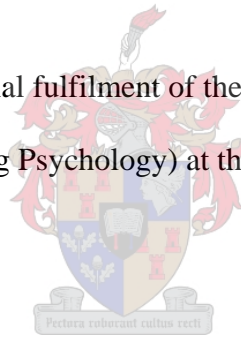


**RESILIENCE IN FAMILIES THAT HAVE EXPERIENCED
HEART-RELATED TRAUMA**

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Assignment presented in partial fulfilment of the requirements for the degree of
Master of Arts (Counselling Psychology) at the University of Stellenbosch



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STATEMENT

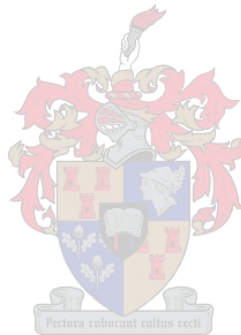
I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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ABSTRACT

The current study was aimed at expanding on and understanding the adaptation and adjustment mechanisms used by families in the wake of heart-related trauma, as a means of providing information that reveals and supports the family's own abilities, capabilities and resilience. The theoretical framework of this study was the Resiliency Model of Family Stress, Adjustment and Adaptation (McCubbin & Thompson, 1991). The focus of this study is on the existing and new resources (including social support), the situation appraisal (including the family schema) and the problem solving and coping aspects of the family. This focus represents the paradigmatic shift from a pathological view of a family to a salutogenic view. Family resilience factors were collected through the self-report questionnaires and an open ended questionnaire, which were completed by the family member who experienced the heart-related trauma. Results indicated that family time and routines appeared to be a key process for mediating family adaptation, as well as parent-child togetherness and family chores. Affirming communication was identified as a key resilience enhancing factor. Communication that is inflammatory (incendiary communication) was found to have a negative effect on adaptation. Further key processes identified as influencing family adaptation were social support, family hardiness and reframing of problem situations. The identification of key processes that mediate recovery can serve as a valuable guide in the South African context for intervention and prevention, contributing to a more comprehensive understanding of families and cardiovascular disease.

OPSOMMING

Die doel met hierdie ondersoek is om aanpassings- en verstellingsmeganismes te identifiseer en te beskryf in gesinne wat deur 'n hart-verwante trauma getref is. Hierdie kwaliteite dui op gesinne se bevoegdheid en veerkrag. Die teoretiese basis van die ondersoek berus op McCubbin en Thompson (1991) se “Resiliency Model of Family Stress, Adjustment and Adaptation”. Die fokus is op bestaande en nuwe hulpbronne (ingesluit sosiale ondersteuning), die beoordeling van die situasie (ingesluit gesinskemas) en problemoplossing en hanteringsaspekte van die gesin. Hierdie oriëntasie is vanuit die solutogene paradigma, waar klem gelê word op veerkragtigheid eerder as op patologie. Twee-en-twintig gesinne het aan die ondersoek deelgeneem. Die resultate dui daarop dat gesinstyd en -roetines, sowel as die teenwoordigheid van gesinstake, 'n sleutel rol speel in gesinsaanpassing. Ondersteunende kommunikasie is ook geïdentifiseer as 'n faktor wat veerkragtigheid verhoog, terwyl negatiewe steurende kommunikasie 'n omgekeerde verband met gesinsveerkragtigheid het. Ander sleutelprosesse wat geïdentifiseer is en positief verband hou met gesinsaanpassing, is sosiale ondersteuning, gesinsgehardheid, en die herformulering van probleemsituasies. Die identifisering van kern gesinsprosesse kan bydra tot die herstel en opbou van gesinne in krisis. In die Suid-Afrikaanse konteks kan hierdie kennis gebruik word om intervensies te beplan vir gesinne met 'n lid wat 'n kardiovaskulêre siekte het.

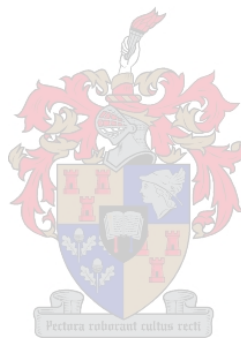
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INTRODUCTION

The interaction between a family and chronic illness, such as cardiovascular disease, has become an increasingly interesting area of study, both in the field of family psychology as well as chronic illness research (Knafl & Gillis, 2002). Knafl and Gillis (2002) in their overview of research done in this area found that most studies have focused on families where a child has a chronic illness and that the knowledge being gained is not used to promote optimal adaptation. The current research, aimed at identifying key processes that mediate recovery could serve as a valuable guide in the South African context for intervention and prevention, contributing to a more comprehensive understanding of families and cardiovascular disease. By targeting and strengthening these key processes, families are able to become more resourceful, as risk and vulnerability may be decreased and they are better able to meet the challenge of future crises (Walsh, 2003).

Cardiovascular disease is the collective term used to describe diseases that involve the heart. It now rates as one of the world's top causes of death, accounting for approximately one third of all deaths globally (Keys, 1970; Mackay & Mensah, 2004; Pollock & Schmidt, 1995). In the South African context cardiovascular disease (from hereon referred to as CVD), has been predominantly considered as affecting the White population, but with increasing urbanisation and changes in lifestyle and diet, the incidence of CVD is sharply on the rise in the Black population. Mackay and Mensah (2004) also cite the rise in incidence of CVD in developing and transitional countries as a result of increasing longevity, urbanisation and lifestyle changes. CVD is rated by Venter (2004) as one of the number one killers in South Africa, costing the economy billions every year. In 1991 the estimated initial cost was 4.135 billion Rand, which does not include the cost of rehabilitation and follow-up. In a study done by the Medical Research Council (Venter, 2004) it was estimated that 32 919 South Africans died of CVD in 2000. Leeman (2003) reports that the incidence of CVD among the Indian male community of South Africa is one of the highest in the world. Mackay and Mensah

(2004), state that 75 % of CVD deaths occur in the poorer regions of the world and that this is likely to increase in the future.

Despite the increasing risk and prevalence of CVD in South Africa, very little research has been done in this area. Where research was done the focus was either on the patient or European / American families. The experience of a chronic illness like CVD has been shown (Penn, 2001; Tarkka, Paavilainen, Lehti & Astedt-Kurki 2002; Van der Poel & Greeff, 2003), to influence not only the patient, but also the family members. As a chronic illness it may be considered as a relationally traumatising experience. CVD is a stressor, as defined by McCubbin and McCubbin (1996), that places a demand on the family that either produces or has the potential to bring about change in the family system. The potential stressors associated with CVD include financial uncertainty, marital conflict, parental role conflict, changing family dynamics and the pressure on the family as caregivers (Monahan, Kohman & Coleman, 1996; Tarkka et al., 2002; Van der Poel & Greeff, 2004).

This study was aimed at expanding on and understanding the adaptation and adjustment mechanisms used by families in the wake of heart-related trauma, as a means of providing information that reveals and supports the family's own abilities, capabilities and resilience.

Resilience involves a dynamic process of fostering positive adaptation in the context of adversity (Hawley, 2000). In the past families were seen to contribute to risk, but not to resilience (Walsh, 2003). A family resilience perspective takes into consideration strengths and limitations of the family as a system. Viewing the family as a system sees the family characteristics as a manifestation of the interaction of the family with the environment (Newby, 1996). Thus the concept of family resilience focuses on the family as a functional unit, where serious crises could have an impact on the family as a whole and may derail the entire family system. At the same time key processes within the family can help lessen the impact and assist in the recovery process of the family unit.

