wishing you could change what has happened.
- 31. Accepting your strong feelings but trying not to let them interfere with other things too much.
- 33. Feeling bad that you cannot avoid the problem.
- 35. Realizing you bring the problem on yourself.
- 41. Going over the problem again and again in your mind to try to understand it.

6. Growth

- 6. Feeling you change or grow as a person in a good way.**
- 14. Concentrating on something good that can come out of the whole thing.**
- 19. Rediscovering what is important in life.**
- 30. Feeling that time will make a difference, the only thing to do is wait.**
- 37. Doing something totally new that you never would do if this had not happened.**
- 42. Feeling you find new faith or some important truth in your life.**
- 48. Being inspired to do something creative.**

7. Help-Seeking

- 4. Talking to someone who can do something concrete about the problem.**
- 9. Asking someone you respect for advice and following it.**
- 23. Talking to someone to find out more about the situation.**
- 53. Getting professional help and doing what they recommend.**