There are various definitions of family resilience. McCubbin and McCubbin (cited in Hawley & DeHaan, 1996 p. 284) define it as "characteristics, dimensions, and properties of families which help families to be resistant to disruption in the face of change and adaptive in the face of a crisis situation". A further definition cited in Hawley and DeHaan (1996, p. 284) defines it as "the family's capacity to cultivate strengths to positively meet the challenges of life". Still another definition cited in Hawley and DeHaan (1996, p. 284) is that it is "the power or ability to return to original form or position after being bent, compressed, or stretched, as well as the ability to overcome adversity, survive stress and rise above disadvantages". Hawley and DeHaan (cited in DeHaan, Hawley & Deal, 2002) defines resilience as the path the family follows as it adapts and prospers in the face of stress. Doing so in unique ways, these depend on the context, developmental level, the interactive combinations and protective factors and the family's shared outlook. This definition focuses on the fluency of resilience, the fact that the image of resilience will vary according to particular stressors and the importance of risk and protective factors that are unique to each family. Within all these definitions there are three commonalities that thread them together. Firstly, resilience is seen as coming to the fore in the face of difficulties, referring to the qualities that enable the family to bounce back (Hawley & DeHaan, 1996). Secondly, resilience carries a property of buoyancy - the ability to bounce back or to return to a previous level of functioning, suggesting that families may initially be thrown off course, but eventually find their way back. A third thread that holds these definitions together is that resilience tends to be viewed in terms of wellness rather than pathology, and it addresses the ways in which families are successful and not the ways in which they fail.

A family resilience framework may be seen as a paradigmatic shift from a pathogenic approach to a salutogenic approach. From a salutogenic point of view one considers the healing resources of the family, their potential for habitual changes for risk reduction and the development of resources. In so doing family resilience moves away from the focus on

problems and difficulties in families into the age of resilience, as championed by Ganong and Coleman (2002).

Family resilience plays an important role in understanding the family's development and recovery after trauma. When faced by a crisis some families are shattered, while others emerge strengthened and more resourceful (Walsh, 1996). Considering the context within which we live today and the increasing diversity of families and the social and economic upheaval facing families, Walsh (1996) proposes that approaches based on family resilience – in other words what allows them to emerge stronger, not what prevents them from coping – are very useful. Walsh (1996) attributes the relevancy to family resilience based approaches helping to prepare families to meet uncertainty and future challenges with mutual support, flexibility and innovation. This study sought to identify the key processes that enable families to cope more efficiently with the aftermath of heart-related trauma.

In a developing country like South Africa there is a double burden of risk associated with CVD. Developing countries share the same burdens as developed countries, which include smoking, alcohol use, high blood pressure, high cholesterol and obesity. In addition to these, poverty – with its associated problems of under-nutrition, communicable disease and low education status – increases the risk for a developing country like South Africa (Mackay & Mensah, 2004). In South Africa these conditions are fertile ground for the development of CVD. Although some risk factors are modifiable, like smoking, physical inactivity and unhealthy diets, within the South African context the poverty stricken communities are at a disadvantage. Fullard (1990) cites that a low socio-economic status has an inverse relationship with the risk of heart disease.

Fullard (1990) cites that the best combination of risk factors prove inadequate in predicting heart disease in any particular individual. Therefore, it is important to consider the behavioural factors associated with heart disease. Research suggests that the behavioural coronary risk profile is multi-factorial in its nature and in addition to personality traits,

protective factors like social support and coping skills need to be taken into consideration, as well as the social environment and its psychosocial stressors when assessing the relevant risk (Fullard, 1990). Fullard (1990) notes that people at either end of the socio-economic scale who experience extreme situational stressors are at risk. Mortality is higher with low income or lower social class individuals, with evidence that it is related to poor environmental factors. Furthermore, poor education also increases the risk. There are also indications that the psychosocial work environment influences the risk to individuals. Examples are work situations in which individuals have low decision latitude and social support. There are indications that acute life stress precedes recurrent coronary events and sudden death. There is also evidence that protective factors may operate in the individual and environment to decrease pathogenic effects. Social support in work (good working climate), in family (sound marriage), or a stable circle of friends, as well as cultural and religious traditions, is believed to exercise a protective function (Fullard, 1990).

The theoretical framework of this study is based on the Resilience model of Family Stress, Adjustment and Adaptation of McCubbin and McCubbin (1996). This model highlights four major domains of family functioning critical to family recovery, (which are interpersonal relationships and development; well-being and spirituality; community relationships and nature; and structure and function), and works from the basis of five fundamental assumptions. The first is that families face hardships as a natural and predictable part of family life, secondly that families develop basic competencies and abilities designed to promote growth and development of the members and which protect the family. The third assumption is that these competencies and abilities are unique to the family and designed to protect the family from unexpected or abnormal stressors and strains and to help the family to recover from a crisis or major change. Following this is the assumption that families draw from and contribute to the network of relationships and resources in the community, including ethnicity and cultural heritage, especially during a crisis. The final assumption of this model is

that families faced with a crisis situation that demands changes in the family functioning work to restore order, harmony and balance, even during change (McCubbin & McCubbin, 1996). Thus the process of adapting includes not only changing the environment, but also the changing of the community and the family relationship to the community to restore the family's well-being.

The focus of this study is on the existing and new resources (including social support), the situation appraisal (including the family schema) and the problem solving and coping aspects of the family. These are of importance in the adjustment phase, which is one of the two interrelated phases distinguished by the resiliency model, with the other being the adaptation phase. The adjustment phase describes the family's post-crisis adjustment and the influence of protective or resistance factors. It could be described as a series of interacting components that shape the family's process and outcomes. The family's outcomes may vary along a continuum from more positive (bonadjustment) to more negative (maladjustment). Maladjustment moves the family back into crisis, whence the family moves into the adaptation phase of the Resiliency Model (McCubbin & McCubbin, 1996). The adaptation phase describes what happens in families in a maladjusted crisis situation when adjustment fails to significantly incorporate a crisis situation to re-establish harmony in the family's functioning. Unsuccessful adaptation brings about the cyclical nature of the model in that the cycle starts again with changes in patterns of functioning and recycles through the family process of adaptation.

Each family's crisis will have both similar and unique aspects. Falicov (cited in Walsh, 2003) sees each family as being in a complex ecological niche, sharing borders and common ground with other families, as well as differing in positions related to matters, such as gender, economic status, life stage and position vis-à-vis the dominant culture. This is a very important aspect of any study done, particularly within the South African context. The participants of the study come from various 'ecological niches' that would exercise an

influence on their experience of a crisis situation in the family. A complete assessment of a family includes an observation of these varied contexts. A family resilience framework seeks to identify the common elements in a crisis situation and effective family responses, while also taking into account each family's unique perspectives, resources and challenges (Walsh, 2003).

Most crises are not simply short-term experiences, but usually constitute an intricate set of changing conditions with a past history and a future course (Walsh, 2003). This is the experience of having a heart problem, because it involves the reorganisation of many aspects of family functioning, especially when the problem is quite severe. Returning home from hospitalisation may involve changing of roles within the household, different diets and regimens. It may also result in the main breadwinner having to leave his job, to name but a few of the changes and adjustments the family has to make. Considering the intricacy of the situation, Walsh (2003) states that no single coping mechanism or response is invariably the most successful, and different strategies may prove to be useful in meeting new challenges that unfold over time. Thus family resilience involves a variety of adaptational pathways over time from the crisis, through the disruptive transition, and subsequent shock waves in the immediate aftermath and beyond (Walsh, 2003). Defrain (cited in Silberberg, 2001) states that when one identifies the strengths within a family, it may become the foundation for continued growth and positive change in a family and a society.

LITERATURE REVIEW

Cardiovascular Disease

Cardiovascular disease is the collective term used for dysfunctional conditions of the heart. This includes Ischemic heart disease (IHD), also known as Coronary Heart Disease (CHD). Cardiovascular Disease is a multi-factorial phenomenon, with no one factor being essential or sufficient to produce the disease, with each risk factor influencing the others (Pollock & Schmidt, 1995). The major risk factors could be arranged into four categories namely, (i)

atherogenic personal attributes, (ii) living habits or less discretionary environmental factors that promote host factors, (iii) signs of preclinical disease and (iv) host susceptibility to all these various influences.

The atherogenic traits are the more biological factors, such as elevated blood lipids, high blood pressure and clinical diabetes. Further biological factors are related to genetic inheritance. The life style that predisposes individuals to CHD is characterised by a diet too rich in calories, saturated fat, cholesterol, and salt and by physical indolence, unrestrained weight gain, cigarette smoking, and alcohol abuse. Less discretionary environmental factors include climate, air pollution, trace metals and water softness (Pollock & Schmidt, 1995).

Coronary heart disease (CHD) is the disease of the blood vessels supplying the heart muscle. The main cause of coronary heart disease is atherosclerosis (also known as the hardening of the arteries), a process that occurs in virtually everyone's body, as the blood vessels start to undergo age-related changes. Atherosclerosis represents the accumulation of lipids and other cells within the walls of the coronary arteries (Gallo, Ghaed, & Bracken, 2004). It is important to note that although it occurs in almost everyone, certain medical conditions may accelerate the process, including high blood pressure, diabetes, smoking, high blood cholesterol and obesity. The blood vessels may be become damaged during the process of age-related changes in some areas. At these damaged sites the blood flow would be disturbed and fat ("cholesterol") and other substances that are circulating in the blood are laid down (Fullard, 1990; Keys, 1970). As more and more fat is deposited and atherosclerotic plaque may result, the arteries may become blocked. This blockage could occur almost anywhere in the body. A blockage in the brain could lead to a "stroke" and a blockage in the legs may lead to pain ("claudication") or ulcers. A plaque disruption and associated clotting processes can trigger "unstable angina", or a sudden worsening of chest pain, which often precedes a more threatening clinical event (Gallo et al., 2004; Keys, 1970). In instances where the artery becomes completely blocked in a portion of the myocardium tissue, it may lead to a

heart attack or a myocardial infarction, which in severe cases could lead to sudden death (Gallo et al., 2004; Keys, 1970).

Families and Illness

Knafl and Gillis (2002) found that studies about families in which a member has a chronic illness falls within two major clusters, namely descriptive studies of family response to illness and explanatory studies of variables contributing to response to chronic illness. In cluster one, of thirty-eight studies examined, cardiac conditions were examined in only two. In studies describing a family's response or the contribution of family variables the focus was mainly on child illness and cardiac conditions were not examined. This overview of Knafl and Gillis (2002) brings the need for a study in this area to the foreground, particularly in the light of an increasing incidence of cardiac conditions. Studies that have focused on heart diseases were limited to the consequences for caregivers (Monahan et al., 1996), the marital relationship (Van der Poel & Greeff, 2004) and the patient's perspective.

Despite the paucity of research in the field of cardiac conditions as related to family resilience, available literature examining the impact into the effects of various chronic illnesses on the family, provide a good basis on which to build. Although specific chronic illnesses may differ, there are commonalities related to the demands of the illness on the family (Walsh, 2002). Newby (1996) found that chronic illness imposes a great responsibility on the family. She states that the family unit has to be dynamic and evolutionary to maintain and manage the stresses of both normal and transition phases, as well as a crisis like CVD. Newby (1996) cites that the response to such a crisis is dependent on the strength and coping mechanisms of the family. Chronic disease, according to Newby (1996), exerts a centripetal pull on the family system. In the face of the crisis the family has to deal with the development demands of the illness.

Patterson (2002) found that patterns of relational family function are important in protecting the family when exposed to risk. Two central aspects highlighted by Patterson are

those of family cohesiveness and flexibility. When a chronic health condition, such as CVD, affects a family it may result in the suppression of negative emotions as a means of not creating further undue stress. However, Patterson (2002) notes that repressing effect and not communicating may lead to an undermining of the family processes and the breakdown of cohesion. Poor communication increases the family's risk, where good communication assists in the adaptation process key to family resilience (Hawley, 2000; Halwey & DeHaan, 1996; Patterson, 2002; McCubbin & McCubbin, 1996; Walsh, 2003). The concept of family connectedness or cohesion was also found as an important resilience factor by Cohen, Slonim, Finzi and Leichtentritt (2002) in their study of Israeli women and their families. They further found that family flexibility was an important mediating factor in dealing with crises experienced by the families in the past year.

Another contributing factor to a family's resilience is its ability to attach some meaning to the occurrence. Families who change the way they think about a situation or circumstances, emphasising what was learned, how the family had grown (cohesiveness) – rather than concentrating on hardships – increase their capabilities (Antonovsky & Sourani, 1988; Gallo et al., 2004; McCubbin & McCubbin, 1996; Patterson, 2002; Walsh, 2003). Family meaning-making also refers to the development of a shared identity. This shared identity of the family (cohesiveness) is facilitated by daily routines and rituals, which build a sense of who the family is (Hawley & DeHaan, 1996; McCubbin & McCubbin, 1996; Patterson, 2002). Furthermore, a family's world view is important in shaping day to day family functioning (Chesla et al., 2003; Patterson, 2002; Walsh, 2003). Silberberg (2001) further elaborates on this notion by pointing to the key process of pulling together (cohesiveness), reframing the crisis (meaning-making) and the sharing of beliefs. Walsh (2003) cites that making meaning of adversity, adopting a positive outlook, and valuing transcendence are important aspects of family resilience. Silberberg (2001) in his study on family resilience also found that rituals, like meals together, strengthen the sense of belonging and meaning in the family.

Hawley (2000) also supports the premise that the way in which a family defines a crisis has an important effect on how they cope. The idea of the family identity is expanded upon by McCubbin and McCubbin (1996) to the concept of a family schema which describes shared values, goals, priorities and expectations. Families with healthy schemas are seen as being more cohesive (Hawley, 2000). Ultimately the family's identity plays an important role in resilience. Cohen et al. (2002) also identified the abovementioned components. The aspects of family cohesiveness, flexibility, communication and identity, focus on the inner workings of a family. But a family lives, works and survives within a social context. Therefore, another important aspect of resilience is social support.

Research literature supports the notion that social support may act as a moderating factor in families that are adapting to a crisis (Fullard, 1990; Gallo et al., 2004; Silberberg, 2001; Tarkka et al., 2002; Walsh, 2003). A study done by Ergh, Rapport, Coleman and Hanks (2002), found that social support showed a direct linear relationship to family functioning after a brain injury of a member. It played a very powerful role in mediating caregiver psychological distress. Knafl and Gillis (2002) cite various studies that show correlations between family responses to chronic illness and social support. Gordon and Perrone (2004) also cite the importance of an adequate social support network when spouses become caregivers of chronically ill partners. Monohan et al. (1996) cites that accurate assessment of social support is essential for work with heart patients and their families.

Jackson and Turnbull (2004) cite various studies that point to the importance of social support when a family is dealing with a crisis of this nature. Tak and McCubbin (2002) found that even perceived social support acted as a resiliency factor between family stress and family coping. They further found that family characteristics played an important predicting factor of perceived social support and parental coping. The family is often the most central source of support for the patient and they in turn need adequate social support (Tarkka et al., 2002).

Conclusion

Considering the epidemic nature of heart disease, with its physiological and psychosocial complexities impacting both the patient and the family unit, it becomes evident that there is a need for further research in order to understand the unique needs and abilities of the family in facing this crisis. Despite the paucity of research in this arena certain characteristics were identified in previous research that point to qualities which help families to adapt to a crisis. Therefore, the aim of this study is to identify qualities and characteristics that are associated with family adaptation.

METHOD

Participants

The participants were identified with the help of a psychologist working at a healthcare facility in the Western Cape. The hospital management gave permission that patients may be approached for participation in this investigation. The participant group was obtained by approaching all patients who had been hospitalised no less than six months prior to participation because of heart related crisis at a healthcare facility in the Western Cape, if they met the criteria of inclusion. There were three criteria, namely that (1) he/she had to have been hospitalised for a heart-related crisis not less than six months ago, (2) he/she was married, and (3) they had at least one child still living in the parental home. Fifty eight families were telephonically approached and presented with the options of either a home visit by the researcher or posting the questionnaires to the home address. Of the 58 families that were approached, 42 agreed to participate. Eventually 22 sets of questionnaires, completed by the parent who experienced the heart-related crisis, were obtained.

Of the 22 participating family members only one was female, 73 % reported Afrikaans as their first language and 27 % were English speaking. The mean age of the participants was 50 (SD=6.8), the mean age of their spouses was 49 (SD=10.02), and the mean number of children in the family was 2.5 (SD=1.01). The mean length of the marital relationship was 22

years (SD=6.69). Eighteen percent of the participants attended university, 22 % were trained post-matric (not at university), a further 22 % completed matric, 9 % completed an apprenticeship, 22 % completed their Junior Certificate (Standard 8) and 4 % had no formal education. The occupational classification of the participants covered quite a broad spectrum. Table 1 provides a summary of the occupational distribution.

Table 1

Occupational Distribution of Participants (N = 22)

Occupational Category	Frequency	Percentage
Highly qualified professional, executive, administrative and technical occupations	6	27
Professional, administrative and managerial workers	5	22.7
Commercially independent	1	4.5
Lower qualified administrative, technical and clerical with limited supervisory responsibility	3	13.6
Skilled workers and artisans with trade qualifications	2	9
Semi-skilled production and manual workers	0	0
Unskilled Production and manual workers	0	0
Not economically active or productive	1	4.5
Other	3	13.6
No response	1	4.5

It follows from Table 1 that the majority of the participants were economically viable, being well employed, despite lacking formal qualifications.

Table 2 summarises the distribution of various forms of cardiovascular disease that resulted in the hospitalisation of the participants.

Table 2

Distribution of the types of Cardiovascular Disease of Participants (N=22)

Cardiovascular Disease Type	Frequency	Percentage
Atherosclerosis - unstable angina	10	45.4 %
Atherosclerosis - heart attack	6	27.3 %
Acute Ischeamic heart disease	4	18.2 %
Other	2	9.1 %

It follows from Table 2 that the majority of the patients were hospitalised for an unstable angina (45.4 %). The second most frequent reason for hospitalisation was a heart attack, with 27.3 % of the participants falling into this category, followed by 18.2 % hospitalisation of Acute Ischeamic Heart Disease and 9 % were hospitalised for other heart-related conditions.

Measuring Instruments

A *biographical questionnaire* was utilised to obtain information from the participants pertaining to family composition, occupational status, education and duration of the marital relationship. Following this, participants completed seven additional questionnaires.

The Family Hardiness Index (FHI) was developed to measure the characteristic of hardiness as a stress resistance and adaptation resource in families (McCubbin, McCubbin & Thompson, 1996). Family hardiness focuses on the family's characteristic approach to life's difficulties and patterns of viewing the impact of life events and change on family functioning. It refers to the strengths and durability of the family unit and is characterised by a sense of control over the outcomes of life's hardships. The FHI is a 20-item instrument consisting of three sub-scales, namely commitment (8 items), challenge (6 items) and control

(6 items). Items were constructed to reflect an integrated orientation, rather than an individual one (McCubbin et al., 1996). The commitment subscale measures the family's sense of internal strengths, dependability and ability to work together. Commitment implies a curiosity about life and a sense of an internal locus of control (McCubbin et al., 1996). The challenge sub-scale measures the families' efforts to be innovative, active, to experience and learn new things. Challenge reflects the belief that change is a natural process in life that may bring about growth rather than presenting a threat to stability (McCubbin et al., 1996). The control sub-scale measures the family's sense of being in control of family life rather than being shaped by outside events and circumstances. Each of the subscales requires participants to assess how accurately each statement describes current family functioning on a five point Likert-type scale (False, Mostly False, Mostly True, True, Not Applicable). To obtain a total score for Family Hardiness the values of all responses should be summed. The overall internal validity (Cronbach's alpha) is .82, and the validity coefficients range from .20 to .23 with criterion indices of family satisfaction time and routines, and flexibility (McCubbin et al., 1996). The dimension of hardiness when applied to families is closely linked to family schema, which represent the basic strengths families call upon to manage difficulties and hardships in crises.

The Family Time and Routines Index (FTRI) developed by McCubbin, McCubbin and Thompson (McCubbin et al., 1996) assesses the types of activities families use and maintain, as well as the value they place on these practices. Occasions of time spent together and routines adopted during these occasions are relatively reliable indices of family integration and stability, which includes effective ways of meeting common problems and ability to handle major crises (McCubbin et al. 1996). The FTRI is a 30-item scale consisting of eight sub-scales, Parent-Child Togetherness, Couple Togetherness, Child Routines, Meals Together, Family Time Together, Family Chores Routines, Relative Connection Routines, and Family Management Routines. This index calls for the respondent to assess on a 4-point

Likert-type scale (False, Mostly False, Mostly True, True), the degree to which each statement describes their family behaviour. Additionally it also requires the assessment of the degree to which the respondent values the routine listed. The FTRI emphasises the establishment and importance of predictable patterns of communication and routines that establish and promote a sense of family cohesion and togetherness.

The Parent-Child Togetherness Subscale measures the family's emphasis on establishing predictable communication between parent and children and adolescents. The Couple Togetherness subscale measures the family's emphasis on establishing predictable routines to promote communication between couples. The Child Routines subscale measures the family's emphasis on establishing predictable routines to promote childrens' or teenagers' sense of autonomy and order. The Family Togetherness subscale measures the family's emphasis on family togetherness to include special events, caring, quiet time and family time. The Family Chores subscale measures the family's emphasis on establishing predictable routines to promote child and adolescent responsibilities in the home. The Meals Together subscale measures the family's efforts to establish predictable routines to promote togetherness through family mealtimes. The Relatives Connection subscale measures the family's effort to establish predictable routines to promote meaningful connection with relatives. The Family Management Routines subscale measures the family's efforts to establish predictable routines to promote a sense of family organisation and accountability needed to maintain family order in the home (McCubbin et al., 1996).

The emphasis on family time and routines varies across the life-cycle of the family, thus one would expect to observe differences in the family's emphasis as children enter and leave the family. The total FTRI score is an indication of the overall emphasis that is placed on family times and routines. The internal reliability for the FTRI is .88 (Cronbach's alpha), with validity indices ranging from .19 to .34 in relation to criterion indices of family functioning. (McCubbin et al., 1996). A reasonable set of tests to validate the measure of Family Time and

Routines include the systematic examination of the association between Family Time and Routines and other criterion indices of family strengths. The criterion indices are family bonding (i.e. family cohesiveness), family coherence (i.e. family sense of order and trust), family celebrations (i.e. family efforts to acknowledge special family events and transitions, as well as indices of family satisfaction, marital satisfaction and community satisfaction. The hypotheses were confirmed. There are no additional studies to report test-retest reliability at this time (McCubbin et al., 1996).

The Social Support Index (SSI) was developed with the goal of recording the degree to which families find support in their communities (McCubbin, Patterson & Glynn, 1996). Community based social support is viewed as an important part of and factor that contributes to family resilience. The SSI is a 17-item instrument which uses a five-point Likert-type scale (Strongly Disagree, Disagree, Not Sure, Agree, Strongly Agree). The Likert-type scale is used to record the degree to which families are integrated into the community, view the community as a source of support and feel that the community is able to provide emotional, esteem and network support. The internal reliability (Cronbach's alpha) is .82 for the SSI, with a test-retest reliability of .83. The SSI was found to have a .40 validity coefficient with the criterion of family well-being. It was found that community or social support varied across stages of the family life cycle, reaching a low point at school age and a high point at the empty nest stage (McCubbin et al., 1996). Past studies have placed emphasis on the importance of social support as a buffer against family crisis, a resiliency factor in promoting family recovery, and as a mediator of family distress (McCubbin et al., 1996).

The Family-Crisis Oriented Personal Evaluation Scales (F-COPES) was developed to identify problem solving and behavioural strategies employed by families in difficult or problematic situations (McCubbin, Olson & Larsen, 1996). The F-COPES integrates the factors of pile up, family resources, and meaning or perception. The instrument consists of 30 five-point Likert-type items (Strongly Disagree, Moderately Disagree, Neither Agree nor

Disagree, Moderately Agree, Strongly Agree) and evaluates internal and external coping strategies.

The F-COPES consists of five subscales, namely the obtainment of social support, the redefinition of the problem, the seeking of spiritual support, the mobilisation of the family to obtain and accept formal support, and the passive appraisal of the crisis. These five subscales are divided into two dimensions, namely internal - and external family coping strategies. Internal family coping strategies refer to the use of coping resources within the nuclear family system. The second dimension of external family coping strategies refers to the active behaviour that a family adopts in order to obtain support from outside the nuclear family system (Olson et al., 1985). The internal strategies are: (1) reformulating or redefining the problem in terms of the meaning it has for the family (positive, negative, or neutral) (Cronbach Alpha = .64); (2) passive appreciation (the family's tendency to do nothing about crisis situations) (Cronbach Alpha = .66). Passive appreciation is an avoidance response based on a lack of confidence in own potential to change the outcome. The external strategies are: (1) use of social support, for example friends (Cronbach Alpha = .74), family members (Cronbach Alpha = .86) and neighbours (Cronbach Alpha = .79; (2) the search for religious support (Cronbach Alpha = .87); and (3) the mobilisation of the family to obtain and accept help (for example professional help and the use of community resources) (Cronbach Alpha = .70). A test-retest reliability coefficient of .71 was obtained for the total scale. The construct reliability of the questionnaire was shown with a factor analysis and a varimax rotation of the axes. Five factors were isolated, with the factor loadings of the items ranging between 0.36 and 0.74. All five factors had Eigen values larger than one (Olson et al., 1985). The reliability coefficients vary from 0.86 to 0.87 for the total scale and from 0.62 to 0.84 for the individual subscales (McCubbin et al., 1996).

The Family Problem Solving Communication questionnaire (FPSC) was developed to assess the two dominant patterns in family communication which seem to play an important

role in family coping with hardships (McCubbin et al., 1996). The FPSC was developed specifically to measure the problem solving and coping component of the Resiliency Model of Family Stress, Adjustment and Adaptation (McCubbin et al., 1996). The model assumes that the quality of family communication determines how a family adjusts and adapts. The total FPSC score reflects the overall environment or context available in the family for communication, in which family hardships and issues are addressed and resolved. Recognising that all families have both positive and negative patterns of communication, the need for a measure to assess both patterns is important to family resilience and problem solving. The FPSC is a 10-item instrument. The participant is asked to denote on a four-point Likert scale (False, Mostly False, Mostly True, True) how accurate each statement reflects how their family system typically behaves. The instrument consists of two five item subscales, incendiary communication and affirming communication. Incendiary communication is a pattern of communication that tends to exacerbate a stressful situation and affirming communication is a pattern, which conveys support and caring and exerts a calming influence (McCubbin et al., 1996). The alpha reliability for the FPSC is 0.89. Incendiary Communication has an alpha reliability of 0.78 and Affirming Communication has an alpha reliability of 0.86 (McCubbin et al., 1996). Construct validity was confirmed through two independent factor analyses with identical factor structures emerging for Incendiary and Affirming Communication. Concurrent validity was confirmed through the correlations of the FPSC with other established criterion measures of family functioning, namely family hardiness, family cohesion, family system distress, and self actualisation (McCubbin & Thompson, quoted in McCubbin et al., 1996). The test-retest reliability for the subscales and overall FPSC is 0.86 (McCubbin et al., 1996).

The Relative and Friend Support Index (RFS) was developed by McCubbin, Larsen and Olson (McCubbin et al., 1996). It consists of eight items that record the degree to which families reach out to relatives and friends for support, as a strategy that the family uses to

manage stressors (McCubbin et al., 1996). The eight items relate to sharing problems or seeking advice from neighbours or relatives, each requiring a response on a five-point Likert rating scale (Strongly disagree, Disagree, Neutral, Agree, Strongly agree). The internal reliability coefficient of the RFS is .82 (Cronbach's alpha) and it has a validity coefficient of .99 in correlation with the original F-COPES (McCubbin et al., 1996).

The Family Attachment and Changeability Index 8 (FACI8) (McCubbin, Thompson & Elver, 1996) is an ethnically sensitive instrument that measures family functioning, the dependent variable in this study. The FACI8 consists of 16 six-point Likert-type items of how often an event occurs now (Never, Sometimes, Half the Time, More than Half, Always, Not Applicable). The FACI8 is divided into two subscales, Attachment and Changeability, each consisting of eight items. The Attachment subscale measures the strength of family members' attachment to each other and the Changeability subscale relates to how flexible the family members are in their relationships with each other. These two scales can be used separately or in combination. The internal reliability for the youths' Attachment scale is 0.73, and for the youths' Changeability scale is 0.80. The internal reliability for the parents' Attachment scale is 0.75 and parents' Changeability scale is 0.78 (McCubbin et al., 1996). Only the total scores are used in this study.

Qualitative data were obtained to determine the subjective perception of resilience factors in families who have experienced heart-related trauma. The participants were provided with an opportunity to answer in writing an open-ended question about what they perceived to be the most important things that assisted the family in the aftermath of the crisis. The data were compared and categorised into the common themes that emerged, according to Grounded theory methodology (Strauss & Corbin, 1999).

Procedure

Each of the 58 identified families was contacted by telephone, firstly by a hospital staff member and then by the researcher, who conveyed the goal and nature of the investigation.

Patients were ensured of the confidentiality of the investigation, and it was emphasised that participation was entirely voluntary. The 58 families were presented with the options of either a home visit by the researcher or posting the questionnaires to the participants. Forty two families agreed to participate. Of the 42 families who agreed to participate, five were visited at their homes for the completion of the questionnaires. A total of 30 sets of questionnaires were sent via post to the families who chose this option, together with an information letter, biographical questionnaire and a prepaid envelope. Of these 12 completed sets of questionnaires were returned, and 18 were not returned. The researcher then set up appointments at the hospital to meet with 7 participating members (the patients) for the completion of the questionnaires. Five completed questionnaires were obtained in this way.

Participants were requested to first complete the biographical questionnaire, followed by the open-ended question, before completing the other questionnaires. Questionnaires completed in the presence of the researcher, were done so with relative ease in a time frame of 30 minutes to an hour. During the completion of the questionnaire the researcher was able to clear up any ambiguities or queries about items. Participants were thanked for their cooperation and participation.

RESULTS

Not one of the biographical variables correlated significantly with the dependent variable, family adaptation (FACI8). Results obtained from the completion of the seven questionnaires indicated significant correlations between family adaptation (FACI8) and several potential resiliency variables. In some other instances, although there was not a statistically significant correlation, the results provided indications of strong trends.

Participants' responses to the open-ended question, inquiring about the most important factors or strengths that the family utilised in helping them through the stressful period, were analysed and categorised. Two major categories came to the fore, namely internal resources

and external resources. Various themes surfaced from these two categories and are summarised in Table 3.

Table 3

Internal and External Coping Resources as Indicated by the Participants (N=22)

Resources	Frequency	Percentage
Internal		
Intrafamilial support - (emotional support amongst family members)	19	83 %
Intrafamilial support - (practical support, including changing roles, sharing responsibility and sacrifices)	14	63 %
Individual characteristics - (acceptance, positive outlook, love and understanding)	14	63 %
Family belief system	5	22 %
Communication	3	13 %
External		
Social support - (friends and extended family)	4	18 %
Professional support - (hospital staff and support groups)	4	18 %
Workplace support - (colleagues)	3	13 %
Religious support - (church support)	2	9 %

It follows from Table 3 that the participants in this study perceived internal resources as being of more importance than external resources. A qualitative analysis of the data shows the internal resource that played the most significant role was intrafamilial support, both emotional and practical. Intrafamilial support seems to be influenced by individual

characteristics of the family. Although some of the families made use of external resources and deemed them important, their role seemed not as prominent in the adaptation process.

Spearman product-moment correlations were calculated to determine the relationship between the dependent variable (family adaptation) and potential resiliency variables. These correlation coefficients are presented in Table 4.

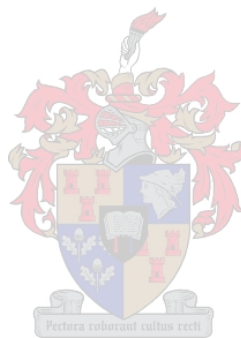


Table 4

Spearman Correlations between Family Adaptation (FACI8) and Potential Resiliency Variables

Variable	r	p
Family Time and Routine Index (FTRI)		
Child Routines - (family's emphasis on establishing predictable routines to promote child/teen's sense of autonomy and order)	0.28	0.24
Couples Togetherness - (family emphasis on establishing predictable routines to promote communication between couples)	0.24	0.31
Meals Together - (family's efforts to establish predictable routines to promote togetherness through family meal times)	0.06	0.82
Parent-Child Togetherness - (family's emphasis on establishing predictable communication between parents, children and adolescents)	0.48	0.04*
Family Togetherness - (family's emphasis on family togetherness to include special events, caring, quiet time and family time)	0.42	0.07
Relative's Connection - (family's efforts to establish predictable routines to promote meaningful connection with relatives)	0.05	0.85
Family Chores - (family's emphasis on establishing predictable routines to promote child and adolescent responsibilities in the home)	0.48	0.04*

Table 4 (continued)

Variable	r	p
Family Management - (family's efforts to establish predictable routines to promote a sense of family organisation and accountability needed to maintain family order in the home)	0.25	0.30
Total FTRI-Family score	0.53	0.02*
Social Support Index (SSI) (the degree to which families find support in the community)	0.45	0.05*
Family Hardiness Index (FHI)		
Commitment - (family's sense of internal strengths, dependability and ability to work together)	0.09	0.69
Challenge - (family's efforts to be innovative, active, to experience new things and to learn)	0.42	0.06
Control - (family's sense of being in control of family life rather than being shaped by outside events and circumstances)	0.41	0.07
Total FHI score	0.46	0.04*
Relative and Friend Support (RFS) (degree to which families call upon relative and friend support to manage stressors and strains)	-0.11	0.65
Family Crisis Oriented Personal Evaluation Scales (F-COPES)		
Social Support - (family's ability to actively engage in acquiring support from relatives, friends neighbours and extended family)	-0.03	0.91
Reframing - (family's ability to redefine stressful events in order to make them more manageable)	0.48	0.03*

Table 4 (continued)

Variable	r	p
Mobilisation - (family's ability to acquire community resources and accept help from others)	0.15	0.52
Passive Appraisal - (family's ability to accept problematic issues minimising reactivity)	0.28	0.23
Family Problem Solving Communication (FPSC)		
Affirming Communication - (pattern of Communication in the family that conveys support, Caring and exerts a calming influence)	0.66	0.00*
Incendiary Communication - (pattern of Communication that is inflammatory and Exacerbates a stressful situation)	-0.63	0.00*
Total FPSC score	0.74	0.00*

*p<0.05

It follows from Table 4 that there were nine variables that had a significant correlation with family adaptation (FACI8 scores). According to this data, family adaptation is significantly positively correlated with (1) Parent-Child Togetherness (Family Time and Routine Index), (2) Family Chores (Family Time and Routine Index), (3) the total Family Time and Routine Index score, (4) the total Social Support Index score, (5) the total Family Hardiness Index score, (6) Reframing (Family Crises Oriented Personal Evaluation scales), (7) Affirming communication (Family Problem Solving Communication), and (8) the total Family Problem Solving Communication score. The data also show a strong significant negative correlation between family adaptation (FACI8) and (9) Incendiary Communication (Family Problem Solving Communication).

A regression analysis was done to establish the ability of various combinations of the independent variables in predicting change in the dependent variable (FACI8). A best subset

regression technique was used to select the optimal set of variables to be included in the model. A summary of this regression analysis is presented in Table 5.

Table 5

Regression Analysis Summary Indicating which Combination of Variables Contribute to the Variation in the Dependent Variable Family Adaptation (FACI8)

Variables	p
Social Support Index (SSI) Total	0.09
Family Hardiness Index (FHI) Total	0.01*
Relative and Friend Support Index (RFS) Total	0.17
Family Problem Solving Communication Total	0.22

*p<0.05

It follows from Table 5 that only one factor is a significant predictor of family adaptation. This factor is the Family Hardiness Index total score. The remaining three factors (Social Support Index - total score, Relative and Friend Support Index - total score and the Family Problem Solving Communication - total score), although not statistically significant, also played a role in accounting for the variability in the dependent variable of family adaptation, as measured by the FACI8. The regression analysis indicates that the four variables in Table 4, jointly account for sixty eight percent ($R^2 = 0.68$) of the variability in the dependent variable.

DISCUSSION

The primary objective of this research was the identification of key processes or factors that assist families in the adaptation process following a trauma or crisis. In this instance the identified crisis was a heart-related dysfunction. Resilience factors were identified by means of establishing the subjective interpretation of what participants perceived as resilience factors, as well as by means of identifying variables that had a significant correlation with family adaptation.

Fullard (1990), as well as Mackay and Mensah (2004), identified low socio-economic status with its associated poor education, as a risk factor for the development as well as prognosis of cardiovascular disease (CVD). Walsh (2003) also identified economic resources as being an important aspect of a family's ability to adapt in the face of a crisis situation. Clark (1999) cites good education as a familial resource because it increases members' ability to solve problems and appraise crises realistically. Consequently it was expected that this would play a role in the adaptation of families. However no significant correlation was found between these factors and family adaptation in this study. This may be attributable to the participants either being gainfully employed or having made adequate provision in terms of medical aid schemas, since the population of participants represents the section of South African population who are able to afford adequate medical services. Despite the lack of correlation, this is still a very important area of research as the overwhelming majority of the South African population are not in this fortunate position and it would be interesting to investigate their adjustment and adaptation.

The major adaptive resource identified by participants as enhancing family resilience, was emotional intrafamilial support (see Table 3). Eighty three percent of participants identified the emotional support provided by their immediate family as fundamental to the adaptation process of the family. Walsh (2003) identifies mutual support as strengthening family resilience, and she also cites the importance of emotional expression. Practical

intrafamilial support, which includes a willingness to be involved in the healing process by assisting with new routines, as well as making sacrifices, was also identified as an important resilience factor by participants. Family time and routines is described by the Resilience model of Family Stress, Adjustment and Adaptation (McCubbin & McCubbin, 1996) as an important aspect of family resilience, and its importance in this research is reiterated by the significant correlation between the Family Chores subscale of the Family Time and Routine Index and family adaptation. The ability of the family to adapt to new routines and assist in taking over different roles seems to be an important aspect in the recovery process. Being able to adjust to new chores and routines, while maintaining which is important, forms a part of what Walsh (2003) and Patterson (2002) see as the flexibility of the family, which plays a major role in adaptation. According to Walsh (2003), in the face of a crisis, like CVD, families have to construct a new sense of normality as they reorganise patterns of interaction. In the case of heart-related trauma the patient is often unable to perform previous duties, sometimes having to leave employment, which means that the other partner becomes the sole breadwinner. At the same time families also need to buffer disruptive changes by efforts to maintain valued customs and restoring stability (Walsh, 2003).

A further important resiliency quality identified by participants relates to the individual characteristics of the family, which includes a positive outlook, and an understanding and acceptance of new circumstances (see Table 3). This aspect refers to the way a family makes meaning of life's adversity (Chesla et al., 2003; Gallo et al., 2004; Patterson, 2002; Silberberg, 2001; Walsh, 2003) and also enjoys theoretical support from the Resiliency Model of Family Stress, Adjustment and Adaptation (McCubbin & McCubbin, 1996). The importance of this factor resurfaces in the identification of family hardiness as a resilience factor (see Table 4), showing that the family's characteristic approach to life's difficulties, and patterns of viewing change as a challenge are important for the well-being of the family. Positive reformulation of a problem situation as an important aspect of family adaptation after a crisis (see Table 4).

Reframing forms part of a family's internal coping strategies, in other words how they use the support-resources within the family system. This aspect is related to a family's perceptual orientation toward difficult situations and dictates whether the family views change as positive, negative or neutral (McCubbin & McCubbin, 1996). The abovementioned are all related in some way to family cohesiveness or sense of coherence which, according to Hawley and DeHaan, (1996) and Patterson (2002) is facilitated by routines and rituals which build a shared identity.

Family times and routines are cited by McCubbin and McCubbin (1996) as a consistent indication of the stability and integration of the family, which includes ways in which they meet the challenges with which they are faced. The Family time and Routine Index, assesses the activities and routines families use and maintain and the value that they place on it (McCubbin & McCubbin, 1996). Since parent-child togetherness is associated with family adaptation (see Table 4), this emphasises the importance of the establishment of predictable communication between parents and children. The positive correlation between parent-child togetherness and family adaptation ($p = 0.04$), shows it to be an important aspect of family resilience. The family chores subscale, which measures the emphasis in families on establishing predictable routines to promote child and adolescent responsibilities in the home, was also found to contribute significantly to family adaptation. The importance of creating and sharing responsibility was further affirmed by the importance placed on this aspect of intrafamilial support by participants as a contributing factor to family adaptation (see Table 3). The total FTRI score indicates that within a family who has suffered heart-related trauma, there is an overall emphasis on family times and routines, showing that the creation of predictable patterns of interaction and communication between members of a family plays a significant role in family adaptation.

Communication plays an important role in the navigation of major family transitions (Patterson, 2002). Although qualitatively indicated by some participants as an important

aspect, it did not enjoy the same importance as intrafamilial support (see Table 4). The positive correlation between family adaptation and affirming communication shows that the quality of the type of communication plays an important role in family adaptation (see Table 4). Affirming communication conveys support and caring, which in turn has a calming effect. Affirming communication also reiterates the importance of the emotional support of families in the recovery process. Moreover, the strong negative correlation between incendiary communication and family adaptation shows the importance of communication that is constructive rather than destructive. Incendiary communication tends to exacerbate an already stressful situation. The quality of family communication is indicative of the way in which families manage tension and stress. The total FPSC score (see Table 4) points towards the importance of establishing a context of communication in which and through which family hardships and issues could be addressed (McCubbin et al. 1996), and thus the necessity of adequate communication within a family as a factor contributing to family adaptation.

It becomes evident from the aforementioned aspects of family meaning making, family times together and communication, that family cohesiveness is an important aspect of family adaptation (Antanovsky & Sourani, 1988). The internal functioning of the family is paramount in the adaptation after a traumatic event. In a pathogenic framework the family is seen as the route of pathology, rather than viewed in terms of its resources and abilities to buffer itself against stress. Viewing the family in pathogenic terms not only disregards the strengths of the family, but also disregards the social context within which families are formed. When looking at the importance of external support and resources (see Table 3), it seems that families with a heart disease member no longer look towards the community for support. Previous research supports the notion that social support is an important variable in helping families adjusting to a crisis (Fullard, 1990; Gallo et al., 2004; Silberberg, 2001; Tarkka et al., 2002; Walsh, 1996). Despite some of the results in this study (see Table 3), the current study also found that the support that families find in the community is associated

with family resilience (see Table 4, Social Support Index). Although social support was not mentioned by many families (low frequency in Table 3), it was confirmed as of importance by the significant correlation ($p = 0.05$) it has with family adaptation (see Table 4).

Summary

Cardiovascular disease compromises a complex set of changing conditions. Therefore, there are complex and different pathways for adaptation, because no single coping response is necessarily most successful (Walsh, 2003). What is most important in dealing with crises are effective family processes. In the context of cardiovascular disease, family time and routines appear to be a key process for mediating family adaptation. Family time and routines focuses on the activities and routines on which families put emphasis. In this research parent-child togetherness and family chores were identified as being important activities for family adaptation. The latter emphasises predictable routines, whereas the former emphasises predictable communication channels. Having predictable routines and a sense of responsibility in the family system is important, but so is the family's ability to adapt to new routines and responsibilities. Open channels of communication are of great importance, but the type of communication was also identified as a key process, namely affirming communication. Communication that is inflammatory (incendiary communication) was found to have a negative effect on adaptation.

Further key processes identified as influencing family adaptation were social support, family hardiness and reframing of problem situation. Social support of the family is seen as one of the most important mediating variables between stresses and coping in the resiliency model (McCubbin & McCubbin, 1996). Family hardiness and reframing as resilience factors refer to a family's characteristic approach to life's difficulties and their perceptual orientation toward difficulties and change. Families who were able to reframe the meaning that a difficult situation has for the family into a positive light and approach the change as a potential for growth appeared to be more resilient in this study

Limitations

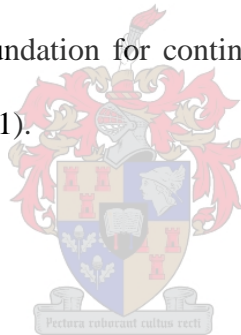
A limitation of this study is that the data obtained represents only a small sector of the South African population, with most families representing the socio-economic group that are able to afford hospitalisation. This points to the need for further research, which incorporates a broader socio-economic spectrum. Although participants were from various cultural backgrounds, the sample size limits the conclusions that may be drawn from this. Thus a larger sample size would assist in incorporating more of the heterogeneity of the South African people, both culturally and economically. A further limitation of the study was its failure to identify the expected relationship between educational level and adaptation, partially due to the sample size, as well as the catchment area. Future studies should also place emphasis on the latter, which may also open the possibilities for comparative studies. Another limitation of the study was its lack of focus on the developmental phase of the family as a criterion. Previous research (DeHaan et al., 2002; Gorden & Perrone, 2004; McCubbin et al., 1996; Sidell, 1997; Walsh, 2002), suggested that the family developmental phase or level, would have an impact on how they cope with a crisis situation. All aspects of the family system should to be taken into consideration to gain a more comprehensive understanding of family adaptation. Furthermore, the member of the family who completed the questionnaires was the patient who was hospitalised, which was in most cases the father. It would be very interesting to compare these responses to those of the remaining family members.

Conclusion

Coming face to face with cardiovascular disease (CVD), bring individuals into close contact with their own mortality, the realisation that they are not as omnipotent as they thought they were. This realisation of mortality is not only experienced by the individual, but also his or her family, because they are faced with the potential loss of a life partner, husband, father or mother, friend, breadwinner and ultimately the stability of the family unit. CVD is a pervasive

phenomenon that affects the entire family. Its increasing incidence and prevalence pointed to a need to fill the void of understanding and information in terms of the family unit.

This research was aimed at identifying the key processes that mediate a family's recovery, after stepping back from the edge of complete loss of a loved one. In so doing, expanding upon and understanding the adaptation and adjustment mechanisms used by these families were important factors. The insight and understanding gained from this study could be used to guide interventions assisting families in similar situations. Furthermore, information gained may also be used as a preventative measure. By understanding what helps a family to adjust, one can build upon resources already within the family, as well as teaching them new skills, such as communication, establishing routines and different ways of approaching problem situations. Because of its dynamic nature, the identification of strengths within a family can become the foundation for continued growth and positive change in a family and a society (Silberberg, 2001).



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Appendix A

BIOGRAFIESE INLIGTING

Alle inligting in hierdie vraelys word as streng vertroulik beskou en u besonderhede sal anoniem verwerk word.

Merk asseblief die toepaslike blokkie, of verskaf die verlangde inligting:

1. Woonagtig in(dorp of stad)

2. Gesinsamestelling

	Deelnemende Ouer	Ander Ouer	Kinders in die huis	Kind 2	Kind 3	Kind 4
Ouderdom						
Geslag						

3. Beroep en Opleiding van Primêre Broodwinner

Beroepsklassifikasie van Ouers	Merk	
	Ma	Pa
Hoogs gekwalifiseerde professionele, uitvoerende, tegniese en administratiewe beroepe		
Professionele werker, administratiewe werker en bestuurder		
Kommersieel onafhanklik		
Laer gekwalifiseerde administratiewe-, tegniese- en klerklike beroepe met beperkte toesighoudende verantwoordelikheid		
Geskoolde werkers en ambagslui met handelskwalifikasie		
Roetine klerklike- en administratiewe-, instandhouding- en verkoopswerkers		
Semi-geeskoolde produksie- en handearbeiders		
Ongeskoolde produksie- en handearbeiders		
Nie ekonomies aktief of produktief		
Ander		
Geen kommentaar		

	Ma	Pa
Ouers se opleiding		
Universiteitsopleiding		
Tersiêre nie-universiteitsopleiding		
Matriek		
Ambag		
Junior Sertifikaat (St. 8)		
Laerskool		
Geen opleiding		
Geen kommentaar		

Duur van die ouerlike verhouding: (voltooide jare)

Wat is jou huistaal? Afrikaans ☐ English ☐ Ander (spesifiseer).....

Omstandighede van hospitalisasie.....

BIOGRAPHICAL INFORMATION

All information in this questionnaire is strictly confidential and your information will be anonymously processed.

Please cross the box most appropriate to you, or complete the statement in the space provided:

1. **Living in**(town or city)

2. **Family composition**

	Participating Parent	Other Parent	Children living at home	Child 2	Child 3	Child 4
Age						
Gender						

3. **Occupation and Education of Primary Breadwinner**

Occupation Classification of Parents	Tick	
	Mom	Dad
Highly qualified professional, executive, administrative and technical occupations		
Professional, administrative and managerial workers		
Commercially independent		
Lower qualified administrative, technical and clerical with limited supervisory responsibility		
Skilled workers and artisans with trade qualifications		
Routine clerical and administrative workers, service and sales workers		
Semi-skilled production and manual workers		
Unskilled production and manual workers		
Not economically active or productive		
Other		
No response		

Breadwinner's Education	Tick	
	Mom	Dad
Attended university		
Trained at Post-matric level (not university)		
Matric		
Apprenticeship		
Primary School Junior Certificate (Std. 8)		
No education		
No response		

Duration of the parental relationship: (completed years)

What is your home language? Afrikaans ☐ English ☐ Other (specify)

.....

Nature of Hospitalisation.....

.....

.....

OOP VRAAG/ OPEN QUESTION

*In your own words, what are the most important factors, or strengths of **YOUR FAMILY** that have helped you and your family to make the necessary adaptations after your hospitalisation?*

A faint, stylized illustration of a coat of arms is centered on the page. The coat of arms features a shield with a cross, a crown, and a crest with a bird. The entire illustration is rendered in a light, faded style, making it barely visible against the background of horizontal dotted lines.